

Regulated Price Plan Roadmap

Pilot Program Project Overview Application

1. Review all eligibility criteria to confirm that your project is eligible for the Regulated Price Plan Pilot Program.
2. All fields must be completed. Incomplete submissions will not be considered. Maximum 10 pages excluding attached documents.
3. All answers, rationale and substantiation must be provided in this document in the space provided. Do not provide attachments unless letters of support from project partners, links or other references as these will not be considered in the review of your application.
4. **Attach this completed document, in Word format (no PDFs) to an email and submit to:**

BoardSec@ontarioenergyboard.ca *citing “EB-2016-0201: RPP Pilot Application” in the subject line.*

1. Within one week of submission, you will receive a response confirming that your application was received with further information regarding the timeline for review.
2. If you have questions you may reach the OEB by calling 1-888-632-6273 or by emailing IndustryRelations@ontarioenergyboard.ca *citing “EB-2016-0201: RPP Pilot Program” in the subject line*.

###  A. Key Information

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| **Project title:** | Quick Ramping CPP & Automation |
| **Distributor(s):** | London Hydro |
| **Applicant(s) Contact name:** | Syed Mir |
| **Applicant(s) Contact title:** | VP of Corporate Services and CIO |
| **Mailing address:** | 111 Horton Street, PO Box 2700, London ON, N6A 4H6 |
| **Phone:** | 519-661-5800 x 5102 |
| **Email:** | mirs@londonhydro.com |
| **Submission date:** | August 22nd, 2016 |



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| **B. Project Overview (check all that apply)** |
| **Regulated Price Plan Roadmap Category** |
| **\_** Price | **X** Non-Price |
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| **Target Market(s): Residential Market Only** |
| X Existing Homes | \_ High Usage Customers |
| \_ New Homes | \_\_ Other: \_  |
| \_ Multi-family |  |
| \_ Single-family |  |
| \_ Low Income Customers |  |
| **Project Type** |
| \_\_ Time-of-use | \_\_ Other Pricing |
|  **X** Critical Peak Pricing |  |
|  **X** Appliance/Household Automation |  |
| \_\_ Information Provision |  |

**Expected Project Duration: 18 Months**

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| **Funding\*\*\**:*** Applicants are encouraged, but not required, to contribute support or have project partners contributed support to the proposed project. Differentiate between cash and in-kind support to the proposed project. Please indicate if the funding is confirmed. “Requested Funding” represents your funding request to the OEB.IF THIS SECTION IS LEFT BLANK YOUR APPLICATION WILL NOT BE CONSIDERED |
|  | **Cash ($)** | **Cash (% of total project value)** | **In-kind ($)** | **In-kind (% of total project value)** |
| **London Hydro Hardware** | $119,000 | 25.2% | $23,400 | 5% |
| **London Hydro Software** | $115,000 | 24.3% | $10,000 | 2.1% |
| **London Hydro Marketing, Recruitment and Incentive**  | $30,000 | 6.4% | $10,000 | 2.1% |
| **3rd party EM&V** | $40,000 | 8.5% |  |  |
| **London Hydro Project Administration** | $100,000 |  | $25,000 | 5.3% |
| **Other(s)\*\*** | $ | 21.2% | $ | % |
| **Subtotal****(non-OEB funding contribution)** | $404,000 | 85.5% | $ | % |
| **Requested Funding** | $404,000 | 85.5% | N/A | N/A |
| **Totals** | $404,000 |  85.5% | $68,400 | 14.5% |
| **Total project value (all cash costs + in kind)** | $472,400 |

\* Provide actual name

\*\*Add rows as necessary

\*\*\*These fields may be amended at a later stage if required.

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| **1. PROJECT CONCEPT AND RATIONALE** |
| **A.** In one sentence, state the ultimate goal of this project. How will the objectives of the Regulated Price Plan Roadmap be achieved as a result of this project? |
| Determine whether a pricing incentive provides sufficient motivation for customers to allow short duration load control activities based on a quick ramp automated load control solution in combination with critical peak pricing. |
| **B.** Discuss in detail the specific objectives of the Regulated Price Plan Roadmap that this project addresses (e.g. technical challenge, energy literacy gap, etc.). |
| This project is intended to address the following objectives of the RPP Roadmap:* Set the price structure to support the achievement of efficient electricity system operation and investment
* Set both prices and the price structure to give consumers incentives and opportunities to reduce their electricity bills by shifting their time of electricity use and reducing their peak demand

The project is intended to evaluate incentive or penalty opportunities for customers to reduce their electricity bill by shifting or eliminating load during critical periods. Engagement of consumers to contribute towards load reduction at critical times supports efficient operation of the electrical system and more efficient investment in infrastructure.Specifically we would like to determine a level of inconvenience that customers are willing to accept to participate in load control activities. Our proposed model would implement two levels of load control for participating pilot customers.* The first of these would leverage existing control methods deployed as part of the Peaksaver Plus program. By combining thermostat control with critical peak pricing, customers should be further incented not to override control activities. Adequate notification of the critical peak through customer-preferred channels may also encourage customers to manually take further activities to temporarily reduce load.
* The second level of load control would be a broader home energy reduction utilizing individual circuit or appliance level load reduction. This is a significantly more extreme measure albeit with greater demand reduction potential.

Through this pilot project we aim to determine the level of inconvenience customers are willing to accept to participate in critical peak load control activities under the incentive of a high critical peak price. Effectively participating customers will have opportunity to make the choice between a higher price for convenience or automatic load reduction to manage costs.In order to incent customers to participate in a pilot program it will be necessary to create a mechanism for the customer to have potential benefit beyond cost avoidance during a critical peak period. We are proposing the design of an alternate time of use schedule with more aggressive off-peak pricing that supports a benefit over the existing time of use schedule to incent participation. In order to not unduly affect customer bills as a result of pilot participation, we will incorporate a price ceiling for the customer bill, funded as part of the program incentive. |
| **C.** How will your project’s activities and outputs address the objectives of the Regulated Price Plan Roadmap outlined above? What solution is this project designed to develop? |
| This project is intended to introduce a quick ramping critical peak price billing and settlement process, whereby customers will be subject to a significantly higher than normal peak price during a short duration load control window. We intend to develop an understanding of a customer’s willingness to be inconvenienced with respect to electricity usage to support load control needs in extenuating circumstances.In the case of a quick ramping critical peak, the notification timeframe and window of activation are short, implying the use of automation technology to be effective. We are proposing the use of two mechanisms to achieve demand reduction during critical peak periods:* Thermostat control (enhanced fast dispatch of Peaksaver Plus type devices)
* Broader home energy reduction control (appliance / circuit level load control devices)

An important aspect of this pilot project is communication with customers to create awareness of the need for load control activities. Leveraging our existing customer notification platform, participating customers would receive immediate notification of activations via their preferred channel of communication. This creates an opportunity for customers to take further manual action for load reduction, or alternatively to take action to opt out of the activation. |
| **D.** Explain how your project compares to other initiatives/ technologies already deployed/ piloted in Ontario and elsewhere. Provide diagrams, etc. as necessary (within this document). |
| This project extends the scope of load control introduced with the Peaksaver Plus program to introduce additional incentive to consumers to allow load control activities. Under the Peaksaver Plus program, a customer was given a one-time incentive for the installation of a thermostat supporting load reduction. A customer may however, choose to override during an activation, or even replace the installed thermostat without notice. Introducing a quick ramping critical peak price in combination with automatic load control provides an additional incentive to the customer to participate in the activation.We are also proposing to trial a broader home energy reduction option as part of the load control process, in addition to thermostat control. This can be achieved utilizing circuit level disconnect/load control devices that can be activated in response to a load control signal.QuickRamp CPP and Automation.pngOur proposal utilizes London Hydro’s existing customer notification system that allows customers to maintain their preferred channel of communication. In the event of a load control activation, participating customers would be immediately notified via their channel preference. The communication would include a link to a participation opt-out portal allowing the customer to opt-out of the activation if so desired, from their Internet-connected computer or smartphone. In the case of participants enrolled for broader home energy reduction activation, the opt-out process would allow for a complete opt-out or restrict to thermostat control only. |

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| **2. PROJECT PLAN** |
| **A.** In no more than ten sentences, outline the project plan. |
| The project will be comprised of several key functions: 1. Participant education and enrollment. Through media and direct engagement promotional sessions, London Hydro will describe the benefits to consumers and offer the program to eligible customers.
2. Installation, configuration and testing of the technical load control solution. During this phase the team will establish and rehearse the automation functionality.
3. Implementation of critical peak pricing and corresponding time of use schedule within London Hydro’s SAP CIS to support billing and settlement processes.
4. Over the course of the pilot the quick ramp scenario will be communicated to the customers and dispatched to the automation equipment.
5. Several milestone evaluations will be conducted to verify functionality and customer satisfaction.
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| **B.** Describe each of the major task areas for this project (e.g. program design, development of training, measurement and verification, research, communications, knowledge transfer, etc.). |
| The major task areas include:1. Program management for coordinating and facilitating the project’s technical and customer interface elements.
2. The technical implementation and integration for system development and technology partner integration.
3. Head end system enhancements and billing/settlement system upgrades to facilitate the upgrades.
4. Marketing, communication and customer support processes training to introduce, support and communicate the results.
5. Technical evaluation of the program effectiveness and publication of results.
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| **C.** Describe each of the major deliverables that will be provided to the OEB as part of this project. |
| The major deliverables of the project include:1. Customer Experience Report to describe the automation responsiveness and associated benefits;
2. EM&V Report outlining energy savings and behavioral impact of quick ramp automation; and
3. Cost Benefit Analysis to determine the value of a CPP program with short duration load control for the RPP Roadmap that could be applied across Ontario.
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| **3. PROJECT TEAM & PARTNERS** |
| A. In this section, please outline the composition of the project team and list any project partners. Discuss the role that each person and organization participating in the project will play. Include the applicant organization in this table. If a 3rd party is not yet part of the team, please identify the accountability they will be responsible for and enter TBD for the name and organization. |
| **PROJECT TEAM** |
| **Project team member** | **Organization and job title** | **Major accountability** |
| Syed Mir | London Hydro | Project Sponsor |
| Adrian Lattanzio | London Hydro | Project Lead |
| Stuart Smith | London Hydro | Solution Architecture & Design |
| Connor Graham | London Hydro | BSA/Developer Lead |
| Gelber Vargas | London Hydro | RT Hardware Specialist/Support |
| Nancy Hutton | London Hydro | Customer Communications & Marketing |
| Susmita Haldar | London Hydro | Quality Assurance Lead |
| Madhumita Ghosh | London Hydro | SAP Supervisor |
| Sriniwas Singh | London Hydro | SAP Specialist |
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| **PROJECT PARTNERS** |
| **Organization** | **Project role (e.g. participant, funder)** | **Financial or in-kind contribution (indicate if confirmed). Please note that if you are invited to submit a proposal your partner must confirm their contribution in writing to the IESO.** |
| To be determined. | Thermostat and Load Control Provider (TBD) | Financial |
| To be determined.  | Program Effectiveness Evaluator (TBD)  | Financial |
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