

**Hydro One Networks Inc.**

7<sup>th</sup> Floor, South Tower  
483 Bay Street  
Toronto, Ontario M5G 2P5  
www.HydroOne.com

Tel: (416) 345-5240  
Cell: (416) 903-5240  
Oded.Hubert@HydroOne.com

**Oded Hubert**

Vice President  
Regulatory Affairs



BY COURIER

August 19, 2016

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
Suite 2700, 2300 Yonge Street  
P.O. Box 2319  
Toronto, ON  
M4P 1E4

Dear Ms. Walli,

**EB-2016-0201 – Regulated Price Plan Roadmap: Guideline for Pilot Projects on RPP Pricing**

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On July 18, 2016 the Ontario Energy Board (OEB) issued its “Regulated Price Plan Roadmap: Guideline for Pilot Projects on RPP Pricing” (Guideline) inviting distributors to participate in developing and implementing price pilots identified by the OEB. In response to the request for proposals contained in the Guideline, Hydro One is pleased to submit the attached application entitled “Hydro One RPP Roadmap Pilot”.

Conservation and load shifting decisions are based on pricing, information and enabling technologies. However, currently the lack of diversity in pricing, the shortfall in relevant information on instantaneous dynamic pricing and load information, and the limited use of complementary enabling technologies contribute to the lack of customer control and less grid flexibility. The proposed pilot will test the value to the consumer and the electricity system of offering alternative dynamic pricing plans, complementary enabling technologies, and dynamic communication of instantaneous information regarding pricing, load consumption patterns and end-use disaggregation of data. This will empower the customer to conduct their own consumption control leading to increased satisfaction.

The proposed pilot will help address the OEB’s RPP Roadmap Objectives. Key features of the proposed pilot include extending the current Smart Grid Fund (SGF) pilot, expanding sample size and offering, as well as building the necessary infrastructure to accommodate pilot requirements.

Hydro One is seeking to extend the existing SGF in-field data collection from October 1, 2016 to April 30, 2017 in order to facilitate retaining existing recruitments until the current pilot EM&V results are made available by May 1, 2017. This will enable transitioning to the new pilot by maintaining current recruitments, avoiding expensive future recruitment, maintaining customer experience by preventing a stop-and-go approach, and assessing persistence based on a longer time frame for customer data monitoring and analysis.

The proposed pilot includes recruiting new customers that represent different geographic locations and customer types (including low income). Based on EM&V results, it will offer customers rate choice from a menu of options that best suit their electricity needs and life style as well as test customer appetite for taking risk related to their rate choice. The new pilot will need to build the necessary back-office infrastructure for billing and other processes to allow for transitioning away from shadow billing.

In order to provide appropriate lead notification to existing pilot participants whose commitment to the current SGF pilot ends on September 30, 2016, **Hydro One will need to receive approval from the OEB for the funding of the bridge extension by mid-September, 2016.**

This application assumes the proposed pilot will not be funded through Hydro One's distribution rates.

We look forward to working with the OEB to develop electricity rates that better serve customers and the needs of the electricity system in Ontario. Please do not hesitate to contact Sahar Mishriki, CDM Manager, at (416) 345-4324 or at sahar.mishriki@hydroone.com if you have any questions.

Sincerely,

ORIGINAL SIGNED BY HENRY ANDRE

Henry Andre on behalf of Oded Hubert



# Regulated Price Plan Roadmap Pilot Program Project Overview Application

## Instructions

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

## A. Key Information

<b>Project title:</b>	Hydro One RPP Roadmap Pilot
<b>Distributor(s):</b>	Hydro One Networks Inc.
<b>Applicant(s) Contact name:</b>	Sahar Mishriki
<b>Applicant(s) Contact title:</b>	Manager, Strategy & Conservation
<b>Mailing address:</b>	483 Bay St 6 <sup>th</sup> Floor South Tower, Toronto ON, M5G 2P5
<b>Phone:</b>	416-345-4324
<b>Email:</b>	<a href="mailto:Sahar.Mishriki@HydroOne.com">Sahar.Mishriki@HydroOne.com</a>
<b>Submission date:</b>	August 19, 2016

Receipt of an application does not constitute a commitment by the Ontario Energy Board to approve the application.

## B. Project Overview (check all that apply)

Regulated Price Plan Roadmap Category	
<input checked="" type="checkbox"/> Price	<input checked="" type="checkbox"/> Non-Price
<b>Target Market(s): Residential Market Only</b>	
<input checked="" type="checkbox"/> Existing Homes	<input checked="" type="checkbox"/> High Usage Customers
<input type="checkbox"/> New Homes	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Multi-family	
<input checked="" type="checkbox"/> Single-family	
<input checked="" type="checkbox"/> Low Income Customers	
Project Type	
<input checked="" type="checkbox"/> Time-of-use	<input checked="" type="checkbox"/> Other Pricing
<input checked="" type="checkbox"/> Critical Peak Pricing	
<input checked="" type="checkbox"/> Appliance/Household Automation	
<input checked="" type="checkbox"/> Information Provision	

**Expected Project Duration: 18 Months**

**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.

The Guideline is not clear about the source of funding for the RPP Roadmap Pilots. Hydro One does not wish to proceed with this application if the funding is sourced from Hydro One's distribution rates. Hydro One is of the view that its customers should not carry the cost burden of this pilot when the outcome of the pilot is expected to benefit all electricity consumers in Ontario as set out by the Guideline. Alternatively, funding may come from the Global Adjustment ("GA"). This is consistent with funding for Conservation and Demand Management ("CDM") activities.

The cost provided below is only an estimate that will be refined should this initial application be accepted and proceed to the next stage of the pilot approval process.

	Cash (\$)	Cash (% of total project value)	In-kind (\$)	In-kind (% of total project value)
<b>Hydro One contribution*</b>	\$ 0	% 0	\$ 60,000	% 0.4
<b>McMaster University contribution*</b>	\$ 0	% 0	\$ 20,000	% 0.1
<b>Partner 2 contribution*</b>	\$ 0	% 0	\$ TBD	% 0
<b>Other(s)**</b>	\$ 0	% 0	\$ TBD	% 0
<b>Subtotal (non-OEB funding contribution)</b>	\$ 0	% 0	\$ 80,000	% 0
<b>Requested Funding</b>	\$ 15,500,000	% 99.5	N/A	N/A

<b>Totals</b>	\$15,500,000	% 99.5	\$80,000	% 0.5
<b>Total project value (all cash costs + in kind)</b>	<b>\$15,580,000</b>			

\* Provide actual name

\*\*Add rows as necessary

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

## 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?**

Hydro One intends to leverage its existing dynamic pricing pilot by extending the current pilot from October 1, 2016 to April 30, 2017, test new pricing elements by expanding to additional participants, and building its billing system infrastructure and processes to support a future program deployment of dynamic pricing in Ontario.

**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.).**

Hydro One currently has two in-field Dynamic Energy Pricing (DEP) pilots. The first pilot is testing 12 dynamic rate options in conjunction with varying levels of information feedback with the in-field portion expected to conclude September 30, 2016. The second pilot is looking at the incremental impact of WiFi thermostats and is expected to complete the in-field portion by June 30, 2017. There are about 1,400 participants across the two pilots.

Hydro One will be seeking to extend the first pilot from October 1, 2016 to April 30, 2017. This will facilitate retaining existing recruitments until the current pilot EM&V results are made available. It will also facilitate transitioning to the Hydro One RPP Roadmap Pilot by maintaining current recruitments, avoiding expensive future recruitment, maintaining customer experience by preventing a stop-and-go approach, and assessing persistence based on a longer time frame for customer data monitoring and analysis.

Hydro One intends to expand the pilot to existing and new participants. In the roll out of the Hydro One RPP Roadmap Pilot, we will be testing important pricing elements by offering customer choice of rate plans based on the EM&V results of the existing pilot, altering the existing risk exposure, and providing customers with enabling technologies.

Under HONI's current pricing pilots, customers were offered a pricing plan which they could opt into. Customers continue to pay their electricity bills to Hydro One. In the mean time they receive monthly reports from McMaster University that show what their cost would be under the new price plan. If the customer's bill is lower, the customer receives a rebate after six and twelve months of being on the new price plan. If the customer's bill is higher, the customer is kept whole as they continue to pay their Hydro One electricity bill.

Under the Hydro One RPP Roadmap Pilot, customers will choose among different rate plan offerings and will be expected to take some of the risk associated with their choice. Hydro One will aim to produce "real bills" (rather than shadow bills/monthly reports) that reflect the customer's choice of price plan. This will require infrastructure investments to accommodate new billing systems and processes. Infrastructure investments would help inform the OEB of the potential rollout costs for a program to be delivered by an Ontario LDC. It will also help the OEB and LDCs understand the implications of removing price guarantees and rebates associated with shadow billing.

This project will help address the following RPP Roadmap Objectives:

1. *Set the price structure to support the achievement of efficient electricity system operation and investment*

The principle of dynamic pricing which Hydro One is currently piloting and intends to continue to pilot through this project is to more closely align prices to customers with the real-time cost of producing power. All pricing structures included in this pilot will accomplish this relative to the current TOU pricing structure in Ontario. By aligning customers prices with system costs, we expect that customers will be motivated to shift more of their usage to lower cost periods which will reduce demand during high cost periods. This will help reduce the annual average cost of power and may help to defer system

investments that would otherwise be necessary. Hydro One's current pricing pilots cover a wide range of both priority and non-priority pricing options that are set out by the OEB's *Regulated Roadmap: Guideline for Pilot Projects on RPP Pricing*. Some exceptions include quick ramping CPP and Evening Peak TOU. With respect to Super Peak TOU and Seasonal TOU, we are testing the impact of no mid-peak in our existing pilots. For priority non-price pilots, Hydro One is currently testing the impact of real time vs. delayed provision of information and the impact of displaying cost per kWh information (based on billing cycle but not in comparison to "bill to date" information). Hydro One is also studying VPP and RTP, two of the non-priority pricing pilots. See Appendix (1) for a high level comparison between Hydro One's and the Roadmap's pricing options.

Hydro One would also investigate rate options that benefit low income customers. Our stratification approach will include having an equal number of low and high consumption participants. This will ensure that we will have a sufficiently large number of low income households in the pilot. As well, this allows us to segment both our analysis and future pricing programs with respect to low income. Literature indicates that low income customers with limited discretionary income, have greater price responsiveness. This means that new pricing plans which offer very low prices at times of the day or week relative to other times will help low income households in significantly reducing their electricity bills and reducing energy poverty. Further discussion of rate scenarios will be provided should this submission move to the next level.

2. *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*

This pilot will make use of over one year's worth of electricity data from over 1,100 customers who are currently participating in Hydro One's Phase I dynamic pricing pilot. By leveraging the results of that pilot, Hydro One intends to select rate structures that have demonstrated the ability to deliver lower bills and higher customer satisfaction. By offering customers a choice in their rate structure, they will be able to select a rate plan that aligns with their ability to shift usage to off-peak hours.

The Hydro One RPP Roadmap Pilot will use enabling technologies such as thermostats, load disaggregation and near real time in-home devices (IHDs). Disaggregated end-use information provided by Plotwatt uses less than 1-min interval data collected by Blue Line IHD to provide customers with detailed information about where and when they are using electricity in their home. This will help inform customers about where to focus their efforts to lower their electricity consumption from specific home equipment that triggers high usage.

Hydro One is keen on equipping its customers with tools that help them manage their electricity consumption and cost. For example, Hydro One's planned e-bill notifications provide the majority of customers (who choose to opt in the program) with information about their home heating and cooling electricity usage. The data used to provide this information is less granular than the data used by Plotwatt. Once it migrates from a small subset to the broader customer base, we expect the Plotwatt data will better inform customers about their electricity usage by home equipment and therefore help them manage their home electricity load. Further, Hydro One is about to finalize the results from its Thermal Energy Storage (TES) Pilot which will help customers, especially those with electrically heated homes and/or low income, to save on their bills by storing heat during off peak periods when prices are low and release it during on peak periods when prices are high. TES is a natural complement to dynamic prices.

3. *Enhancing energy literacy and consumer response through non-price tools*

Hydro One also intends to leverage enabling technologies that have been tested in its existing pilot to further assess persistence of these savings. Real-time electricity usage information via an in-home display can provide customers with up-to the minute usage and cost information to help influence their

choices of when to use various appliances. Disaggregation of electricity usage by major end-use via an online portal can provide powerful insights to customers to educate them on where they are using power most in their home. Wi-Fi connected thermostats allow customers to save energy in a “set-it and forget-it” manner and allow customers to make simple choices that can lead to large savings. Hydro One may also consider offering additional enabling technologies beyond those in its current DEP pilots.

**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?**

Conservation and load shifting decisions are based on pricing, information and enabling technologies. However, currently the lack of diversity in pricing, the shortfall in relevant information on instantaneous dynamic pricing and load information, and the deficiency in using complementary enabling technologies contributes to the lack of customer control, less grid flexibility and a non-adaptive infrastructure. The current price structure with its particular peak, mid-peak and off-peak rates offered at specific times of the day, while providing suitable opportunities for some to conserve and shift loads, is not providing suitable and encouraging incentives for many. This lack of a diversity of pricing plans, integrated with appropriate enabling technologies and with timely relevant instantaneous information on pricing and disaggregated loads, limits the customer and system efficiency benefits.

To address the deficiencies and opportunities outlined above, the proposed Hydro One RPP Roadmap Pilot will demonstrate the value to the consumer and the electricity system of offering alternative dynamic pricing plans and complementary enabling technologies and dynamic communication of instantaneous information regarding pricing, load consumption patterns and end-use disaggregation of data. Customers are much more likely to actively participate in programs to which they have voluntarily subscribed to options that conform more to their diverse needs. The Hydro One RPP Roadmap Pilot will be comprised of electricity options that residential customers have stated that they prefer and that would likely support important behavioral changes in electricity usage of benefit to the grid. To achieve the benefits for the smart grid and for customers, dynamic or ‘smart’ rates that integrate efficiency, demand response and customer satisfaction, are necessary. ‘Smart’ rates may include more innovative TOU rate structures and more dynamic prices to reflect system conditions at critical hours at particular times of the year (e.g., enhanced TOU rates, critical or variable peak prices, etc.). This will provide customers with choice, incentives and opportunities to reduce their electricity bills while addressing system needs.

Hydro One will extend its current pilot, narrow down pricing plans based on the EM&V results of the current pilot, expand the pilot to additional participants, and build its back office infrastructure and processes to support a future program deployment. By retaining existing participants, we can assess persistence of savings in a dynamic rate environment, reduce recruitment costs of the Hydro One RPP Roadmap Pilot, and improve the customer experience for these participants. This approach will help set the price structure to support the achievement of efficient electricity system operations and investments.

Following the extension, the Hydro One RPP Roadmap pilot will, for the first time, provide consumers with choice from a menu of dynamic pricing options. This pilot will help test which attributes customers most prefer when selecting a rate plan and their ability to shift and save on their bills. Hydro One will also be testing the degree of risk which customers are prepared to bear as they select a rate option. Under the current pilot, customers’ risk is limited as they are guaranteed that they will not pay more than what they would under current TOU rates. This pilot would assess change in customer response to rate alternatives where the customer would be accountable for the risk associated with their choice. The Hydro One RPP Roadmap pilot will also serve as an opportunity to focus on rate offerings and enabling technologies that have proven successful based on the EM&V results of the existing pilot. Current Hydro One pilots are extensive in their scope as they study a wide range of pricing options including variations of TOU, RPP, CPP and VPP prices. EM&V results would narrow down rate options that could be extrapolated to all Ontario customers, and across various geographical regions, densities and income levels (including low income).

To prepare for the transition to pricing as a program that would roll out dynamic pricing options to all customers, Hydro One would make the necessary billing system infrastructure investments and process changes. The Hydro One RPP Roadmap Pilot would enable Hydro One to carry out proper testing of billing processes to allow successful delivery to customers in the future. This is a significant component of the pilot, without which, Hydro One would be challenged in carrying out the RPP Roadmap objectives.



All of these activities will serve to inform the OEB as to how customers respond to various rate plans, which rate plans are seen as most favourable by customers, and the impact of certain enabling technologies on bills. This pilot is expected to design and develop a solution for delivering dynamic pricing across Ontario, in terms of rate offerings, customer education, and transitioning to a full deployment to all Ontario customers.

**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).**

The scope of Hydro One's current dynamic energy pricing pilots is considered among the largest pricing pilots worldwide. It is evaluating 12 different dynamic rate options and 5 levels of information feedback and automation. This scope may be well beyond other programs/pilots deployed across North America. Under the RPP Roadmap pilot, Hydro One intends to narrow the scope to include rate structures that have produced favourable customer response from shifting their consumption out of the peak, lowering customer bills, and improving customer satisfaction. We will be quantifying the take-up rate of these optional pricing plans.

The pilot rates will be designed to be revenue neutral with respect to existing average residential load profiles – i.e., the same revenue would be recovered for an average participant under the new dynamic rate as under current TOU rates faced by Hydro One residential customers. This practice has also been adopted under our current Smart Grid Fund pilot.

Similar to initiatives that benefit all Ontarians such as conservation and demand management, this pilot would inform the OEB of the benefit to all Ontario electricity customers, and should therefore be funded by all customers (e.g. through Global Adjustment).

Hydro One is partnered with McMaster University, whose professors and researchers are world renowned in the field of energy analytics. They have extensive experience in designing rate and information feedback pilots and analyzing their results. McMaster is capable of extracting numerous insights from a diverse stratification of customers spanning a wide range of income levels, urban vs. rural density, geographic location, home heating and cooling types, enabling technology, and pricing offerings, etc. This diverse sample of participants will allow the OEB to gain a wide range of information and insights from a single pilot.

## **2. PROJECT PLAN**

**A. In no more than ten sentences, outline the project plan.**

Hydro One intends to offer residential customers across diverse income, density and geographic ranges the opportunity to select from a number of dynamic rate plans for a 12 month period beginning May 1, 2017. Several of these pricing options are reflected by the OEB's priority and non-priority pricing options, as discussed earlier.

Hydro One will offer some of the participants a variety of enabling technologies that provide information and automation to the customer. Hydro One, with McMaster University, will evaluate the impact of each rate treatment and enabling technology with respect to energy conservation, peak demand savings, customer preferences, customer satisfaction, and other aspects. These results can also be presented across stratifications including but not limited to income level, density, and geography.

Customers have expressed a desire for choice and more control over their electricity rates and this pilot aims to give customers that choice. Pricing options will be based on the outcome of customers' feedback from current pricing pilot as set out by the EM&V results. Customers may also be exposed to some risk associated with their rate choice. A variety of rate structures (with aspects similar to those included in Table A2 in the Guideline) are expected to be tested. To facilitate the smooth roll out of dynamic pricing, Hydro One will build and test its back office infrastructure and processes.

**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.).**

### **Program Design**

Hydro One, together with McMaster University, will assess which rate options and enabling technologies have provided the greatest benefits to customers under their existing Dynamic Energy Pricing pilot. Specific offerings will be tailored based on these findings. The team will determine an appropriate number of participants to include in the study that will allow a statistically significant evaluation of all offerings across various characteristics including geography, income level and usage level. The team will also review existing materials, including the pilot website, shadow bills, program information pamphlets, etc. and make the necessary upgrades to incorporate lessons learned from the existing pilot and to reflect the current pilot offering.

### **Recruitment & Marketing**

There will be two phases to the recruitment: existing pilot participants and new participants. For customers on the existing pilot, Hydro One intends to offer an extension of their existing pilot to April 30, 2017. Hydro One would then offer all those participants who agreed to the extension the opportunity to participate in the Hydro One RPP Roadmap Pilot beginning May 1, 2017.

Hydro One will also recruit new participants for the Hydro One RPP Roadmap Pilot. Potential participants will be identified based on an assessment of their usage, geography, historical usage amount among other factors. Hydro One will reach out to these customers through email and direct mail. Information about the pilot will also be made available on a pilot website where customers can sign up and be accepted upon a review of their eligibility criteria. Eligibility criteria will depend on the type of enabling technology(s) offered to customers.

### **Customer Education**

Customers will need to be well informed about the pilot offerings and about the impact that it may have on their lifestyle and electricity bills prior to participate in the pilot. Customers would be educated about the various rate offerings and enabling technologies and the potential impact on the way they use electricity. Strong supporting materials including a robust website, FAQs, and live support will be made available to customers as they make the decision to participate in the pilot. Customers will also be kept informed during the pilot, through transitional shadow bills, participant brochures, live-support and information through their enabling technology to maintain understanding of their rates and how to best take advantage of their applicable rate structure. Customer education would provide participants with clear, accurate, and customer-friendly information that would help them make well-informed choices about their price plans and electricity usage.

### **Installer Training**

A key component to effective program delivery involving home installations lies in having knowledgeable, courteous installers who can answer customer questions about the pilot, rates and the enabling technologies they are receiving. The installer may be the only representative of the pilot the customer meets in person, and customers often take advantage of this opportunity to ask detailed questions about the pilot that they may not ask the program administrators over the phone or via email. As a result, it is extremely important that installers are well trained so they can confidently and honestly answer customer questions or let them know where they can find answers to questions they may not know. Hydro One intends to solicit proposals from a variety of potential installation contractors to ensure the most qualified vendor is selected as the installation vendor. Hydro One and McMaster will also deliver detailed in-person training session(s) for all installers and provide comprehensive documentation to ensure they are fully educated in the pilot details.

### **EM&V Analysis**

McMaster University has professors and researchers who have extensive experience designing and evaluating energy and pricing pilots. McMaster University will be closely involved in the pilot design and customer recruitment to treatments groups to ensure that an adequate number of participants across rate treatments, enabling technologies and characteristic stratifications is realized. This will promote the viability and results of this pilot. McMaster will follow the IESO EM&V protocol and best practices identified in the OEB Pilot Plan Technical Manual.

### **Billing Infrastructure Development**

While the existing pilots currently use shadow billing administered by McMaster University, Hydro One would need to make the necessary investments in its own billing infrastructure to offer these rates without shadow billing on an ongoing basis to a broader customer base.

**C. Describe each of the major deliverables that will be provided to the OEB as part of this project.**

Hydro One will deliver:

**Interim Report**

Following recruitment of participants, Hydro One will deliver an interim report outlining the status of the project and any required adjustments to the initial project plan.

**Final Report**

By December 31, 2018, Hydro One will deliver a final report summarizing all findings from the Hydro One RPP Roadmap Pilot. These will include but are not limited to the following results: conservation savings, peak demand reduction, customer satisfaction, customer satisfaction, etc. The Final Report will also include any lessons learned that come out of the pilot.

### 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 3<sup>rd</sup> 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
Sahar Mishriki	Hydro One, Manager Strategy & Conservation	Project Lead
David Zavarise	Hydro One, CDM Analyst	Analyst
Dean Mountain	Professor, McMaster University	Experimental Design, EM&V
Ken Deal	Associate Professor, McMaster University	Experimental Design, EM&V
Frank Denton	Emeritus Professor, McMaster University	Experimental Design, EM&V
Byron Spencer	Professor, McMaster University	Experimental Design, EM&V
Ivor da Cunha	Field Coordinator, McMaster University	Project Co-ordination
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.
Hydro One Networks Inc.	Project Lead, In-kind Contributor	
McMaster University	Project Administrator, EM&V, In-kind Contributor	
Other Partners/Vendors as Required		

**Attach this completed document, in Word format (no PDFs) to an email and submit to:**  
[BoardSec@ontarioenergyboard.ca](mailto:BoardSec@ontarioenergyboard.ca) citing "EB-2016-0201: RPP Pilot Application" in the subject line.

## Appendix (1)

### OEB vs. HONI Priority Pricing Pilots

Pilot Name	Description	Part of Existing HONI DEP Pilot
Critical Peak Pricing (CPP)	Implement a high price during specific times of year, while maintaining TOU during non-critical days/hours	Yes. Have varied price but not length of critical period.
Quick Ramping CPP	Very short CPP windows (15 minutes) with no notice. Requires enabling technology	No
Enhanced Peak TOU	Higher On-Peak to Off-Peak price ratio	Yes
Super Peak TOU	Super peak during summer or winter months and no mid-peak period	Are testing TOU with no mid-peak, but peak is same price year round and able to simulate this offering using DEP data.
Evening Peak TOU	Shifts summer peak later in the day to match system peak	No
Seasonal TOU	Eliminates mid-peak period and introduces flat rates during spring and autumn	Are testing TOU with no mid-peak, TOU still in effect all-seasons. For RTP participants have flat rates during winter.

### OEB vs. HONI Priority Non-Pricing Pilots

Pilot Name	Description	Part of Existing HONI DEP Pilot
Real time vs. delayed provision of information	Test impact of providing info about electricity usage or costs	Yes, testing IHDs that provide real-time info vs. no IHD
Financial Opportunity vs. Environmental/Health Info	Test impact of providing customers with info framed as a financial opportunity vs. environmental/health motivation. I.e. "Running your dishwasher off-peak can save \$50/year" vs. "Running your dishwasher off-peak can save 10 kg of CO <sub>2</sub> emissions"	No
Cost per kWh vs. Bill to Date	Test impact of providing info based on real time costs vs. bill to date: I.e. "Over the last hour you spent \$3 on electricity" vs. "You have spent \$50 on electricity so far this month"	Yes, for anyone receiving Plotwatt they see this comparison based on calendar month. Comparisons can be made for those with not IHD. (do not do this for Bill to date, as more difficult to offer when we have over 20 billing cycles)

## OEB vs. HONI Priority Non-Pricing Pilots (cont.)

Pilot Name	Description	Part of Existing HONI DEP Pilot
Multi Appliance Automation	Utility interface that controls multiple devices for load control events.	Part of BYOT/Autosave but not DEP
Customer Programmed Appliances	Allows customers to program their appliances with key objectives	Yes, Energate
Quick Ramping Automation	Utility turn off/down certain devices (i.e. water heater, A/C) for very short intervals (15 mins)	No