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BY COURIER

May 13, 2008

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

Dear Ms. Walli:

EB-2007-0086 – Hydro One Networks' Time-of-Use Pilot Project Results

In accordance with the Ontario Energy Board's approval, Hydro One Networks' Regulated Price Plan Time-of-Use Pilot Project, EB-2007-0086, I am pleased to submit the report for the Time-of-Use Pricing Pilot Project Results.

I trust that the report will satisfy the Board's requirements for information sharing and should you have any questions, please do not hesitate to contact Stan But at 416-345-5859 or myself.

Sincerely,

ORIGINAL SIGNED BY SUSAN FRANK

Susan Frank

Attach.

Hydro One Networks Inc.
Time-of-Use Pricing Pilot Project Results

EB-2007-0086

May 2008

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Acknowledgments

The TOU Pilot Team would like to thank Dr. Dean Mountain of McMaster University who provided advice on sample design and Chris Cincar of the Ontario Energy Board (OEB) who provided guidance on the pilot project.

Pilot results were presented to Hydro One's Customer Advisory Board (CAB). Comments received from the CAB members were reflected in the report.

Executive Summary

In March 2007, Hydro One Networks Inc. ("Hydro One") received approval from the Ontario Energy Board ("OEB") to undertake a pilot project using funding from the 3rd tranche CDM budget involving 500 residential, farm and small general service (under 50 kW) Distribution customers for 5 months (May to September 2007) to assess their response to time-of-use ("TOU") pricing. Instead of paying the Regulated Price Plan ("RPP") commodity prices, pilot participants were asked to pay the OEB-approved RPP TOU rates during the pilot period.

This study was required because results from other TOU pilot projects undertaken by the OEB or other LDCs in the Province may not be directly applicable to Hydro One's customers since most of our customers are rural-based and have higher electricity usage due to great reliance on electric equipment such as electric space and water heating. The main objectives of the pilot were:

- To assess the customer responses to the RPP TOU rates versus the two-tiered threshold RPP;
- To assess the effectiveness of the real-time in-home display monitors ("RTM") in conjunction with RPP TOU rates;
- To assess the communication and settlement support required for implementing RPP TOU rates.

Major findings

- Pilot participants were responsive to the RPP TOU rates and were able to shift and conserve part of their load. For a typical customer on RPP TOU rates, the load-shifting impact averaged 3.7% in the summer months and the conservation impact averaged 3.3%.

- Providing RTMs to customers on RPP TOU rates helped them respond even more. On a normal summer day, the load-shifting impact averaged 5.5%, while the conservation impact averaged 7.6%. On a hot summer day (over 30°C), the load-shifting impact was even more pronounced at 8.5%.

- Extrapolating the load-shifting impact (8.5%) on a hot summer day to all Hydro One residential customers would yield a summer peak load-shifting impact of about 150 MW. Extrapolating the load-shifting impact to all residential customers in the Province would result in a much higher impact.

- 76% of pilot participants under the RPP TOU rates paid a lower electricity bill as a result of load-shifting, compared to the regular RPP rates. Savings attributable to conservation would be incremental. Customers who were better off gained on average about $23 during the pilot (about $6 per month), while customers who were worse off on average lost about $7 (less than $2 per month).

- 72% of participants indicated that they would like to remain on the RPP TOU rates, and 87% claimed they changed their behaviour during the pilot. Only 4% found the changes in their daily activities in response to the RPP TOU rates to be inconvenient.

- 63% of participants with an RTM found it useful to help them conserve electricity. On average, customers thought they would save 9% on electricity consumption by using the RTM.

- Of the 200 small general service (under 50 kW) customers contacted, only 2 agreed to participate in the pilot. Analysis of the hourly load profiles for the small general service customers who declined participation in the pilot revealed that these customers on average could be worse off by about $10 per month in their electricity bill in the summer if they did not shift load and/or conserve. Further analysis using generic load profiles shows that small general service customers could be better or worse off under RPP TOU rates depending on the industry in which they operate, their specific hourly electricity consumption patterns and their ability to shift load and/or undertake conservation initiatives.

Conclusions and Program Implications

- The pilot study shows that the current RPP TOU rates are effective in encouraging load shifting and conservation in Ontario. Other creative TOU pricing options, such as the critical peak pricing, should be considered.
- The use of an in-home real-time display monitor is very useful as it empowers customers to shift and conserve. Other technology options that could help customers better manage their electricity usage should also be tested.
- Depending on individual usage patterns, selected customer groups under the RPP TOU rates could be better off or worse off. Customers groups that would likely be negatively affected by the RPP TOU rates include residential customers with low electricity consumption; customers who stay at home during peak hours; and business customers with one work shift and/or who close on weekends. These customers need to shift and/or conserve more in order to offset the RPP TOU rate impact. If it is envisioned that TOU rates become mandatory for all customers, these negatively affected customer groups may require some mitigation alternatives. A shortened on-peak period and/or other pricing measures, or voluntary TOU below a certain threshold, would help mitigate the negative impact.

1. Introduction

In March 2007, Hydro One Networks Inc. ("Hydro One") received approval from the Ontario Energy Board ("OEB") to undertake a pilot project using funding from the 3rd tranche CDM budget involving 500 residential, farm and small general service (under 50 kW) Distribution customers for 5 months (May to September 2007) to assess their response to time-of-use ("TOU") pricing. Instead of paying the Regulated Price Plan ("RPP") commodity prices as shown in Table 1, pilot participants were asked to pay the OEB-approved RPP TOU rates during the pilot period. TOU rates, consisting of different prices for various time periods, encourage pilot participants to shift electricity consumption from the more expensive on-peak period to the less expensive off-peak period. Appendix A provides more details regarding the pilot proposal submitted to the OEB.

This study was required because results from other TOU pilot projects undertaken by the OEB or other LDCs in the Province may not be directly applicable to Hydro One's customers since most of our customers are rural-based and have higher electricity usage due to great reliance on electric equipment such as electric space and water heating. The main objectives of the pilot were:

- To assess the customer responses to the RPP TOU rates versus the two-tiered threshold RPP. Responsiveness is measured in the following categories:
  - shifting usage away from peak periods
  - conservation impact
  - bill impact

- To assess the effectiveness of the real-time in-home display monitors ("RTM") in conjunction with the RPP TOU rates;

- To assess the communication and settlement support required for implementing the RPP TOU rates.

Table 1: RPP and RPP TOU Prices for Pilot Participants (May-September, 2007)

Type of Rate	Day of the Week	Time	Pricing	Rate (¢ per kWh)
RPP Rates*	Weekdays, Weekends & Holidays	All Day	Tier threshold per month in kWh*	5.50¢
			Additional kWh	6.40¢
RPP TOU Rates*	Weekends & Holidays	All Day	Off-Peak	3.4¢
	Weekdays	7:00am-11:00am	Mid-Peak	7.1¢
		11:00am-5:00pm	On-Peak	9.7¢
		5:00pm-10:00pm	Mid-Peak	7.1¢
		10:00pm-7:00am	Off-Peak	3.4¢

***** The threshold for the summer months was set at 600 kWh for residential customers and 750 kWh for non-residential customers.

2. Pilot Study Group Design

Under the guidance of Professor Dean Mountain of McMaster University, the project was designed to reflect a stratified sample of Hydro One Distribution customers in four study groups, two TOU groups and two control groups.

TOU Groups

Two TOU study groups were selected for the pilot, and both groups were billed according to the TOU rates shown in Table 1 for the pilot period. Customers in the first TOU group were given a RTM to view their real-time consumption and cost information. Customers in the second TOU group were given a $50 bonus at the end of the pilot instead of the RTM as an incentive to participate in the project. Customers in TOU groups had access to weekly tracking reports on the web specially designed for the pilot. They also received 2 status reports by mail that reflected their usage pattern and savings. Appendix D provides a sample of the interim and final reports sent to the customers.

Control Groups

Customers participating in the control groups paid the regular RPP prices. Those RPP prices were designed for conventional meters in two tiers, one price for monthly consumption under a tier threshold and a higher price for consumption over the threshold. The regular RPP tiered rates during the pilot (May to September) are summarized below:

Residential customers

- First 600 kWh per month at the commodity rate of 5.3 ¢/kWh
- Incremental load above 600 kWh per month at 6.2 ¢/kWh.

Small Business customers

- First 750 kWh per month at the commodity rate of 5.3 ¢/kWh
- Incremental load above 750 kWh per month at 6.2 ¢/kWh.

Similar to the TOU groups, customers in the first control group received an RTM to view their hourly consumption and usage. Customers in the second control group did not get an incentive or receive any further information. Customers in the latter group were not aware their load was used for analysis in the pilot, as it is very important customers in the control group behave normally in terms of their electricity usage.

3. Pilot Participant Recruitment

A stratified sample was randomly selected from about 23,000 customers who already had smart meters installed and data communication system set up. Customers were screened to remove those that were: (1) not suitable for the pilot project (such as seasonal customers, customers planning to move out, and customers with incomplete data due to weak communication) or (2) not suitable for the special manual billing process used during the pilot (such as retailer-enrolled customers and customers on a pre-arranged bill payment method).

About 3,100 invitation letters (see Appendix B for sample invitation letter) were sent out. During the telephone recruitment process, about 2,700 customers were contacted by telephone during the participant enrolment process. In total, 411 customers agreed to participate in the

pilot, reflecting an overall response rate of about 13%. Customers who were called did have the right to say no, or to opt out. Customers who agreed to participate in the RPP TOU were required to sign an agreement with Hydro One (see Appendix C for sample customer agreement). As guided by Dr. Dean Mountain, 75 customers were also included in the study as a special control group without an RTM or cash incentives. Therefore, the final sample of the pilot consisted of 486 customers with the following groupings:

- 153 customers on RPP TOU rates with RTM
- 177 customers on RPP TOU rates with a $50 incentive at the end of the pilot
- 81 customers on regular RPP rates with RTM
- 75 customers on regular RPP rates as the control group without RTM or incentives.

Table 2 presents the pilot participants by rate class and study group. About 200 small general services (under 50 kW) customers were contacted, only 2 general service (under 50 kW) customers agreed to participate in the pilot project. The most common reason used by these customers to refuse participation was the fear of being worse off on the TOU rates. Additional hourly load profile analysis was prepared for the small general service (under 50 kW) customers, and the results are presented in Section 4.5 of this report.

Table 2: Number of Customers in the Pilot by Rate Class and Study Group

Number of Customers	TOU With RTM	TOU without RTM	RPP with RTM	RPP without RTM
Total	**153**	**177**	**81**	**75**
Residential – High density	88	80	48	48
Residential – Low density	44	66	14	17
Urban Residential	10	15	7	8
Farm – Phase 1	9	16	12	2
General service (under 50 kW)	2	0	0	0

4. Analysis of Results

To facilitate a comparison of the results with other TOU pricing pilot projects in Ontario, Hydro One followed the same analytical approach as guided by the OEB staff. Impacts on pilot participants were measured for the following categories:

- Load-shifting impact: the demand response of customers shifting some electricity load usage away from peak hours to the mid-peak and off-peak periods.
- Conservation effect: the reduction in total electricity consumption, regardless of time periods.

– Bill impact: comparison of what customers paid on the RPP TOU rates versus the conventional RPP (non-TOU) rates.

To correct for the differences in customer representation between the pilot sample and total utility, the study results for load-shifting and conservation impacts were extrapolated to the total utility level, using appropriate weights by rate class.

4.1 Load-Shifting Impact

A non-parametric econometric model was used to measure the load-shifting away from on-peak hours. Factors taken into account by the model include the different TOU pricing periods, treatment or control groups and type of day. Further details regarding the model can be found in "Ontario Energy Board Smart Price Pilot Final Report", Appendix E, Load Impact and Conservation Effect Analytical Model, prepared for the OEB, July 2007. Additional econometric analysis was applied to each rate class considered in this pilot to test whether there was a statistically significant difference between energy consumption of the various study groups at different TOU intervals. The tests revealed the load-shifting impacts were statistically significant at 1% probability level (i.e. one chance in a hundred that the results could have happened by coincidence).

As presented in Table 3, the load-shifting impact (away from on-peak periods) averaged 3.7% for customers on the RPP TOU rates and 5.5% for customers on the RPP TOU rates with an RTM in the summer months. For very hot days (over 30 degree Celsius), the load-shifting impact was 8.5% for customers on the RPP TOU rates with an RTM. The higher load-shifting impact during very hot days was attributed to higher air conditioning load compared to normal summer days.

Extrapolating the load-shifting impact on a hot summer day (8.5%) to all Hydro One residential customers would yield a summer peak load-shifting of about 150 MW during the summer system peak period. Extrapolating the load-shifting impact to all residential customers in the Province would yield a much higher result.

Table 3: Load-shifting Away from On-Peak Periods under RPP TOU rates

Load-shifting Source	**% of shifting**
All Days	
TOU and RTM effect	-5.5%
TOU effect	-3.7%
Incremental RTM impact on load-shifting	-1.8%
Very hot days (>30 degree C)	
TOU and RTM effect	-8.5%
TOU effect	-2.9%
Incremental RTM impact on load-shifting	-5.6%

4.2 Conservation Impact

Conservation impact was estimated by comparing the electricity consumption of each pilot participant during the pilot period to the same period in 2006. The consumption figures were corrected to remove abnormal weather effects so that differences in weather conditions would not affect the estimate of conservation. The 2007 figures were calculated using hourly meter reads and the 2006 data were collected using Hydro One's customer billing system. As shown in Table 4, pilot participants on average reduced their energy consumption by 3.3% compared to the same period last year. Customers with an RTM conserved even more, averaging 7.6%. Due to data limitations, the results for very hot days could not be measured separately.

Table 4: Conservation Impact during the Pilot under RPP TOU rates

Conservation Source, All days	% of change
TOU and RTM effect	-7.6%
TOU effect	-3.3%
Incremental RTM impact on conservation	-4.3%

To measure the impact of customers having access to an RTM under conventional RPP (non–TOU) rates, additional analysis was undertaken to compare the electricity consumption of customers on the regular RPP (non-TOU) rates with and without an RTM. This comparison revealed that the average customer on the RPP (non-TOU) rates with access to an RTM conserved 6.7% during the pilot period.

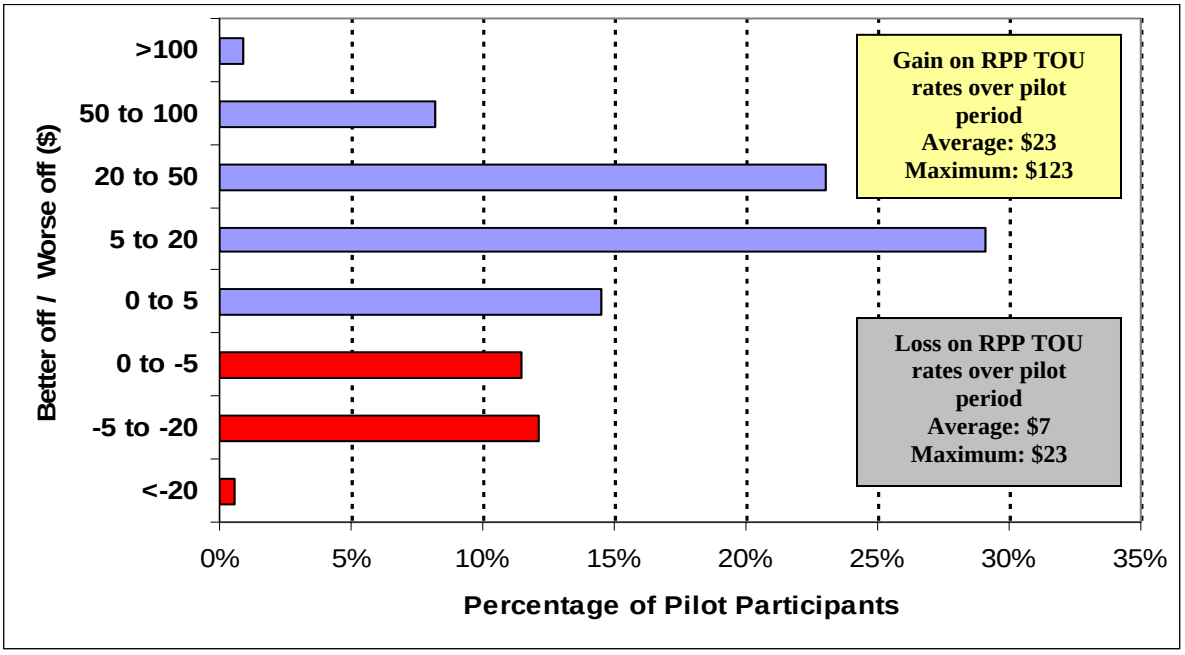
Table 5: Conservation Impact of RTM under RPP rates

Conservation Source, All days	% of change
RTM effect	-6.7%

4.3 Customer Bill Impact

To calculate the bill impact of the RPP TOU rates, customer bills were compared using the RPP TOU rates and the regular RPP rates. As the hourly data was available only for 2007, this comparison captured the load-shifting impact but not the conservation impact. As shown in Figure 1, most pilot participants (76%) were better off with the RPP TOU rates during the pilot period. Customers who were better off on average gained about $23 during the pilot (about $6 per month), while customers who were worse off on average lost about $7 (less than $2 per month).

Figure 1: Bill Impact of RPP TOU Rates



* Figure 1 presents the bill impact over the entire pilot period.

Further analysis revealed that whether customers benefit from the RPP TOU rates would depend on their consumption level and hourly load profile. It is noteworthy that 32% of pilot participants were better off on the RPP TOU rates without conservation. As illustrated in Figure 2, the consumption patterns for these customers are likely to be more evenly spread out during the day with a greater percentage of usage during the mid-peak and off-peak periods. As a result, these customers will likely benefit from the RPP TOU rates.

In the pilot, about 14% of customers were worse off under the RPP TOU rates, despite making an effort to reduce their electricity consumption relative to the previous year. As illustrated in Figure 3, the consumption patterns for these customers are likely to have a greater percentage during on-peak and mid-peak periods where the electricity rates are relatively higher than the off-peak period. Customers who stay at home will likely be negatively affected by the RPP TOU rates. These customers will need to shift and/or conserve more in order to offset the RPP TOU rate impact. Similarly, customers with low electricity usage are likely to be negatively impacted, as there is only a limited amount of load above the base load that they are able to shift or conserve.

Figure 2: Load Profiles for customers who will likely benefit from TOU rates

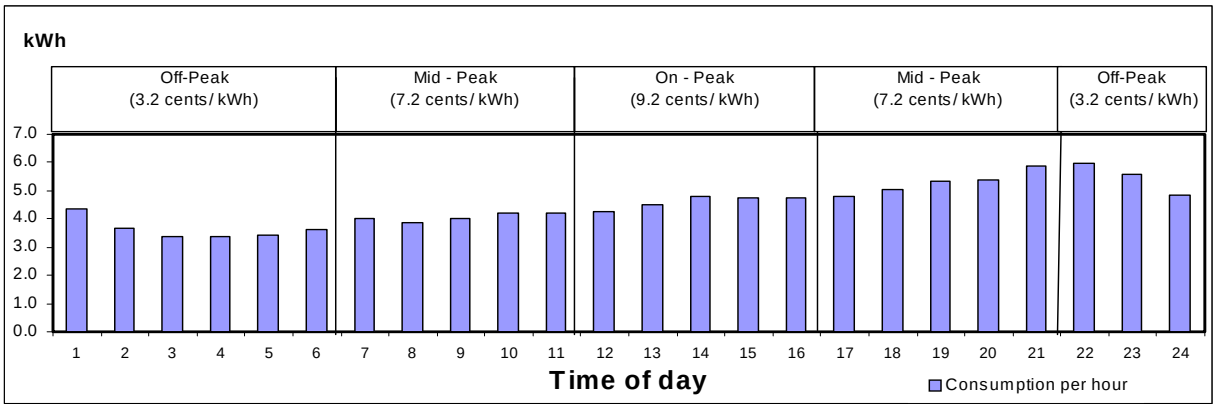
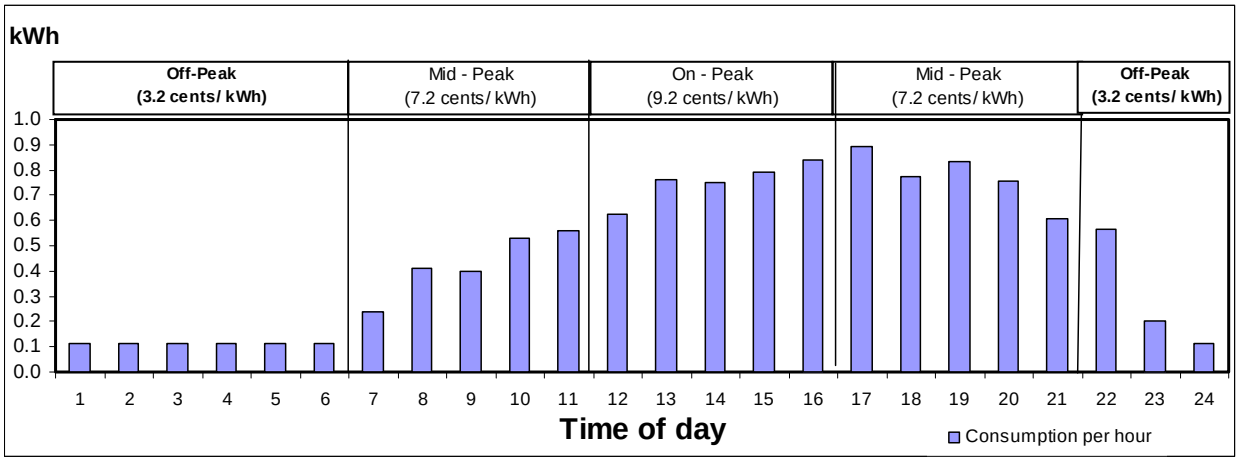


Figure 3: Load profiles for customers who will likely be worse off on TOU rates



4.4 Customer Feedback

Customer feedback was obtained from the recruitment process and from the two survey questionnaires completed by the pilot participants (see Appendix E for sample of survey questionnaires used). The following summarizes the feedback received from the customers during the pilot:

Feedback received during the recruitment process

The most frequently used reasons for refusal are provided below:

- "I do not like being told by Hydro One when and how to use electricity"
- "I am already conserving as much as I can"
- "I will deal with the new rates when necessary"
- "I am a stay-at-home mother/retired, and these rates will increase my expenses".

Feedback on RPP TOU rates

- 72% would like to remain on the RPP TOU rates
- 87% claimed they changed their behaviour in response to the RPP TOU rates
- 68% felt the current RPP TOU rate differentials provided enough incentive for load-shifting
- 53% did not mind the RPP TOU rates affecting their daily activities
- Only 4% found the change to RPP TOU rates inconvenient.

Feedback on RTM

- 63% found the RTM useful to help conserve electricity
- 45% found it difficult to install the RTM. Pilot participants reported difficulty in fitting the RTM around the meter and in programming the TOU rates on the RTM. These comments are useful for future RTM program implementation.
- Customers thought on average they would save 9% on electricity consumption by using the RTM.

Feedback on communication

- 76% preferred to receive communications by mail; 16% preferred emails;
- 82% found the interim report very useful.

Feedback on TOU website:

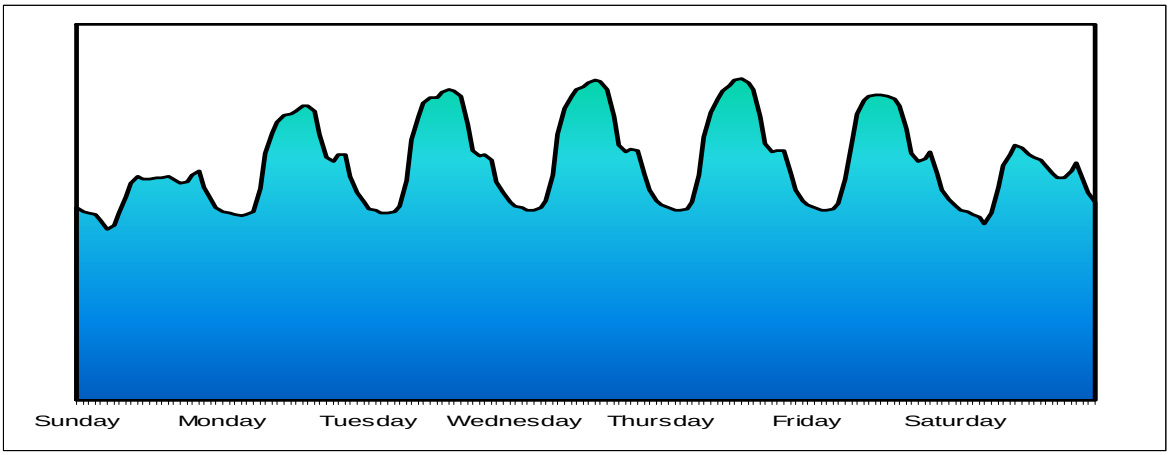
When TOU rates are offered, customers will be able to view their hourly usage by 9 A.M. the following day. To test customer response to this service, all pilot customers in the TOU group were given access to a special website set up to their usage by the RPP TOU periods. Customer feedback on this information is summarized below:

- 40% used the TOU pilot website to view their usage; 5% logged on every week
- 53% found the information on the website useful
- Extrapolating this to the provincial level, over 200,000 households would view their consumption on a weekly basis when RPP TOU rates are fully implemented.

4.5 Analysis of General Service Customers

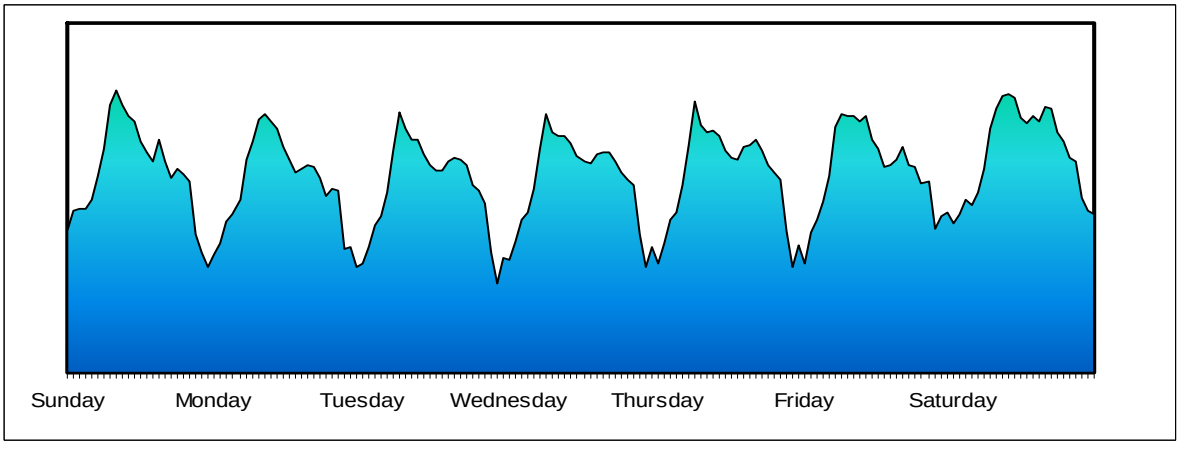
During the recruitment process, nearly 200 small general service (under 50 kW) customers were contacted to participate in the RPP TOU rates. Only 2 customers agreed to join the pilot. The most common reason used by customers for refusal was the fear of being worse off under the RPP TOU rates. Given that smart meters were installed, a data only analysis using 348 small general service (under 50 kW) customers with complete hourly data revealed that 55% of these customers would be worse off on the RPP TOU rates if they did not change their electricity consumption patterns. Assuming these customers would not shift and/or conserve in response to the RPP TOU pricing, these customers on average could be worse off by about 14% (about $10 per month on average) in their electricity bill in the summer. As shown in Figure 4, this group of customers had a relatively low electricity usage during the off-peak period; consequently the savings in the off-peak period were not sufficient to offset the relatively higher rates during on-peak and mid-peak periods.

Figure 4: Weekly Load Shape of 348 General Service Customers



However, this impact should not be generalized, because the results of these 348 customers are not representative of the small general service (under 50kW) customers within Hydro One. Analysis using the generic load shapes for Hydro One's small general service (under 50kW) customers revealed that the impact of the RPP TOU rates on small business customers will depend on the industry they operate in and their specific usage profile. Businesses with one work shift and/or who are closed on weekends will likely need to shift and/or conserve more in order to offset the RPP TOU rate impact. However, the impact for businesses whose load is more evenly distributed between off-peak and other periods will likely be more neutral even without load-shifting and conservation (see Figure 5).

Figure 5: Weekly Load Shape of Retail General Service Customers



5. Summary of Major Findings

Major findings of this pilot are summarized below:

- Pilot participants were responsive to the RPP TOU rates and were able to shift and conserve part of their load. For a typical customer on RPP TOU rates, the load-shifting impact averaged 3.7% in the summer months, and the conservation impact averaged 3.3%.

- Providing RTMs to customers on RPP TOU rates helped them respond even more. On a normal summer day, the load-shifting impact averaged 5.5%, while the conservation impact averaged 7.6%. On a hot summer day (over 30°C), the load-shifting impact was even more pronounced at 8.5%.

- Extrapolating the load-shifting impact (8.5%) on a hot summer day to all Hydro One residential customers would yield a summer peak load-shifting impact of about 150 MW. Extrapolating the load-shifting impact to all residential customers in the Province would result in a much higher impact.

- 76% of pilot participants under the RPP TOU rates paid a lower electricity bill as a result of load-shifting compared to the regular RPP rates. Savings attributable to conservation would be incremental. Customers who were better off gained on average about $23 during the pilot (about $6 per month), while customers who were worse off on average lost about $7 (less than $2 per month).

- 72% of participants indicated that they would like to remain on the RPP TOU rates and 87% claimed they changed their behaviour during the pilot. Only 4% found the changes in their daily activities in response to the RPP TOU rates to be inconvenient.

- 63% of participants with an RTM found it useful to help them conserve electricity. On average, customers thought they would save 9% on electricity consumption using the RTM.

- Of the 200 small general service (under 50 kW) customers contacted, only 2 agreed to participate in the pilot. The most common reason used for refusal was the fear of being worse off on the RPP TOU rates.

- Analysis of the hourly load profiles for the small general service customers who declined participation in the pilot revealed that these customers on average could be worse off by about $10 per month in their electricity bill in the summer if they did not shift load and/or conserve. However, this impact should not be generalized because these customers are not representative of all small general service customers within Hydro One.

- Further analysis using generic load profiles shows that small general service customers could be better or worse off under the RPP TOU rates depending on the industry in which they operate, their specific hourly electricity consumption patterns and their ability to shift load and/or undertake conservation initiatives.

Conclusions and Program Implications

- The pilot study shows that the current RPP TOU rates are effective in encouraging load shifting and conservation in Ontario. Other creative TOU pricing options, such as the critical peak pricing, should be considered.
- The use of an in-home real-time display monitor unit is very useful as it empowers customers to shift and conserve. Other technology options that could help customers better manage their electricity usage should also be tested.
- Depending on individual usage patterns, selected customer groups under the RPP TOU rates could be better off or worse off. Customers groups that would likely be negatively affected by the RPP TOU rates include residential customers with low electricity consumption; customers who stay at home during peak hours; and business customers with one work shift and/or who close on weekends. These customers need to shift and/or conserve more in order to offset the RPP TOU rate impact. If it is envisioned that TOU rates become mandatory, these negatively affected customer groups may require some migration alternatives. A shortened on-peak period and/or other pricing measures, or voluntary TOU below a certain threshold, would help mitigate the negative impact.

Appendix A:
Hydro One TOU Pricing Pilot Proposal

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Susan Frank
Vice President and Chief Regulatory Officer
Regulatory Affairs

BY EMAIL AND COURIER

March 9, 2007

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

Dear Ms. Walli:

Request for Approval for Hydro One Networks' Regulated Price Plan Time-of-Use Pilot Project

In accordance with the Board's Standard Supply Service Code, Hydro One Distribution Networks Inc. (Networks) applies for approval to proceed with a Regulated Price Plan (RPP) Time-of-Use (TOU) pilot project as described in the attached proposal.

Networks believes the pilot project will provide very useful information with respect to load research and program implementation information related to RPP TOU rates. In order for Networks to start the pilot project on time in May 2007, we respectfully request the Board process this request as expeditiously as possible.

Yours truly,

Susan Frank

Proposal for RPP TOU Pilot Project

Hydro One Distribution Networks Inc. (Networks) plans to undertake a pilot project involving 500 customers for 5 months (May to September 2007) to assess the response of its residential, farm and small general service customers to use of Regulated Price Plan (RPP) Time-of-Use (TOU) commodity rates. This study is required because results from TOU pilot projects currently undertaken by other LDCs in the province may not be directly applicable to Networks since most of our customers are primarily rural based and have higher usage of electric equipment such as electric space and water heating. In addition, Networks' proposed pilot offers the following special features:

- Farm and small general service customers are included in the study;
- Effectiveness of real time in-home display monitors and smart thermostats will be tested with RPP TOU rates;
- Pilot participants will be paying RPP TOU rates, getting a RPP TOU bill and seeing their consumption profiles through a special web site set up for the project.

The RPP TOU pilot will be fully funded by Networks' 3rd tranche CDM budget under Program Management and Research which was already approved by the Board in RP-2004-0203/EB-2005-0198. Networks has an approved budget allocation of $2.6 million for Program Management and Research and as of Q4, 2006 has spent about $1.6 million under this category. There will be sufficient funding in the allocated budget to cover the incremental cost for this pilot.

In order to minimize time delays as well as costs, pilot participants will be randomly selected from customers who already had smart meters installed as part of the provincial smart meter initiative. The primary purpose of this pilot is to examine the impact of RPP TOU rates and whether that affects conservation behaviour. In addition, Networks intends to use this opportunity to assess the extent to which real time in-home display monitors will help our customers on RPP TOU rates shift load and/or reduce energy consumption more effectively. Also, some selected customers with central air conditioning who are willing to participate in Networks' load control program will be offered a smart thermostat from which customers could remotely control their air conditioning setting. Professor Dean Mountain of McMaster University will be retained to provide general guidance for the pilot project, while detailed load shape analysis will be undertaken in-house by the Hydro One Load Research Team.

Networks intends to share the pilot project results with the Board. If deemed useful and assuming results from other LDC RPP TOU pilot projects are available, province-wide RPP TOU impact analysis can be performed using the LDC-specific load profiles prepared recently for 80 LDCs for cost allocation informational filings as required by EB-2005-0317.

<u>Pilot Project Objectives</u>

- Assess how RPP TOU commodity rates affect the hourly electricity consumption patterns of Networks' residential, farm and small general service customers. Since Networks' customers are mostly rural based, it will be useful to compare the Networks' pilot results with other LDC RPP TOU pilot projects undertaken for urban customers in the province.
- Assess the impact and effectiveness of real time in-home display monitors helping customers on RPP TOU rates shift and/or reduce load.
- Assess the impact and effectiveness of smart thermostats helping customers remotely manage their air conditioning load in the summer months.

- Assess the communication and settlement support required to implement the RPP TOU rates for all Networks' customers with smart meters in the future.

Study Approach

- Professor Dean Mountain of McMaster University, a recognized expert in load research in the province, will be retained to provide general guidance for the pilot study and particularly in the areas of sample design, customer selection and the methodology used by the Hydro One Load Research Team for assessing the load impacts. Based on preliminary analysis, a sample size of about 500 customers should be sufficient to construct a representative sample for the RPP TOU pilot study.
- In order to minimize time delays and costs, residential, farm and small general service customer that already had interval meters installed as part of the provincial smart meter initiative will be stratified and randomly selected to ensure a representative sample is chosen for the pilot project.
- After receiving approval from the Board for this pilot project, selected customers will be contacted in April 2007 to determine whether they are willing to participate in the pilot project and pay the RPP TOU rates for 5 months (May to September 2007). Participation in the pilot is entirely voluntary. Customers agreeing to participate in the pilot project will be asked to sign a contract agreeing to participate and pay the RPP TOU prices during the pilot study.
- For the study period, pilot participants will get a monthly bill clearly showing their electricity consumption differentiated by RPP TOU rates. In order to avoid making costly changes to the existing customer billing system that affect all Networks' customers, RPP TOU rate calculation and special billing for the 500 pilot participants will be processed separately and the information will be fed back to the normal billing engine for issuance of bills. After September 2007, pilot participants will return to the regular RPP (non-TOU) rates and get the usual billing arrangements.
- A special RPP TOU pilot project web site will be set up for pilot participants to sign in and view their own energy consumption profile by RPP TOU prices for the previous week. The energy profile information will be updated on a weekly basis. Information is not updated on a more frequent basis (such as daily) in order to keep the pilot project cost to a minimum. According to Professor Dean Mountain, providing weekly feed back to pilot participants is reasonable.
- About half of the pilot participants will get the real time in-home display monitors to help them manage their electricity consumption with RPP TOU rates. The in-home display monitors will be able to display the RPP TOU rates. Pilot participants will be allowed to keep the in-home display monitor after expiry of the pilot study. The real time in-home display monitors used in the pilot will be compatible with smart meters as well as RPP TOU rates.
- About half of the pilot participants will not get the in-home display monitors. To encourage customer participation for the pilot, a sign-up bonus will be considered for these customers.
- Selected pilot participants with central air conditioning will also be asked whether they are willing to participate in the Networks' SmartStat Program[1]. Participants in the load control program will get a smart thermostat for which they can remotely manage their thermostat settings.
- A special 1-800 phone line will be set up for the pilot project. Networks' staff from the pilot project team will handle questions from pilot participants pertaining to their consumption profiles and RPP TOU bills.

[1] Networks introduced the SmartStat residential load control program in July 2006. This program is designed to achieve summer peak demand reduction by controlling central air-conditioning temperature set-points using web-enabled programmable thermostats.

- Pilot participants will be asked to fill out 2 questionnaires during the study period, one questionnaire at the beginning of the pilot and the other questionnaire at the end of the project to provide further information (such as appliance and equipment usage, actions taken to change the consumption patterns during the pilot) to help the project team better understand the reasons for potential changes in the hourly electricity consumption patterns.
- After the completion of the pilot study, detailed load shape analysis will be undertaken by the Hydro One Load Research Team applying similar methodology used to derive load profiles in the cost allocation informational filings for EB-2005-0317. Hourly interval data will be normalized using weather normalization methodology approved by the Board in RP-2205-0020/EB-2005-0378. Professor Dean Mountain of McMaster University will review the methodology used for the impact analysis and the results of the final report.

Benefits of the Pilot Project

- Results from this RPP TOU pilot study will be useful for load research, load forecasting, CDM program planning and for identifying any potential issues pertaining to future RPP TOU program implementation.
- Networks intends to share the pilot results with the Board. If deemed useful and assuming results from other LDC RPP TOU projects are available, province-wide RPP TOU impact analysis can be performed using LDC-specific load shapes recently prepared for 80 LDCs in their cost allocation informational filings for EB-2005-0317.

Budget for the Pilot

- The pilot project will be fully funded by Networks' 3rd tranche CDM budget which was already approved by the Board in its decisions for RP-2004-0203/EB-2005-0198. The incremental cost for the pilot project is estimated to be about $120,000, which include spending for the following items:
    - Incremental cost of bill preparation for 500 customers for 5 months;
    - Remuneration for Professor Dean Mountain of McMaster University to provide general project guidance;
    - Setting up and maintaining a special RPP TOU web site for customers to review their electricity consumption profiles;
    - Handling charges for shipping real time in-home display monitors to selected customers;
    - Cost for undertaking 2 customer surveys;
    - 1-800 telephone line handling calls from pilot participants;
    - Project communication materials with customers;
    - Financial incentives for customer to participate in the pilot project
- Cost for the real time in-house display monitors and smart thermostats are already covered by existing Hydro One's CDM programs using the 3rd tranche funding.

Appendix B:
Sample Invitation Letter to Customers

Hydro One Networks Inc.
TOU Pilot Project Team
8th Floor, South Tower
483 Bay Street
Toronto, Ontario M5G 2P5

Tel: (1 866) 258 8333
Fax: (416) 345-5870
Email: LoadResearch@HydroOne.com

Customer Name
Address
Address
Town
Postcode

May 10, 2007

Subject: Time-of-Use Pilot Project

Dear :

As electricity conservation becomes more vital to sustaining a reliable supply of electricity in Ontario, Hydro One Networks Inc. ("Hydro One") is committed to working with you to develop effective conservation and demand management programs. We applied to the Ontario Energy Board (OEB) and received their approval to undertake a time-of-use (TOU) pricing pilot for about 500 customers from May 1 to September 30, 2007, to study how TOU rates affect the way people use electricity.

As one of Hydro One's first customers to have a smart meter installed, we are pleased to invite you to participate in this pilot project. If you are eligible to participate in this project, you will have the opportunity to see how much energy you can shift and save under the TOU rates.

How does the pilot project work?

Pilot participants will pay the OEB-approved TOU energy rates for five months (May through September, 2007) instead of the current Regulated Price Plan (RPP) energy rates (see the table below for comparison). Please note that the TOU rates pertain only to the electricity commodity prices and will not affect other charges on your electricity bill. During the pilot period, participants will receive a monthly bill clearly showing their electricity consumption differentiated by the TOU rate calculation. After September 30, 2007, participants will return to the regular RPP rates that they are now paying and to their usual billing arrangements. TOU rates during the pilot period will encourage participants to shift electricity consumption from the more expensive on-peak period to the less expensive off-peak period, resulting in lower electricity payments for the same consumption.

Type of Rate	Day of the Week	Time	Pricing	Rate (¢ per kWh)
RPP Rates*	Weekdays, Weekends & Holidays	All Day	First 600 kWh per month	5.3¢
			Additional kWh	6.2¢
RPP TOU Rates*	Weekends & Holidays	All Day	Off-Peak	3.2¢
	Weekdays	7:00am-11:00am	Mid-Peak	7.2¢
		11:00am-5:00pm	On-Peak	9.2¢
		5:00pm-10:00pm	Mid-Peak	7.2¢
		10:00pm-7:00am	Off-Peak	3.2¢

***** These rates have recently been changed by the OEB and will be effective on May 1, 2007

How will the TOU pilot benefit participants?

Participants in the pilot will be able to take advantage of the lower off-peak electricity rates by switching their use from peak hours to off-peak hours. For instance, they will be able to save money by running the dishwasher during off-peak hours and by doing laundry on the weekends. Some participants who do not shift enough of their usage to off-peak hours may actually see an increase in their energy bill during the pilot.

To help participants better manage their electricity consumption, we will be offering a number of the pilot participants a **free Power Cost monitor valued at $150**. If you are selected to participate in the pilot and then become one of the participants selected to receive the monitor, you will be able to see your electricity consumption on a real-time basis. The monitor also makes it possible to track electricity consumption during the month. Since quantities are limited, the Power Cost monitors will be offered on a first-come-first-serve basis to customers who are selected to participate in the pilot.

Pilot participants will also receive an energy efficiency kit with two compact fluorescent lights, a timer and energy saving tips. To help pilot participants better understand their electricity consumption patterns during the pilot, they will have access to a website showing their daily consumption profiles, which will be updated on a weekly basis.

How can you apply to participate?

Over the next two weeks, you may be contacted by Hydro One staff to determine your eligibility to participate in the TOU pilot. Please note that participation in the pilot is completely voluntary. If you are interested in participating or have any questions regarding this pilot, please call us at 1-866-258-8333 during office hours. This is a toll-free phone number specifically set up for the pilot. Alternatively, you can send an email to LoadResearch@HydroOne.com.

If you are selected to participate in the pilot, you will need to sign an agreement with Hydro One Networks Inc., agreeing to participate and to pay the TOU rates during the pilot period. You will also be asked to fill out two questionnaires, one at the beginning and of the pilot and the other at the end of the pilot, to provide further information to help the project team better understand the reasons for potential changes in your consumption patterns.

Thanks in advance for your interest.

Hydro One TOU Pilot Team

Appendix C:
Sample of TOU Pilot Agreement

CUSTOMER AGREEMENT FOR TIME-OF-USE PILOT PROJECT

The undersigned customer ("the Customer") and Hydro One Networks Inc. ("Hydro One") agree as follows:

1. The Customer wishes to participate in Hydro One's time-of-use pilot project ("the Project") that will be in effect from May through September, 2007, and the Customer hereby enrols in the Project in accordance with the terms and conditions in this Agreement. The Term of this Agreement shall commence on the Customer's normal billing date in May, 2007, and shall end on the Customer's normal billing date in September, 2007.

2. During the Term, the Customer will be charged and will pay for the electricity component of the monthly bill in accordance with the "Pilot Project TOU Rates" that appear in the chart below; and after the Term, the rates for the electricity component of the monthly bill will be the "RPP Rates" that appear in the chart below. The rates for the electricity component of the monthly bill will also be the said "RPP Rates" if and when the Customer ceases residing in the premises before the end of the Term. During the Term, all the other terms and conditions of the Customer's existing electricity distribution contract with Hydro One will remain unchanged.

Type of Rate	Day of the Week	Time	Pricing	Rate (¢ per kWh)
RPP Rates Effective May 1, 2007	Weekdays, Weekends & Holidays	All Day	First 600 kWh per month	5.3¢
			Additional kWh	6.2¢
Pilot Project TOU Rates Effective May 1, 2007	Weekends & Holidays	All Day	Off-Peak	3.2¢
	Weekdays	7:00am-11:00am	Mid-Peak	7.2¢
		11:00am-5:00pm	On-Peak	9.2¢
		5:00pm-10:00pm	Mid-Peak	7.2¢
		10:00pm-7:00am	Off-Peak	3.2¢

3. Depending on the day and time of day that the Customer uses electricity during the Term, the Pilot Project TOU Rates may result in the Customer's charges for the electricity component of the monthly bill being higher or lower than the amount that the Customer would have paid effective May 1, 2007, had the Customer not participated in the Project, even if the amount of electricity used remains the same as it was before the Term began.

4. After the Term begins, Hydro One will give the Customer an energy efficiency kit containing two compact fluorescent light bulbs, a timer, and energy saving tips. *[After the signed original of this Agreement is received by Hydro One from the Customer, Hydro One will send the Customer a thank-you bonus cheque of $50, subject to the following: the thank-you bonus will not be paid unless the Customer continues to reside in the same premises for the entire Term and unless the Customer completes and returns to Hydro One the two questionnaires referred to below.] [After the signed original of this Agreement is received by Hydro One from the Customer, Hydro One may, in its discretion, provide the Customer with a Power Cost Monitor valued at $150, which monitor will enable recipients to view electricity consumption on a real-time basis.]*

5. During the Term, the Customer will have access to a website showing the Customer's daily consumption profiles, which will be updated on a weekly basis.

6. As a condition of being permitted to participate in the Project, the Customer will complete and return to Hydro One two questionnaires provided by Hydro One, one at the beginning of the Project and one at the end, in order to provide further information concerning the reasons for any changes in the Customer's consumption patterns.

7. No benefit of this Agreement may be assigned by the Customer to any other person.

8. Notwithstanding anything else in this Agreement except clause 9 below, Hydro One may terminate this Agreement at any time during the Term or prior to the commencement of the Term by giving written notice to the Customer. If such notice is provided, the Customer shall begin paying the RPP Rates shown in the chart above, effective on the Customer's first billing date after receipt of the notice. Hydro One shall not have any liability to the other party arising out of the termination.

9. References in this Agreement to "RPP Rates" or "RPP Rates that appear in the chart below" shall be deemed to be the RPP rates in effect at the time of the Customer's return to RPP rates. The RPP rates in effect at the time of the Customer's return to RPP rates may be higher or lower than the RPP rates shown in the chart shown in clause 2 of this Agreement.

Signed by the Customer on April _____, 2007.

_____
Signature of Customer

_____
Printed Name of Customer

_____
Customer's address and postal code (please print)

HYDRO ONE NETWORKS INC.

_____
Name:
Title:
I have authority to bind the Corporation.

Appendix D:
Sample of Interim and Final Report

Hydro One Networks Inc.
TOU Pilot Project Team
8th Floor, South Tower
483 Bay Street
Toronto, Ontario M5G 2P5

Tel: (1 866) 258 8333
Fax: (416) 345-5870
Email: LoadResearch@HydroOne.com

Time- of- Use Pilot Interim Report

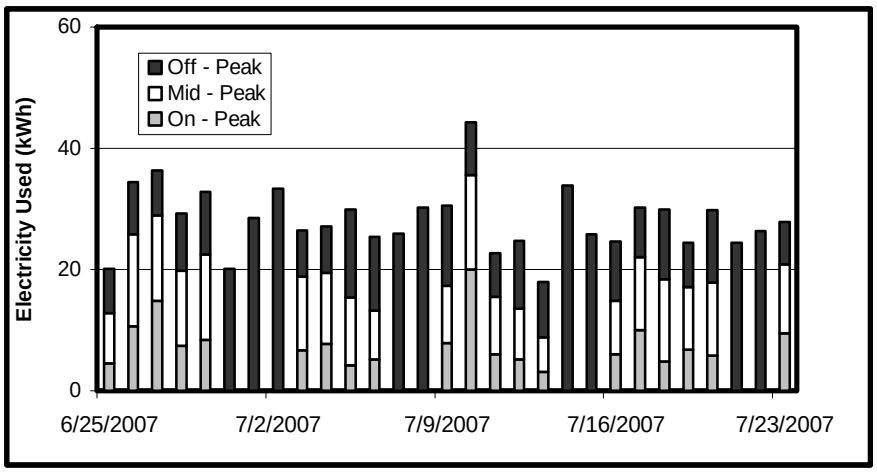
Customer Name: **Account Number:**

This interim report shows your electricity usage on the Time-of-Use (TOU) pilot from 6/25/2007 to 7/23/2007.

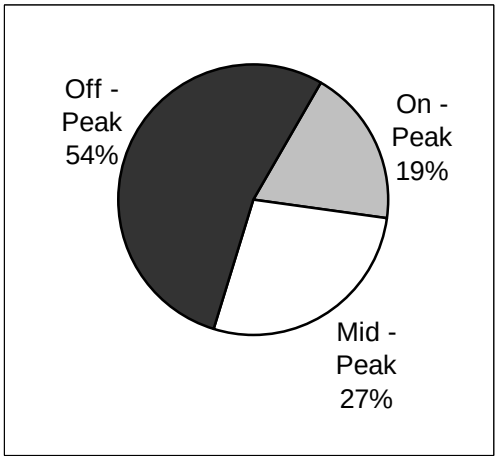
For easy reference, the current TOU rates set by the Ontario Energy Board are summarized below.

Type of Rate	Day of the Week	Time	Pricing	Rate (¢ per kWh)
TOU Rates	Weekends & Holidays	All Day	Off-Peak	**3.2¢**
	Weekdays	7:00am – 11:00am	Mid-Peak	**7.2¢**
		11:00am – 5:00pm	On-Peak	**9.2¢**
		5:00pm – 10:00pm	Mid-Peak	**7.2¢**
		10:00pm – 7:00am	Off-Peak	**3.2¢**

Your total electricity usage from 6/25/2007 to 7/23/2007



Usage by TOU periods



Comparison – TOU rates versus RPP rates

Your current bill on the TOU rates			
	kWh	**Rates (¢ / kWh)**	**Total**
On - Peak	169	9.2	$ 15.55
Mid - Peak	244	7.2	$ 17.57
Off - Peak	479	3.2	$ 15.33
Total	892		**$ 48.44**

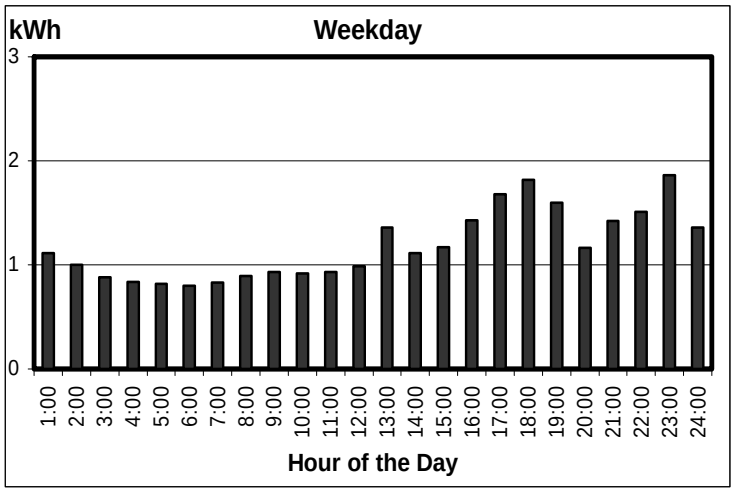
What you would pay if you were on RPP rates			
	kWh	**Rates (¢ / kWh)**	**Total**
First 600 kWh per month	600	5.3	$ 31.80
Additional kWh	292	6.2	$ 18.11
Total	892		**$ 49.91**

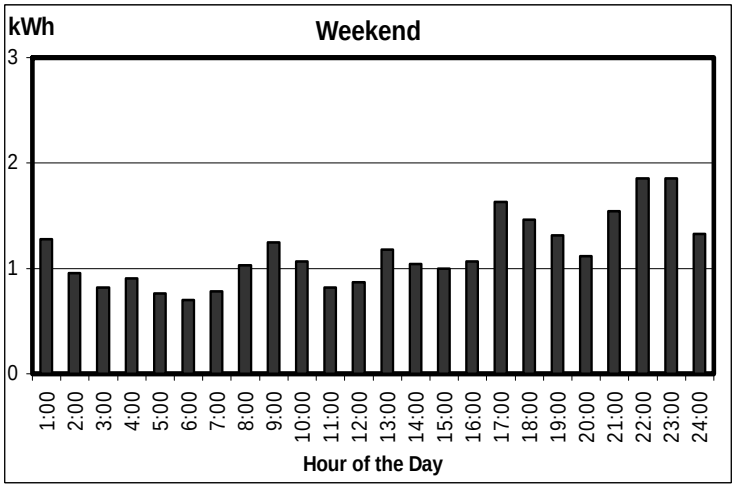
For the month of June, 76% of the pilot participants were better off under the TOU rates.

To help you take advantage of the TOU rates, please see the energy tips provided at the back of this report.

You may also want to visit our website at www.HydroOneNetWorks.com for further energy saving tips.

Average weekday and weekend profile





Tips for customers on TOU rates

- Cooling Down the Heat… 
  - Pre-cool your house early in the morning and increase the temperature setting during on-peak hours.
  - Use a fan to improve air circulation during on-peak hours.

- Saving the Laundry Dollars … 
  - Do your laundry during the weekends to take advantage of the lower off-peak rates on Saturdays and Sundays.
  - Try to schedule ironing during off-peak hours.

- Kitchen Savers … 
  - Use the oven during off-peak hours. Try the microwave oven or gas barbeque during on-peak hours.
  - Run your dishwasher during off-peak hours.

- Cooling Down in Your Pool… 
  - Use the timer on your pool pump and let it run during off-peak hours.
  - Use a solar blanket5 to keep the water warm overnight and reduce your heater use.

- Around Your House… 
  - Use other major appliances, such as vacuum or sauna, during off-peak hours.
  - Turn monitor off instead of using a screen saver while you are not using a computer.

Don't forget to logon at **www.HydroOneNetworks.com\TOU** to view your weekly consumption on the TOU pilot.

If you have any questions about the pilot or would like to provide any feedback, please contact the TOU pilot team at 1-866-285-8333 or by email at **LoadResearch@HydroOne.com.**

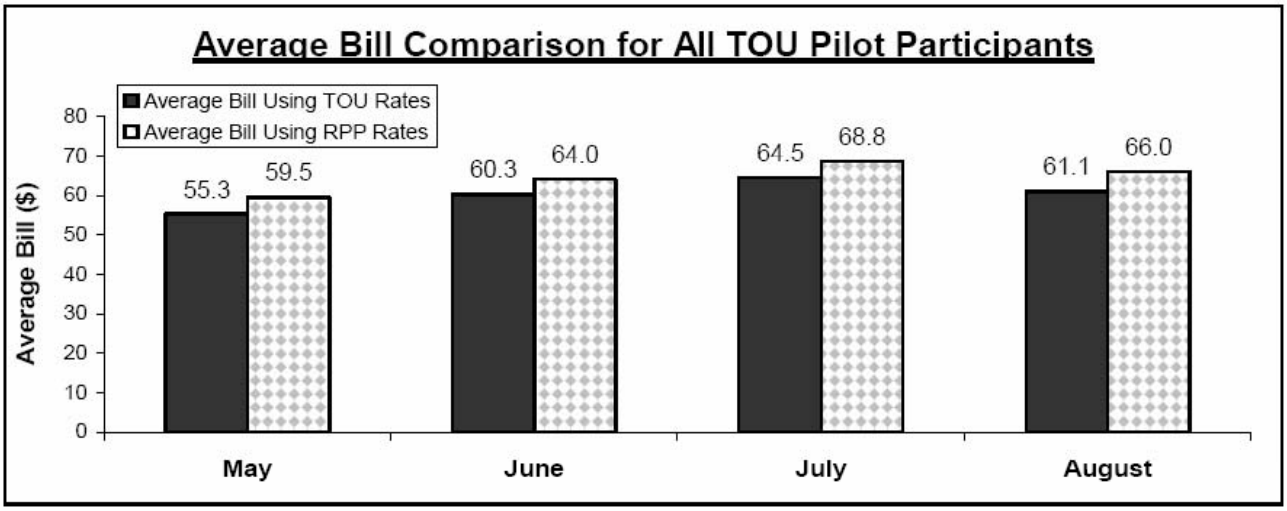
Hydro One Networks Inc.
TOU Pilot Project Team
8th Floor, South Tower
483 Bay Street
Toronto, Ontario M5G 2P5

Tel: (1 866) 258 8333
Fax: (416) 345-5870
Email: LoadResearch@HydroOne.com

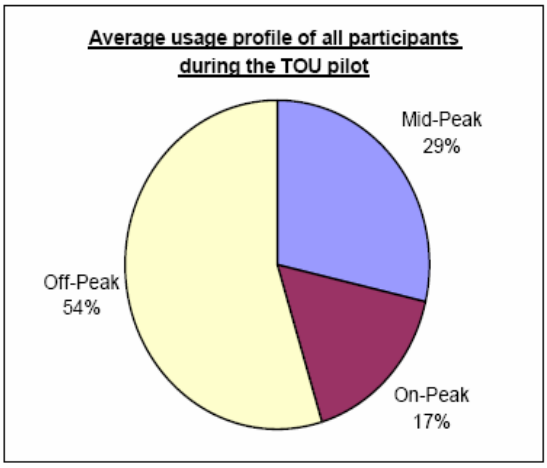
Time-of-Use Pilot Project Final Report

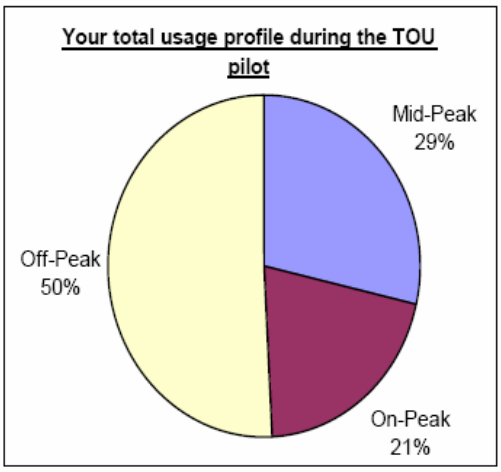
Customer Name: **Account Number:**

This report shows the electricity usage information for all Time-of-Use (TOU) pilot participants and your usage profile from 25-May-07 to 25-Sep-07.



Your Bill Comparison-TOU Versus RPP Rates				
Bill Period	kWh	Bill on TOU Rates	Bill on RPP Rates	Difference
May	1775	$98.72	$104.65	$5.93
June	1667	$94.78	$97.95	$3.17
July	1949	$111.07	$115.44	$4.37
August	1398	$74.26	$81.28	$7.02
Total	6789	$378.83	$399.32	$20.49



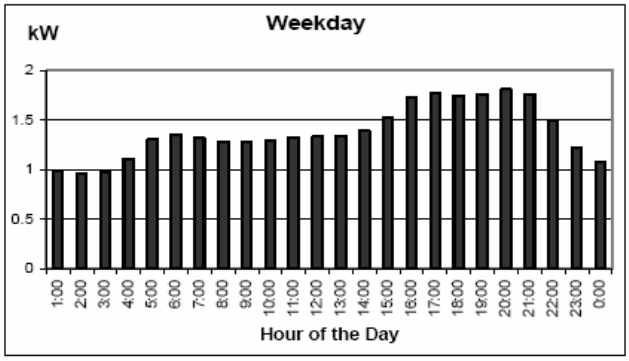


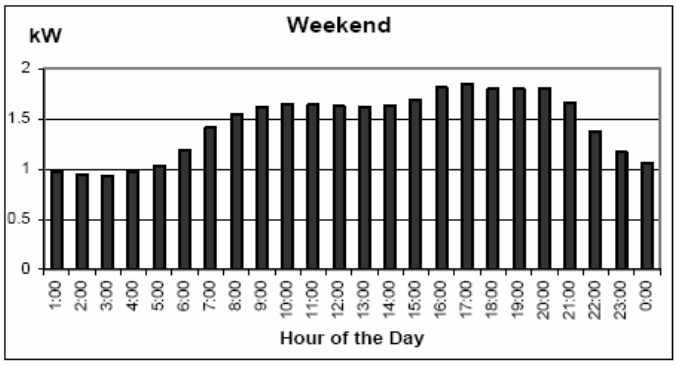
Thanks to your great effort, the TOU project is a success.

Key findings:

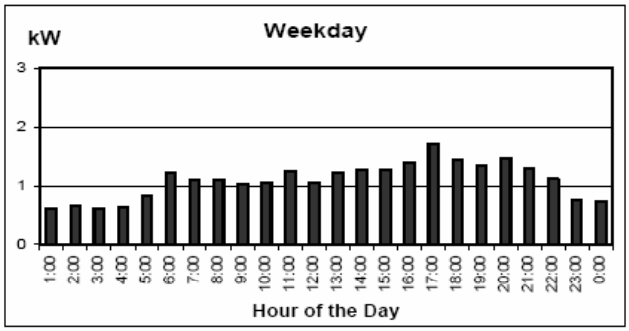
- 76% of all pilot participants save on their bills under TOU rates;
- On average, pilot participants shift 3.7% of their usage away from on-peak periods;
- Also, customers on the pilot reduce 3.3% of their usage compared to last year;
- 72% of all pilot participants would like to remain on the project;
- 87% said they have changed their behavior.

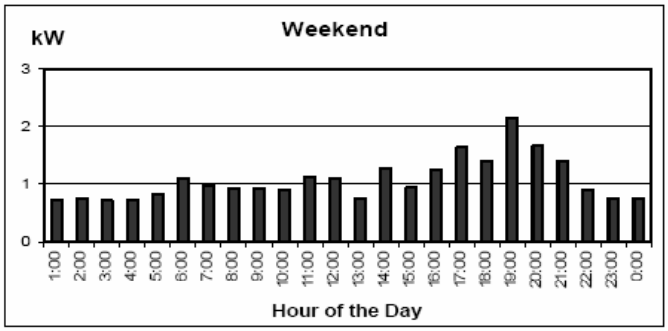
Average Usage Profile for All Participants during the TOU Pilot



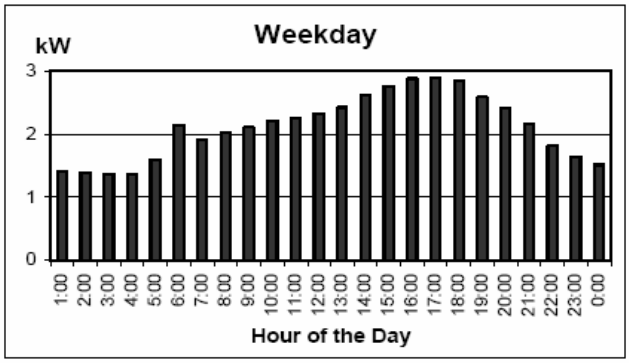


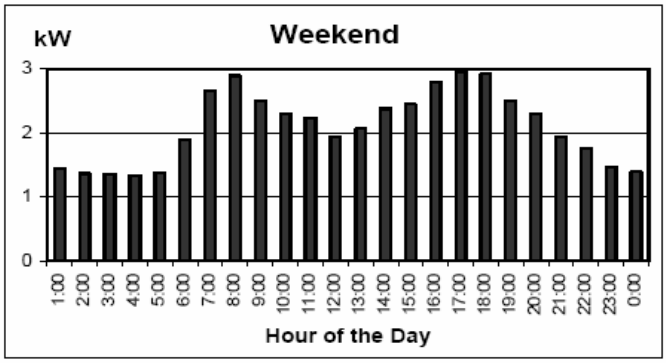
Your Average Usage Profile One Month before the TOU Pilot





Your Average Usage Profile during the TOU Pilot





Try our new online energy audit tool for your home or business! PowerSaverPlus will give you tips to use less electricity and save on your bill. Visit www.hydroonenetworks.com/PowerSaverPlus today! It's easy. It's free. Plus, you could win one of 20 electricity usage monitors!

To get more information about energy conservation, visit our website at www.PowerSaver.ca

If you have any questions about this report or the new online energy audit, please contact us at 1-866-258-8333 or by email at **LoadResearch@HydroOne.com.**

Appendix E:
Sample of Residential Appliance Survey and Feedback Survey

Customer Account # | | | | | | | | | | |

Post Code | | | | - | | | |

Residential Appliance Survey

Hydro One is working with the Ontario government to build a conservation culture. By completing this survey, you are helping us understand your electricity needs and how you use electricity. Your participation in this survey is voluntary and all information collected will be kept strictly confidential and used for research purposes only by Hydro One.

SECTION 1 - YOUR HOME

1. In what type of building do you live?
   - O Single detached
   - O Semi-detached house
   - O Townhouse or Row house
   - O Apartment or Condominium
   - O Other

2. When was your home built?
   - O Before 1956
   - O 1957-1976
   - O 1977-1986
   - O 1987-1996
   - O 1997 or later
   - O Don't Know

3. What is the size of the living space of your home in square feet? Do NOT include your garage, attic or basement.
   - O Less than 1,000
   - O 1,000 –1,499
   - O 1,500 – 1,999
   - O 2,000 – 2,499
   - O 2,500 – 2,999
   - O 3,000 – 3,999
   - O 4,000 or more
   - O Don't Know

4. Is natural gas available on your street?
   - O Yes
   - O No
   - O Don't Know

5. What type of primary **space heating** system do you have? ONLY ONE ANSWER
   - O Electric baseboard
   - O Electric furnace
   - O Natural gas
   - O Oil
   - O Heat pump
   - O Propane
   - O Wood
   - O Other

6. What type of supplementary space heating system(s) do you have, if any? ONLY ONE ANSWER
   - O Electric baseboard
   - O Electric furnace
   - O Natural gas
   - O Oil
   - O Heat pump
   - O Propane
   - O Wood
   - O Other
   - O None

7. Please indicate how much of your home is heated by the supplementary system.

Space Heating Systems	(square footage of house heated by the supplementary system)		
	Less than 20%	21% to 35%	36% to 50%
Electric baseboard	O	O	O
Electric furnace	O	O	O
Heat pump	O	O	O
Other	O	O	O

8. What type of **water heater** do you have? ONLY ONE ANSWER
   - O Electric
   - O Natural gas
   - O Propane
   - O Oil
   - O Other
   - O None

9. What type of **air - conditioning equipment** do you have and how old is it?

Air - conditioning equipment	Age (years)				
	Less Than 5	5 to 10	10 to 15	More than 15	Do Not Have
Central air - conditioner	O	O	O	O	O
Heat pump (Ground Source)	O	O	O	O	O
Heat pump (Air source)	O	O	O	O	O
Window air - conditioner # 1	O	O	O	O	O
Window air - conditioner # 2	O	O	O	O	O
Window air - conditioner # 3	O	O	O	O	O

10. Do you have a programmable thermostat?
    - O Yes
    - O No

11. In the winter, do you lower the temperature?
    - (I) At night — O Yes O No
    - (ii) When you're not home — O Yes O No

12. In an average week during the 2006 cooling season, what were your normal temperature settings?

	Less than 64°F (18°C)	65°F to 66°F (19°C)	67°F to 68°F (20°C)	69°F to 70°F (21°C)	71°F to 72°F (22°C)	73°F to 74°F (23°C)	More than 74°F (23°C)
Afternoon (1pm - 4pm)	O	O	O	O	O	O	O
Evening (4pm - 11pm)	O	O	O	O	O	O	O

13. How many of the listed lighting products do you use INSIDE your home?

	Number						
Lighting Products	**0**	**1-2**	**3-5**	**6-10**	**11-15**	**16-20**	**21+**
Regular light bulbs	O	O	O	O	O	O	O
Halogen light bulbs	O	O	O	O	O	O	O
Fluorescent tubes	O	O	O	O	O	O	O
Compact fluorescent lights	O	O	O	O	O	O	O

14. How many of each of the listed lighting products do you use OUTSIDE your home?

		Number			
Lighting Products	0	1-2	3-5	6-10	11+
Regular light bulbs	O	O	O	O	O
Regular floodlight/spotlights	O	O	O	O	O
Halogen floodlight/spotlights	O	O	O	O	O
Compact fluorescent lights	O	O	O	O	O

15. We would like to find out about the electrical appliances currently in your home.

Appliance	Age (years)				
	Less than 5	5 to 10	10 to 15	More than 15	Do not have
Full size refrigerator #1	O	O	O	O	O
Full size refrigerator #2	O	O	O	O	O
Freezer	O	O	O	O	O
Mini / bar fridge	O	O	O	O	O

Appliance	Number of Appliances			
	0	1	2	More Than 2
Personal computer	O	O	O	O
Television	O	O	O	O
Microwave oven	O	O	O	O
Top load washing machine	O	O	O	O
Front load washing machine	O	O	O	O
Dishwasher	O	O	O	O
Whirlpool bathtub	O	O	O	O
Hot tub	O	O	O	O
Electric air filter	O	O	O	O
Pool pump	O	O	O	O
Dehumidifier	O	O	O	O

Appliance	Fuel Source		
	Gas	Electricity	Propane
Range / oven	O	O	O
Clothes dryer	O	O	O
Pool heater	O	O	O
Sauna	O	O	O

SECTION 2 - ENERGY CONSERVATION

16. Would you be interested in a program that allows Hydro One to increase the central air conditioning setting by 2°C during peak periods?
O Yes O No O Participated in the program

17. Would you be interested in a program that allows Hydro One to shut off the electric water heater during peak periods?
O Yes O No O Participated in the program

18. Would you be interested in an in-home device that tracks and displays ongoing electricity consumption?
O Yes O No O Participated in the program

19. Would you be interested in a program that collects and recycles old appliances from your house?
Fridge O Yes O No O Not applicable
Freezer O Yes O No O Not applicable
Room air - conditioner O Yes O No O Not applicable

20. Would you be interested in installing an energy-saving device on the water heater?
O Yes O No O Already installed

21. If you were to participate in a conservation program, how do you plan to save energy?

Program	Already achieved as part of Hydro One /	Already achieved - personal	Interested for future	Not interested for the future
More efficient air cooling system	O	O	O	O
More efficient space heating system	O	O	O	O
More efficient water heating system	O	O	O	O
Programmable thermostat	O	O	O	O
Purchase energy saving appliances	O	O	O	O
Increase insulation of doors, windows and roof	O	O	O	O
Participate in a "Do-it-Yourself" online energy audit	O	O	O	O
Participate in professional energy audit	O	O	O	O

22. Please indicate if you would be interested in using coupons/ rebates to purchase the following energy - saving products.

Program	Interested	Not Interested
Compact fluorescent light bulbs	O	O
LED holiday lights	O	O
ENERGY STAR appliance	O	O
Heating system / furnace	O	O
Programmable thermostat	O	O
ENERGY STAR air conditioner	O	O

23. How would you like to receive energy conservation information from Hydro One?
O Information in my bills
O Regular mail
O Media advertising
O Hydro One website
O Hydro One e-mail
(Please provide email address)_____
O Not interested

24. What type of Internet connection do you have?
O High speed at home
O High speed at work
O Dial - up at home
O Dial - up at work
O None

25. Would you be interested in receiving, viewing and paying Hydro One bills online?
O Yes
O No
O Already registered
O Do not have facilities to do so.

26. If you are interested in joining a Hydro One Customer Survey Panel to provide Hydro One with ongoing input about services, programs and communications, via short Internet surveys, please enter your email address below.

_____

SECTION 3 – HOUSEHOLD DEMOGRAPHICS

Your answers to the following questions will help assist Hydro One in using your survey responses to represent other households with similar demographics. Please note that all responses will be kept **strictly confidential** and will be used for research purposes only.

27. How many people currently live in your home:
O 0 O 2 O 4 O 6
O 1 O 3 O 5 O More than 6

28. Do you own or rent your home?
O Own O Rent O Other

29. What is your TOTAL household income before tax for 2006?
O Less than $20,000 O $80,000 – $99,999
O $20,000 – $39,999 O Over $100,000
O $40,000 – $59,999 O Decline to provide
O $60,000 – $79,999

THANK YOU FOR YOUR TIME AND COOPERATION.

To be eligible to win our contest, you must correctly answer this skill testing question...

50 multiplied by 5, divide by 10, add 15 & subtract 10.

Customer Account Number

Time-of-Use Pilot Project – 2nd Questionnaire

This is the second and final questionnaire for the Hydro One Time–of–Use (TOU) Pilot. Please respond by September 30th, 2007.

SECTION 1 – YOUR ACTIONS DURING THE TOU PILOT

1) (a) During the pilot, did you and your household members (hereafter referred to as "you") change the way you use electricity to take advantage of the TOU rates?

☐ Yes ☐ No

(b) If yes, in the table below, please indicate the time periods during which you made changes to your electricity usage and to what extent. *If no, please go to question 2.*

	Overall	Mid - peak (7am-11am)	On - peak (11am-5pm)	Mid - peak (5pm-10pm)	Off - peak (10pm-7am)	Off - peak (Weekends)
No changes made						
A few changes made						
Some changes made						
Significant changes made						

2) Please identify the actions that you took during the pilot to take advantage of the TOU rates. ***Please select all that apply*** to you.

(i) Cooling

☐ Set back your thermostat in the evening? If yes, by how many degrees? _____ °C or _____°F

☐ Set back your thermostat during the day? If yes, by how many degrees? _____ °C or _____°F

☐ Pre-cool the house during off-peak hours and increase the temperature setting during on-peak hours.

☐ Use a fan and turn off the air conditioner.

☐ Use a fan in addition to the air conditioner to improve air circulation.

☐ Other, please specify _____

(ii) Electric Water Heating *(Please answer this question only if you have electric water heating and select all that apply to you. If not, please go to the next question)*

☐ Schedule hot water use during off-peak hours (i.e. showers and washing)

☐ Install water heater blanket to reduce heat loss

☐ Other, please specify _____

(iii) Pool

- ☐ Use a timer on the pool pump and let it run during off-peak hours
- ☐ Use a timer on the pool heater and let it run during off-peak hours
- ☐ Use a solar blanket to keep the pool water warm overnight to reduce the heater use
- ☐ Other, please specify _____

(iv) Laundry and dishwashing

- ☐ Schedule the laundry during off-peak hours instead of mid-peak or on-peak hours
- ☐ Run the dishwasher during off-peak hours
- ☐ Hang clothes to dry outside
- ☐ Wash dishes by hand
- ☐ Other, please specify _____

(v) Insulation and windows

- ☐ Air sealing retrofit (e.g. apply caulking around window frame to prevent air leakage)
- ☐ Other, please specify _____

(vi) Other appliances

- ☐ Have you shifted your usage of other appliances to off-peak periods (after 10 p.m. or during weekends)? If yes, please provide details _____
- ☐ Have you reduced your use of appliances? If yes, please provide details _____
- ☐ Control any of your household equipment and/or appliances with timers? If yes, please specify _____
- ☐ Switch to more energy efficient or low wattage light bulbs such as compact fluorescent light bulbs?
- ☐ Purchase an appliance that displays the ENERGY STAR® label? If yes, please check-off all that apply to you from the following list:

☐ Washing Machine	☐ Dishwasher	☐ Hot Water Tank
☐ Dryer	☐ Air Conditioner	☐ Heating System/Furnace
☐ Fridge	☐ Freezer	☐ Other, please describe _____

(vi) Other Actions

- ☐ Other actions not listed? If yes, what are they? _____

- ☐ I have not undertaken any actions since **May 2007**.

3) (a) Please indicate **when** you use the following appliances during the TOU pilot.

	Weekdays				Weekends
	7 am - 11 am	11am - 5pm	5pm - 10pm	10pm - 7am	All day
Television					
Computer					
Printer, Scanner, Copier					
Dehumidifier					
Fan					
Spa / Hot Tub					
Pool Pump					
Washing Machine					
Clothes Dryer					
Oven					
Dishwasher					
Microwave					

(b) Please indicate **how often** you use these appliances on weekdays between 11 am and 8 pm.

	Never	1 day a week	2-3 days a week	4 or more days a week
Television				
Computer				
Printer, Scanner, Copier				
Dehumidifier				
Fan				
Spa / Hot Tub				
Pool Pump				
Washing Machine				
Clothes Dryer				
Oven				
Dishwasher				
Microwave				

SECTION 2 – YOUR VIEWS ABOUT THE TOU PILOT

4) (a) Would you recommend the TOU rates to your friends if the pilot was expanded?

☐ Yes ☐ No

(b) Why or why not?

_____

_____

5) Do you feel the current difference between "off-peak" and "on-peak" rates is large enough to provide you with the necessary incentive to shift your electricity consumption to "off-peak" periods?

☐ Yes ☐ No

6) (a) How do you feel about the TOU rates affecting your daily activities?

☐ Do not mind ☐ Slightly bothersome ☐ Bothersome ☐ Very bothersome

(b) Please indicate why _____

_____

7) What **benefits** do you feel the TOU rates offer to consumers? *Please select all that apply to you.*

☐ Allows participants to become more aware of "when" they use electricity during the day or week
☐ Allows participants to become more aware of their "total electricity consumption" regardless of the time of day or week you use it
☐ Makes participants more conscious about what they can do to reduce their electricity bill (e.g., turning off lights or other devices when not in use, shifting usage to cheaper periods)
☐ Makes participants more conscious about "peak" usage
☐ Gives participants greater control over their electricity costs
☐ Benefits to the environment
☐ Other benefits, please specify _____
☐ No benefits *(Please go to question 8)*

8) What is the **main benefit** of the TOU rates to electricity consumers? *Please **select one only**.*

☐ Allows participants to become more aware of "when" they use electricity during the day or week
☐ Allows participants to become more aware of their "total electricity consumption" regardless of the time of day or week you use it
☐ Makes participants more conscious about what they can do to reduce their electricity bill (e.g., turning off lights or other devices when not in use, shifting usage to cheaper periods)
☐ Makes participants more conscious about "peak" usage
☐ Gives participants greater control over their electricity costs
☐ Benefits to the environment
☐ Other benefits, please specify _____

9) (a) If given the option, would you like to remain on the TOU rates?

☐ Yes ☐ No

(b) Please specify why or why not? _____

_____

10) As a result of receiving your TOU bills, interim report and using the in-home display device (PowerCost Monitor), how likely are you to change your electricity usage in the **future** and during which time periods.

	Overall	Mid - peak (7am-11am)	On - peak (11am - 5pm)	Mid - peak (5pm-10pm)	Off - peak (10pm-7am)	Off - peak (Weekends)
Not at all likely						
Not very likely						
Likely						
Very Likely						

11) Please check off any of the following that apply to you regarding your monthly TOU electricity bills.

- ☐ Information was easy to understand
- ☐ Information was helpful in understanding how much electricity was used during different periods
- ☐ Information was helpful for shifting electricity usage to off-peak and mid-peak periods
- ☐ Information was helpful in understanding how to save on electricity bill
- ☐ Information was useful in reducing total electricity usage

12) (a) How often did you access information on your electricity usage on the website?

☐ Daily ☐ Weekly ☐ 2-3 times a month ☐ Monthly

☐ Often ☐ Once or twice during the pilot ☐ Never

(b) Did you find the information on the website useful in helping you to understand the usage profiles and lower your electricity bills?

☐ Yes ☐ No

(c)What other information would you like to see on the website?

_____

_____

13) (a) Did you find the information in the interim report useful in helping you to understand the usage profiles and lower your electricity bills?

☐ Yes ☐ No

(b) What other information would you like to see on the report?

_____

_____

14) Thinking about the different communication you received as part of the TOU pilot program, please indicate your preferred method of receiving this information.

	Mail	Fax	E-mail	Telephone	Online
General communications about the Pilot					
TOU bills					
Interim reports					

15) Thinking about information that would help you to manage your electricity bill under TOU rates, please check off all the information that would be helpful:

- ☐ A booklet with tips to help you manage your electricity bill under TOU rates.
- ☐ A fridge magnet defining the TOU periods
- ☐ Bill messages providing tips on TOU rates appropriate for the season
- ☐ Bill inserts providing helpful tips on managing your bill under TOU rates appropriate for the season
- ☐ A portion of Hydro One's web site dedicated to managing your electricity use under TOU rates.
- ☐ A DVD providing you with tips on managing your electricity bill under TOU rates
- ☐ Other, please specify _____

16) Thinking about the different communication you received as part of the TOU pilot, is there any additional information you think would help you to benefit more from the TOU prices?

_____

_____

(a) Please indicate whether the PowerCost Monitor, valued at $150, influenced your decision to participate in the pilot.

☐ Yes ☐ No

(b) Please indicate how you felt about the incentive offered to you to participate in the pilot.

☐ Not necessary ☐ Too little ☐ Adequate ☐ Too much

17) (a) Have you found the PowerCost Monitor to be useful in helping you conserve energy in your home?

☐ Yes ☐ No

18) (a) Was the PowerCost Monitor easy to install and program?

☐ Yes ☐ No

(b) If no, please provide details of any difficulties that you encountered.

_____

_____

19) Which features have you found useful on the PowerCost Monitor?

- ☐ $Dollars/Hr
- ☐ $Dollars
- ☐ Predicted $Dollars
- ☐ KW
- ☐ KWHrs
- ☐ Predicted KWHrs
- ☐ External temperature

20) In your opinion, what are the major benefits of the PowerCost Monitor? Please rank the listed benefits in order of importance to you, with one (1) being the most important benefit and eight (8) being the least important benefit. You may select a ranking more than once, if you feel the level of importance applies to more than one benefit.

- ☐ With more information available we can make more informed consumption choices
- ☐ The instantaneous feedback is ideal
- ☐ We can keep the monitor at the end of the pilot program
- ☐ We like the information features on the monitor
- ☐ Ability to reduce my electricity consumption to help minimize the cost of my electricity bill
- ☐ Ability to reduce my electricity consumption to assist with environmental conservation
- ☐ To help prevent future shortages/blackouts
- ☐ Other, please specify _____

21) (a) In your opinion, how could the PowerCost Monitor be improved?

- ☐ Eliminate the need to install the sensor unit on the meter
- ☐ Equip the monitor with the ability to display different colors (green/red) to alert you of different TOU periods
- ☐ Equip the monitor with more graphs and charts
- ☐ Equip the monitor with the ability to communicate two ways to inform you of periods of high provincial electricity demand or helpful tips for the time of day/day of week/season

(b) Given your experience with TOU rates, would you be interested in the ability to control electricity use (air conditioner, thermostat, pool/spa pumps, hot water heater) remotely through the internet or telephone?

☐ Yes ☐ No

(c) Given your experience with TOU rates, would you be interested in Hydro One programs to automatically control selected appliances (such as air conditioner and electric water heater) during high demand periods?

☐ Yes ☐ No

22) Based on your experience with the PowerCost Monitor to date, how much do you hope to save on your energy consumption each month?

☐ 0–5% ☐ 5–10% ☐ 10-15% ☐ 15-20% ☐ Greater than 20%

23) How much do you think customers would like to pay for the PowerCost Monitor by themselves?

$_____

SECTION 3 – YOUR HOME AND DEMOGRAPHICS

24) (a) How many people are currently living in your household? _____

(b) Please indicate the number of people that are home USUALLY (more than 50% of the time) during the week

Indicate Number of People at Home			
7 AM to 11 AM	**11 AM to 5 PM**	**5 PM to 10 PM**	**Weekends**

25) (a) Have you changed any appliances or heating and cooling devices since **May 2007**?

☐ Yes ☐ No

(b) If yes, please indicate the date the change was made and provide details of the change.

Month: _____ Year: _____

_____

_____

26) (a) Has your home undergone any renovations since **May 2007**?

☐ Yes ☐ No

(b) If yes, please indicate the date the change was made and provide details of the change.

Month: _____ Year: _____

_____

_____

27) (a) Has the square footage of your house changed since **May 2007**? (Please include basements, attics, etc. only if "finished")

☐ Yes ☐ No

(b) If yes, please indicate the date the change was made and provide details of the change.

Month: _____ Year: _____

_____

_____

Thank you for taking the time to fill out this questionnaire