

SMART METER PILOT - A SUCCESSFUL PROJECT IN CUSTOMERS' BENEFIT

Oakville Hydro wrapped up an ambitious project: Individual Metering and Time-of-Use (TOU) pricing.

The pilot project tested the response of condominium residents in three buildings to 1) a change from bulk metering to individual metering and being billed under the Regulated Price Plan (RPP) tiered pricing and 2) a change from RPP tiered to Time-of-Use rates.

The project results show:

- ✓ Energy savings by an average of 22%
- ✓ Significant consumption shifts from periods when the provincial distribution system is high loaded and consumption is costly (On-peak and Mid-peak periods) to the periods when the electricity requests and the prices are lower (Off-peak periods).

The project in detail: <http://www.oakvillehydro.com/pdf/SmartMeters-TOU-Project.pdf>

Questions and Answers

Oakville Hydro Individual Metering and Time-of-Use Pilot

1. What was the pilot all about?

The pilot involved just over 280 customers in three buildings in Oakville. In the first stage of the pilot, participants went from bulk billing to individual metering and were billed under the Ontario Energy Board's tiered Regulated Price Plan rates. In the second stage of the pilot, participants were billing under the Ontario Energy Board's Regulated Price Plan (RPP) time-of-use rates.

2. Why did Oakville Hydro do the pilot?

Oakville Hydro undertook the pilot to determine the impact that individual metering and billing under time-of-use rates would have on condominium residents who were bulk-billed.

3. What does bulk-billing mean?

Bulk-billing describes the process whereby the entire building's consumption is measured and a single bill, based on the entire building's consumption, is provided to the building owner and manager.

4. Isn't individual metering more expensive for consumers than bulk metering because they have to pay for electricity themselves instead of their building owner or manager paying for it?

Under bulk billing, the building owner or manager is responsible for paying the electricity bill but in most cases the electricity costs are ultimately passed on to the residents through their monthly condominium charges. With individual metering, consumers only pay for what they use. This provides them with greater control over their energy costs – if they reduce their consumption this reduction flows directly through to their electricity bill. Under bulk billing, individual residents have very little, if any, control over their electricity costs. Even if they made a significant reduction in their electricity usage, the amount they ultimately pay for electricity through their condominium charges would hardly change.

5. How do time-of-use rates work?

Time-of-use rates requires a “smart meter” that measures electricity consumption in different periods of the day and week. The consumer's electricity bill is then based on their consumption in each period multiplied by the price applicable for that period. Three different time periods exist – On-Peak, Mid-Peak and Off-Peak – and three different prices are defined under the Ontario Energy Board's Regulated Price Plan Time-of-Use rates. The prices for each period are based on the average supply costs for the period – some periods with relatively high demand, i.e., summer afternoons tend to have higher demand and supply costs, resulting in higher prices. Other periods – such as late nights and early mornings, have lower demand and supply costs resulting in lower prices. In general, electricity costs for consumers under RPP time-of-use prices will more accurately reflect the costs to supply them than the current tiered RPP prices.

6. Did consumption change when customers went to individual metering?

Yes, electricity consumption went down approximately 22% when customers switched to individual metering.

7. Did consumers change how they used electricity after going to Time-of-Use Rates?

Since participants were only on time-of-use rates for a relatively short period, the pilot results only reflect their short-term behaviour changes. Overall the reduction in consumption was spread more or less evenly over the three time-of-use pricing periods (On-Peak, Mid-Peak and Off-Peak). Additional shifts in consumption to lower price periods (Off-Peak and Mid-Peak) are expected over time as customers become more aware of opportunities to reduce and shift their consumption to lower-priced periods.

8. What was the overall impact on participants in going from bulk billing to individual metering with time-of-use rates?

Overall, electricity consumption went down by 22%. Due to the large decrease in consumption, monthly electricity costs went down from roughly \$37 to \$30 per month.

9. Won't consumers pay more under time-of-use rates because the prices in two out of the three time periods are higher than the standard rates?

Results from the pilot indicate that less than 50% of participants' consumption was at the higher On- and Mid-Peak rates. More than 50% was at the lower Off-Peak rate. As a result, their average price for electricity was just about equal to the average price they would have paid on the standard rates. In fact, for more than 60% of the participants, the difference was less than \$2 per month – some paid slightly more and some paid slightly less depending on their consumption level and consumption patterns.

10. When are other consumers going to go to Time-of-Use prices?

The Ontario Energy Board is expected to provide details about when other customers will move to Time-of-Use rates later this year.