



SMART METER PROJECT BACKGROUNDER

Part of the Provincial Grid

It's estimated that the Province of Ontario will need to refurbish, replace or conserve over 80% of its current electricity generating capacity over the next 20 years at an estimated cost of about \$70 billion.

Peak Demand is an important factor in the growing need for new generation capacity. At certain times of the day (varying by season) electricity consumption grows to the point that the province need to import and access expensive power from outside the grid.

Smart Meters are designed to help the province smooth 'peak demand' with the eventual introduction of Time of Use Rates.

What are Smart Meters?

- These meters communicate electricity consumption wirelessly to the utility.
- Consumption is recorded hourly.

Currently, most homes in Ontario are equipped with electromechanical electricity meters that measure how much electricity is used during a billing period - typically one or two months. A smart meter records how much electricity is used and when it is used (typically hourly), and communicates this information automatically via wireless and other technologies. This reporting is expected to take place once a day.

The complete smart meter system consists of smart meters, the communication network, and data storage and processing systems. Some of these systems are the responsibility of Thunder Bay Hydro and others are the responsibility of the provincial government.

Time of Use Rates

The province currently offers household and small business rates based on a two tiered Regulated Price Plan. Price is based on overall volume of consumption per month.

Time of Use rates will break down price to when electricity is used during the day. Prices will be based on low, mid and peak demand periods. (See Smart Meter Answer book)

When teamed with time-of-use (TOU) rates, smart meters will eventually provide electricity consumers with the financial incentive and the ability to take action to manage their electricity bills by lowering their consumption during peak (higher cost) periods, and by moving consumption to off-peak (lower cost) periods.

By smoothing out the peaks in electricity demand, the province can reduce the need for additional power generation facilities, which will make the system less expensive to operate and also benefit the environment.

The first phase of Thunder Bay Hydro's smart meter project involves the installation of the meters only.

The smart meters will continue to work as regular meters (they will be manually read and there will be no change in the way customers are billed) until the communications network and related systems have been fully tested and the province legislates that time-of-use (TOU) rates are to be in effect.