

SMART METERS



(mindpowersystem, 2007)

INTRODUCTION

“To create a conservation culture in Ontario and become a leader in energy efficiency, the government is facilitating a number of key initiatives:

- introducing flexible, time-of-use pricing for electricity;
- committing to install a smart electricity meter in all Ontario homes and small businesses by the end of 2010 and
- introducing legislation to enable implementation of the government's smart metering initiative and conservation targets.” (Ontario Ministry of Energy and Infrastructure, 2008)

WHY SMART METERS? (smartmetersontario.ca, 2008)

Smart Meters Will Help Ontario Meet Its Energy Needs

Between now and 2025, Ontario must build almost a whole new electricity system.

This includes replacing about 80 per cent of our current generating facilities as they retire over time, and expanding the system to meet our future growth.

Building new supply is vital. So is conservation.

Conservation will help us to make the best use of our existing electricity resources and slow the growth in our demand.

That’s why Ontario is introducing new tools – like Smart Meters – that can help.

Smart Meters will encourage us all to think more about how and when we use electricity.

WHAT ARE SMART METERS? (smartmetersontario.ca, 2008)

How Is a Smart Meter Different?

A Smart Meter is a huge advance over Ontario’s current devices.

Our old-style meters can only measure the total amount of electricity used over an entire billing period because they have to be read manually. That’s why, between actual readings, you might get an estimated bill that will be “trued up” at a later date.

A Smart Meter can automatically record when electricity is used.

That’s what makes a Smart Meter so different. In the future, your Smart Meter will record your total electricity consumption hour by hour. And it will send that information to your utility through either a wireless or another form of technology.

Smart Meters make time-of-use (TOU) prices possible.

With the ability to measure when electricity is used, different prices can apply at different times of the day. With time-of-use pricing, you will have a new way to manage your electricity use and your bills.

What Are the Benefits of Smart Metering for Me?

Here are just some of the benefits you’ll see as soon as your Smart Meter is fully operational and time-of-use – or TOU – pricing is in place:

1. You’ll be able to take action to manage your electricity bills.

With attention to how and when you use electricity, you'll be able to better manage your electricity costs.



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2. You'll get real feedback about your electricity use.

Your electricity bill will show how much you consumed within each TOU period – and, in the future, detailed information may be available to you via the Internet or by telephone.

3. And you'll get more precise electricity bills.

The bills you receive will be based on the hourly readings taken and sent by your Smart Meter.

Smart Meters Will Help Smooth Peak Demand

When we're all using a lot of electricity at the same time we create a "peak demand" period. And supplying electricity at those peak times has a range of impacts:

- 1. They add to our electricity costs** because higher demand often means higher market prices.
- 2. They're hard on the environment** because more of the less attractive forms of generation must be run to meet them.
- 3. They add to the amount Ontario needs to invest in the system** because meeting the peaks requires even more new generation, and more transmission and distribution infrastructure.

So, working together to reduce our use at peak times makes good sense.

TIME OF USE (TOU) PRICING (smartmetersontario.ca, 2008)

How Will TOU Pricing Work?

With TOU pricing, electricity prices will vary, based on when it is used.

That includes by time of day, by day of week (weekdays versus weekend), and by season (winter or summer).

This is a significant change from the way prices currently work.

Right now, our *rates are based on averaging out the more expensive (daytime) and cheaper (nighttime) prices of electricity, simply because our older meters can't report when it was used.

TOU pricing will encourage Ontarians to shift some electricity use to off-peak hours.

TOU pricing better reflects the way the electricity market works. Prices rise and fall over the course of the day and tend to drop overnight and on weekends based on the amount of supply available and our levels of demand.

**The Ontario Energy Board (OEB) sets prices for electricity under the Regulated Price Plan (RPP). They are based on the electricity supply costs forecast for the year ahead, and any adjustments required due to differences between what was paid and what supplies actually cost over the previous period.*

BEST STRATEGIES (smartmetersontario.ca, 2008)

First, Give Me the Fundamentals.

There are a number of effective ways to approach conservation. Your best strategy might combine some or all of the following:

1. Shift some electricity use to off-peak periods.

Under TOU rates, shifting activities that are energy-intensive to the less expensive mid-peak and off-peak hours will make a lot of sense.



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2. Reduce electricity use across all periods of the day.

Conservation always makes good sense.

3. Ensure you're not paying for nothing!

Many electronic items – for example, computers, TVs and cell phone chargers – aren't fully off unless you pull the plug. Since each can use between four and 10 watts of electricity, try to plug them into a power bar that you can turn off.

4. Opt for energy-efficient products wherever you can.

ENERGY STAR[®] appliances and compact fluorescent light bulbs (CFLs) use less power, reducing both your electricity consumption and your costs.

5. Take advantage of conservation promotions.

Many utilities, and the Ontario Power Authority (OPA), are creating programs that will help you conserve. Call us or visit powerWISE.ca to find out more.

FAQ (smartmetersontario.ca, 2008)

Will I see a Smart Meter charge on my bill?

The cost of the Smart Meter initiative will be recovered through the electricity rates paid by all customers in the same way that costs for existing meters and services are recovered today.

When will I begin paying time-of-use prices?

A date has not yet been established for the implementation of time-of-use (TOU) rates for most customers with Smart Meters. You will be notified in advance of when you can start to take advantage of time-of-use rates.

Will I see lower electricity bills?

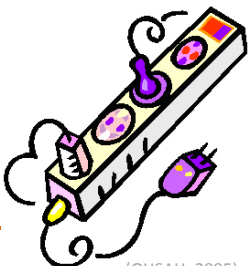
With time-of-use rates, you'll see the results of your conservation efforts – and you'll save money if you can shift your heaviest electricity use to off-peak hours. Equipment like air conditioners, electrical heating, space and water heating as well as ovens, dryers and even lighting for example, can use a great deal of energy.

Will I receive a Smart Meter if I am currently with, or moving to, a retailer? Will I pay time-of-use rates?

Yes, you will receive a Smart Meter, but your rates will be determined by the terms and conditions of the contract you choose to sign.

Is my usage information secure and will it remain confidential?

Yes. Ontario's electricity distribution companies are required, by law, to ensure that the Smart Meters and communication networks that are put into place are equipped with security features to prevent unauthorized access. We must also comply with federal laws regarding the privacy, protection and disclosure of personal information. Any data that is sent to the central data repository will be provided in such a way as to prevent identification of an individual customer.



(OHSAA, 2005)

