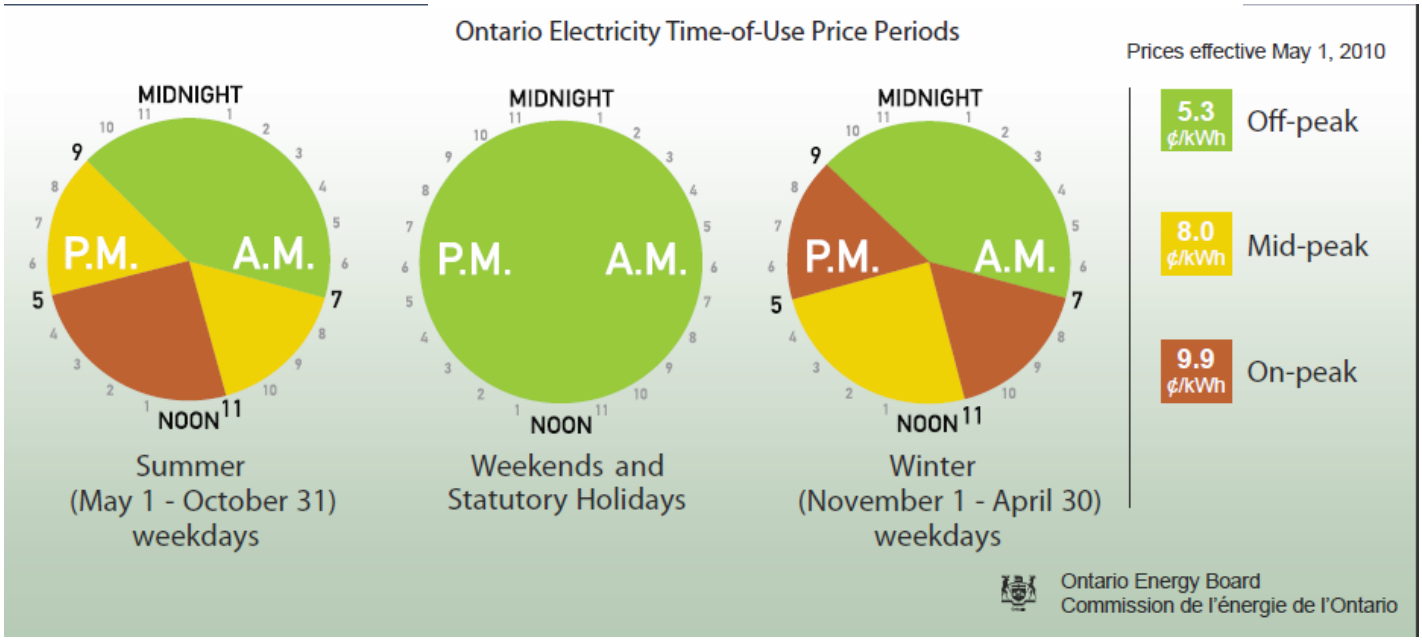
ARE YOU SMART ABOUT SMART METERS?

By 2011, most homes and businesses in Ontario will have made the switch from traditional power meters (right side) to *Smart Meters* (left side). A smart meter tracks how much electricity you use and when you use it. The purpose of this change is to manage the demand and cost of electricity in Ontario better so that we can decrease our impact on the environment. Instead of paying a flat rate, as we did with the old technology, we now pay different rates depending on when we use the electricity during the day. This new method is called *Time-of-Use* rates.

http://www.bluewaterpower.com/readingyourhydrometer.htm

The picture below illustrates how the price of electricity changes during the day and during the year.

http://www.miltonhydro.com/main.php?section=conservation&sub1=programs&sub2=peaksaver&sub3=page4



One of the biggest energy consuming activities in your house is doing the laundry. It uses 1800 W of power to dry your clothes and 500 W of power to wash them. Part of the advertisements around the change to smart meters says that you should use big energy consumers during off peak hours to save money on your electricity bill. The following questions will help you determine how much money your household will save if you wash your close during off peak hours. (Show your work for each calculation for each step)

1. How many loads of laundry does your household do a week? _____
   (An average person does 2.5 loads per week)

2. How many hours a week does it take to complete all the loads? _____
   (Each load takes about 1.5 hours to wash and dry)

3. Complete the following Table

Time of Use Period	*Electricity Rate (Put in Dollars)*	*# of hours per week to do the laundry*	*Power of the Washer and Dryer*	*Cost per week to do the laundry*	*Cost per year to do the laundry*
Off -Peak			2.3 kW		
Mid-Peak			2.3 kW		
On- Peak			2.3 kW		

Calculations : Weekly cost = rate x # of hours x power
Yearly cost = weekly cost x 52

4. How much money would you save if you did your laundry during Off-Peak hours versus On-Peak hours?

5. How much money would you save if you did your laundry during Off-Peak hours versus Mid-Peak hours?

6. How much money would you save if you did your laundry during Mid-Peak hours versus On-Peak hours?

7. Why do you think On-Peak hours are between 11am - 5 pm during the summer and between 7 am - 11 am and 5 pm - 9 pm during the winter? *Hint: Think of things that you use only during those months that use a lot of energy.*

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_____

8. Why do you think weekends and holidays are always off-peak hours?

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9. Do you think you will make an effort to use more energy (for example by only playing video games or charging your phones or running your dishwasher) during off peak hours?

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