2008 ENERGY STAR HIGH EFFICIENCY HAUTE EFFICACITÉ
Utility of the Year – Regional

Thunder Bay Hydro Awarded ENERGY STAR® Utility of the Year - Regional

Careful consideration should be given to the energy efficiency of appliances and devices at the time of purchase. There are numerous products available to consumers who choose to purchase ENERGY STAR® qualified appliances and devices. Making informed decisions when purchasing new appliances and electrical equipment is an important first step in realizing energy efficiencies.

This year Thunder Bay Hydro was recognized nationally by the Government of Canada and awarded the 2008 ENERGY STAR® Utility of the Year - Regional, for its efforts in marketing energy-efficient products and for its promotion of ENERGY STAR® appliances to its customers.

"We recognized the power of the ENERGY STAR® branding and have worked hard to ensure that our customers would be able to make full use of this tool," said Tim Wilson, Vice-President of Customer Service and Conservation. "It is a pleasure to see our work recognized at the national level."

Thunder Bay Hydro's application highlighted its presentations in local schools, provision of CFL light bulbs within the community, and local initiatives such as rebates for intelligent parking lot controls and new energy efficient appliances. In the past year, Thunder Bay Hydro has worked hard to ensure that up-to-date education materials are available to their customers in their offices, at community displays and on-line.

Phantom Load Lurks

Thunder Bay Hydro's

Most electricity consumers are not aware of the power drain created by phantom load in everyday household electronics. It is an issue that is gaining prominence at a time when consumers are being encouraged to do what they can to conserve electricity.

By definition a phantom load is electric power used by electrical devices when they are in standby mode or switched off. Any device in the home can be a source of standby or phantom power and consumers are often surprised to hear that something as simple as turning off the TV does not necessarily mean that the power flow has stopped.

Just how much phantom load is being created by electrical devices in a typical home? This was the question that the Conservation and Energy Services staff at Thunder Bay Hydro asked themselves as they considered ways that they could better educate their customers about this unseen power drain. It was clear to staff that many customers were not aware of the electrical loads in their homes and businesses.

In order to better understand the impact of phantom load on a typical household's electricity consumption, Thunder Bay Hydro undertook a study in the spring of 2008 to measure standby or phantom loads on electrical devices in a 20 year old 1,600 square foot bungalow. The findings provided practical data and examples of phantom loads in an average household.

The study included all electronic devices and electrical equipment being used in the home that was plugged in to electrical outlets. Devices, known as "line loggers," were used to identify the electrical consumption that each of the devices used. All of the electrical devices were then examined to determine standby or phantom load. The results were revealing - in a home that consumed an average of 8500 kWh per year, 1019 kWh could be traced back to standby load loss, or over 10% of the household's total electricity consumption.

Simple measures were employed in the home, and by changing some of the resident's common habits, standby power loss was greatly reduced. These conservation measures are now being widely promoted to Thunder Bay Hydro customers.

For example:

- By turning off the computer and using enabling conservation software (which most personal computers have), customers can save up to 60% of the energy used by the average PC. This can make a difference on electricity bills that amounts to about 10 days worth of electricity annually.
- The most direct way to eliminate a load is to unplug it or turn it off from a wall switch, or power bar. Power bars make it convenient to manipulate multiple devices with a single on/off switch.

Behind Many Household Electronics

Phantom Load Study Uncovers Standby Power Drain in Homes

- Set up an exclusive area for charging batteries. The 'charging station' helps to eliminate devices being left 'powered-up' and allows users to connect all battery charging to a power bar with an on/off switch. A battery drill charger in the test home was using 280 kWh of standby power annually - by putting it on a power bar this power drain was almost completely eliminated.
- Entertainment equipment in 'rec' rooms and other areas of the home that are rarely used should have power bars installed that can be turned off for extended periods.
- Main floor entertainment systems can be configured to allow existing receptacles on a wall switch to control a portion of the load. Simply turning off the wall switch will turn off the power bar.
- Simply unplug certain electrical devices that might not be used on a daily basis. In the test house, devices such as lawn sprinkler system controls, fax and adding machines, and exercise equipment were simply unplugged when not in use.

With the purchase of a few power bars, the electrical reconfiguration of an entertainment centre and the simple action of unplugging equipment that was not in use, the test house in the study was able to realize considerable kilowatt hour savings.

Annual electricity lost through phantom load accounted for 1019 kWh of the family's total consumption - after simple conservation measures were employed, the household was able to shave off 883 kWh of its phantom load.

The losses attributed to phantom load were successfully brought down to minimal levels with a minimal amount of effort.

Thunder Bay Hydro distributes electricity to over 49,000 customers within the city limits of Thunder Bay via a network of over 1,300 kilometers of overhead and underground power lines.