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INFORMATION • TOOLS • RESOURCES

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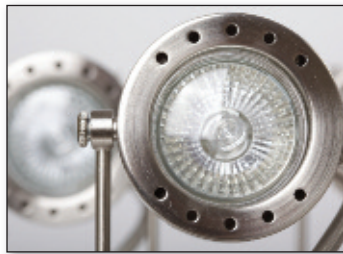
Energy Focused at Work and Home

It seems that Tony Thoma never stops thinking about electricity costs. Tony is a residential consumer advocate on IESO's Stakeholder Advisory Committee. He is also the Dean of Engineering Technology at Mohawk College.

Recently Tony turned his attention to building a new house. His design called for installing over 70 pot lights throughout the house; in the kitchen, living room, hallways and entrance areas.

He had read a number of reports about the savings that could be had from using solid state LED lighting and he decided to experiment with this technology. Tony shares with us his process of becoming an early adopter of LED lighting.

"I built my house in 2012 and managed the construction as the general contractor. I decided to use pot lights throughout the house, especially in the kitchen area. Over 70 pot lights were installed in the main floor.



I decided to experiment with LED bulbs. The biggest 'bang for the buck' would be to focus on areas where the lights were typically in use for the longest period of time. For most households, including ours, that is the kitchen area. In our house, we have the lights on in the morning prior to everyone leaving for work and school, and again in the evening for meal preparation, eating and homework.

I began by purchasing several four watt, MR16 LED bulbs (white light). I calculated a total reduction of 360 watts of energy with all the lights on. I then created a spreadsheet with the estimated number of lighting-use hours and multiplied that against the relevant charges on our bill. I estimated that changing to LED bulbs saved about \$50/year – or \$5/bulb.

I also considered the maintenance costs – I would typically replace a halogen bulb every two years at a cost of \$4 each.

These fixtures typically cost well over \$20 each, but I purchased them from an on-line importer at less than half the cost. I also learned more about light output. Even though I measured the equivalent power ratings (50 watt halogen equal to a 4 watt LED), I should have used a minimum of 5 watt LED bulbs for a brighter light output."

Connect with Tony via email at: tony.thoma@mohawkcollege.ca or visit www.facebook.com/OntarioIESO to share your thoughts and ideas.

Get your 2013 Calendar

The 2013 IESO Calendar is a visual reflection on how electricity is made and consumed in Ontario.

Twelve stunning photographs combined with interesting facts showcase generation, transmission, distribution and consumption in different regions of the province.

To order your complimentary copy, please send an e-mail to communications@ieso.ca with your name and mailing address.



Market Information Corner

The onset of winter weather means that consumers use electricity differently than in the summer. Here are some ways that winter weather affects electricity demand:

- Cloud cover and snowfall can contribute to increased lighting load (up to 750 MW)
- A 30 km/h wind on a cold day (-10°C) can increase demand by 800 MW
- Each degree below 10°C incrementally raises demand from 50 MW to as much as 250 MW a degree at -20°C because of heating load



Canadians Open the Door to Smart Grids – New Consumer Research Released

A national online survey conducted by SmartGrid Canada in partnership with the Independent Electricity System Operator shows that Canadian consumers clearly want to be engaged with smart grids – but they want to know more about what value these technologies can deliver.

“This survey reveals a window of opportunity for our industry,” said Alex Bettencourt, Managing Director of SmartGrid Canada. “Canadians are, by and large, very open to the concept of smart grids and smart homes. While they may have an inkling of what it might entail, there’s clearly a need for our industry to raise awareness levels through large scale education efforts and address consumer concerns about cost, control and privacy.”

Some findings of the report include:

- Seventy-two per cent of Ontarians indicated that they have changed their energy use in response to time-of-use rates, with a slighter lower percentage (69 per cent) believing that these efforts are having an impact on their bills.
- Almost a third said they already have or would consider participating in a load control program which would allow their utility or another third party to reduce their air conditioning or water heater use during peak demand.

The full report is available from the SmartGrid Canada site at: www.sgcana.org/media

Getting SMART with your Energy Management Plan

Developing an energy management plan for your organization helps your staff understand what changes need to be made and why. It also helps track your progress, cost savings and energy efficiency project payback. When you are thinking about your energy plan, think about using SMART goals. SMART is an acronym often used in project management which helps you create goals that will motivate you and others toward your objective. Here are some energy management ideas for each SMART goal.

Specific – Target specific processes and operating procedures in your company. This could be as easy as turning more lights and computers off at night. It could also involve looking at the way you operate your chillers on a daily basis to optimize their performance.

When you get specific in your energy management plan, it allows you and your staff to focus on defined projects and tasks.

Measureable – Before putting an overall target on energy reduction, know how much energy you use and where you use it. By understanding which devices use the most electricity in your business, you can target potential areas to reduce consumption. Then you can put an overall target in place.

Attainable – It is probably an insurmountable challenge to create an energy management plan in isolation. Look to other businesses for advice and strategies in order to create an energy management plan for your business. Make sure that you are aware of capital spending in different parts of your organization so that energy efficiency is a priority for all purchases.

Realistic – Your energy management goals should be reasonable and practical to achieve. When tracking and reporting on the savings from completed energy management projects, check back to see if the results differed from expected savings.

Timely – Look for low hanging fruit. One of the quickest ways to build momentum from an energy management plan is to have your staff look for low or no cost solutions that will have a bottom line impact. Often, it’s those projects that give the biggest bang for the buck.

Energy Savings Tip

Your peak demand can represent up to 30 per cent of your business’ total electricity bill. Find out when you set your demand peak and what electrical devices you are using during that 15 or 60 minute period. This will tell you if there are opportunities to shift some of that usage to other times and reduce your demand charges.

The IESO is a not-for-profit organization that manages the reliability of Ontario’s power system and operates the wholesale electricity market where the hourly price of electricity is set. Through its market education program, the IESO works with consumers paying the market price by creating educational material on the market and providing opportunities for consumers to learn about the electricity sector and how they can better manage electricity costs. For more information on the IESO’s market education program, please contact:

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