



# BC Food Processors

## A S S O C I A T I O N

**BC Hydro Sponsored  
Office of Energy Efficiency, NRCan  
“Spot the Energy Savings Opportunities” Workshop**

In June, I attended a full day, hands-on workshop exploring energy saving practices. The workshop explored *Energy Basics* – Principles, definitions and calculations; *The 7 Steps* – Principles-based methodology; and *Applications & Demonstrations* – compressed air, fans & pumps, lighting, and motor management. We received a workbook, executive summary and a CD with spreadsheets and other tools. BC Hydro is willing to organize a workshop specific to food processing.

### **ENERGY SAVINGS TIPS**

1. In order for companies to build an energy managing culture they must put people in the feedback loop. You must be able to track and report on energy use.
2. Carry out internal/external benchmarking and transfer knowledge i.e. among various plants in a company.
3. Work from, “what’s on my bill this month to what’s happening by the hour.” Companies already have this type of control through QA – bring the same quality control to energy. Check your meter hourly.
4. Confirm that the Power Factor is over 90% to ensure you are not being penalized. In the workshop we looked at the effect of adding capacitors have on PF.
5. Prevent short term peak uses of power which will send your demand up. Some ideas – run at night (off peak time), know what kind of meter you have – on all BC Hydro meters it takes 15 minutes for a load to register – you can time when you bring up motors to avoid metering. Implement demand control strategies to limit demand charges. Businesses are charged as much as 30% for the demand charges.
6. Consider replacing unit heaters with radiant heat in buildings with large high ceilings.
7. Reduce lighting levels to meet the requirements before upgrading to new lighting. When retrofitting, find the source for greatest lumens per watt to provide the right light level – consider reflectors. Replace all incandescent and compact fluorescent lamps in exit signs with LED. LED lamps use a fraction of the wattage of conventional bulbs.
8. When buying natural gas from a third party be aware that Terasen Gas still charges for transportation and metering per GJ no matter what company is billing for the gas. Ask your third party marketer, “Are there any additional charges?”

9. Lower the compressed air set point to meet the need. Manage end use, reduce leaks, and consider relocating compressed air sources – locating the air source in a cold room takes less energy than a higher temperature air source.
10. Maintain filters and clean the coils – sequence compressors, pumps and fans.
11. Choose new equipment based on life cycle costing rather than upfront cost. Take into account the energy costs of any new equipment you are considering.
12. Fans & pumps – replace inlet, outlet and other throttling devices that control the flow with variable speed drives
13. Motors – Match the motor to the load – compare an amp reading with the faceplate. Motors should be well maintained. When choosing a new motor look at the following site for an analysis of energy efficiency.  
<http://oee.nrcan.gc.ca/industrial/equipment/software/FactSheet.pdf> You should look for premium efficient motors. Do not accept an old free standard motor. “You’ll waste more energy than you are saving with a freebie.”

This workshop was a valuable hands-on look at all aspects of energy use in a factory.

Workshop delivered by **Robert Greenwald**, Prism Engineering Ltd.

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