Energy Circles
ELECTRICITY CHALLENGE

Introduction
This is a game. The rules are simple. Register your Energy Circle by sending us the date of your first gathering and the names of the participants. Record your electricity usage for the previous 24 months and take the average kWh per day. This is the figure you will try to beat. Send us this info too. There will be prizes for the individuals who make the biggest percentage decreases in their power usage. As an added bonus, these people will also be saving the most money on their hydro bills. There will also be prizes for the people who sign up the most recruits.

Please go through the following list carefully. In each box please put one of the following symbols:

n/a	not applicable
y	yes, we will change
a	already do this
d	don't want to do this

Checklist of Things You Can Do

The Simplest Ones

These are the changes that only involve becoming more aware of how you actually consume power. No expenses are required although the purchase of a couple of power bars might help.

Lighting

- ☐ Get in the habit of checking how many lights are on in your house and turn off unnecessary ones; how many lights are on at 9pm tonight? _____ How many could you turn off? _____; try this same exercise for the next three nights:
  _____ lights were on; I turned _____ off
  _____ lights were on; I turned _____ off
  _____ lights were on; I turned _____ off
- ☐ Turn your porch or other outside lights off unless you are expecting visitors
- ☐ _____

Appliances
Many of the common household appliances have ghost loads; that is they are using power even when they are off. For example, let's assume your VCR uses 11 watts when on and 3 watts when off. During a 24-hour period, if you watch a two-hour movie, you use 22 watts when using the VCR and 66 watts when it is off. Unplug all small appliances all when not in use, or put them on power bars or switched plugs.

- ☐ Unplug the microwave when not in use; my microwave uses _____ watts when not in use
- ☐ Unplug all stereo equipment or plug it all into a power bar; my stereo uses _____ watts on and _____ watts when off
- ☐ Watch less TV; never leave the TV on when you aren't watching it; unplug the TV when not in use; use the smallest TV you can - the big new plasma TVs use about three times the power of a "normal" TV; my TV uses _____ watts on and _____ watts off
- ☐ Unplug your VCR; my VCR uses _____ watts on and _____ watts when off
- ☐ Check the temperature of your refrigerator and freezer and see if you can make them less cold without affecting the food; 2-3 C (35-38 F) should do for the refrigerator; you should also defrost your refrigerator whenever there is ice as thick as a pencil; if it has an energy saver setting use it; I reduced the temperature in my refrigerator: Y / N; in my freezer Y / N

- [ ] If your refrigerator is too close to the stove, or in sunlight for an extended time, or too close to a wall (3 inches clearance on the back and one inch on each side is recommended) it may be worth moving it
- [ ] If you have a water dispenser unplug it and learn to drink water at room temperature or keep a jug of cold water in the fridge; my water dispenser uses _____ watts
- [ ] Get rid of any old “beer” fridges; fridges older than five years old use a lot more energy than new fridges; my old refrigerator uses _____ watts when on
- [ ] If you have a stand-alone freezer, can you find a suitable space for it in an unheated garage or even out on a deck? In the winter it will barely need to draw power and in the summer, as long as it is in a shady spot, it will usually be cooler than inside the house
- [ ] If you have an electric oven try to minimize its use; for example it takes a lot less power to boil water in an electric kettle than on the stove, and a lot less power to heat food in a toaster-oven or even a microwave than in the oven
- [ ] Unplug all battery chargers and other small black transformers (wall warts) when not in use
- [ ] Check all small appliances you have plugged in around the house; if any of them have ghost loads make sure you keep them unplugged. Could you stop using any of these appliances?
  _____ uses _____ watts when on and _____watts when off
  _____ uses _____ watts when on and _____watts when off
  _____ uses _____ watts when on and _____watts when off
  _____ uses _____ watts when on and _____watts when off
- [ ] _____

Heating

- [ ] Close the windows if the heat is on
- [ ] Wear sweaters inside; turn down the heat 2-3 degrees and try it
- [ ] If you have curtains, use them to keep the heat in at night
- [ ] Close the door to, and turn the heat down in, rooms that you rarely use
- [ ] Turn the heat down when you leave the house for several hours
- [ ] If you have a forced air furnace, check and change the air filter regularly
- [ ] _____

Hot Water

- [ ] Turn the temperature of your hot water tank down a few degrees; it doesn’t have to be so hot that it scalds you if you don’t mix the hot with some cold; 130 F (54 C) should do
- [ ] Turn your hot water tank off at the breaker when you are away for any extended periods
- [ ] Minimize the number of less-than-full loads of laundry; use cold or warm wash
- [ ] Reduce the amount of hot water you use: put a timer in the shower and take shorter showers; do not leave the hot water running, etc.
- [ ] Hang your washing outside when possible or even inside on a drying rack
- [ ] Always wait until the dishwasher is full before running it
- [ ] For small loads, or when you have time, try doing the dishes the good old fashioned way
- [ ] _____

Other

- [ ] _____
- [ ] _____

The Second Level

At this level are a number of items that involve small expenditures.

- ☐ Install a programmable thermostat to ensure heat only comes on when needed; this is probably one of the most important points on this list
- ☐ Invest in a smart meter that tells you how much electricity you are using (see resources page 4)
- ☐ Add shrink-wrap film to any single-glazed windows
- ☐ Add an insulating jacket to your hot water tank
- ☐ Insulate any hot water pipes that you can get to, especially the three feet nearest the tank.
- ☐ Install a low-flow shower head and faucet aerators to reduce hot water consumption
- ☐ Install Compact Florescent Lights (CFL) or LED lights anywhere you can; if you use a 60 watt incandescent bulb substitute a 15 watt CFL; LED spotlights are available but, due to the harsh color of the light, may be best used outside or other not-so-important areas. However, the LED technology is changing fast and, as LEDs use a fraction of the power of even CFLs, they are the bulbs to install if you can find suitable ones; Energy Options, located in the same mall as Ganges Village Market, is starting to stock a range of LEDs
- ☐ Put your outdoor lights on motion detectors; you do not need a light outside if no one is there
- ☐ Analyse your house lighting; does your bathroom really need a set of 6 lights above the sink? Would small task lights be more useful in certain rooms?
- ☐ Check the weather-stripping on you doors and windows; replace worn parts to ensure heat is not constantly leaking outside, tape shut any windows not needed for ventilation
- ☐ Check your refrigerator gasket; put a piece of paper against it and close the door; if you can pull out the piece of paper easily your gasket is not working properly; replace the gasket or start thinking about upgrading the refrigerator itself
- ☐ Install blinds or curtains to use at night in winter to keep heat in and to use during the day in summer to keep heat out; if there are windows that are not really needed, consider insulating over them for the winter
- ☐ caulk all the wiring, plumbing or venting holes that enter the attic from heated space below
- ☐ Stuff child protectors in any electrical outlets that you don't use very often
- ☐ Buy foam pads to install behind the cover plates of electrical outlets
- ☐ Replace your Christmas lights with LED Christmas lights
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

The Third Level

These ideas are optional but can save significant amounts of power. One or more of these may be in your budget.

- ☐ Replace an old refrigerator with a new Energy Star model. New refrigerators are generally much more energy efficient than older models but ask the salespeople to verify power usage before you purchase. Hydro gives a $30 rebate when you recycle your old refrigerator. If your refrigerator isn't too old, consider giving it to someone with an even older refrigerator. Check the power consumption first to make sure the worst fridge gets recycled.
- ☐ Replace any single-paned windows with double-paned or, preferably, EnergyStar windows
- ☐ If you have a forced air heating system, consider installing an Air Source Heat Pump
- ☐ Do some insulation upgrades; up to about R28 in the walls and crawlspace, and R45 in the ceiling insulation usually makes economic sense; but any improvement you can make will help
- ☐ Buy a front loading washing machine; but check the size of the drum and the amount of power used; most front-loaders use much less energy and much less water; LG, Fisher & Paykal and Bosch are some of the more energy efficient brands
- ☐ Hire an energy consultant to do a proper evaluation of your house; small incentives are available for some retrofit measures.
- ☐ Consider installing a solar hot water system to reduce your hot water energy costs; if your house is sited well a solar thermal system should be able to supply 60% of your annual hot water requirements.
- ☐ _____

Thank you for participating

We hope that the Electricity Challenge will make us all more aware of how much power we use. Keep in mind that the more power we use the more CO2 that is produced. Even in BC where most of the electricity comes from hydropower, the interconnected nature of the grid means that every kWh saved reduces CO2. It is a sad truth of our modern world that the CO2 we produce will contribute to the flooding of villages in third world countries that produce almost no CO2. We are all on one planet!

Resources

Places to Recycle Compact Fluorescents

The downside of compact fluorescent technology is that there is mercury in each bulb. Recycle used CFLs carefully. So far, the closest recycling locations are:

Sidney: Capital Iron, 9768 5th Street
Victoria: Capital Iron, 1900 Store Street
Nanaimo: Canadian Tire, 6900 North Island Highway

Regular fluorescent tubes can be taken to the hazardous household waste at Hartland Landfill.

Home Energy Assessments

The local certified energy advisor is Elizabeth White: elizwhite@saltspring.com 537-2616
City Green Solutions www.citygreen.ca is a non-profit delivery agent for the EcoEnergy Retrofit program. Contact CityGreen 1-866-381-9995

Smart Meters

Power Cost Monitor available from: http://save-electricity.ca 1-866-607-2583

Energy Circles

Salt Spring Energy Strategy info: Marion Pape 537-4567 www.saltspringenergystrategy.org
ELECTRICITY CHALLENGE FORMS and info: Andrew Haigh, Salt Spring Books 537-2812

DROP OFF your results at Salt Spring Books or email to Andrew Haigh: ahaigh@uniserve.com