

Ways We Can Conserve Without Spending an Arm and a Leg

By Zeke Yewdall

Editor's note: The following article appeared in the July 2004 issue of *Home Power Magazine* (www.home-power.com), and is reprinted with permission. The article has been edited by Co-op Currents. In italics WEC Products and Services Director Bill Powell (BP) adds comments relevant to Co-op members and Vermont.

So... You want to do your part to help the environment. Photovoltaics (PV or solar electric) sounds great, but realistically, it is beyond the financial

reach of many of us. You can argue, correctly, that the real cost of other energy sources isn't accounted for in their price; but does that mean your check for a PV system won't bounce?

There are other ways you can walk your talk, which are more achievable for the average person and can actually have as great an impact on cleaning up the environment. Let's explore some of the options in the realms of electricity and transportation.

Efficiency

Conserving energy is almost always the most cost-effective thing you can do. A home energy audit will identify many ways, but there are a few things most homes need:

A new refrigerator. Many manufacturers offer efficient, low-end models that are not costly and perform extremely well compared to refrigerators made a few years ago. If you replace a 10-year-old fridge, you could save up to 1,000 kilowatt-hours (kWh) per year. The American Council for an Energy Efficient Economy (ACEEE) can tell you which appliances are the most efficient.

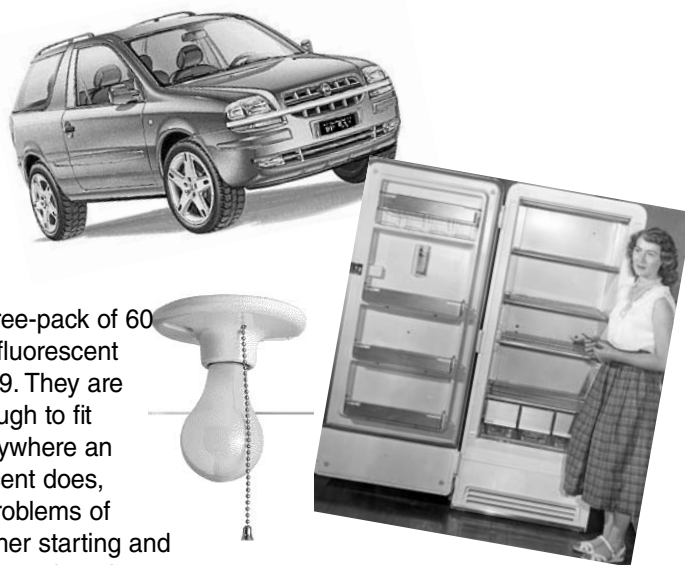
Compact fluorescent lights in the most-used fixtures in your house. CFLs have improved immensely in recent years. Most home centers and hardware stores sell a three-pack of 60 watt-equivalent compact fluorescent light bulbs for less than \$9. They are

small enough to fit almost anywhere an incandescent does, and the problems of cold-weather starting and flickering have largely been solved.

BP: Contact the Co-op to (1) borrow a kilowatt-hour test meter to measure your refrigerator's usage (or any 120-volt appliance), before you replace it; (2) get recommendations for appliance selection and lighting choices, and (3) schedule any of the Co-op's Home Comfort services, including electrical energy audits.

Eliminate phantom loads. Your computer system should be on a power strip or switched outlet, which you can turn off when not in use. Newer electronics with switching power supplies are getting better. For example, DVD players usually have a phantom load under 1 watt, instead of the 5- to 15-watt phantom load for older VCRs. Especially beware of wall-warts (those wall-cube power supplies); they usually consume about 50 percent of their rating while not powering anything. Unplug them when they're not in use, or put them on switched outlets or plug strips. The U.S. Department of Energy's Consumer Energy Information Website (www.eere.energy.gov/consumerinfo) is a good source of information on efficiency.

(BP) The Co-op recommends that



computers, fax machines, scanners, TVs, VCRs and most household appliances also be connected to an appropriate SURGE PROTECTION device. Using power strips alone is not recommended; "strips" connected to surge devices, or — in the case of computers — uninterruptible power supplies (UPS), are acceptable. We first wrote on the topic of "phantom," or parasitic, power in the July 1999 issue of Co-op Currents.

Buy Green Power

In many states you can choose to buy green power. In states that have opened electricity generation to competition, this may mean switching utility companies. Elsewhere, it may just mean signing up for a premium product from your utility. Some states require utilities to offer a green power product. You can find a list of utilities offering green power at www.dsireusa.org, and by searching the web for green pricing programs.

(BP) Vermont has not moved to retail electric competition, so switching suppliers is not an option in Vermont. Rather than offering green power at a premium price to those members willing to pay, Washington Electric Co-op is finding renewable energy options that we make



available to all our members without charging a premium.

Transportation

Electricity and transportation are both largely fossil fuel-fired, but at least electricity comes mostly from domestic fuel sources, whereas 60 percent of our oil (mostly going to transportation) is now imported — about 20 percent from the Middle East.

For a related article see “When Will the Joy Ride End?” at www.oilcrisis.com/debate/udalljoyride.htm

You can reduce gasoline consumption. Combine trips; carpool; drive your more efficient vehicle most of the time if you have two. Take the bus, walk, bike. I heard of someone in Norway who skied an hour to work each day, and remember thinking he was insane. But in America we accept an hour's drive to work as normal. The skiing Norwegian is getting exercise and a relaxing time outdoors every day, while we have to pay for our recreation and do it on the weekends. Who is really crazy?

Buy domestic fuel. You can buy gas from companies that do not import from the Middle East or support drilling in the Arctic. BP/Phillips, Citgo, Conoco, Sinclair, Sunoco and Hess do not import oil from the Middle East. Shell, Chevron, Texaco, Exxon/Mobil, Marathon/ Speedway and Amoco do. Shell and Amoco (now combined with BP) do generally have a better record on environmental issues. Exxon/Mobil has particularly reprehensible policies regarding climate change, the Middle East and the environmental impact of petroleum use and extraction.

Use biodiesel. You could buy a diesel car and use biodiesel to fuel it. In addition to supporting American farmers instead of foreign oil interests, biodiesel reduces SOx, CO, HC and particulate

pollution compared to petroleum-based diesel, even in small-percentage blends. However, NOx may increase slightly. Minnesota requires that all diesel fuel sold be 2 percent biodiesel, because it is an alternative lubricant to sulfur in the fuel. Homebrew biodiesel can be made from used restaurant oil. The National Biodiesel Board's website (www.biodiesel.org) provides more information on biodiesel and where you can buy it. Biodiesel is only cheaper than regular diesel if you get free vegetable oil and make it yourself. Commercially sold biodiesel runs about \$2.80 per gallon.

Drive a hybrid. If you are planning to buy a new car, consider a hybrid. You can choose between the Civic, Insight and Prius, with more in the works. Hybrids qualify for around a \$2,000 tax credit, about half the cost of the premium over the non-hybrid equivalent car.

Do you actually need an SUV? On an icy or snow-packed road a Civic will handle better, and all-wheel drive cars are better than SUVs until the snow gets deep. For households that own two SUVs, keep one and trade the other for a hybrid for the majority of trips. Even many non-hybrid compact cars get nearly 40 miles per gallon. For ratings see www.greencars.com. For information on tax credits, see www.cleancarcampaign.org. EV World's AFVmarket.com website also has information on where to buy used or recently off-lease EVs and hybrids.

Buy an electric car. Admittedly, this is getting hard. Major manufacturers have discontinued selling or leasing new electric cars in the U.S. Home conversions, or buying a used electric car, are among the few options left. And in states with really dirty coal power plants, this may not be much better environmentally than a good hybrid car. Still, it will eliminate your dependence on foreign oil.

Renewable Energy Systems

You can install your own RE (renewable energy) system. This can be more rewarding than merely buying renewable energy credits, but it can also be expensive. Prices to offset all the electricity used by the average conserving household range from \$10,000 to \$30,000 for a PV array or small wind system. With photovoltaics it's easy to start with a small system and expand as expenses allow.

(BP) Since 1999, Vermont has allowed members to own and self-generate renewable energy under a net metering law: <http://www.washingtonco-op.com/pages/netmeter.htm>

Contact the Co-op for technical information about RE and net metering requirements).

You Can Do It

You can do many things to reduce the environmental impact of your energy use. They range from simple, inexpensive methods like replacing incandescent light bulbs or checking off a green-power box on your utility bill, to making different decisions when you buy your next car, to installing your own renewable energy system. All have different costs, pollution reductions and payback times. They are also different in how they fit in with your lifestyle. It's up to you to make the informed decision about what is best for you.

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