

GREEN MATTERS

A publication by the "Green Mission Team" at Calvary Presbyterian Church

EASY GREEN STEP: PRIMER ON CFL LIGHT BULBS

Sara Starr, Liz Johnson, and Dick Jesson have been working with electrical and lighting consultants to reduce energy use at Calvary. We'll be telling you more about that project in a later *Green Matters* issue, but some of the reductions will be achieved by installing "CFLs" (Calvary has already replaced many incandescents with fluorescents, as you may have in your own home or business).

Q: What is a CFL? CFL stands for "compact fluorescent lamp."

Q: Can it be used in a regular light socket? Yes.

Q: Does changing to CFL save money? Energy efficient choices can save families about a third on their energy bill. CFLs use about 75% less energy than a traditional incandescent bulb, produce 75% less heat, and last up to 10 times longer.

Q: Isn't fluorescent light a turn-off? Not if you use a good product, like those certified by Energy Star, a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. Qualified bulbs labeled "warm white" or "soft white" produce light like typical incandescent light bulbs. CFLs that have a cooler color (similar to bright white incandescent bulbs) are usually labeled "bright

white" or "daylight" on the product packaging.

Q: How can I get a CFL that provides the same amount of light as an incandescent bulb? Manufacturers include product equivalency information on the packaging to help consumers choose a bulb that produces enough light. For example, if you are looking for an Energy Star qualified light bulb to replace your 60-watt incandescent, look for words like "Soft White 60" or "60 Watt Replacement" on the packaging.

Q: Do CFLs work on dimmer switches? Yes, certain ones do. Check the fine print on the back of the packaging for proper applications and any restrictions. Using a CFL not designed for dimmer switches can shorten its life significantly. If your hardware store does not have what you need, the Energy Star website listed at the end of this article has information on locating retailers and buying on line.

Q: I've heard turning them off and on frequently uses lots of energy. Is that right? While there is a brief surge in energy use when a CFL is turned on, with today's starting technology, that surge usually lasts about a tenth of a second and consumes about as much energy as five seconds of normal operation. So, even when turned on and off frequently, a CFL uses less energy than its incandescent equivalent. But turning a CFL on and off frequently can shorten its life, so it's best used in light fixtures you leave on for at least 15 minutes at a time, such as kitchen ceiling lights, the living or family

room table and floor lamps, and outdoor porch or post lamps.

Q: What about disposal when they've burned out? Because CFLs contain small amounts of mercury, it is **Q: THEY DO?? ISN'T THAT DANGEROUS?**

According to the EPA (www.epa.gov), the amount of mercury in a CFL varies, but typically is about 1/100th of the amount of mercury found in a mercury fever thermometer (by comparison, older thermometers contain about 500 milligrams of mercury, equal to 100 CFLs). No mercury is released when the bulbs are unbroken or in use. A key concern is the disposal of CFLs in landfills where, if they break or leak, mercury is released in the environment. This is one way that mercury gets in water and is absorbed by fish, and then by us when we eat fish. The EPA supports the use of CFLs because it reduces the release of mercury and greenhouse gases from coal-burning power plants.

Q: OK. So how am I supposed to dispose of CFLs when they burn out? Many places take them for free, including many hardware stores. Go to the San Francisco Department of the Environment's website, <http://sfgov.org/site/frame.asp?u=http://www.sfenvironment.org>. From the pull-down menus on the "ECO Finder RRR" choose "lighting" and "CFL Compact Fluorescent." Then put in your zip code and you'll get a long list. By the way, the mercury in recycled CFLs can be used in new fluorescent light bulbs and other mercury-containing devices.

Q: What if a CFL breaks?

The EPA recommends special precautions to limit any exposure to mercury. Allow the room to air out for at least 15 minutes with air conditioning and forced air systems shut off (people and pets should also leave). For hard surfaces, scoop up the debris with stiff plastic or paper (rather than using a vacuum or broom); use sticky tape to pick up remaining glass fragments or powder; place the debris in a glass jar with a metal lid or a well-sealed plastic bag. For rugs and carpeting, pick up glass fragments carefully and place them in a glass jar with metal lid or in a sealed plastic bag; use sticky tape for any remaining glass or powder, and vacuum if needed after all visible materials are removed; then remove the vacuum bag (or empty and wipe canister) and put the bag or debris in a sealed plastic bag. (The City says that it prefers that the debris be taken to a toxic waste disposal center, but if that is all you have, it can go in the garbage because it is not that harmful.) There are more details and recommendations on the on the web site listed below, including instructions for clothing and bedding.

Q: What if a CFL broke and I did not follow the EPA recommendations for clean up? Don't panic. CFLs contain very, very small amounts of mercury sealed within the glass tubing. If the CFL broke recently, check EPA clean up guidelines for any

reasonable actions that can still be taken (such as disposal of a vacuum bag with CFL debris). EPA's clean-up guidelines are conservative because they are based on studies that address long-term exposure to mercury vapors on a regular basis, as on the job. [Source for all of this article but the City's views on disposal:

www.energystar.gov]

THE BILL MCKIBBEN READER

The *Bill McKibben Reader* has 42 selections from the author's writings, spanning 23 years. For someone like me, who has never read his work, it was a good introduction to his musings on man, nature, and how each affects the other.

A 1999 essay describes the misery of the people in New York's Adirondack Mountains during the annual 6-7 week blackfly season. You "feel your sanity threatened" as the flies crawl in and out of ears, nose, mouth, and eyes, and bite any body part not covered, leaving welts, hovering "in a cloud about your face and [moving] with you for miles, so great is their need for your warmth and company and blood."

Being frugal, the town declined privately offered pest control services, even when an apparently environmentally friendly option became available. Then a movement to control the problem grew, which "may" have started at a Rotary Club meeting in

Smith's Restaurant when a local realtor complained of losing a sale because her clients could not get from car to house because the flies were so thick.

But then opposition, although "not particularly organized," formed. Questions were raised over the cost and effectiveness. Of special interest to McKibben was that most of the opposition was "unexpectedly philosophical." Unease over "mucking around" with longstanding environmental systems was reinforced with a concern over depleting the food supply of bird, bats and fish. A surprising number said, "not always loudly, often a little backhandedly, maybe with a shade of embarrassment – that somehow the blackflies were a part of life here, one of the things that make us whatever it is that we are."

McKibben then relates an experiment he undertook. He got friends to tape everything in a 24-hour period that came over a 100-channel cable system. He watched the 2400 hours of video over the course of a year. Among the lessons that "spewed forth . . . was this one overriding message. *You are the most important thing on earth.* You, sitting there on the couch, clutching the remote, are the center of creation, the heaviest object in the known universe; all things orbit your desires. This Bud's for You."

And the connection with the town's reaction to the blackfly problem? "[T]he drive to eliminate blackflies [manifests] our deep consumer urge. We want to consume bite-free air; we want to consume our cedar decks and our pools and our gardens free of any complication or annoyance."

And the benefit from the suffering the blackfly misery? Well, that takes several pages of discussion not easily summarized, but includes this: "They remind me day after day in their season that I'm really not the center of the world . . . They are a humbling force . . . Over the course of a decade, living in a place dominated by high mountains, wild winters, summer storms, trackless forest, and hungry insects has in fact warped me in certain ways . . . I am still a consumer; the consumer world was the world I emerged into, whose air I breathed for a very long time, and its assumptions still dominate by psyche – but maybe a little less so each year . . . There are times when I can feel the spell breaking in my mind – the spell of the advertiser on the tube . . . There are times when I can almost feel myself simply being."

And here is an example McKibben gives of himself as consumer: "It is true that I am a Methodist Sunday-school teacher theoretically immune to covetousness of all sorts, and that as an environmental writer I'm quite aware that if we all continue to buy immense amounts of things we will wreck the planet . . . I own a crummy car, no television, a wood-burning stove, and extremely virtuous if somewhat abrasive toilet paper. . . . [But in the store] I say to myself, this pair of hiking boots weighs a full two ounces less than the pair I currently own. Lifting two ounces at a time in the course of taking, oh, eight million steps would waste enough energy to raise the level of the Nile six inches. I'll take them."

McKibben has been writing about global warming since 1984. One of my favorite selections is his account of Jim Hansen, the "middle-aged, middle-western, middle-tempered physicist who directs NASA's Goddard Institute for Space Studies." Hansen told Congress in 1988, "in an unassuming monotone," that "based on his reading of the temperature data found in the past century, the heating [of the earth caused by man-made carbon dioxide] had already begun." As another scientist told McKibben, "Other researchers had been saying stuff like this in the bathroom at seminars, but he had the guts to do it out in public." Hansen immediately "moved the problem from the theoretical to the immediate, from obscure journals straight to CNN." McKibben leads us through Hansen's work up to that point, and the debate following his Congressional testimony. It is an approach that I always enjoy – the science or history lesson through the lens of the individual living through the whirlwind of controversy.

McKibben has written eleven books and numerous articles. I find his work by turns insightful, amusing and profound, a kind of status report on our relationship with all of God's creation.

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