

Ask EcoGirl

By Patricia Dines

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Eco-Lighting for a Brighter Future

Dear EcoGirl: What's the story with these curly-cue "eco" lightbulbs? I hear that they lower energy use, helping save money and the planet. But they also contain mercury and can't go in the trash. Are we just trading one eco-problem for another? *Signed, Puzzled*

Dear Puzzled: Thank you for your question. Yes, as with many green-labelled products, there are pros and cons to these bulbs, officially called compact fluorescent lamps (CFLs).

On the one hand, CFLs do indeed use significantly less electricity, trimming both energy costs and eco-harm. Yet, they do also contain trace amounts of neurotoxic mercury, which isn't released in everyday use, but means that CFLs require special disposal, carry modest risks if broken, and can harm workers if manufacturing protections are inadequate.

On balance, though, most experts conclude that CFLs offer a vital tool for combatting the significant harm of climate change and air pollution. We just need to understand their limits to use them appropriately and encourage development of better alternatives.

Assessing CFLs

- **CFLs are significantly more energy-efficient** than the more-common incandescents, cutting electricity use by 75% for the same amount of light. About 20% of the average home's electricity bill is lighting, and one CFL can save over \$30 during its lifetime. The EPA estimates that, if each U.S. home replaced an incandescent with a CFL, we'd save enough electricity to light three million homes and prevent greenhouse gas emissions (GHG) equal to 800,000 cars.

- **CFLs last up to ten times longer than incandescents.** This extended life more than offsets their sometimes-higher cost and makes fuller

use of their raw materials and production impacts. Plus, bulbs need changing less often, saving us time and reducing business maintenance costs.

- **CFLs contain a small amount of mercury (1.4 to 4 mg), which is sealed inside** and not released with normal use and proper disposal. Most of a bulb's materials (99%) can be reused for new bulbs.

- **CFLs prevent a notably higher level of mercury from poisoning our air, water, and seafood.** About 50% of U.S. electricity is produced by burning coal; in 2006, this put an estimated 51 tons of mercury into our shared environment. *Scientific American* calculates that replacing a 75-watt incandescent with an equivalent CFL drops related average mercury emissions from 13 mg to about 3.5 mg over the CFL's average 7,500-hour lifetime. This cuts the mercury released by 9.5 mg or 73%! Plus, it helps decrease coal mining's devastation.

Choosing Wisely

So switching to CFLs can provide urgently-needed energy reduction that benefits our health, wallets, and world. Bulbs are available in various styles, at prices reasonable relative to their savings, and sometimes even seriously discounted. To get the most benefit, install CFLs first in lights that are high-use or difficult to access.

I also encourage you to explore LED lightbulbs, which offer even greater energy efficiency without the mercury downside. They're available as holiday lights, accent lighting, track lights, and other low-wattage bulbs. They do cost notably more. For example, I recently saw a 40-watt equivalent bulb (which uses only 1.5 watts) for \$13. Its package touts \$112 in energy savings and a 30,000-hour lifetime, proclaiming "you'll never change your bulbs again." Industry experts expect prices to drop.

Essential Acts

If you use CFLs, take these two key actions to help ensure their net benefits.

- 1) **Dispose of CFLs properly.** To keep mercury out of our shared environment, don't put CFLs in the garbage. Discard them at the Sonoma County Household Toxics Facility, Community Toxics Collection Days, or participating stores, such as Friedmans, Home Depot, OSH, True Value Hardware, and Sebastopol Hardware. For more information, see (www.recycle-now.org) or the Recycling Guide (in your AT&T yellow pages), or call 565-3375.

- 2) **Handle bulbs carefully.** If a CFL breaks, hold your breath and open the windows to disperse the vapor. Gather the fragments in a plastic bag or glass jar without touching them (a wet rag can help), and bring to a toxics center. For more about mercury pollution prevention, see (www.rrwatershed.org/mercury.html).

By finding ways like these to reduce our energy use, we can all help steer our culture towards a happier future.

Ask EcoGirl is written by Patricia Dines, Author of The Organic Guides, and Editor and Lead Writer for The Next STEP newsletter. Email your questions about going green to <EcoGirl@AskEcoGirl.info> for possible inclusion in future columns. View past columns at <www.AskEcoGirl.info>. Also contact EcoGirl for information about carrying this syndicated column in your periodical. "EcoGirl: Encouraging the eco-hero in everyone."

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