

CFL's may be energy efficient but be careful if you break one. Harry Sullivan, Truro Daily News

Shedding Light on a CFL disposal problem.

Chantale Hache was understandably pleased when she received an offer to have all the light bulbs in her business replaced for free with a more environmentally friendly version. She's not so certain now whether those initial emotions were justified. As a local business owner, Hache was asked in early December by Nova Scotia Power Inc., (NSPI) to participate in its Direct Install program to replace her existing incandescent bulbs with the new, compact fluorescent bulbs. (CFLs). The program was directed at small businesses, non-profit organizations and community groups free of charge who wished to participate. In all, 1087 businesses, including some nursing homes, took advantage of the offer, resulting in changing 44,401 incandescent bulbs to CFL's and 7,148 LED exit sign lamps, according to NSPI spokeswoman Margaret Murphy. The calculated energy savings from those bulbs is estimated at 6,619 megawatt hours.

Hache said she was initially "thrilled" to participate because she prides herself in being environmentally conscious. But after having one of the new bulbs burn out shortly after they were installed (despite the fact they are supposed to have a longer lifespan than the traditional bulbs), Hache learned, to her dismay, that special measures are required for both the disposal and cleanup (should they break) of the CFL's because of the small amount of mercury they contain.

"Nowhere along the process of me being a part of this program did anyone make me aware, because there is mercury in those bulbs, that there's a very specific way to properly clean it up if one breaks, or in the event one burns out, how to dispose of it properly," she said. "It's a danger ... and they're not telling people how to properly dispose of them."

In response, Murphy said the people who installed Hache's CFLs for NSPI obviously did not follow proper procedures during the installation process. "We apologize if the owner did not receive all the information," she said. "It should have been provided. In most cases, we know that installers were familiar with the steps for disposal because it was part of their training. And in most cases the feedback has been good. In any new program there will be changes as we all adapt to new technology. It's our job to make this as easy as possible for the business owner. So we will certainly listen to this feedback and use it to make sure that information is provided if people have questions, they receive the answers they need."

But Hache believes that should have been made a priority from the get-go and that the hazardous component should be spelled out in large letters on the packaging to better inform consumers of the potential dangers they face from mercury vapours released when the bulbs break.

"The reality is, no matter how you look at it, the mercury vapour goes up to 25,000 to 100,000 nanograms when a bulb breaks in a room," she said based on the results of a study conducted in 2007 by the Maine Department of Environmental Protection. That study was based on 45 experimental trials where CFL's were broken in a small/moderate size room. **Maine's Ambient Air Guideline, meanwhile sets 300 nanograms per cubic meter as an acceptable standard.** "It's an issue," Hache said.

Independent MP Bill Casey agrees. "I looked at a package of two new CFL bulbs," he said, and there is nothing on it about disposal. No warnings or anything. And I'm surprised that an item that has potential to be so dangerous is not flagged and instructions are not required on the packaging." Casey said he has contacted "quite a few people" who have handled CFL's and nobody that I've approached knew they had a dangerous chemical in them." CFL packaging does indicate that mercury is present, although in some cases the notification is in very small print in an obscure location. "So there's definitely some public awareness required on this," Casey said.

Bob Kenney, Solid Waste-Resource Analyst with the Department of Environment, said Hache's concerns were raised when the program was introduced. The province does have a committee looking at issues surrounding a variety of household hazardous products and wastes, he said. "Beyond mercury, there's all kinds of different chemicals in your house," he said, including thermometers and watch batteries, which also contain mercury. We know the issue exists and so does the federal government, so they have a task force that is working on this ... to look at the proper disposal of this material."

Hache doesn't accept this response, however, and believes more public education is required before someone is harmed by mercury poisoning of a CFL. "Yes, it is less than a thermometer and the mercury is less than a watch battery, which is fine. But how many times do you break a watch battery and how many times do you break a light bulb?"

What to do if you break a CFL:

Before Clean-up: Air out the room
Have people and pets leave the room and don't let anyone walk through the breakage area on way out.
Open a window and leave the room for fifteen minutes or more.
Shut off the forced-air heating/air conditioning system if you have one.

Clean Up Steps for Hard surfaces Carefully scoop up glass pieces and powder using stiff paper or cardboard and place them in a glass jar with a metal lid (such as a canning jar) or in a sealed plastic bag; use sticky tape, such as duct tape to pick up any remaining fragments or powder; wipe the area clean with damp paper towels or disposable wet wipes. Place the towels in glass jar or plastic bag; **Do not vacuum or broom on hard surfaces.**

Clean Up for Carpet or Rug Do the same as above, but where vacuuming is needed, remove the vacuum bag and double bag and wipe canister clean and double bag rag in sealed bags.

For CFL disposal double bag and take to a Household Hazardous Waste Depot like one in Debert. The municipality does not accept the bulbs at its landfill site nor will they be taken at Enviro Depot sites.

Mother's Treasures, your Electrical Contractor 384-2242 offers the following advice:

Home Depot has disposal bins for accepting bagged CFLs. When handling CFL's always handle by base especially when installing and removing for less chance of breakage. Use extra caution to make sure there is room for the bulb in the modern fixture before installing, so bulb is not crushed in front of your face when installing shades. Vacuuming up debris is not recommended in central vacs as mercury will stay in your vacuum cleaner and be spread throughout the house as you use the appliance again and again. CFL's also emit dangerous radiation and should not be used in lamps within 3 feet of a person sitting, or in a lamp that could easily topple.