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ENERGY FOCUS

Batteries Set Us Free, But Should Be Recycled

By Adam Wasch

There were kids whose toys were not powered and those whose toys were. Batteries made the difference. I was a powerless kid. My toys only went as far as I could throw them. My best friend Brett, however, had self-propelled cars, a portable radio, and an electric-eyed Skeletor who said, "I must possess all, or I possess nothing," when pushed. I thought Brett was better off. Decades later, I still feel defeated by the stamina of battery-powered toys.

Batteries weigh on my mind in other ways. What do you do with them after they go bad? Where do they go? And, are rechargeable batteries better? What's the environmentally sound solution? These questions are all the more pertinent given the premium placed today on portability. Can batteries be recycled? The answer depends on the type of battery. First, some trivia.

According to the Environmental Protection Agency (EPA), some 3 billion dry-cell batteries are sold every year. The average person disposes of eight dry-cell batteries a year. Most of these batteries find their way into landfills, where their toxic metal content is contained, but not eliminated. Batteries can contain mercury (an ingredient phased out by law since 1996), lead, cadmium, or nickel that can leach into ground water if not disposed of properly or enter the air if incinerated.

Non-rechargeable dry-cell batteries include alkaline and carbon zinc (9-volt, D, C, AA, AAA), mercuric-oxide (button or so-called watch batteries), silver-oxide and zinc-air (button), and lithium (9-volt, C, AA, coin, button). Common rechargeable batteries come in a variety of standard and customized sizes and contain Nickel Cadmium Battery (NiCd), Nickel-Metal Hydride (NiMH), or Lithium-ion. (Li-ion). There are also lead acid batteries, most commonly represented by car batteries.

In theory, any battery contains materials that can be recycled, but in practice only a few types of batteries are recycled. For example, nearly 90 percent of all lead-acid batteries are recycled, but few if any alkaline batteries are. Here in Fairbanks, the Fairbanks North Star Borough Solid Waste Division collects car batteries at its main landfill and at each transfer station. These batteries are stacked and shipped for recycling elsewhere. The lead is extracted and reused. Even the plastic can be recycled.

Rechargeable batteries (NiCd, NiMH, Li-ion) are increasingly collected and recycled by the same national store chains that sell cordless power tools, cellular and cordless phones, laptop computers, digital cameras, two-way radios, camcorders, and remote control toys. Locally, call Sears, Lowe's, Home Depot,

Radio Shack, Wal-Mart and other stores to verify if they can be dropped off. The EPA says button cells are increasingly targeted for recycling because of the value of recoverable materials, their small size, and their easy handling relative to other battery types.

The best way to manage battery waste is to create less of it by reducing your dependence on batteries to begin with. Cordless drills and whatnot may be in vogue, but in reality few of us really need that extra portability. For those applications where a cord just won't do or is unsafe, rechargeable batteries are the way to go – but only if you commit to recycling them responsibly. Otherwise, rechargeable batteries have the potential of adding even more toxic waste to landfills than regular batteries.

For more information on battery disposal and recycling, check out the Rechargeable Battery Recycling Corporation online at <http://www.rbrc.org> or the Environment, Health and Safety Online website at <http://ehso.com/ehshome/batteries.php>.

Adam Wasch promotes energy awareness for the Cooperative Extension Service (CES) and the Cold Climate Housing Research Center (CCHRC).

For questions or comments please contact CCHRC at (907) 457-3454