

Product Stewardship: Rechargeable Batteries

Background

Rechargeable batteries are a growing waste stream, as Americans continue to use more wireless products. In 2005, Americans used an average of six wireless products daily (up from three in 1999) and more than 30 percent of consumers owned eight or more of them.¹ In addition, cell phone subscriptions in the U.S. increased from 340,000 in 1985 to more than 140 million in 2003.²

Rechargeable batteries can be recharged and reused many times, but ultimately they can no longer hold a charge and must be discarded. Rechargeable batteries include nickel-cadmium, nickel-metal hydride, lithium-ion, nickel-zinc, and small sealed lead-acid. The heavy metals contained in rechargeable batteries, such as cadmium, lead, nickel and mercury, can be released and contaminate the environment when batteries are placed in landfills, incinerated or burned as household waste. Some of these metals are hazardous or carcinogenic.

Batteries generally make up less than 1 percent of municipal solid waste, but nickel-cadmium and small-sealed lead-acid batteries accounted for 75 percent of the cadmium and 65 percent of the lead found in landfills in 1995.³

Valuable resources such as stainless steel, magnetic alloy and plastic can be recovered from batteries and used to make new ones, thus reducing waste generation from the mining of raw materials and conserving energy and raw materials in the production of new batteries. Using metal recovered from batteries consumes 75 percent fewer resources and 46 percent less energy than extracting it from primary sources.⁴

How are rechargeable batteries currently handled?

About 61 percent of Americans either throw their unwanted batteries in the garbage or stockpile them. More than 6 million pounds of rechargeable batteries were recycled in the U.S. and Canada in 2007.⁵ Oregon has recycled more than 300,000 pounds since 2003, when the Rechargeable Battery Recycling Corporation (RBRC) started its collection program. (RBRC is a nonprofit organization founded in 1994 by five major battery manufacturers. It has more than

375 member manufacturers who pay a fee to place the RBRC recycling seal on the batteries they sell in the U.S.) RBRC has 859 collection sites in Oregon, which provide the main battery recycling infrastructure. Between 2003 and 2008, about 61 percent of these sites (527) reported collecting batteries and cell phones.⁶

In 1996, RBRC launched “Call2Recycle,” its free rechargeable battery program in the U.S. It began collecting and recycling cell phones in 2004. It has more than 40,000 collection locations in the U.S. and Canada. Many national retailers provide collection points for the RBRC recycling program, including ALLTEL, AT&T, Best Buy, Black & Decker, DeWalt, Home Depot, Lowe’s, Office Depot, Radio Shack, Sears/Orchard Supply Hardware, Staples, Target, US Cellular, and Verizon Wireless.

Product stewardship legislation

Proposed product stewardship legislation (House Bill 3060) now under consideration by the 2009 Legislature would provide a statewide program for anyone to recycle rechargeable batteries. The legislation would also include provisions for recycling mercury-containing fluorescent lights.

- Producers who want to sell their products in Oregon must finance and operate a state-approved, convenient collection, transportation and recycling program for their products, including consumer education. (Local government solid waste programs currently handle end-of-life costs.)
- Government’s role in the system is limited to oversight, plan approval and monitoring of performance goals.
- In order to be compatible with RBRC’s national recycling program (for ease of implementation and program start-up) alkaline, zinc-carbon and button-cell batteries are not included in the legislation.

For more information:

Contact DEQ’s Solid Waste Program in Portland: Jan Whitworth, (503) 229-6434, toll-free in Oregon at 1-800-452-4011, x6434; or Abby Boudouris, (503) 229-6108, toll-free in Oregon at 1-800-452-4011, x6108.



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Footnotes

¹ Rechargeable Battery Recycling Corp. (RBRC), survey conducted by NOP World, an international research organization, on behalf of RBRC, 2005

² INFORM, a non-profit, solid waste information clearinghouse organization, *Call All Cell Phones: Collection, Reuse, and Recycling Programs in the U.S.*, by Eric Most, 2003

³ U.S. Environmental Protection Agency, Enforcement Alert, March 2002, EPA 300-N-02-002

⁴ *Garbage Land: On the Secret Trail of Trash*, by Elizabeth Royle, 2005

⁵ RBRC, Call2Recycle Program, presentation, November 2008

⁶ RBRC, Oregon Locations Receipt Report through 12/31/08

