



Protecting Our Health and Environment

Sustainable Purchasing

Fact Sheet

BATTERIES

Why Buy “Green” Batteries?

There are many reasons to buy rechargeable rather than single-use batteries, and to reduce battery use and waste, including:

- Batteries increase the price and environmental impact of equipment, so it’s important to factor in the cost of battery replacement and disposal when ordering equipment
- Rechargeable batteries work well for many applications and have a quick payback
- Using industry-financed battery recycling programs can reduce disposal costs
- Rechargeable batteries earn LEED credits (1 point for sustainable purchasing of “ongoing consumables”)



Environmental & Health Issues

Not only are single-use batteries expensive to continually replace, they are problematic because they are:

- Energy-intensive and polluting to manufacture (via smelting)
- Heavy to transport (to retailers and consumers as well as recycling and disposal sites)
- Rapidly disposable
- Hazardous (batteries contain strong corrosive acids that can cause burns to eyes and skin)

Rechargeable batteries can be recharged up to 1,000 times, lasting several years. Because they can be used again and again, fewer batteries need to be manufactured, transported, and disposed of. This reduces pollution from mining and smelting, energy consumption, and climate impacts. The State of California has banned batteries from landfills; all batteries must be recycled or handled as hazardous waste.

Best Practices

Consider these strategies for reducing battery waste:

- Conduct a battery audit: identify opportunities to eliminate battery-operated equipment and switch to rechargeable batteries.
- Set single-use battery reduction goals with deadlines make the transition to rechargeable batteries smooth.

Which Equipment Works Best With Rechargeables?

The equipment best suited for rechargeable batteries includes:

- Wireless mice
- Telephone headsets
- Radios
- Pagers
- Calculators
- Non-emergency flashlights
- Paper towel/soap dispensers
- Washroom faucets

Rechargeable batteries aren’t cost effective for equipment where batteries are changed out infrequently, such as smoke detectors, emergency equipment, medical devices, and emergency exit signs.

- Choose products that eliminate/minimize battery use. For example, use manual soap and paper towel dispensers or plug-in calculators and high-efficiency hand driers. Choose cameras, flashlights, and other devices with built in (but easily removable) rechargeable batteries.
- Specify batteries that are long lasting. Use lithium-ion instead of alkaline batteries and specify a minimum rated life for all batteries.
- Choose rechargeable batteries, whenever practical. Require office and electrical supply vendors to offer a broad range of rechargeable batteries and ENERGY STAR-rated chargers on your contracts; add these products to your “core list” to encourage vendors to give you high discounts.
- Develop office protocols. Ensure that freshly recharged batteries are always available and that batteries needing recharging are not discarded.
- Utilize the RBRC’s Call2Recycle Program to recycle spent rechargeable batteries and cell phones free of charge.



Choosing Rechargeable Batteries and Chargers

Batteries

There are three types of rechargeable batteries: nickel-cadmium (NiCD), nickel-metal-hydrate (NiMH), and low-self dischargeables (LSDs).

NiMHs are the most popular type of rechargeables, are more versatile than their predecessors, and come in a variety of sizes including AAA, AA, C, D, and 9V. LSDs, also known as hybrid rechargeables, are a type of NiMH battery that maintains its charge longer than standard NiMH batteries. However, these hybrids may not be available in all sizes. NiCD batteries should be avoided if possible because of the presence of cadmium (a toxic and bioaccumulative heavy metal), although they may be needed for some equipment such as power tools.

It is also important to look for “high capacity” batteries for high-drain applications and to use batteries with a high power rating, or mAh (milliamps hour). The higher the mAh, the more time it will hold a charge during use.

Chargers

When choosing chargers, look for models that are ENERGY STAR-rated and that will accommodate the battery types (i.e., chemistries), sizes, and quantities you anticipate using.



Other features to look for include switching to a trickle charge or auto shut-off once batteries are fully charged and accommodating single or multiple batteries during a charge (some chargers will only work if charging a pair of batteries, not a single one)

It's best to avoid “quick” chargers, although in-vehicle chargers are worth considering.

Disposal Issues

Although batteries account for less than 1% of the municipal solid waste stream, they represent a disproportionate amount of the toxic heavy metals in trash.

Some batteries contain toxic heavy metals such as mercury, lead, cadmium, and nickel, which can contaminate the environment when they are improperly disposed of. If incinerated, these metals may be released into the air or concentrate in the resulting incinerator ash.

Incorporating Battery Recycling into Contracts

Incorporate battery recycling into contracts by requiring or giving preference to vendors that agree to collect and recycle batteries. Request:

- A recycling plan be included with the bid
- A one-for-one recycling credit be offered
- Bidders' recycling costs or require it to be free

RBRC's Call2Recycle Program

The Rechargeable Battery Recycling Corporation's (RBRC) Call2Recycle Program is an industry-financed program for communities, agencies, and businesses to recycle rechargeable batteries and cell phones free of charge.



You can either drop off rechargeable batteries at one of Call2Recycle's many existing collection sites or choose to be a collection site. Businesses, retailers, communities, and public agencies are eligible to be collection sites. You can opt to collect only from your staff or collect from the public. For more information on RBRC's Call2Recycle Program, visit www.call2recycle.org.

Sample Specifications/Policy Language

Below are some sample specifications from other jurisdictions that purchase green batteries.

City and County of San Francisco, CA: Sustainable Battery Ordinance, 2005

In 2005, San Francisco adopted a *Sustainable Battery Ordinance* that requires City and County departments to purchase:

- Rechargeable NiMH batteries or another rechargeable battery type identified by the Director of the Department of the Environment
- Only from vendors that collect and recycle spent batteries in compliance with applicable laws
- Products accompanied by detailed recycling instructions
- Products with easily removable battery packs

San Francisco's electrical supplies contract requires vendors to offer rechargeable batteries in AA, AAA, C, D, and 9-volt sizes as well as ENERGY STAR-rated chargers.

For more information on San Francisco's policy, see <http://sfenvironment.org>.

City of Portland, OR: Battery Reduction Goals, 2008

In its *2008 Sustainability Report*, the Portland Water Bureau indicated that it had set a goal of reducing its agency's battery use by 10% in the coming year and 20% within two years. It also reported that it had conducted a battery audit and was pilot testing rechargeable batteries in some of its equipment.

For more information on the City of Portland's battery reduction goals, visit www.portlandonline.com/water/index.cfm?a=226237&c=49430.

