



Fluorescent Lamps

Environmentally Preferable Purchasing Considerations

- Air quality
- Climate change
- Energy efficiency
- Recycled content
- Reduce solid waste
- Reduce toxic chemicals usage

Benefits

- Lower energy bills
- Lower release of mercury
- Less maintenance

How To Buy

[Revised Code of Washington RCW 70.95M.060](#) directs the Department of General Administration (GA) to give preference to the purchase of products that contain the least amount of mercury necessary for the required performance.

Washington State Contract [00802](#) offers high efficiency T-8 lamps.

Lamps from the F032 ECO Series are the most environmentally preferable lamps

★ **GOAL: To reduce energy use and mercury content by installing energy efficient fluorescent lamps.** ★

Overview

High efficiency tube lamps have improved over the past few years. T8 and T5 fluorescent lamps have a longer rated life and emit a higher quality of light than T12 and standard -grade T8 lamps.

Some of these long lasting lamps are rated to last 36,000 hours. Since lighting accounts for at least 30 percent of the energy used in most commercial buildings, total savings can be large.

Replacing T12s with T8s (with electronic ballasts) typically results in a 40 percent savings in energy costs. See How to Buy for information on buying T-8s.

State agencies are directed to give priority and preference to the purchase of low mercury products in the [Washington Purchasing Manual](#). All fluorescent lamps contain mercury,

a heavy metal that is toxic in extremely low doses.

The [US Green Building Council](#) encourages the use of low-mercury lamps in its [Leadership in Energy and Environmental Design \(LEED\)](#) rating system. LEED credits are awarded if the average mercury content for all indoor and outdoor fixtures in the building is below a certain level.

Standards

Lamps are identified as hazardous or non-hazardous by the U.S. Environmental Protection Agency's (EPA's) test for Toxicity Characteristic Leaching Potential (TCLP). Most lamps identified as non-hazardous contain lower amounts of mercury. Check the manufacturer's website to find lamps that are TCLP compliant.

Success Story: Washington State Department of Corrections (DOC)

The Washington State Department of Corrections has reduced energy costs through relamping projects at several facilities. DOC has replaced T12s with T8 and T5 lamps.

The Stafford Creek Corrections Center anticipates annual energy savings of at least \$11,000 by retrofitting 12,000 lamps in its facility.

Group relamping is recommended when a large number of lamps need replacement. Entire rooms, floors, or even buildings can be retrofitted.

Many relamping projects are accomplished with utility rebates. See [Pacific Northwest Utility Links](#) or [dsire-usa.org](#) to learn about utility rebate programs.

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Washington State Department of Ecology

Environmentally Preferable Purchasing

The Department of Ecology offers tools and resources to make environmentally preferable purchasing easier.

Learn about responsible products, standards and certifications, state EPP directives and more at our website:

www.ecy.wa.gov/beyondwaste/epp.html

Contact:

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Web Resources

[Association of Lighting and Mercury Recyclers](#)

[Consortium for Energy Efficiency](#)

[Interstate Mercury Education and Reduction Clearinghouse](#)

[Fluorescent Lighting Home](#), Product Stewardship Institute

[Greening Federal Facilities](#), US Department of Energy

[Mercury-containing Lamps/Light Bulbs](#), Department of Ecology

[National Lighting Product Information](#)

[Shedding Light on Mercury in Fluorescents: A Workbook for Design Professionals](#), INFORM

[USGBC LEED for Existing Buildings](#)

Product Performance

Lamps must be matched to the right fixture and ballast to ensure that they will perform properly and last a long time.

The Rocky Mountain Institute ran a life-cycle analysis which found that fluorescent lamps tend to burn out more quickly when frequently turned on and off. To extend the life of the bulb, leave them on when leaving the room for less than 15 minutes.



Laws and Directives

Executive Order 02-03	Directs agencies to shift to nontoxic, recycled, and remanufactured materials in purchasing and construction. Also directs agencies to reduce or eliminate waste as an inefficient or improper use of resources and help create markets for recycled content products.
Executive Order 04-01	Directs state agencies to adopt measures to reduce the use of equipment, supplies, and other products that contain persistent toxic chemicals.
Executive Order 05-01	Directs state agencies to reduce their energy purchases by 10% using all practicable and cost-effective means including energy efficiency programs.
Governor's Directive 04-01	Directs state agencies and institutions to recycle all fluorescent lamps at the end of their useful life.
Chapter 70.95M RCW Mercury Education Reduction Act 2003	The Department of General Administration (GA) shall give priority and preference to the purchase of equipment, supplies, and other products that contain no mercury-added compounds or components, with certain designated exceptions. Fluorescent lamps containing mercury must be labeled as containing mercury to be sold in Washington State.

End-of-Life

Improper disposal of lamps causes 400 to 500 pounds of mercury to be released into the state's environment each year, according to the state [Mercury CAP](#) (Chemical Action Plan).

[Governor's Directive 04-01](#) directs agencies to recycle lamps so the mercury can be safely removed and reused. Lamps must not be thrown away or crushed.

Facilities have the choice of managing spent lamps as universal waste (UW) or dangerous waste. The [Universal Waste Rule for Lamps](#) is less burdensome.

State contract [11601](#) offers recycling and disposal services for used lamps that comply with the Universal Waste rules. State and local governments can have the vendor pick up the spent lamps or request a recycling kit to send them directly to the manufacturer.