



# Fluorescent Lamps

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For government purchasers

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## Responsible Purchasing Attributes

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

## Benefits of Purchasing

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

## How to Buy

### [Revised Code of Washington](#)

[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 T8 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.**

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 T8s.

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 even in extremely low doses.

The [U.S. 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) 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.



## **Leading the Way – Washington State Department of Corrections**

The Washington State Department of Corrections (DOC) 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.

**Environmentally Preferable Purchasing**

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

Find out about environmentally preferable products, standards and certifications, law and directives, and more at our website:

[www.ecy.wa.gov/beyondwaste/epp.html](http://www.ecy.wa.gov/beyondwaste/epp.html)

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**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](#)  
U.S. 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

[U.S.GBC 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.



**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 (DW). 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.

**Laws and Directives**

<a href="#">Executive Order 02-03</a>	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.
<a href="#">Executive Order 04-01</a>	Directs state agencies to adopt measures to reduce the use of equipment, supplies, and other products that contain persistent toxic chemicals.
<a href="#">Executive Order 05-01</a>	Directs state agencies to reduce their energy purchases by ten percent using all practicable and cost-effective means including energy efficiency programs.
<a href="#">Governor's Directive 04-01</a>	Directs state agencies and institutions to recycle all fluorescent lamps at the end of their useful life.
<a href="#">Chapter 70.95M RCW Mercury Education Reduction Act 2003</a>	The Department of General Administration 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.

*To ask about available formats for the visually impaired please call the Hazardous Waste and Toxics Reduction Program at 360-407-6700. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*