

Department of Legislative Services
Maryland General Assembly
2011 Session

FISCAL AND POLICY NOTE

House Bill 643 (Delegate Carr)
Health and Government Operations Education, Health, and Environmental Affairs

Procurement - State Buildings - Energy Efficient Outdoor Lighting Fixtures

This bill prohibits State funds from being used to install or replace a permanent outdoor luminaire on the grounds of any building or facility owned or leased by the State unless the fixture meets specified criteria regarding energy efficiency and light emission. The bill includes exemptions from the prohibition and a process for requesting and obtaining a waiver for one aspect of the prohibition.

Fiscal Summary

State Effect: None. The Department of General Services and Maryland Department of Transportation (MDOT), which are responsible for the lighting of State buildings and facilities advise that the bill does not affect current practices already used to install and replace outdoor luminaires for new and renovated buildings. Therefore, the bill has no material effect on State finances, especially given the waiver provisions.

Local Effect: None.

Small Business Effect: None.

Analysis

Bill Summary: Luminaires installed or replaced with State funds must:

- maximize energy conservation and minimize light pollution, glare, and light trespass;
- provide the minimum illumination necessary for the intended purpose of the lighting; and

- be a restricted uplight luminaire if it has an output of more than 1,800 lumens.

A “luminaire” is the complete lighting unit including the lamp, other components that produce light, and the assembly that holds the lamp.

A “restricted uplight luminaire” is a lighting fixture that (1) allows no direct light emission above a horizontal plane through the fixture’s lowest light-emitting part, except for a 0.5% maximum incidental uplight from reflection off mounting hardware; and (2) emits no more than 10% of the total direct light emission at or above a vertical angle of 80 degrees.

The bill does not apply to luminaires that are:

- located on the grounds of a correctional facility;
- required by federal regulation;
- required for storm operation activities performed by MDOT;
- required to illuminate the Maryland or United States flag;
- used for sign illumination; or
- in a lighting plan where fewer than 25% of the luminaires are to be replaced.

The Board of Public Works (BPW) or the board’s designee may waive the requirement that high-output luminaires be restricted uplight luminaires if the waiver is necessary for the lighting application. BPW must establish requirements for the waiver as specified in the bill. In awarding a waiver, BPW or its designee must consider design safety, costs, and any other factors it deems appropriate.

Current Law: Statute does not address the energy efficiency or output of State-funded lighting fixtures. The Governor’s EmPOWER Maryland Initiative (Chapter 131 of 2008) establishes a State goal of reducing per capita energy consumption by 15% from calendar 2007 consumption levels to calendar 2015.

Background: House Joint Resolution 14 of 2001 created the Task Force to Study Lighting Efficiency and Light Pollution in Maryland. The purpose of the task force was to study the cost, extent, and consequences of inefficient public lighting and light pollution in the State, and the benefits of alternative improvements. The task force released a report in March 2002 that made numerous recommendations and provided the following general guidelines for State agencies:

- choose luminaires that distribute the light only where it is needed, minimizing light pollution and unnecessary energy consumption;

- choose appropriate lamp source color, efficient ballasts, and lamps with longer life ratings;
- choose lamp types to maximize visibility per lumen output, as well as maximizing lumen output per input watt of energy;
- design to appropriate lighting levels based on Illuminating Engineering Society of North America recommendations and to avoid over lighting; and
- locate lights to avoid spillover onto adjacent property and choose appropriate pole heights.

Several states, including California, Colorado, Maryland, New Mexico, and Texas, have adopted roadway lighting design laws and/or policies that require installation of lights that minimize light pollution. In Maryland, MDOT advises that its highway lighting practices strive to minimize light pollution, trespass, and glare; maximize lighting efficiency; and enhance the safety of the traveling public.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Board of Public Works, Department of Budget and Management, Department of General Services, Maryland Department of Transportation, University System of Maryland, Department of Legislative Services

Fiscal Note History: First Reader - March 1, 2011
mc/rhh

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