



# House of Representatives

General Assembly

**File No. 36**

February Session, 2004

Substitute House Bill No. 5024

*House of Representatives, March 11, 2004*

The Committee on Government Administration and Elections reported through REP. O'ROURKE of the 32nd Dist., Chairperson of the Committee on the part of the House, that the substitute bill ought to pass.

## **AN ACT REDUCING OUTDOOR LIGHT POLLUTION AT STATE BUILDINGS AND FACILITIES.**

Be it enacted by the Senate and House of Representatives in General Assembly convened:

1 Section 1. (NEW) (*Effective October 1, 2004*) (a) As used in this  
2 section:

3 (1) "Fixture" means the assembly that holds a lamp and may include  
4 an assembly housing, a mounting bracket or pole socket, a lamp  
5 holder, a ballast, a reflector or mirror and a refractor or lens;

6 (2) "Full cut-off luminaire" means a luminaire that allows no direct  
7 light emissions above a horizontal plane through the luminaire's  
8 lowest light-emitting part;

9 (3) "Glare" means direct light emitting from a luminaire that causes  
10 reduced vision or momentary blindness;

- 11 (4) "Illuminance" means the level of light measured at a surface;
- 12 (5) "Lamp" means the component of a luminaire that produces the  
13 light;
- 14 (6) "Light trespass" means light emitted by a luminaire that shines  
15 beyond the boundaries of the property on which the luminaire is  
16 located;
- 17 (7) "Lumen" means a unit of measurement of luminous flux;
- 18 (8) "Luminaire" means the complete lighting unit, including the  
19 lamp and the fixture;
- 20 (9) "Permanent outdoor luminaire" means any luminaire or system  
21 of luminaires that is outdoors and intended to be used for seven days  
22 or longer; and
- 23 (10) "State funds" means any bond revenues or any money  
24 appropriated or allocated by the General Assembly.
- 25 (b) Except as provided in subsection (c) of this section, no state  
26 funds shall be used to install or replace a permanent outdoor luminaire  
27 for lighting on the grounds of any state building or facility unless (1)  
28 the luminaire is designed to maximize energy conservation and to  
29 minimize light pollution, glare and light trespass, (2) the luminaire's  
30 illuminance is equal to the minimum illuminance adequate for the  
31 intended purpose of the lighting, and (3) for a luminaire with a rated  
32 output of more than one thousand eight hundred lumens, such  
33 luminaire is a full cut-off luminaire.
- 34 (c) The provisions of subdivision (3) of subsection (b) of this section  
35 shall not apply to luminaires located on the grounds of any  
36 correctional institution or facility administered by the Commissioner of  
37 Correction, required by federal regulations, required for storm  
38 operation activities performed by the Department of Transportation, or  
39 in a lighting plan for a Department of Transportation facility where  
40 less than twenty-five per cent of the luminaires are to be replaced. The

41 Commissioner of Public Works, or the commissioner's designee, may  
 42 waive the provisions of subdivision (3) of subsection (b) of this section  
 43 with respect to luminaires on the grounds of any other state building  
 44 or facility when, after a request for such a waiver has been made and  
 45 reviewed, the commissioner or the commissioner's designee  
 46 determines that such a waiver is necessary for the lighting application.  
 47 Requests for such a waiver shall be made to the commissioner or the  
 48 commissioner's designee in such form as the commissioner shall  
 49 prescribe and shall include, without limitation, a description of the  
 50 lighting plan, a description of the efforts that have been made to  
 51 comply with the provisions of subdivision (3) of subsection (b) of this  
 52 section and the reasons such a waiver is necessary. In reviewing a  
 53 request for such a waiver, the commissioner or the commissioner's  
 54 designee shall consider design safety, costs and other factors deemed  
 55 appropriate by the commissioner or the commissioner's designee.

56 (d) The provisions of this section shall not apply to the installation  
 57 or replacement of luminaires for which the Secretary of the Office of  
 58 Policy and Management (1) conducts a life-cycle cost analysis of one or  
 59 more luminaires that meet the requirements set forth in subsection (b)  
 60 of this section and one or more luminaires that do not meet such  
 61 requirements, and (2) certifies that a luminaire which meets such  
 62 requirements is not cost effective and is not the most appropriate  
 63 alternative based on the life-cycle cost analysis.

This act shall take effect as follows:	
Section 1	<i>October 1, 2004</i>

**GAE**      *Joint Favorable Subst.*

The following fiscal impact statement and bill analysis are prepared for the benefit of members of the General Assembly, solely for the purpose of information, summarization, and explanation, and do not represent the intent of the General Assembly or either House thereof for any purpose:

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### **OFA Fiscal Note**

#### **State Impact:**

<b>Agency Affected</b>	<b>Fund-Effect</b>	<b>FY 05 \$</b>	<b>FY 06 \$</b>
All agencies with care & control of their buildings; Pub. Works, Dept.	GF - Cost	See Below	See Below
Treasurer, Debt Serv.	GF - Cost	None	Minimal
Various	GF - Savings	See Below	See Below

Note: GF=General Fund

**Municipal Impact:** None

#### **Explanation**

The bill requires that all new or replacement permanent light fixtures at state buildings or facilities be replaced with fixtures designed to maximize energy conservation and minimize light pollution, glare and light trespass. It gives the commissioner of Public Works the power to provide waivers to this requirement based on design safety considerations, costs and other factors such as property security. This could result in an increase in General Fund cost for funds appropriated to the Department of Public Works and all state agencies that have care and control of their buildings beginning in FY 05 of between \$1,500 and \$3,000 for each fixture because full cutoff luminaries cost approximately 3% more than semi-cutoff luminaries. It could also result in an increase in General Fund debt service cost because the requirement also applies to projects funded with General Obligation bond funds.

To the degree that the bill results in the installation of more energy efficient lighting, it could also reduce General Fund cost for utilities.

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**OLR Bill Analysis**

sHB 5024

***AN ACT REDUCING OUTDOOR LIGHT POLLUTION AT STATE BUILDINGS AND FACILITIES*****SUMMARY:**

This bill bans the use of state bond revenues or appropriated or allocated state funds to install or replace an outdoor light or lighting unit on state building or facility grounds that:

1. fails to maximize energy conservation and minimize light pollution, glare, and light trespass (light that shines beyond the boundaries of the property where it is located);
2. provides light at a level that exceeds what is adequate for its intended purpose; or
3. has an output of more than 1,800 lumens (the unit for measuring the brilliance of a light source), unless it is equipped with a full cut-off luminaire (a lighting unit that allows no direct light emissions above a horizontal plane through its lowest light-emitting part).

The bill allows four exceptions to the cut-off requirement. It exempts lighting units (1) on the grounds of a Department of Correction correctional institution or facility, (2) required by federal regulations, (3) required for Department of Transportation (DOT) storm operations, and (4) in a plan for DOT facilities where less than 25% of the luminaires will be replaced. It also sets conditions under which the public works commissioner, or his designee, may waive the cut-off requirement for other state buildings or facilities when necessary. The bill directs the commissioner to prescribe the form for the waiver request, which must include a description of the lighting plan, the efforts that have been made to comply with the cut-off requirement, and the reasons the waiver is necessary. The commissioner, or his designee, must consider in his review design safety, cost, and other appropriate factors.

The bill also exempts a new or replacement lighting system from its

requirements if the Office of Policy and Management secretary finds that a non-complying system is more cost-effective than a system that meets the bill's requirements. The secretary must determine this by comparing the systems' life-cycle cost analyses and certifying that a system that meets the bill's requirements is not cost-effective or the most appropriate alternative.

EFFECTIVE DATE: October 1, 2004

**COMMITTEE ACTION**

Government Administration and Elections Committee

Joint Favorable Substitute

Yea 14    Nay 3