



House of Representatives

File No. 627

General Assembly

February Session, 2006 (Reprint of File No. 276)

Substitute House Bill No. 5051
As Amended by House Amendment
Schedules "A" and "B"

Approved by the Legislative Commissioner
April 24, 2006

AN ACT CONCERNING LUMINAIRES AT STATE AGENCIES.

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

- 1 Section 1. (NEW) (*Effective July 1, 2006*) (a) As used in this section:
- 2 (1) "Fixture" means the assembly that holds a lamp and may include
3 an assembly housing, a mounting bracket or pole socket, a lamp
4 holder, a ballast, a reflector or mirror and a refractor or lens;
- 5 (2) "Restricted uplight luminaire" means a luminaire that allows no
6 direct light emissions above a horizontal plane through the luminaire's
7 lowest light-emitting part other than a 0.5 per cent maximum
8 incidental uplight from reflection off mounting hardware;
- 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 restricted upright 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,
39 required to illuminate either the state flag or the flag of the United
40 States or in a lighting plan for a Department of Transportation facility
41 where less than twenty-five per cent of the luminaires are to be
42 replaced. The Commissioner of Public Works, or the commissioner's
43 designee, may waive the provisions of subdivision (3) of subsection (b)
44 of this section with respect to luminaires on the grounds of any other

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

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

66 Sec. 2. Subsection (d) of section 13a-143d of the general statutes is
67 repealed and the following is substituted in lieu thereof (*Effective July*
68 *1, 2006*):

69 (d) [Any luminaire] All luminaires in violation of any provision of
70 subsection (b) or (c) of this section operating prior to October 1, [2003]
71 2004, shall be brought into compliance with the requirements in
72 subsection (b) of this section [no later than October 1, 2005] in
73 accordance with the following schedule: Approximately twenty per
74 cent by October 1, 2006, approximately forty per cent by October 1,
75 2007, approximately sixty per cent by October 1, 2008, approximately
76 eighty per cent by October 1, 2009, and one hundred per cent by
77 October 1, 2010.

This act shall take effect as follows and shall amend the following sections:		
Section 1	<i>July 1, 2006</i>	New section
Sec. 2	<i>July 1, 2006</i>	13a-143d(d)

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:

OFA Fiscal Note

State Impact:

Agency Affected	Fund-Effect	FY 07 \$	FY 08 \$
Pub. Works, Dept.; All agencies with care & control of their buildings	GF - Cost	See Below	See Below
Treasurer, Debt Serv.	GF - Cost	None	See Below
Various	GF - Savings	See Below	See Below
Policy & Mgmt., Off.	GF - Cost	None	None

Note: GF=General Fund

Municipal Impact: None

Explanation

The bill requires that new or replacement permanent light fixtures at state buildings or facilities (with certain exceptions) 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. The bill further requires that all luminaries operating prior to 10/1/04 must be brought into compliance with the provisions of Section 21 at the rate of 20% per year between 10/1/06 and 10/1/10.

The fiscal impact of these provisions will depend on the number of luminaries that are replaced. A sampling of current prices obtained from a vendor indicates that the cost differential between semi-cutoff luminaries and full cutoff luminaries range between \$5 and \$30 more per unit for 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 bonds.

To the degree that the bill results in the installation of more energy

efficient lighting, it could also reduce General Fund costs for utilities.

It is anticipated that the Office of Policy and Management can perform a life cycle cost analysis on non-complying lighting systems within the agencies normal budgetary resources.

House "A" and "B" make minor changes to the bill that have no fiscal impact.

The Out Years

The annualized ongoing fiscal impact identified above would continue into the future subject to inflation.

OLR Bill Analysis**sHB 5051 (as amended by House "A" and "B")******AN ACT CONCERNING LUMINAIRES AT STATE AGENCIES.*****SUMMARY:**

The bill bans, with some exceptions, the use of state funds to install or replace certain outdoor light, or lighting units on state building or facility grounds.

The bill also extends the deadline by which violators must comply with laws regulating the use of floodlights on private property.

*House Amendment "A" changes references to full-light cutoff luminaires to restricted uplights and redefines the term to allow for reflective light.

*House Amendment "B" adds the flag exceptions to the requirement for restricted uplights.

EFFECTIVE DATE: July 1, 2006

BAN ON THE USE OF STATE FUNDS FOR CERTAIN LIGHTING

The bill bans the use of state bond revenues or appropriated or allocated state funds to install or replace outdoor lights or lighting units on state building or facility grounds that:

1. fail 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. provide light that exceeds what is adequate for its intended purpose; or

3. have an output of more than 1,800 lumens (the unit for measuring the brilliance of a light source) unless it is a restricted uplight (a lighting unit that allows no direct light above a horizontal plane through its lowest light-emitting part, but may allow 0.5% incidental uplight from reflection off mounting hardware).

EXCEPTIONS TO THE BAN

The bill allows five exceptions to the full cut-off requirement. It exempts lighting units (1) on the grounds of a Department of Correction institution or facility, (2) required by federal regulations, (3) required for Department of Transportation (DOT) storm operations, (4) in a plan for DOT facilities where less than 25% of the luminaires will be replaced, and (5) required to illuminate either the state or U.S. flag.

The bill also exempts a new or replacement lighting system from its requirements if the Office of Policy and Management secretary finds that a noncomplying system is more cost-effective than one 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.

The bill sets conditions under which the Department of Public Works commissioner, or his designee, may waive the restricted uplight 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 restricted uplight requirement, and the reasons the waiver is necessary. The commissioner, or his designee, must consider design safety, cost, and other appropriate factors in his review.

COMPLIANCE WITH FLOODLIGHT REQUIREMENTS

Current law requires all violators operating before October 1, 2003 to comply by October 1, 2005. The bill instead requires approximately

20% of violators operating before October 1, 2004 to comply by October 1, 2006 and it increases the compliance by 20% each year until full compliance is reached by October 1, 2010. The law prohibits (1) floodlights intended to illuminate private property from being located in a state highway right-of-way unless they meet certain light pollution reduction and other requirements and (2) a floodlight from being located in a state highway right-of-way if the private property it is intended to illuminate is across the highway from the utility pole on which it would be mounted.

COMMITTEE ACTION

Government Administration and Elections Committee

Joint Favorable Substitute

Yea 19 Nay 0 (03/14/2006)

Appropriations Committee

Joint Favorable

Yea 32 Nay 2 (04/10/2006)

Energy and Technology Committee

Joint Favorable

Yea 12 Nay 2 (04/13/2006)

Finance, Revenue and Bonding Committee

Joint Favorable

Yea 43 Nay 0 (04/20/2006)