SENATE DOCKET, NO. 1373 FILED ON: 1/21/2011

SENATE . . . . . No. 1689

The Commonwealth of Massachusetts

PRESENTED BY:

Michael J. Rodrigues

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled:

The undersigned legislators and/or citizens respectfully petition for the adoption of the accompanying bill:

An Act requiring efficient outdoor lighting.

PETITION OF:

NAME:	DISTRICT/ADDRESS:
Michael J. Rodrigues	

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SENATE . . . . . No. 1689

By Mr. Rodrigues, a petition (accompanied by bill, Senate, No. 1689) of Michael J. Rodrigues for legislation to require efficient outdoor lighting. Telecommunications, Utilities and Energy.

The Commonwealth of Massachusetts

In the Year Two Thousand Eleven

An Act requiring efficient outdoor lighting.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. Chapter 7 of the General Laws, as appearing in the 2010 Official Edition, is hereby amended by inserting after section 22O the following section:-

"Section 22P. (a) As used in this section, the following words shall have the following meanings:

"Glare", direct light emitted by a luminaire that causes reduced visibility of objects or momentary blindness;

"Illuminance", a level of light measured at a surface;

"Lamp", the component of a luminaire that produces light;

"Light pollution", general sky glow caused by the scattering of artificial light in the atmosphere;

11 “Light trespass”, light emitted by a luminaire that shines beyond the boundaries of the
12 property on which the luminaire is located;

13 “Lumen”, a specific standard unit of measurement of luminous flux;

14 “Luminaire”, a complete lighting unit, including a lamp or lamps together with the parts
15 designed to distribute the light, to position and protect the lamps, and to connect the lamps to the
16 power supply;

17 “Outdoor light fixtures”, outdoor artificial illuminating devices, installed or portable,
18 used for flood lighting, roadway and area lighting, general illumination, or advertisement;

19 “Permanent outdoor luminaire”, any fixed luminaire or system of luminaires that is
20 outdoors and that is intended to be used for thirty (30) days or longer;

21 “Roadway lighting”, permanent outdoor luminaires that are specifically intended to
22 illuminate roadways for automotive vehicles;

23 “Shielded luminaire”, a luminaire that allows no more than 2% of the light from the
24 luminaire above a horizontal plane through the luminaire's lowest light emitting part, in its
25 mounted form;

26 “State funds”, any bond revenues or any money appropriated or allocated by the general
27 court.

28 (b) On or after the effective date of this act, the State shall install, replace, or maintain an
29 outdoor lighting fixture by using State funds only if:

30 (1) any outdoor lighting fixture with a rated output greater than 1,800 lumens is
31 installed or replaced with a luminaire that is shielded;

32 (2) the minimum illuminance adequate for the intended purpose is used with
33 consideration given to nationally recognized standards;

34 (3) for lighting of a designated highway of the State highway system, the Department
35 of Transportation determines that the purpose of the outdoor lighting fixture cannot be achieved
36 by the installation of reflective road markers, lines, warning or informational signs, or other
37 effective passive methods; and

38 (4) full consideration has been given to energy conservation, reducing glare,
39 minimizing light pollution and preserving the natural night environment.

40 (c) Paragraph (b) of this section shall not apply if:

41 (1) the outdoor lighting fixture is used on a temporary basis to provide additional
42 illumination for emergency procedures or nighttime work;

43 (2) the outdoor lighting fixture is used for a special event or situation requiring lighting
44 that cannot be met under these requirements, such as but not limited to sports facilities, historic
45 decorative considerations, monuments or flag lighting; provided, however, that all such lighting
46 shall be selected and installed to shield the lamp(s) from direct view to the greatest extent
47 possible, and to minimize upward lighting and light trespass;

48 (3) the lighting results in a higher energy use than an alternative solution;

49 (4) a compelling safety interest exists that cannot be addressed by another method;

50 (5) a federal law supersedes or is inconsistent with its requirements;

51 (6) the outdoor lighting fixture is used solely to enhance the aesthetic beauty of an

52 object, structure or landscape and is less than 12,000 lumens emitted from the luminaire;

53 (7) a qualified lighting professional has determined, based on life cycle cost analysis,

54 that such lighting is not cost effective; or

55 (8) the outdoor lighting fixture is used for the replacement of individual previously

56 installed lighting fixtures that are destroyed, damaged or inoperative."