SENATE DOCKET, NO. 844 FILED ON: 1/17/2013

SENATE . . . . . No. 1573

The Commonwealth of Massachusetts

PRESENTED BY:

Cynthia S. Creem

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 passage of the accompanying:

An Act An Act improving outdoor lighting and increasing dark-sky visibility .

PETITION OF:

NAME:	DISTRICT/ADDRESS:
Cynthia S. Creem	*First Middlesex and Norfolk*
Sean Garballey	*23rd Middlesex*
Kay Khan	*11th Middlesex*
Daniel A. Wolf	*Cape and Islands*
William N. Brownsberger	*Second Suffolk and Middlesex*
Bruce E. Tarr	*First Essex and Middlesex*
Kenneth J. Donnelly	*Fourth Middlesex*
James B. Eldridge	*Middlesex and Worcester*
Karen E. Spilka	*Second Middlesex and Norfolk*
Gale D. Candaras	*First Hampden and Hampshire*
Patricia D. Jehlen	*Second Middlesex*
Thomas M. McGee	*Third Essex*
Paul R. Heroux	*2nd Bristol*
Alice Hanlon Peisch	*14th Norfolk*

SENATE DOCKET, NO. 844 FILED ON: 1/17/2013

SENATE . . . . . No. 1573

By Ms. Creem, a petition (accompanied by bill, Senate, No. 1573) of Cynthia S. Creem, Sean Garballey, Kay Khan, Daniel A. Wolf and other members of the General Court for legislation to promote energy efficient lighting, conserve energy, regulate outdoor night lighting, and reduce light pollution. Telecommunications, Utilities and Energy.

[SIMILAR MATTER FILED IN PREVIOUS SESSION
SEE
SENATE
, NO. *1651* OF 2011-2012.]

The Commonwealth of Massachusetts

An Act An Act improving outdoor lighting and increasing dark-sky visibility .

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 85 of the General Laws, as appearing in the 2008 Official Edition, is hereby amended by adding the following three (3) sections:

Section 37. As used in Sections 38 and 39, the following words shall, unless the context clearly requires otherwise, have the following meanings:

"Direct light", light emitted by a fixture, whether from the light source, from a reflector, or through a refractor

"Façade lighting", permanent outdoor fixtures that are specifically intended to illuminate the exterior surfaces of buildings or structures

"Fixture", a complete lighting unit, including a light source together with the parts designed to distribute the light, to position and protect the light source, and to connect the light source to the power supply

"Fixture lumens", total lumens emitted by a fixture

"Fully shielded fixture", a fixture that emits no direct light above a horizontal plane through the fixture's lowest light-emitting part, in its mounted position

15 “Glare”, light emitted by a fixture that causes visual discomfort or reduced visibility

16 “Illuminance”, the luminous power incident per unit area of a surface

17 “Light trespass”, light that falls beyond the property it is intended to illuminate

18 “Lumen”, a standard unit of measurement of the quantity of light emitted from a source
19 of light

20 “Ornamental Roadway Lighting”, a roadway-lighting fixture that serves a decorative
21 function in addition to a roadway-lighting function and which has a historical period appearance
22 or decorative appearance.

23 “Parking-lot lighting”, permanent outdoor fixtures specifically intended to illuminate
24 uncovered vehicle-parking areas

25 “Part-night service”, a rate charged by a utility company to provide unmetered electricity
26 for permanent outdoor fixtures that operate for only a portion of each night’s dusk-to-dawn
27 cycle.

28 “Permanent outdoor fixture”, a fixture for use in an exterior environment installed with
29 mounting not intended for relocation

30 “Roadway lighting”, permanent outdoor fixtures specifically intended to illuminate
31 public roadways

32 “Sky glow”, scattered light in the atmosphere, caused by light directed upward or
33 sideways from fixtures, reducing one’s ability to view the natural night sky.

34 “State funds”, bond revenues or money appropriated or allocated by the General Court.

35 Section 38.

36 (a) No state funds shall be used to install a new permanent outdoor fixture, or to pay for
37 the cost of operating such fixture, unless the following conditions are met:

38 (1) in the case of roadway lighting or parking-lot lighting; whether mounted to
39 poles, buildings, or other structures, the fixture is fully shielded.

40 (2) in the case of building-mounted fixtures not specifically intended for roadway
41 lighting, parking-lot lighting, or façade lighting, the fixture is fully shielded when its initial
42 fixture lumens is greater than 3000 lumens.

43 (3) in the case of façade lighting, the fixture is shielded to reduce glare, sky glow,
44 and light trespass to the greatest extent possible.

(4) in the case of ornamental roadway lighting fixtures, the fixture emits no more 700 lumens above a horizontal plane through the fixture's lowest light-emitting part.

(5) for illumination by new permanent outdoor fixtures for applications covered in Section 38(a), only the illuminance levels required for the intended purpose as defined in the 10th edition of The Lighting Handbook, published by the Illuminating Engineering Society (IES), may be used. Where local city or county laws, ordinances, or regulations specify a different requirement, only the illuminance levels required for the intended purpose by these laws, ordinances, or regulations are to be used.

(6) in the case of roadway lighting unassociated with intersections of two or more streets or highways, the Department of Transportation has determined that the purpose of the fixture installation or replacement cannot be achieved by installation of reflectorized roadway markers, lines, warning or informational signs, or other passive means.

(b) This section shall not apply:

(1) if a federal law, rule or regulation preempts state law;

(2) if the outdoor lighting fixture is used temporarily for emergency procedures or for road repair;

(3) to navigational and other lighting systems necessary for aviation and nautical safety;

(4) to lighting for an athletic playing area; provided, however, that the fixtures used therefor shall be selected and installed so as to minimize glare, light trespass, and sky glow outside the athletic playing area;

(5) if a compelling and bona fide safety or security need exists that cannot be addressed by any other method;

(6) to the replacement of previously installed permanent outdoor fixtures that are destroyed, damaged, or inoperative; have experienced electrical failure due to failed components; or require standard maintenance;

(7) to lighting intended for tunnels and roadway underpasses; or

(8) to special events or situations that might require additional illumination, including, but not limited to, the illumination of historic structures, monuments, or flags; provided, however, that all such illumination be selected and installed to minimize glare, light trespass, and sky glow to the greatest extent possible.

76 (c) No public utility company shall install a permanent outdoor fixture for roadway
77 lighting or parking-lot lighting if the cost of operating such fixture is paid for by state funds,
78 unless the provisions specified for such uses under Sections 38 (a) and 38(b) are met.

79 (d) The Department of Energy Resources, in consultation with the Department of
80 Transportation, shall develop and promulgate regulations to implement and enforce this section,
81 including a system to ensure that the use of state funds complies with the requirements set forth
82 herein.

83 SECTION 2. The Department of Transportation shall:

84 (a) review and update warranting and other criteria for roadway lighting, to comply with
85 current standards, procedures, and accepted best practices;

86 (b) make a study of lighting operational costs, and develop recommendations on cost
87 reduction through replacement of existing fixtures with lower-wattage, fully shielded fixtures,
88 and by removal of unnecessary roadway lighting and installation of passive safety measures
89 where possible.;

90 (c) issue the first report of its findings and recommendations as required in this section to
91 the Department of Energy Resources on or before August 31, 2014, and annually thereafter.

92 SECTION 3. The Department of Public Utilities shall, subject to its ratemaking
93 authority, develop a rate for part-night service for unmetered roadway or parking-lot lighting to
94 apply to each new electric utility rate case submitted after January 1, 2014.

95 SECTION 4. This act shall take effect on November 1, 2013.