HOUSE DOCKET, NO. 1240 FILED ON: 1/20/2011

HOUSE . . . . . No. 1762

The Commonwealth of Massachusetts

PRESENTED BY:

Sean Garballey

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 improving outdoor lighting and increasing dark-sky visibility .

PETITION OF:

NAME:	DISTRICT/ADDRESS:
Sean Garballey	*23rd Middlesex*
Cynthia S. Creem	☐ *[District]* ☐
James Arciero	*2nd Middlesex*
Cory Atkins	*14th Middlesex*
Jennifer E. Benson	*37th Middlesex*
Linda Campbell	*15th Essex*
Carolyn C. Dykema	*8th Middlesex*
James B. Eldridge	☐ *[District]* ☐
Ann-Margaret Ferrante	*5th Essex*
Jennifer L. Flanagan	☐ *[District]* ☐
Jonathan Hecht	*29th Middlesex*
Kay Khan	*11th Middlesex*

Peter V. Kocot	*1st Hampshire*
Alice Hanlon Peisch	*14th Norfolk*
Denise Provost	*27th Middlesex*
Byron Rushing	*9th Suffolk*
Carl M. Sciortino, Jr.	*34th Middlesex*
Stephen Stat Smith	*28th Middlesex*
Benjamin Swan	*11th Hampden*

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HOUSE . . . . . No. 1762

By Mr. Garballey of Arlington, a petition (accompanied by bill, House, No. 1762) of Sean Garballey and others relative to improving outdoor lighting and increasing dark-sky visibility. Telecommunications, Utilities and Energy.

The Commonwealth of Massachusetts

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 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 lamp, off a reflector, or through a refractor of a luminaire.

"Foot-candles", lumens per square foot.

"Fully shielded luminaire", a luminaire that allows no direct light from the luminaire above a horizontal plane through the luminaire's lowest light-emitting part, in its mounted form.

"Illuminance", the luminous power incident per unit area of a surface, as measured in lux or foot-candles.

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

"Light pollution", exterior artificial light directed, reflected or scattered upward.

"Light trespass", light emitted by a luminaire that shines beyond the boundaries of the property on which the luminaire is located.

"Lumen", a standard unit of measurement of luminous flux.

18 “Luminaire”, a complete lighting unit, including a lamp or lamps together with the parts
19 designed to distribute the light, to position and protect the lamps and to connect the lamps to the
20 power supply.

21 “Lux”, lumens per square meter.

22 “Municipal funds”, bond revenues or money appropriated or allocated by the governing
23 body of a town or city within the Commonwealth.

24 “Outdoor parking-lot lighting”, permanent outdoor luminaires that illuminate
25 automotive vehicle parking areas.

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

29 “Permanent outdoor luminaire”, a fixed luminaire that is outdoors and intended to be
30 used for 7 days or longer.

31 “Roadway lighting”, permanent outdoor luminaires intended to illuminate public
32 roadways for automobiles.

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

34 Section 38.

35 (a) No state or municipal funds shall be used to install a new or replacement permanent
36 outdoor

37 luminaire unless the following conditions are met:

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

40 (2) for building-mounted luminaires not intended for roadway or parking-lot lighting, the
41 luminaire is fully shielded when the rated initial output of its lamp or lamps is greater than 3500
42 lumens.

43 (3) for luminaires specifically intended to illuminate building facades, the luminaire is
44 shielded to reduce glare, light trespass, and light pollution to the greatest extent possible when
45 the rated initial output of its lamp or lamps is greater than 3500 lumens.

46 (4) if a lighting recommendation or regulation applies, only the illuminance levels
47 required for the intended purpose by these recommendations or regulations are used.

(5) if no lighting recommendation or regulation applies, only the illuminance levels required for the intended purpose as defined in recognized standards, including, but not limited to, recommended practices adopted by the Illuminating Engineering Society (IES), are used;

(6) for roadway lighting unassociated with intersections of 2 or more streets or highways, the Department of Transportation has determined that the purpose of the lighting installation or replacement cannot be achieved by installation of reflectorized roadway markers, lines, warnings or informational signs, or other passive means; and minimization of glare, light pollution and light trespass, and minimization of non-renewable energy usage, must be considered.

(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 by emergency personnel requiring additional illumination for emergency procedures or temporarily used by repair personnel for road repair;

(3) to navigational lighting systems at airports and other lighting necessary for aircraft safety;

(4) to special events or situations that may require additional illumination, including, but not limited to, the illumination of historic structures, monuments, or flags; provided, however, that all such illumination shall be selected and installed to shield the lamp used from direct view to the greatest extent possible, and to minimize glare, light pollution and light trespass; or

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

(c) No public utility company shall install or replace a permanent outdoor luminaire for roadway lighting or parking-lot lighting, if the cost of operating such luminaire is paid for by state or municipal funds, unless:

(1) the new or replacement luminaire is fully shielded;

(2) the illuminance levels required for the intended purpose, as defined in recognized standards, including, but not limited to, recommended practices adopted by the Illuminating Engineering Society, are met but not exceeded; and

(3) the luminaire is designed to maximize energy conservation and to minimize light pollution, glare and light trespass.

80 (d) The department of energy resources, in consultation with the Department of
81 Transportation, shall promulgate regulations to implement and enforce this section, including a
82 system to ensure that the use of state or municipal funds complies with the requirements set forth
83 herein.

84 (e) No person shall install a new or replacement luminaire on a residential or commercial
85 property in a manner that creates light trespass or glare on a public right of way sufficient to
86 visually impair drivers of vehicles on the roadway.

87 Section 39.

88 a) The Department of Transportation shall:

89 (1) review and update warranting and other criteria for roadway lighting, to comply with
90 current standards, procedures and accepted best practices;

91 (2) make a study of lighting operational costs, and develop recommendations on cost
92 reduction through replacement of existing fixtures with lower-wattage, fully shielded luminaires,
93 and by removal of unnecessary roadway lighting and installation of passive safety measures
94 where possible;

95 SECTION 2. The department of public utilities shall, subject to its ratemaking authority,
96 develop a rate for part-night or midnight service for unmetered roadway or parking-lot lighting to
97 apply to each new electric utility rate case submitted after August 31, 2013.

98 SECTION 3. The Department of Transportation shall issue the first report of its findings
99 and recommendations as required in Section 39 (a)(2) to the department of energy resources on
100 or before August 31, 2013, and annually thereafter.

101 SECTION 4. This act shall take effect on November 1, 2012.