

**SENATE . . . . . No. 1957**

**The Commonwealth of Massachusetts**

PRESENTED BY:

***James B. Eldridge***

*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 increasing solar rooftop energy.**

PETITION OF:

NAME:	DISTRICT/ADDRESS:	
<i>James B. Eldridge</i>	<i>Middlesex and Worcester</i>	
<i>Jack Patrick Lewis</i>	<i>7th Middlesex</i>	<i>1/22/2019</i>
<i>Carmin Lawrence Gentile</i>	<i>13th Middlesex</i>	<i>1/22/2019</i>
<i>Jason M. Lewis</i>	<i>Fifth Middlesex</i>	<i>1/23/2019</i>
<i>Mike Connolly</i>	<i>26th Middlesex</i>	<i>1/28/2019</i>
<i>Rebecca L. Rausch</i>	<i>Norfolk, Bristol and Middlesex</i>	<i>1/30/2019</i>
<i>Mary S. Keefe</i>	<i>15th Worcester</i>	<i>1/31/2019</i>
<i>Jennifer E. Benson</i>	<i>37th Middlesex</i>	<i>1/31/2019</i>
<i>Denise Provost</i>	<i>27th Middlesex</i>	<i>1/31/2019</i>
<i>Kay Khan</i>	<i>11th Middlesex</i>	<i>2/1/2019</i>
<i>Daniel M. Donahue</i>	<i>16th Worcester</i>	<i>2/1/2019</i>
<i>Marc R. Pacheco</i>	<i>First Plymouth and Bristol</i>	<i>2/1/2019</i>
<i>Maria Duaiame Robinson</i>	<i>6th Middlesex</i>	<i>2/1/2019</i>
<i>James K. Hawkins</i>	<i>2nd Bristol</i>	<i>2/7/2019</i>

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By Mr. Eldridge, a petition (accompanied by bill, Senate, No. 1957) of James B. Eldridge, Jack Patrick Lewis, Carmine Lawrence Gentile, Jason M. Lewis and other members of the General Court for legislation to increase solar rooftop energy. Telecommunications, Utilities and Energy.

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**The Commonwealth of Massachusetts**

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**In the One Hundred and Ninety-First General Court  
(2019-2020)**  
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An Act increasing solar rooftop energy.

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

1           SECTION 1. The General Laws, as appearing in the 2018 Official Edition, are hereby  
2 amended by inserting after chapter 143 the following chapter:-

3           CHAPTER 143A. SOLAR HOMES AND BUSINESSES.

4           Section 1. As used in this chapter the following words shall have the following meanings  
5 unless the context clearly requires otherwise:-

6           “Board”, state board of building regulations and standards.

7           “Department”, department of public safety.

8           “Developer”, any person or company that constructs residential or commercial buildings.

9           “Effective solar area”, the portion of a building roof on which the output from a solar  
10 energy system, taking into account shading from existing permanent natural or manmade barriers

11 external to the building (including but not limited to trees, hills, and adjacent structures), would  
12 be equivalent to 70 percent or greater of the output of an unshaded solar energy system on an  
13 annual basis.

14 “Large commercial building”, a commercial building of 10,000 or more square feet.

15 “Multi-family dwelling”, a building intended to be inhabited as a primary or secondary  
16 residence by multiple individuals or groups of individuals living in separate apartments.

17 “New construction”, any newly constructed residential or commercial building that  
18 requires a building permit to proceed.

19 “Single-family dwelling”, a building intended to be inhabited as a primary or secondary  
20 residence by one individual or group of individuals.

21 “Solar energy system”, any system that uses solar energy to provide all or a portion of the  
22 electrical needs of a residential or commercial building.

23 “Solar hot water heater”, any system that uses solar energy to heat water for use in a  
24 residential or commercial building.

25 “Substitute renewable energy system”, any system that uses renewable energy resources  
26 other than solar energy to provide for all or a portion of the electrical needs of a residential or  
27 commercial building; provided, that a renewable energy system shall use a technology eligible  
28 for the renewable portfolio standard under subsection (c) of section 11F of chapter 25A of the  
29 General Laws

30 Section 2. (a) All new construction shall be built to accommodate the installation of a  
31 solar energy system. The board shall promulgate regulations within 1 year from the passage of

32 this act to amend the state building code to establish minimum standards that must be met for  
33 new construction to accommodate a solar energy system.

34 (b) In drafting the regulations, the board shall take into account existing building code  
35 requirements and compliance costs. The board shall also consult with scientists, engineers, and  
36 professional societies with relevant expertise in solar energy systems and building construction.

37 (c) At a minimum, the board shall include requirements for: (1) static load roof strength,  
38 with a requirement that roofing where solar equipment could be placed be capable of supporting  
39 a minimum of 6 pounds per square foot; (2) placement of non-solar related rooftop equipment,  
40 taking into account positioning that avoids shading of solar equipment and maximization of  
41 continuous roof space; (3) sizing and provision of extra electrical panels to accommodate the  
42 addition of an appropriately sized future solar energy system; and (4) provision of space for a  
43 solar energy system DC-AC inverter in the utility room or on an outside wall.

44 (d) The board shall also consider including requirements for: (1) roof orientation and  
45 angle; (2) roof types that are compatible with a solar installation mounting strategy that will  
46 require minimal or no roof penetrations; and (3) a conduit for wiring from roof to electric panel.

47 (e) To the extent necessary, the board shall promulgate separate standards for residential  
48 and commercial construction.

49 (f) In developing these regulations, the board shall consult with the department of energy  
50 resources, the Massachusetts Clean Energy Center, and other state agencies with relevant  
51 expertise.

52           Section 3. (a) The board shall promulgate regulations within 1 year from the passage of  
53 this act to amend the state building code to require certain types of new construction, as specified  
54 in this section, to have a solar energy system.

55           (b) Single-family dwellings shall have a solar energy system producing sufficient  
56 electricity on an annual basis to meet 100 percent of the average electricity demand of dwellings  
57 of a similar size and type.

58           (c) Multi-family dwellings and large commercial buildings up to ten stories in height  
59 shall have a solar energy system producing sufficient electricity on an annual basis to meet  
60 minimum standards established by the board.

61           (d) The board may require other categories of new construction or renovated buildings to  
62 have a solar energy system, and set minimum standards for the capacity of the solar energy  
63 system.

64           (e) The board may reduce the required minimum capacity of solar energy systems for  
65 single-family and multi-family dwellings by up to 25 percent if installed in conjunction with a  
66 battery storage system with a minimum capacity of 7.5 kilowatt-hours per dwelling unit.

67           (f) The board shall determine the average electricity consumption for the types of  
68 buildings described in this section and revise its determination at least every three years, taking  
69 into account changes in electricity consumption due to energy efficiency improvements, electric  
70 vehicle charging, air source heat pumps and other electric heating technologies, and other  
71 factors.

72 Section 4. (a) Developers may seek an exemption from the inspector of buildings or  
73 building commissioner from the requirements under sections 2 and 3 of this chapter upon a  
74 sufficient showing that the effective solar area is less than 80 contiguous square feet.

75 (b) Developers may seek an exemption from the inspector of buildings or building  
76 commissioner from the requirements under sections 2 and 3 of this chapter upon a sufficient  
77 showing that a substitute renewable energy system will be installed at the time of construction,  
78 producing an equal or greater amount of electricity on an annual basis as the minimum required  
79 solar installation under section 3 of this chapter. Developers may seek a reduction in the required  
80 size of a solar energy system upon a sufficient showing that a substitute renewable energy  
81 system will be installed at the time of construction, producing sufficient electricity on an annual  
82 basis to offset the reduction in electricity produced by the solar energy system.

83 (c) Developers may seek an exemption from the inspector of buildings or building  
84 commissioner from the requirements under sections 2 and 3 of this chapter, or a reduction in the  
85 required size of a solar energy system, upon a sufficient showing that a solar hot water heater  
86 will be installed at the time of construction. Such exemption or reduction shall only be granted to  
87 the extent that the installation of a solar hot water heater will reduce the portion of the effective  
88 solar area available for a solar energy system.

89 (d) The board may allow exemptions for affordable housing developments, after  
90 consulting with affordable housing developers and operators, organizations that represent  
91 affordable housing residents, and other stakeholders.

92 (e) The board shall promulgate regulations within 1 year of the passage of this act that  
93 clearly define the process for seeking an exemption.

94           Section 5. (a) All future editions and amended versions of the building code, as adopted  
95 by the board, shall include regulations meeting the requirements of sections 2, 3, and 4 of this  
96 chapter.

97           (b) The board may from time to time revise the regulations promulgated under sections 2,  
98 3, and 4 of this chapter, in accordance with changes in technology and building practices.

99           Section 6. Compliance with the provisions of this chapter shall not impair a building's  
100 eligibility for any incentives, rebates, credits, or other programs in existence to encourage  
101 development of renewable energy resources.

102           Section 7. A building permit for new construction shall not be granted without a showing  
103 that the building complies with the requirements of this chapter.

104           Section 8. Any person who fails to comply with or otherwise violates this chapter shall be  
105 liable for a civil administrative penalty not to exceed \$10,000 for each violation, or twice the  
106 estimated additional cost that would have been incurred by constructing a building to meet the  
107 requirements of this chapter, whichever is greater.