

# SENATE . . . . . No. 2545

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## The Commonwealth of Massachusetts

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In the One Hundred and Ninetieth General Court  
(2017-2018)  
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SENATE, Thursday, June 7, 2018

The committee on Ways and Means to whom was referred the Senate Bill relative to 2030 and 2040 emissions benchmarks (Senate, No. 479) (the committee on Senate Global Warming and Climate Change having recommended that the bill be amended by substituting a new draft entitled “An Act to promote a clean energy future” (Senate, No. 2302) (also based on Senate, Nos. 477, 478, changed and 1974 and House, No. 3994),-- reports, recommending that the same ought to pass with an amendment substituting a new draft entitled “An Act to promote a clean energy future” (Senate, No. 2545).

For the committee,  
Karen E. Spilka

**The Commonwealth of Massachusetts**

**In the One Hundred and Ninetieth General Court  
(2017-2018)**

An Act to promote a clean energy future.

*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. Section 1 of chapter 21N of the General Laws, as appearing in the 2016  
2 Official Edition, is hereby amended by striking out the definition of “Direct emissions” and  
3 inserting in place thereof the following definition:-

4           “Direct emissions”, emissions from sources that are owned or operated, in whole or in  
5 part, by a person, entity or facility including, but not limited to: (i) emissions from a  
6 transportation vehicle; (ii) a building or structure, including but not limited to a residential,  
7 commercial, industrial or institutional building or structure; or (iii) an industrial, manufacturing  
8 or other business process.

9           SECTION 2. Said section 1 of said chapter 21N, as so appearing, is hereby further  
10 amended by inserting after the definition of “Greenhouse gas emissions source” the following  
11 definition:-

12           “Greenhouse gas-emitting priority”, natural gas, petroleum, coal and any solid, liquid or  
13 gaseous fuel derived therefrom, and any other matter identified by the department as a

14 greenhouse gas-emitting priority that emits or is capable of emitting a greenhouse gas when  
15 burned.

16 SECTION 3. Said section 1 of said chapter 21N, as so appearing, is hereby further  
17 amended by inserting after the word “of”, in line 50, the following words:- a greenhouse gas-  
18 emitting priority or.

19 SECTION 4. Said section 1 of said chapter 21N is hereby further amended by striking out  
20 the definition of “Market-based compliance mechanism”, in lines 56 to 65, inclusive, and  
21 inserting in place thereof the following definition:-

22 “Market-based compliance mechanism”, any form of price compliance system imposed  
23 on sources or categories of sources or any form of pricing mechanism imposed directly on  
24 greenhouse gas-emitting priorities or on the distribution or sale of greenhouse gas-emitting  
25 priorities which are designed to reduce emissions as required by this chapter including, but not  
26 limited to: (i) a system of market-based declining annual aggregate emissions limitations for  
27 sources or categories of sources that emit greenhouse gases; (ii) greenhouse gas emissions  
28 exchanges, banking, credits and other transactions governed by rules and protocols established  
29 by the secretary or a regional program that results in the same greenhouse gas emissions  
30 reduction, over the same time period, as direct compliance with a greenhouse gas emissions limit  
31 or emission reduction measure adopted by the executive office pursuant to this chapter; or (iii) a  
32 system of charges or exactions imposed to reduce statewide greenhouse gas emissions in whole  
33 or in part.

34 SECTION 5. Subsection (a) of section 2 of said chapter 21N, as so appearing, is hereby  
35 amended by striking out the first sentence and inserting in place thereof the following sentence:-

36 The department shall monitor and regulate greenhouse gas-emitting priorities and direct and  
37 indirect emissions of greenhouse gases with the goal of reducing emissions in order to achieve  
38 greenhouse gas emissions limits established by this chapter.

39 SECTION 6. Subsection (b) of section 3 of said chapter 21N, as so appearing, is hereby  
40 amended by striking out clauses (2) and (3) and inserting in place thereof the following 2  
41 clauses:- (2) a 2030 statewide greenhouse gas emissions limit accompanied by plans to achieve  
42 this limit in accordance with said section 4; provided, however, that the 2030 statewide  
43 greenhouse gas emissions limit shall maximize the ability of the commonwealth to meet the 2050  
44 statewide greenhouse gas emissions limit; (3) a 2040 statewide greenhouse gas emissions limit  
45 accompanied by plans to achieve this limit in accordance with said section 4; provided, however,  
46 that the 2040 statewide greenhouse gas emissions limit shall maximize the ability of the  
47 commonwealth to meet the 2050 statewide greenhouse gas emissions limit.

48 SECTION 7. Subsection (a) of section 4 of said chapter 21N, as so appearing, is hereby  
49 amended by inserting after the first sentence the following 2 sentences:- The secretary shall  
50 further adopt the 2030 statewide greenhouse gas emissions limit pursuant to clause (2) of  
51 subsection (b) of section 3 which shall be between 35 per cent and 45 per cent below the 1990  
52 emissions level and a plan for achieving that reduction. The secretary shall further adopt the  
53 2040 statewide greenhouse gas emissions limit pursuant to clause (3) of said subsection (b) of  
54 said section 3 which shall be between 55 per cent and 65 per cent below the 1990 emissions level  
55 and a plan for achieving that reduction.

56 SECTION 8. Said subsection (a) of said section 4 of said chapter 21N, as so appearing, is  
57 hereby further amended by striking out the last sentence and inserting in place thereof the

58 following sentence:- The 2020, 2030 and 2040 statewide greenhouse gas emissions limits and  
59 implementation plans shall comply with this section.

60 SECTION 9. Said section 4 of said chapter 21N, as so appearing, is hereby further  
61 amended by striking out, in line 17, the word "limit" and inserting in place thereof the following  
62 word:- limits.

63 SECTION 10. Said section 4 of said chapter 21N, as so appearing, is hereby further  
64 amended by striking out, in line 42, the words "2020 emission limit and implementing plan" and  
65 inserting in place thereof the following words:- 2020, 2030 and 2040 statewide greenhouse gas  
66 emissions limits and implementing plans.

67 SECTION 11. Said section 4 of said chapter 21N, as so appearing, is hereby further  
68 amended by striking out subsection (h) and inserting in place thereof the following subsection:-

69 (h) The secretary shall issue a 2050 emissions reduction plan that shall describe in detail  
70 the commonwealth's actions and methods for achieving the 2030, 2040 and 2050 emissions limit  
71 required by subsection (b) of section 3 of chapter 21N. The 2050 emissions reduction plan shall:  
72 (i) address all sources and categories of sources that emit greenhouse gas emissions; (ii) take into  
73 account the imposition of market-based compliance mechanisms required in section 7A; and (iii)  
74 indicate for each source or category of sources how, to what extent and when the commonwealth  
75 will act to reduce its emissions in order to achieve the 2050 emissions limit required by said  
76 subsection (b) of section 3 of chapter 21N. The secretary shall evaluate, adjust if necessary and  
77 publish updates to the 2050 emissions reduction plan at least once every 30 months, including  
78 assessments of the effectiveness, to date, of all actions, methods, regulations and programs  
79 designed to reduce greenhouse gas emissions and of if the actions, methods, regulations and

80 programs disproportionately impact low-income households, minimize administrative burdens  
81 and minimize leakage.

82 SECTION 12. Said chapter 21N is hereby further amended by inserting after section 7  
83 the following section:-

84 Section 7A. The secretary shall promulgate regulations establishing market-based  
85 compliance mechanisms for: (i) the transportation sector; provided, however, that the regulations  
86 shall, at a minimum, be designed to reduce passenger vehicle and light duty truck emissions; (ii)  
87 the commercial, industrial and institutional sectors, including but not limited to buildings and  
88 industrial, manufacturing and other business processes; and (iii) the residential building sector.

89 The market-based compliance mechanisms established pursuant to this section shall: (i)  
90 maximize the ability of the commonwealth to achieve the greenhouse gas emissions limits  
91 established pursuant to this chapter; and (ii) be designed to minimize disproportionate impacts on  
92 low-income households. The market-based compliance mechanisms may be established by  
93 joining any existing market-based compliance mechanisms. The secretary shall evaluate and  
94 adjust, if necessary, all market-based compliance mechanisms adopted pursuant to this section at  
95 least once every 30 months to meet the requirements of this section and to achieve greenhouse  
96 gas emissions limits. The regulations may be promulgated as part of a coordinated regional effort  
97 with other states or Canadian Provinces to implement, expand or join any other market-based  
98 compliance mechanisms. The department shall ensure it has adequate resources to implement the  
99 requirements of this chapter.

100 SECTION 13. Section 9 of said chapter 21N, as appearing in the 2016 Official Edition, is  
101 hereby amended by adding the following paragraph:-

102           This chapter shall apply to municipal electric departments and municipal light boards as  
103 defined in section 1 of chapter 164A; provided, however, that the secretary may exempt  
104 municipal electric departments and municipal light boards if the secretary determines that the  
105 exemption will not negatively impact the commonwealth's ability to achieve the greenhouse gas  
106 emissions limits established pursuant to this chapter.

107           SECTION 14. Subsection (a) of section 11F of chapter 25A of the General Laws, as so  
108 appearing, is hereby amended by striking out clause (3) and inserting in place thereof the  
109 following clause:- (3) an additional 3 per cent of sales each year thereafter.

110           SECTION 15. Chapter 25A of the General Laws is hereby amended by adding the  
111 following section:-

112           Section 17. (a) The department shall establish an energy storage system target program  
113 for the deployment of energy storage systems by distribution company customers, distribution  
114 companies and municipal lighting plants to achieve a statewide energy storage deployment target  
115 of 2,000 megawatts by January 1, 2025. The department shall set annual statewide deployment  
116 targets to be achieved in each distribution company's and municipal lighting plant's service  
117 territory in order to reach the 2,000 megawatts energy storage system target.

118           (b) To achieve the annual targets established in subsection (a), the department may  
119 consider a variety of deployment mechanisms and may require policies to encourage the cost-  
120 effective deployment of energy storage systems including, but not limited to: (i) distribution  
121 company or municipal lighting plant programs to encourage private deployment of energy  
122 storage systems by their customers; (ii) procurement of cost-effective energy storage systems to  
123 be owned and operated by a distribution company; provided, however, that any such

124 procurement shall finance the deployment of energy storage systems for the purpose of: (1) a  
125 nonwires alternative to investment in distribution; (2) deferring investment in distribution  
126 infrastructure that would otherwise be needed to address actual or forecasted overloads on  
127 distribution circuits or at substations; or (3) improving the capability of the distribution system to  
128 recover from adverse events that otherwise could result in long-term outages in critical areas of  
129 the distribution system; (iii) the use of alternative compliance payments collected pursuant to  
130 subsection (f) to fund a grant program for private development; and (iv) the use of energy storage  
131 to replace fossil generation and the use of energy efficiency funds under section 19 of chapter 25  
132 if the department determines that customer-owned energy storage provides sustainable peak load  
133 reductions on either the electric or gas distribution systems and is otherwise consistent with  
134 section 11G of this chapter.

135 (c) A distribution company shall not own or operate energy storage systems equal to  
136 more than 20 per cent of the annual target established by the department for the distribution  
137 company's service territory established in subsection (a) for the purpose of achieving the annual  
138 targets.

139 (d) Each distribution company and municipal lighting plant shall annually make a map  
140 available that identifies areas of critical need for energy storage systems within their service  
141 territory. Each distribution company and municipal light plant shall identify on the map areas of  
142 actual or forecasted overloads on distribution circuits or at substations. The map shall aggregate  
143 system detail as necessary for distribution system security.

144 (e) The department shall promulgate regulations allowing for each distribution company  
145 and municipal lighting plant to discharge its obligations under this section by making an



146 alternative compliance payment in an amount to be established by the department. The  
147 regulations shall require distribution companies and municipal lighting plants to annually submit  
148 to the department a report that shows it is in compliance with this section.

149 (f) Annually, not later than December 1, the department shall make available on its  
150 website a report on the energy storage system target program.

151 (g) The department shall promulgate regulations to implement this section.

152 SECTION 16. Section 139 of said chapter 164 of the General Laws, as appearing in the  
153 2016 Official Edition, is hereby further amended by inserting after the word “charges”, in line  
154 85, the second time it appears, the following words:- , including demand charges as part of a  
155 monthly minimum reliability contribution except as authorized under subsection (j).

156 SECTION 17. Said section 139 of chapter 164 of the General Laws, as so appearing, is  
157 hereby amended by striking out subsection (f) and inserting in place thereof the following  
158 subsection:-

159 (f) No aggregate net metering cap shall apply to a solar net metering facility; provided,  
160 however, that the maximum amount of generating capacity eligible for net metering by a  
161 municipality or other governmental entity shall be 10 megawatts.

162 SECTION 18. Said section 139 of said chapter 164, as so appearing, is hereby further  
163 amended by inserting after the word “system”, in line 150, the following words:- ; provided,  
164 however, that a distribution company shall not assess a demand charge unless it is a charge based  
165 on demand during a pre-determined portion of the hours of a day defined as peak hours of  
166 system demand and unless the distribution company has informed all of its customers of the

167 manner in which any such demand charges are assessed; and provided further, that a distribution  
168 company shall only assess a demand charge if metering functionality or technology is available  
169 to the customer at a reasonable cost to provide the customer with near real time access to  
170 electricity usage data.

171 SECTION 19. Said section 139 of said chapter 164, as so appearing, is hereby further  
172 amended by striking out, in lines 175 to 177, inclusive, the words “; provided that, the date  
173 designated by the department shall be not later than December 31, 2018”.

174 SECTION 20. Section 16 of chapter 298 of the acts of 2008 is hereby amended by  
175 striking out, in lines 3 and 4, the words “, and shall expire on December 31, 2020”.

176 SECTION 21. The secretary of energy and environmental affairs shall conduct a detailed,  
177 quantitative modeling and analysis of the commonwealth’s energy economy and emissions,  
178 which shall be sufficient to identify multiple technically and economically-feasible pathways to  
179 reduce statewide emissions consistent with the 2050 emissions limit required by subsection (b)  
180 of section 3 of chapter 21N of the General Laws. Such modeling and analysis may employ back-  
181 casting methodology and may be conducted in conjunction with other states or regional entities  
182 as part of an analysis of reducing regional emissions by 2050 to a level consistent with those  
183 required by said chapter 21N. The secretary shall publish the results of its modeling and analysis  
184 and shall make the model, all model assumptions and all input and output data available for  
185 public inspection and use. The secretary shall file a report of its findings with the clerks of the  
186 senate and house of representatives, the senate and house committees on ways and means and the  
187 joint committee on telecommunications, utilities and energy not later than December 31, 2020.

188 SECTION 22. (a) Notwithstanding any general or special law to the contrary, the  
189 department of energy resources may determine and recommend offshore wind energy generation  
190 solicitations and procurements of up to 5,000 megawatts of aggregate nameplate capacity by  
191 December 31, 2035 if the department, after investigation, makes a written finding that procuring  
192 more than the 1,600 megawatts required by section 83C of chapter 169 of the acts of 2008 is  
193 consistent with the commonwealth's energy policy, including the policies established in said  
194 chapter 169 and chapter 298 of the acts of 2008 and after consideration of the economic benefits  
195 of additional nameplate capacity and the impact on ratepayers, including distribution company  
196 customers. The department shall publish a plan to effectuate any such additional solicitations  
197 and procurements which shall include the recommendations of the joint procurement taskforce  
198 established in subsection (c). Notwithstanding the requirements of this section, as part of the  
199 plan, the department may require different solicitation, evaluation and selection of parties as  
200 required by said section 83C of said chapter 169 if such changes are recommended by the joint  
201 procurement taskforce or will benefit distribution company customers. The department shall hold  
202 at least 1 public hearing to consider the economic benefits of up to 5,000 megawatts of aggregate  
203 nameplate capacity and the impact of such subsequent solicitations and procurements on the  
204 commonwealth's energy policies under this subsection and on ratepayers, including distribution  
205 company customers. The plan required to be published under this subsection shall be filed with  
206 the clerks of the senate and the house of representatives.

207 (b) Notwithstanding any general or special law to the contrary, the department of energy  
208 resources may determine and recommend clean energy generation solicitations and procurements  
209 for more than 9,450,000 megawatts-hours as required by section 83D of chapter 169 of the acts  
210 of 2008 if the department, after investigation, makes a written finding that doing so is consistent

211 with the commonwealth's energy policy, including the policies established in said chapter 169  
212 and chapter 298 of the acts of 2008 and after consideration of the economic benefits of additional  
213 clean energy generation and the impact on ratepayers, including distribution company customers.  
214 The department shall publish a plan to effectuate any such additional solicitations and  
215 procurements which shall include the recommendations of the joint procurement taskforce  
216 established in subsection (c). Notwithstanding the requirements of this section, as part of the  
217 plan, the department may require different solicitation, evaluation and selection of parties as  
218 required by said section 83D of said chapter 169 if such changes are recommended by the joint  
219 procurement taskforce or will benefit distribution company customers. The department shall hold  
220 at least 1 public hearing to consider the economic benefits of more than 9,450,000 megawatts-  
221 hours of clean energy generation and the impact of such subsequent solicitations and  
222 procurements on the commonwealth's energy policies under this subsection and on ratepayers,  
223 including distribution company customers. The plan required to be published under this  
224 subsection shall be filed with the clerks of the senate and the house of representatives.

225 (c) There shall be a joint procurement taskforce consisting of the commissioner of energy  
226 resources, the attorney general and representatives of the distribution companies to conduct a  
227 review of the procurements conducted pursuant to sections 83C and 83D of chapter 169 of the  
228 acts of 2008 to identify and report on the challenges and strengths in the respective procurement  
229 processes and to make recommendations to improve the process for future procurements. The  
230 taskforce shall: (i) compare the requirements of sections 83C and 83D of said chapter 169 to  
231 similar procurements in other states; (ii) examine the makeup of the procurement evaluation and  
232 selection teams; (iii) review the evaluation metrics as identified in the request for proposals and  
233 applied in the evaluation process; (iv) analyze the selection process utilized; (v) review the

234 consideration given to economic impacts; (vi) consider the impact and feasibility of reducing the  
235 timeline of implementation between procurements under section 83C of said chapter 169; and  
236 (vii) analyze the impact of the procurements on distribution customers and energy markets. The  
237 taskforce shall make recommendations on improvements to the procurement process including,  
238 but not limited to: (1) changing the solicitation parties, the evaluation team and the selection  
239 team; (2) the appropriate role of the distribution companies in the process; (3) the evaluation  
240 metrics; (4) the impact of additional procurements on the price and availability of renewable  
241 energy credits pursuant to section 11F of chapter 25A of the General Laws; and (5) the efficacy  
242 of additional procurements. The task force shall file its report with the clerks of the senate and  
243 house of representative, the house and senate committees on ways and means and the joint  
244 committee on telecommunications, utilities and energy not later than December 31, 2019.

245 SECTION 23. Notwithstanding any general or special law to the contrary, the secretary  
246 of energy and environmental affairs shall publish the next report required by section 5 of chapter  
247 21N of the General Laws not later than December 31, 2021.

248 SECTION 24. Clause (3) of subsection (a) section 11F of chapter 25A of the General  
249 Laws, as appearing in section 14, shall apply to 2019 and each year thereafter.

250 SECTION 25. Sections 16 to 18, inclusive, shall apply to any monthly minimum  
251 reliability contribution, including a monthly minimum reliability contribution approved by the  
252 department of public utilities to take effect on or before December 31, 2018. Any monthly  
253 minimum reliability contribution approved by the department of public utilities prior to the  
254 effective date of this section and sections 16 to 18, inclusive, that does not meet the requirements  
255 of said sections shall be refiled for review and approval by the department before taking effect.

256 SECTION 26. The 2030 statewide greenhouse gas emissions limit required by subsection  
257 (a) of section 4 of chapter 21N of the General Laws shall be adopted not later than January 1,  
258 2021.

259 SECTION 27. The 2040 statewide greenhouse gas emissions limit required pursuant to  
260 subsection (a) of section 3 of chapter 21N of the General Laws shall be adopted not later than  
261 January 1, 2031.

262 SECTION 28. The department of energy resources shall establish the annual statewide  
263 deployment targets to be achieved in each distribution company's and municipal lighting plant's  
264 service territory in order to reach the 2,000 megawatt energy storage system target pursuant to  
265 subsection (a) of section 17 of chapter 25A of the General Laws not later than December 31,  
266 2018.

267 SECTION 29. The regulations required pursuant to clause (i) of the first paragraph of  
268 section 7A of chapter 21N of the General Laws shall be promulgated and in effect not later than  
269 December 31, 2020.

270 SECTION 30. The regulations required pursuant to clause (ii) of said first paragraph of  
271 said section 7A of said chapter 21N shall be promulgated and in effect not later than December  
272 31, 2021.

273 SECTION 31. The regulations required pursuant to clause (iii) of said first paragraph of  
274 said section 7A of said chapter 21N shall be promulgated and in effect not later than December  
275 31, 2022.

276 SECTION 32. The regulations required pursuant to section 6 of chapter 21N shall be  
277 promulgated and in effect not later than December 31, 2023 and shall be sufficient to achieve a  
278 2050 statewide emissions limit that is at least 80 per cent below the 1990 level.