

**HOUSE . . . . . No. 3395**

**The Commonwealth of Massachusetts**

PRESENTED BY:

***Sean Garballey and Marjorie C. Decker***

*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 to transition Massachusetts to 100 per cent renewable energy.

PETITION OF:

NAME:	DISTRICT/ADDRESS:
<i>Sean Garballey</i>	<i>23rd Middlesex</i>
<i>Marjorie C. Decker</i>	<i>25th Middlesex</i>
<i>Paul Tucker</i>	<i>7th Essex</i>
<i>Sarah K. Peake</i>	<i>4th Barnstable</i>
<i>Brendan P. Crighton</i>	<i>Third Essex</i>
<i>Adrian Madaro</i>	<i>1st Suffolk</i>
<i>John C. Velis</i>	<i>4th Hampden</i>
<i>Carmine L. Gentile</i>	<i>13th Middlesex</i>
<i>Frank I. Smizik</i>	<i>15th Norfolk</i>
<i>Denise Provost</i>	<i>27th Middlesex</i>
<i>Ruth B. Balsler</i>	<i>12th Middlesex</i>
<i>Jack Lewis</i>	<i>7th Middlesex</i>
<i>Christine P. Barber</i>	<i>34th Middlesex</i>
<i>James B. Eldridge</i>	<i>Middlesex and Worcester</i>
<i>Mike Connolly</i>	<i>26th Middlesex</i>
<i>Aaron Vega</i>	<i>5th Hampden</i>
<i>Smitty Pignatelli</i>	<i>4th Berkshire</i>
<i>José F. Tosado</i>	<i>9th Hampden</i>

<i>David M. Rogers</i>	<i>24th Middlesex</i>
<i>Thomas J. Calter</i>	<i>12th Plymouth</i>
<i>Steven Ultrino</i>	<i>33rd Middlesex</i>
<i>Jason M. Lewis</i>	<i>Fifth Middlesex</i>
<i>Natalie Higgins</i>	<i>4th Worcester</i>
<i>John W. Scibak</i>	<i>2nd Hampshire</i>
<i>Jennifer E. Benson</i>	<i>37th Middlesex</i>
<i>Gerard Cassidy</i>	<i>9th Plymouth</i>
<i>Chris Walsh</i>	<i>6th Middlesex</i>
<i>Kay Khan</i>	<i>11th Middlesex</i>
<i>Paul R. Heroux</i>	<i>2nd Bristol</i>
<i>Kenneth I. Gordon</i>	<i>21st Middlesex</i>
<i>Paul W. Mark</i>	<i>2nd Berkshire</i>
<i>James J. O'Day</i>	<i>14th Worcester</i>
<i>Carlos González</i>	<i>10th Hampden</i>
<i>Solomon Goldstein-Rose</i>	<i>3rd Hampshire</i>
<i>Michelle M. DuBois</i>	<i>10th Plymouth</i>
<i>James Arciero</i>	<i>2nd Middlesex</i>
<i>Gailanne M. Cariddi</i>	<i>1st Berkshire</i>
<i>Denise C. Garlick</i>	<i>13th Norfolk</i>
<i>Stephen Kulik</i>	<i>1st Franklin</i>
<i>Daniel M. Donahue</i>	<i>16th Worcester</i>
<i>Louis L. Kafka</i>	<i>8th Norfolk</i>
<i>Stephan Hay</i>	<i>3rd Worcester</i>
<i>Jay R. Kaufman</i>	<i>15th Middlesex</i>
<i>Jay D. Livingstone</i>	<i>8th Suffolk</i>
<i>Jeffrey N. Roy</i>	<i>10th Norfolk</i>
<i>Edward F. Coppinger</i>	<i>10th Suffolk</i>
<i>John J. Lawn, Jr.</i>	<i>10th Middlesex</i>
<i>Peter V. Kocot</i>	<i>1st Hampshire</i>
<i>Patricia D. Jehlen</i>	<i>Second Middlesex</i>

**HOUSE . . . . . No. 3395**

By Representatives Garballey of Arlington and Decker of Cambridge, a petition (accompanied by bill, House, No. 3395) of Sean Garballey, Marjorie C. Decker and others relative to the use of renewable energy in the Commonwealth. Telecommunications, Utilities and Energy.

**The Commonwealth of Massachusetts**

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

An Act to transition Massachusetts to 100 per cent renewable 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 2016 Official Edition, are hereby  
2 amended by inserting after chapter 25C the following chapter:-

3 CHAPTER 25D.

4 100 Percent Renewable Energy Act

5 Section 1. The purpose of this chapter is to steadily transition the Commonwealth to 100  
6 per cent clean, renewable energy by 2050 in order to (1) avoid pollution of our air, water and  
7 land, reduce greenhouse gas emissions, and ultimately eliminate our use of fossil fuels and other  
8 polluting and dangerous forms of energy; (2) increase energy security by reducing our reliance  
9 on imported sources of energy and maximizing renewable energy production in Massachusetts  
10 and in our region; (3) increase economic development by stimulating public and private  
11 investments in clean energy and energy efficiency projects; (4) create local jobs by harnessing  
12 Massachusetts' skilled workforce, business leadership, and academic institutions to advance new

13 technologies, improve the energy performance of homes and workplaces, and deploy renewable  
14 energy across the Commonwealth; and (5) improve the quality of life and economic well-being  
15 of all Massachusetts residents, with an emphasis on communities and populations that have been  
16 disproportionately affected by pollution and high costs under our energy system.

17 Section 2. As used in this chapter the following words shall have the following meanings  
18 unless the context clearly requires otherwise:-

19 “Building sector,” the energy consumed to heat, cool, provide hot water for, and provide  
20 electricity for buildings in the Commonwealth of Massachusetts. The building sector shall not  
21 include energy used for heavy industrial activities.

22 “Commissioner,” the commissioner of the department of energy resources

23 “Department,” the department of energy resources

24 “Emission,” as defined in chapter 21N of the General Laws.

25 “Greenhouse gas,” as defined in chapter 21N of the General Laws.

26 “Non-renewable energy,” energy produced from any source that fails to meet one or more  
27 of the criteria for renewable energy.

28 “Renewable energy,” energy produced from sources that meet all of the following  
29 criteria:

- 30 • (1) Virtually pollution-free, producing little to no global warming pollution or  
31 health-threatening pollution;

- 32 • (2) Inexhaustible, coming from natural sources that are regenerative or practically  
33 unlimited;
- 34 • (3) Safe, having minimal impacts on the environment, community safety and  
35 public health; and
- 36 • (4) Efficient, a wise use of resources.

37 Renewable energy shall include energy produced with the following technologies,  
38 provided that the use of these technologies conforms to the requirements above: solar  
39 photovoltaic, solar thermal electric, solar thermal heating, offshore wind energy, onshore wind  
40 energy, and geothermal energy. Renewable energy may include other technologies that meet the  
41 requirements above.

42 “Secretary,” the secretary of energy and environmental affairs

43 “Sector,” a major category of energy usage in the Commonwealth of Massachusetts.  
44 Sectors shall include electricity generation, heating, transportation, and industry, and may  
45 include other major categories as identified by the department of energy resources.

46 “Subsector,” a subcategory within a sector of energy usage, characterized by a common  
47 energy generation technology, industry, application, end-use sector, or type of consumer.

48 “Transportation sector,” the technologies and uses of energy that are applied to move  
49 people and goods within, into, and out of the Commonwealth of Massachusetts, including non-  
50 motorized forms of transportation such as walking and bicycling.

51 “Zero net energy building,” an energy-efficient building where, on a source energy basis,  
52 the actual annual delivered energy is less than or equal to the on-site renewable exported energy.

53           Section 3. (a) It shall be the goal of the Commonwealth of Massachusetts to meet 100 per  
54 cent of Massachusetts' energy needs with renewable energy by 2050, including the energy  
55 consumed for electricity, heating and cooling, transportation, agricultural uses, industrial uses,  
56 and all other uses by all residents, institutions, businesses, state and municipal agencies, and  
57 other entities operating within its borders.

58           (b) It shall be the goal of the Commonwealth of Massachusetts to obtain 100 per cent of  
59 the electricity consumed by all residents, institutions, businesses, state and municipal agencies,  
60 and other entities operating within its borders from renewable energy sources by 2035.

61           (c) In meeting these goals, the Commonwealth of Massachusetts and its agencies shall  
62 prioritize (1) sources of renewable energy that are located in Massachusetts or elsewhere in New  
63 England, (2) sources of renewable energy that represent additional renewable generation capacity  
64 added to the grid, (3) models for local and community ownership of renewable energy  
65 generation, particularly those models that bring direct financial benefits to low-income  
66 communities, and (4) reducing energy consumption through efficiency measures to the greatest  
67 extent practicable.

68           Section 4. (a) In order to integrate the goal of 100 per cent renewable energy throughout  
69 state government operations, the secretary shall establish an administrative council for the clean  
70 energy transition not later than 90 days from the passage of this act.

71           (b) The council shall be chaired by the secretary or the secretary's designee; and shall  
72 include a representative from the department of environmental protection, the department of  
73 energy resources, the department of public utilities, the Massachusetts Clean Energy Center, the  
74 office of the governor, and the executive offices of administration and finance, education, health

75 and human services, housing and economic development, labor and workforce development,  
76 public safety and security, and transportation and public works. The council shall also include a  
77 representative designated by the attorney general, the treasurer and receiver general, the secretary  
78 of the commonwealth, the state auditor, and the President of the University of Massachusetts.  
79 The council shall also include a member designated by the secretary of education to represent the  
80 community college system and a member designated by the secretary of education to represent  
81 the the state university system.

82 (c) The council shall identify all existing laws, regulations, and agency programs with an  
83 impact on energy production and consumption, and evaluate them based on (1) their potential to  
84 support the state's transition to 100 per cent renewable energy and (2) their ability to maximize  
85 the environmental and economic benefits of the transition for Massachusetts residents and  
86 businesses, particularly but not exclusively for (i) residents of gateway municipalities as defined  
87 in section 3A of chapter 23A of the General Laws, (ii) communities that have been impacted by  
88 pollution from energy sources, and (iii) neighborhoods identified as Environmental Justice  
89 Populations under the Environmental Justice Policy of the executive office of energy and  
90 environmental affairs.

91 (d) Each executive department shall conduct a review of the laws, regulations, and  
92 programs in its jurisdiction, and submit a report to the council describing how these laws,  
93 regulations, and programs can be modified in order to accelerate the transition to 100 per cent  
94 renewable energy. Each executive department shall further consider how modifying its programs  
95 to accelerate the transition to 100 per cent renewable energy can help achieve the department's  
96 other objectives.

97 (e) The secretary shall publish the council's findings under subsections (c) and (d) of this  
98 section within 6 months of the formation of the council. The secretary and the council shall  
99 review and update these findings every 3 years from the date of initial publication.

100 (f) Within one year from the passage of this act, the council shall determine a date by  
101 which the operations of state government will be powered with 100 percent renewable energy,  
102 provided that the date is not later than January 1, 2035. Within eighteen months of the passage of  
103 this act, each executive department shall present a plan to achieve this goal for the facilities and  
104 activities in its jurisdiction. Each executive department shall report on its progress to the council  
105 and update its plan annually.

106 (g) The council shall meet at least once per quarter to review progress in modifying laws,  
107 regulations, and agency programs to accelerate the transition to 100 per cent renewable energy.  
108 These meetings shall be open to members of the public and shall provide opportunities for public  
109 comment.

110 Section 5. (a) The Commonwealth shall establish a clean energy center of excellence at a  
111 public institution of higher education to conduct and sponsor research on (1) renewable energy  
112 and energy efficiency technologies; (2) effective practices for renewable energy adoption by  
113 residents, institutions, businesses, state and municipal agencies, and other entities; (3) barriers  
114 preventing access to renewable energy, particularly but not exclusively for low-income  
115 communities; and (4) community outreach models and other tools to increase the adoption of  
116 renewable energy, particularly for low-income communities.

117 (b) The center shall be advised by a 15-member committee composed of experts  
118 knowledgeable in (1) renewable energy, energy efficiency, and energy storage technologies; (2)



119 architecture, building engineering, and construction; (3) transportation; (4) affordable housing;  
120 (5) environmental justice; and (6) other relevant fields.

121 Section 6. (a) The Commonwealth shall establish a council for clean energy workforce  
122 development. The council shall be co-chaired by the commissioner of the department of energy  
123 resources and the secretary of labor and workforce development. The council shall include  
124 representatives from the Massachusetts Clean Energy Center, the executive office of education,  
125 the University of Massachusetts, the state universities and community colleges, organized labor,  
126 renewable energy businesses, occupational training organizations, economic development  
127 organizations, community development organizations, and organizations serving Environmental  
128 Justice Populations.

129 (b) The council shall identify the employment potential of the energy efficiency and  
130 renewable energy industry and the skills and training needed for workers in those fields, and  
131 make recommendations to the governor and the general court for policies to promote  
132 employment growth and access to jobs. The council shall prioritize maximizing employment  
133 opportunities for fossil fuel workers displaced in the transition to renewable energy, residents of  
134 gateway municipalities as defined in section 3A of chapter 23A of the General Laws, and  
135 residents of areas identified as Environmental Justice Populations under the Environmental  
136 Justice Policy of the executive office of energy and environmental affairs.

137 (c) The council shall establish a target for the number of new renewable energy jobs to be  
138 created in Massachusetts by 2030 not later than January 1, 2019. The Council shall also set a  
139 target for the number of new renewable energy jobs to be created for members of the prioritized  
140 categories identified in subsection (b); and this target shall be no less than 10 percent of the total

141 number of jobs created or 7,500 jobs, whichever is greater. The council shall create job growth  
142 targets for each subsequent ten-year period beginning in 2030, including a target for the number  
143 of jobs to be created for members of the prioritized categories identified in subsection (b); and  
144 this target shall be no less than 10 percent of the total number of jobs created or 7,500 jobs,  
145 whichever is greater. The job growth targets for each subsequent ten-year period shall be  
146 finalized at least 12 months prior to the start of the ten-year period.

147 (d) At least annually, the council shall submit a report to the general court and the  
148 governor recommending changes to existing state policies and programs to meet its job growth  
149 targets.

150 (e) The council shall meet at least once per quarter to review progress in expanding  
151 renewable energy employment. These meetings shall be open to members of the public and shall  
152 provide opportunities for public comment.

153 Section 7. (a) In consultation with the administrative council for the clean energy  
154 transition and the clean energy center of excellence, the department shall conduct a study  
155 identifying pathways towards 100 percent renewable energy for the building sector, and the  
156 policies necessary for all new buildings to be zero net energy buildings by 2030 and for non-  
157 renewable energy consumption to be reduced for existing buildings by 50 percent by 2030.

158 (b) The study shall consider how to expand access to renewable heating and electricity  
159 technologies, increase access to energy efficiency programs, and minimize costs, particularly but  
160 not exclusively for low-income communities.

161 (c) The department shall present the results of this study to the administrative council for  
162 the clean energy transition not later than 1 year from the passage of this act. The department shall

163 review and update this study every five years, considering technological developments,  
164 demographic changes, the effectiveness of existing programs and policies, and other factors.

165 Section 8. (a) The department shall determine the overall quantity of energy consumed  
166 statewide in the calendar year 2016 across all sectors and the percentage of energy consumed  
167 that came from renewable energy sources, using the best available data. This determination shall  
168 include an analysis of the percentage of renewable energy consumed in Massachusetts that was  
169 produced (1) in Massachusetts; (2) in Maine, New Hampshire, Connecticut, Rhode Island, and  
170 Vermont; and (3) in states not previously listed or in other countries or territories.

171 (b) The department shall also determine (1) the amount of energy consumed in any  
172 individual sector or subsector representing more than 2 percent of total statewide energy  
173 consumption, (2) the types and sources of energy consumed in that sector or subsector, and (3)  
174 the percentage of energy consumed in that sector or subsector that came from renewable sources.

175 (c) The department shall publish a similar analysis of renewable and non-renewable  
176 energy consumption on at least a triennial basis and for the years 2020, 2030, 2040, and 2050.  
177 This analysis shall include the amount, percentage, types, and sources of renewable and non-  
178 renewable energy consumed across all sectors statewide and in the individual sectors and  
179 subsectors identified pursuant to subsection (b), as well as any additional sectors or subsectors  
180 that have since come to represent at least 2 percent of total statewide energy consumption.

181 (d) The department shall establish interim limits for the overall percentage of  
182 Massachusetts' energy to come from non-renewable sources: (1) in 2030, no more than 50  
183 percent non-renewable energy; and (2) in 2040, no more than 20 percent non-renewable energy.

184 The department shall also establish interim limits on non-renewable energy in the individual

185 sectors and subsectors identified under subsections (b) and (c). These interim limits shall  
186 maximize the ability of the Commonwealth to achieve 100 percent renewable energy by 2050.

187 (e) The department shall establish interim non-renewable energy limits for 2030 and 2040  
188 concurrent with the Department of Environmental Protection's establishment of interim 2030  
189 and 2040 limits on greenhouse gas emissions pursuant to subsection (b) of section 3 of chapter  
190 21N of the General Laws. The Department of Environmental Protection shall establish a 2030  
191 interim limit on greenhouse gas emissions and the Department of Energy Resources shall  
192 establish a 2030 interim limit on non-renewable energy consumption not later than January 1,  
193 2018. The Department of Environmental Protection shall establish a 2040 interim limit on  
194 greenhouse gas emissions and the Department of Energy Resources shall establish a 2040  
195 interim limit on non-renewable energy consumption not later than January 1, 2027. The  
196 Department of Environmental Protection shall establish a 2050 statewide emissions limit not  
197 later than January 1, 2037.

198 (f) The interim limit on greenhouse gas emissions for 2030 shall reduce emissions by at  
199 least 50 per cent below the 1990 level, as determined by the department of environmental  
200 protection under subsection (a) of section 3 of said chapter 21N.

201 (g) The interim limits on non-renewable energy consumption for 2030 and 2040 shall be  
202 considered binding caps and shall be legally enforceable by any citizen of the Commonwealth of  
203 Massachusetts.

204 Section 9. (a) The department and other state agencies controlling sectors or subsectors of  
205 energy consumption shall promulgate regulations establishing declining annual limits on the  
206 percentage of non-renewable energy consumed by the sectors and subsectors identified in

207 subsections (b) and (c) of section 8 of this chapter. These regulations shall reduce the use of non-  
208 renewable energy at a rate sufficient to meet the interim 2030 and 2040 limits on non-renewable  
209 energy consumption, as well as the 2050 goal of 100 percent renewable energy. In adopting these  
210 regulations, the department shall consider how to minimize costs and maximize economic,  
211 social, public health, and environmental benefits for fossil fuel workers displaced in the  
212 transition to renewable energy, residents of gateway municipalities as defined in section 3A of  
213 chapter 23A of the General Laws, and residents of areas identified as Environmental Justice  
214 Populations under the Environmental Justice Policy of the executive office of energy and  
215 environmental affairs.

216 (b) The department shall develop these regulations concurrent with the department of  
217 environmental protection's development of regulations to reduce greenhouse gas emissions  
218 under subsection (d) of section 3 of chapter 21N of the General Laws.

219 (c) The department of energy resources and the department of environmental protection,  
220 along with other agencies that control sectors or subsectors of energy consumption or greenhouse  
221 gas emissions, shall promulgate regulations under subsection (a) of section 9 of this chapter and  
222 subsection (d) of section 3 of chapter 21N of the General Laws not later than January 1, 2019, to  
223 meet the 2030 interim limits on greenhouse gas emissions and non-renewable energy  
224 consumption; and not later than January 1, 2029, to meet the 2040 interim limits on greenhouse  
225 gas emissions and non-renewable energy consumption; and not later than January 1, 2039, to  
226 achieve 100 percent renewable energy and at least 80 percent greenhouse gas emission  
227 reductions by 2050.

228 (d) The department of energy resources, the department of environmental protection, and  
229 other state agencies may jointly promulgate regulations to satisfy limits on greenhouse gas  
230 emissions and non-renewable energy consumption.

231 (e) The regulations promulgated under subsection (a) of section 9 of this chapter and  
232 subsection (d) of section 3 of chapter 21N of the General Laws are intended to result in real,  
233 permanent reductions in greenhouse gas emissions and the use of non-renewable energy resulting  
234 from activities in the Commonwealth of Massachusetts.

235 Section 10. (a) The department, together with the Massachusetts Clean Energy Center,  
236 the executive office for administration and finance, the division of capital asset management and  
237 maintenance, and other state agencies, shall identify opportunities to expand solar and other  
238 renewable energy generation capacity on state-owned facilities and land. The department and the  
239 division of capital asset management and maintenance, in consultation with other state agencies,  
240 shall install an additional 100 megawatts of solar and other clean energy generation capacity on  
241 state properties by December 31, 2020.

242 (b) The department and the division of capital asset management and maintenance,  
243 together with other state agencies, shall establish a goal for the amount of additional renewable  
244 energy generation capacity installed on state-owned facilities and lands in each subsequent five-  
245 year period beginning in 2020. The goal for each five-year period shall be not less than 25  
246 megawatts of renewable energy generation capacity. The department and the division of capital  
247 asset management and maintenance, together with other state agencies, shall install enough  
248 renewable energy generation capacity to meet the goal for each five-year period.

249 (c) On an annual basis, the division of capital asset management and maintenance shall  
250 track the upfront cost of renewable energy projects installed under the provisions of this section,  
251 and the revenue and energy cost savings accruing to the state and its agencies from those projects  
252 through net metering credits, electricity sales, the sale of renewable energy credits, other state or  
253 federal incentive programs, and other sources of revenue or energy cost savings.

254 (d) Annually, the division of capital asset management and maintenance shall determine  
255 which renewable energy projects have paid back their initial costs with revenue and energy cost  
256 savings. These projects shall be known as revenue positive projects. Once this determination has  
257 been made, any future revenue or energy cost savings from revenue positive projects shall be  
258 credited into a clean energy workforce development account at the Massachusetts Clean Energy  
259 Center. Such funds shall be held in an account separate from other accounts of the Massachusetts  
260 Clean Energy Center. In any year in which revenue from renewable energy projects on state  
261 properties is not sufficient to credit at least \$5 million into the clean energy workforce  
262 development account, the department shall direct funds from alternative compliance payments  
263 under subsection (h) of section 11F of the General Laws to bring the total contribution to \$5  
264 million.

265 (e) The executive office of energy and environmental affairs and the executive office of  
266 labor and workforce development shall direct the use of funds from the clean energy workforce  
267 development account, in consultation with the council for clean energy workforce development.  
268 These funds shall be used to provide job training, education, and job placement assistance for  
269 Massachusetts residents to work in the clean energy and energy efficiency industry.

270 (f) At least half of the funds spent from the clean energy workforce development account  
271 on an annual basis shall be spent on programs and initiatives that primarily benefit (1) fossil fuel  
272 workers displaced in the transition to renewable energy, (2) residents of gateway municipalities  
273 as defined in section 3A of chapter 23A of the General Laws, or (3) residents of areas identified  
274 as Environmental Justice Populations under the Environmental Justice Policy of the executive  
275 office of energy and environmental affairs.

276 (g) The department and the division of capital asset management and maintenance shall  
277 submit an annual report to the governor, the general court, and the council for clean energy  
278 workforce development, describing progress towards meeting goals for renewable energy  
279 installations on state properties, the costs and revenue associated with each project, and the  
280 amount of revenue generated for the clean energy workforce development account.

281 (h) The executive office of energy and environmental affairs and the executive office of  
282 labor and workforce development shall submit a report annually to the governor, the general  
283 court, and the council for clean energy workforce development, describing the expenditure of  
284 funds from the clean energy workforce development account.

285 SECTION 2. Chapter 6C of the General Laws is hereby amended by inserting after  
286 section 76 the following section:-

287 Section 77. (a) The department of transportation shall conduct a study identifying  
288 pathways towards 100 percent renewable energy for the transportation sector and the policies  
289 necessary to power the transportation sector with at least 50 percent renewable energy by 2030.



290 (b) The study shall give preference to transportation options that (1) increase access to  
291 mass transportation across all income levels; (2) minimize costs, particularly for low-income  
292 communities; and (3) maximize access to employment centers.

293 (c) Without limitations on the department of transportation's evaluation of effective  
294 statewide transportation options, the study shall consider the feasibility, cost effectiveness, and  
295 environmental and economic benefits of high-speed rail service between major urban centers in  
296 Massachusetts, including Boston, Worcester, and Springfield.

297 (d) The department of transportation shall publish the findings from this study not later  
298 than 1 year from the passage of this act. The department shall review and update this study every  
299 5 years, considering technological developments, demographic changes, the effectiveness of  
300 existing programs and policies, and other factors.

301 SECTION 3. Subsection (a) of section 11F of chapter 25A of the General Laws is hereby  
302 amended by striking out the third sentence and inserting in place thereof the following words:-  
303 Every retail supplier shall provide a minimum percentage of kilowatt-hours sales to end-use  
304 customers in the commonwealth from Class I renewable energy generating sources, according to  
305 the following schedule: (1) an additional 1 per cent of sales by December 31, 2003, or 1 calendar  
306 year from the final day of the first month in which the average cost of any renewable technology  
307 is found to be within 10 per cent of the overall average spot-market price per kilowatt-hour for  
308 electricity in the commonwealth, whichever is sooner; (2) an additional one-half of 1 per cent of  
309 sales each year thereafter until December 31, 2009; (3) an additional 1 per cent of sales every  
310 year thereafter until December 31, 2017; (4) an additional 2 per cent of sales every year  
311 thereafter until December 31, 2018; (5) an additional 3 per cent of sales every year thereafter

312 until December 31, 2020; (6) an additional 4 per cent of sales every year thereafter until  
313 December 31, 2022; (7) an additional 5 per cent of sales every year thereafter until December 31,  
314 2028; and (8) an additional 6 per cent of sales every year thereafter.

315 SECTION 4. The provisions of this act shall become effective 90 days from the passage  
316 of this act, except where otherwise specified.