

# SENATE . . . . . No. 2121

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Text of the Senate Bill relative to 2030 and 2040 emissions benchmarks (Senate, No. 2121) (being the text of Senate, No. 2092, printed as amended)

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## The Commonwealth of Massachusetts

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In the One Hundred and Eighty-Ninth General Court  
(2015-2016)  
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An Act relative to 2030 and 2040 emissions benchmarks.

*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. Chapter 21A of the General Laws is hereby amended by inserting after  
2 section 26 the following section:-

3           Section 27. During the first year of each new gubernatorial administration or the first  
4 year of a new gubernatorial term, the governor shall convene an energy planning council  
5 consisting of not fewer than 15 members, including: the secretary of energy and environmental  
6 affairs who shall serve as chair; the secretary of administration and finance; 1 person to be  
7 appointed by speaker of the house of representatives; 1 person to be appointed by the house  
8 minority leader; 1 person to be appointed by the president of the senate; 1 person to be appointed  
9 by the senate minority leader; and 9 persons to be appointed by the governor, 1 of whom shall  
10 represent consumers, 1 of whom who shall represent low-income residents, 1 of whom shall  
11 represent large employers, 1 of whom shall represent small employers, 1 of whom shall represent  
12 the renewable energy industry, 1 of whom shall be from an environmental organization, 1 of  
13 whom shall represent an investor-owned local distribution company and 1 of whom shall

14 represent a municipal-owned local distribution company. The governor may also appoint  
15 additional members of regional and local energy groups or collaboratives to serve on the council.  
16 Members of the council shall serve for a term of 1 year or until an energy development policy  
17 has been approved by the governor under this section.

18         The secretary of energy and environmental affairs, with the assistance of the energy  
19 planning council, shall develop and implement a written comprehensive energy policy for the  
20 commonwealth and a strategic plan for implementing the policy. The plan shall be consistent  
21 with the comprehensive adaptation management action plan established pursuant to section 2 of  
22 chapter 21P and shall include, but not be limited to, addressing: (i) the projected demand for  
23 energy in the commonwealth; (ii) measures to meet the projected demand by evaluating the total  
24 potential costs and economic and noneconomic benefits of various measures to the economy and  
25 environment, using the best available economic models, emissions estimation techniques and  
26 other scientific methods; (iii) identifying energy from all available resources; and (iv)  
27 considering all necessary changes to transmission infrastructure to meet projected demand goals.

28         Once the policy and plan have been adopted by the secretary and the council, the council  
29 shall submit the policy and plan to the clerks of the senate and house of representatives and the  
30 joint committee on economic development and emerging technologies. The committee shall  
31 conduct a public hearing on the policy and plan prior to final approval by the governor. The  
32 approved policy and plan shall be published in writing and posted on the official website of the  
33 commonwealth not later than December 31 of that year.

34         The plan established pursuant to this section shall be developed in 5-year increments and  
35 updated accordingly and shall reflect any major energy development initiatives and programs of

36 the secretariat and any agencies subject to this section. In developing the policy, the council shall  
37 review the published energy development policy and plan in effect at the commencement of the  
38 governor's term of office and may hold public hearings throughout the commonwealth.

39           SECTION 2. Subsection (b) of section 3 of chapter 21N of the General Laws, as  
40 appearing in the 2014 Official Edition, is hereby amended by striking out clauses (2) and (3) and  
41 inserting in place thereof the following 2 clauses:- (2) a 2030 statewide greenhouse gas  
42 emissions limit accompanied by plans to achieve this limit in accordance with said section 4;  
43 provided, however, that the 2030 statewide greenhouse gas emissions limits shall maximize the  
44 ability of the commonwealth to meet the 2050 statewide greenhouse gas emissions limit; (3) a  
45 2040 statewide greenhouse gas emissions limit accompanied by plans to achieve this limit in  
46 accordance with said section 4; provided, however, that the 2040 statewide greenhouse gas  
47 emissions limit shall maximize the ability of the commonwealth to meet the 2050 statewide  
48 greenhouse gas emissions limit.

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

57 SECTION 4. Said subsection (a) of said section 4 of said chapter 21N, as so appearing, is  
58 hereby further amended by striking out the last sentence and inserting in place thereof the  
59 following sentence:- The 2020, 2030 and 2040 statewide greenhouse gas emissions limits and  
60 implementation plans shall comply with this section.

61 SECTION 5. Said section 4 of said chapter 21N, as so appearing, is hereby further  
62 amended by striking out, in line 16, the word "limit" and inserting in place thereof the following  
63 word:- limits.

64 SECTION 6. Said section 4 of said chapter 21N, as so appearing, is hereby further  
65 amended by striking out, in line 42, the words "2020 emission limit and implementing plan" and  
66 inserting in place thereof the following words:- 2020, 2030 and 2040 statewide greenhouse gas  
67 emissions limits and implementing plans.

68 SECTION 7. The General Laws are hereby amended by inserting after chapter 21O the  
69 following chapter:-

70 CHAPTER 21P.

71 COMPREHENSIVE ADAPTATION MANAGEMENT ACTION PLANNING IN  
72 RESPONSE TO CLIMATE CHANGE

73 Section 1. As used in this chapter, the following words shall have the following meanings  
74 unless the context clearly requires otherwise:

75 "Adaptation", a response and process of adjustment to actual or expected climate change  
76 and its effects that seeks to increase the resiliency and reduce the vulnerability of the  
77 commonwealth's built and natural environments and seeks to moderate or avoid harm or exploit

78 beneficial opportunities to reduce the safety and health risks that vulnerable human populations  
79 and resources may encounter due to climate change.

80 “Executive office”, the executive office of energy and environmental affairs.

81 “Hazard mitigation”, an effort using nonstructural measures to reduce loss of life and  
82 property by lessening the impacts of major storms.

83 “Plan”, the comprehensive adaptation management action plan.

84 “Public utility”, as defined in clause (7) of paragraph (j) of section 5 of chapter 21E.

85 “Resilience”, the ability to respond and adapt to changing conditions and withstand and  
86 rapidly recover with minimal damage from disruption due to climate-related events and impacts  
87 which may include, but shall not be limited to, shoreline improvement, seawall maintenance and  
88 expansion, infrastructure improvement or innovative building design and construction.

89 “State agency”, a legal entity of state government established by the legislature as an  
90 agency, board, bureau, department, office or division of the commonwealth with a specific  
91 mission that may either report to an executive office or secretariat or be independent division or  
92 department.

93 “State authority”, a body politic and corporate constituted as a public instrumentality of  
94 the commonwealth and established by an act of the legislature to serve an essential governmental  
95 function; provided, however, that “state authority” shall include energy generation and  
96 transmission, solid waste, drinking water, wastewater and stormwater and telecommunication  
97 utilities serving areas identified by the executive office as subject to material risk of flooding;  
98 provided further, that unless designated as such by the secretary of energy and environmental

99 affairs, “state authority” shall not include: (i) a state agency; (ii) a city or town; (iii) a body  
100 controlled by a city or town; or (iv) a separate body politic for which the governing body is  
101 elected, in whole or in part, by the general public or by representatives of member cities or  
102 towns.

103           Section 2. (a) The secretary of energy and environmental affairs and the secretary of  
104 public safety and security, in consultation with appropriate secretariats as determined by the  
105 governor, shall develop, draft, adopt and revise at least once every 10 years, a comprehensive  
106 adaptation management action plan. The plan shall encourage and provide guidance to state  
107 agencies, state authorities and regional planning agencies to proactively address the  
108 consequences of climate change. The plan shall also provide a process for local and regional  
109 climate vulnerability assessment and adaptation strategy development and implementation and  
110 may encourage and provide guidance to cities and towns to proactively address the consequences  
111 of climate change. The plan and any updates shall be filed with clerks of the house of  
112 representatives and senate. The plan shall be developed with guidance from the comprehensive  
113 adaptation management action plan advisory commission established in section 3.

114           Upon the adoption of the plan, all certificates, licenses, permits, authorizations, grants,  
115 financial obligations, projects, actions and approvals for any proposed projects, uses or activities  
116 in and by a state agency or state authority shall be consistent, to the maximum extent practicable,  
117 with the plan.

118           (b) The plan shall include, but not be limited to: (i) a statement setting forth the  
119 commonwealth’s goals, priorities and principles for ensuring effective prioritization for the  
120 resiliency, preservation, protection, restoration and enhancement of the commonwealth’s built

121 and natural infrastructure; (ii) a commitment to sound management practices which shall take  
122 into account the existing natural, built and economic characteristics of the commonwealth's most  
123 vulnerable areas and human populations; (iii) data on existing and projected climate trends,  
124 according to the best and latest data, forecasting and models including, but not limited to,  
125 changes for temperature, precipitation, drought, sea level, and inland and coastal flooding; (iv) a  
126 statement on the preparedness and vulnerabilities in the commonwealth's emergency response  
127 and infrastructure resiliency including, but not limited to, energy, transportation,  
128 communications, health and other systems; (v) an assessment of economic vulnerability,  
129 including but not limited to, local businesses in high-risk communities; and (vi) an assessment of  
130 natural resources and ecosystems, identifying vulnerabilities and strategies to preserve, protect,  
131 restore and enhance.

132           Section 3. (a) There shall be a comprehensive adaptation management action plan  
133 advisory commission to assist the secretary of energy and environmental affairs and the secretary  
134 of public safety and security in developing the comprehensive adaptation management plan. The  
135 commission shall consist of: the secretary of the energy and environmental affairs or a designee;  
136 the secretary of public safety and security or a designee; 1 person from the University of  
137 Massachusetts with expertise in climate science chosen by the university; and 18 persons to be  
138 appointed by the secretary of energy and environmental affairs and the secretary of public safety  
139 and security, 1 of whom shall have expertise in transportation and built infrastructure, 1 of whom  
140 shall have expertise in commercial, industrial and manufacturing activities, 1 of whom shall have  
141 expertise in commercial and residential property management and real estate, 1 of whom shall  
142 have expertise in energy generation and distribution, 1 of whom shall have expertise in wildlife  
143 and land conservation, 1 of whom shall have expertise in water supply and conservation, 1 of

144 whom shall have expertise in the outdoor recreation economy, 1 of whom shall have expertise in  
145 economic and environmental justice, 1 of whom shall have expertise in ecosystem dynamics, 1  
146 of whom shall have expertise in coastal zones and oceans, 1 of whom shall have expertise in  
147 rivers and wetlands, 1 of whom shall be a professional engineer, 1 of whom shall be from a  
148 statewide nonprofit land and water conservation organization; 1 of whom shall have expertise in  
149 historic and cultural resources, 1 of whom shall be a property owner in a coastal community, 1 of  
150 whom shall have expertise in small business administration, 1 of whom shall be a certified  
151 floodplain manager and 1 of whom shall have expertise in local government. The secretary of  
152 energy and environmental affairs and the secretary of public safety and security shall jointly  
153 designate an appointee to serve as chair.

154 (b) The advisory commission shall prepare a report:

155 (1) identifying: (i) how the secretary of energy and environmental affairs can support  
156 existing adaptation, resilience and hazard mitigation efforts of state agencies, such as the  
157 StormSmart Coasts program at the office of coastal zone management, the coastal erosion  
158 commission report, BioMap2 at the department of fish and game and vulnerability studies being  
159 conducted by the department of public health and the Massachusetts Department of  
160 Transportation; (ii) recommendations of new actions that may be implemented immediately  
161 using existing state agency legal authority, state resources and funding based upon the  
162 recommendations included in the climate change adaptation report prepared pursuant to section 9  
163 of chapter 298 of the acts of 2008 and existing climate change action plans prepared by regional  
164 planning agencies and municipalities; (iii) unilateral actions that can be taken by the executive  
165 branch to increase climate adaptation, resilience and hazard mitigation including, but not limited  
166 to, executive orders and policy directives issued by the governor or policies, regulations and



167 guidance by the secretary of energy and environmental affairs; (iv) recommendations of new  
168 climate resilience and adaptation actions that require legislative authority, state resources or  
169 funding, including identification of funds to leverage opportunities through public-private  
170 partnerships; and (v) the cost of climate adaptation within the 10-year term of the plan, based  
171 upon the adaptation actions recommended in this report, existing climate action plans, including  
172 those prepared by regional planning councils, municipalities and state agency cost assessments  
173 outlined in section 4; and

174 (2) providing information relative to the risks associated with climate change, both means  
175 and extremes, including, but not limited to, the risks associated with changes in temperature,  
176 drought, increased precipitation and coastal and inland flooding identified by the advisory  
177 committee on flood risks created by climate change established in section 39 of chapter 52 of the  
178 acts of 2014.

179 Section 4. Each state agency, state authority and public utility, as designated by the  
180 secretary of environmental affairs and the secretary of public safety and security, shall, in  
181 consultation with the executive office, develop and update at least once every 10 years a  
182 vulnerability and adaptation assessment for their portfolio of assets based on the relevant  
183 scientific data and information collected by the comprehensive adaptation management action  
184 plan advisory commission pursuant to section 3. The vulnerability assessments shall classify the  
185 economic losses over time associated with each major asset for the relevant climate risks  
186 including, but not limited to, coastal and inland flooding and extreme heat, as unacceptable,  
187 noncritical or immaterial. For assets exposed to material risk of unacceptable losses, the  
188 vulnerability assessment shall include order-of-magnitude cost-estimates for: (i) measures to  
189 protect the assets; (ii) measures to make the assets resilient; and (iii) removal and relocation of

190 the assets from exposed areas. Estimates shall also be prepared for the economic, social and  
191 environmental damages if no adaptation actions are taken. Qualitative cost-benefit discussions of  
192 projected social impacts of flood prevention versus flood resilience shall also be included in the  
193 vulnerability assessment.

194           Section 5. The secretary of energy and environmental affairs and the secretary of public  
195 safety and security shall, at least 6 months before establishing a comprehensive plan pursuant to  
196 this chapter, provide for public access to the draft plan in electronic and printed copy form and  
197 shall provide for a public comment period, which shall include at least 5 public hearings across  
198 the commonwealth. The secretary of energy and environmental affairs and the secretary of public  
199 safety and security shall publish notice of any public hearing in the Environmental Monitor at  
200 least 30 days but not more than 35 days before the date of a hearing. A notice of a public hearing  
201 shall also be placed, at least once each week for the 4 consecutive weeks preceding the hearing in  
202 newspapers with sufficient circulation to notify the residents of the municipality in which the  
203 hearings shall be held. The public comment period shall remain open for at least 60 days from  
204 the date of the final public hearing. After the close of the public comment period, the secretary of  
205 energy and environmental affairs and the secretary of public safety and security shall issue a  
206 final plan and shall file the plan, together with legislation necessary to implement the plan, if  
207 any, by filing the same with the clerks of the house of representatives and senate.

208           Section 6. The plan shall be consistent with this chapter and all other general and special  
209 laws. Nothing in the plan shall be construed to supersede existing general or special laws or to  
210 confer any rights, or adversely impact existing rights, or remedies in addition to those conferred  
211 by general or special laws existing on the effective date of this chapter.

212 SECTION 8. Section 16 of chapter 298 of the acts of 2008 is hereby amended by striking  
213 out, in lines 3 and 4, the words “, and shall expire on December 31, 2020”.

214 SECTION 9. The secretary of energy and environmental affairs shall develop and  
215 support a regional comprehensive climate change adaptation management action plan grant  
216 program which shall consist of financial assistance to regional planning agencies to develop and  
217 implement comprehensive cost-effective adaptation management action plans at the regional  
218 level of government. Funds shall be expended from item 2000-7070 of section 2A of chapter  
219 286 of the acts of 2014 for the grant program and the department of energy resources may make  
220 available monies from amounts collected by the Department of Energy Resources Credit Trust  
221 Fund established in section 13 of chapter 25A of the General Laws for the grant program.  
222 Regional comprehensive adaptation management action plans shall include, but not be limited to:  
223 (i) technical planning guidance for adaptive municipalities through a step-by-step process for  
224 regional climate vulnerability assessment and adaptation strategy development; (ii) development  
225 of a definition of regional impacts by supporting municipalities conducting climate vulnerability  
226 assessments; (iii) a demonstrated understanding of regional characteristics, including regional  
227 environmental and socioeconomic characteristics; and (iv) prioritization of protecting identified  
228 inland and coastal vulnerable locations not yet built upon. The grants shall advance statewide,  
229 regional and local efforts to adapt land use, zoning, infrastructure, policies and programs to  
230 reduce the vulnerability of the built and natural environment to changing environmental  
231 conditions as a result of climate change and for the development and implementation of an  
232 outreach and education program in low income and urban areas about climate change and the  
233 effects of climate change.

234 SECTION 10. The executive office of energy and environmental affairs, in consultation  
235 with the division of capital asset management and maintenance, may acquire by purchase from  
236 willing sellers land abutting or adjacent to areas subject to the ebb and flow of the tide or on  
237 barrier beaches or in velocity zones of flood plain areas, on which structures have been  
238 substantially and repeatedly damaged by severe weather, for conservation and recreation  
239 purposes, including those rejected by the Pre-Disaster Mitigation Grant Program and the Hazard  
240 Mitigation Grant Program administered by the Federal Emergency Management Agency.

241 Prior to the acquisition of any land under this section, the executive office shall develop a  
242 conservation and recreation management plan and coastal erosion mitigation and management  
243 plan for any such land after consultation with the municipality in which the land is located. The  
244 plan shall set forth the priority, description and location of lands to be acquired and any land  
245 management agreement reached between the agency and municipality that provides for local  
246 responsibility to carry out the development and management of the property. Land acquired  
247 pursuant to this section shall contain a deed restriction stating that the land shall be used for  
248 conservation and recreation purposes only.

249 No land shall be acquired under this section until after a public hearing has been held by  
250 the executive office in the municipality in which the land is located to consider the management  
251 plan. The executive office shall notify the mayor and city council in a city or the board of  
252 selectmen, planning board and conservation commission, if any, of a town not later than 10 days  
253 prior to any such hearing.

254 If the executive office deems it necessary to make appraisals, surveys, soundings,  
255 borings, test pits or other related examinations to obtain information to carry out this section, the

256 executive office or its authorized agents or employees may, after due notice by registered mail,  
257 enter upon lands, water and premises, not including buildings, to make such appraisals, surveys,  
258 soundings, borings, test pits or other related examinations and such entry shall not be a trespass.  
259 The executive office shall provide reimbursement for any injury or actual damages resulting to  
260 the lands, waters and premises caused by any act of the executive office or its authorized agents  
261 or employees and shall, so far as possible, restore the lands to the same condition as prior to  
262 making such appraisals, surveys, soundings, borings, test pits or other related examinations.

263           SECTION 11. (a) The executive office of energy and environmental affairs, acting for  
264 and on behalf of the commonwealth, may lease to a municipality or nonprofit organization, on a  
265 form approved by the attorney general, for not more than 25 years, certain property acquired by  
266 the commonwealth pursuant to section 9 or by the Federal Emergency Management Agency  
267 under 42 U.S.C. § 4001, as amended, for use as conservation and recreation areas. Leases shall  
268 be in such form and contain such provisions as the secretary of energy and environmental affairs,  
269 in consultation with the division of capital asset management and maintenance, shall determine,  
270 including such terms and conditions as necessary to comply with laws relative to the protection  
271 of barrier beaches. Lands shall be leased upon the express conditions that the land shall be used  
272 for conservation and recreation purposes only, that no permanent structures shall be erected and  
273 a reversionary clause that requires the lease to be terminated if the leased land is used in  
274 violation of any law relative to barrier beaches or condition of the lease.

275           (b) In consideration for the granting of a lease authorized in subsection (a), the lessee  
276 municipality or nonprofit organization shall agree to maintain the acquired land as a clean, safe  
277 and orderly conservation or recreation area.

278 SECTION 12. The secretary of transportation shall conduct a feasibility study on the  
279 installation of charging stations for electric vehicles at rest stops along interstate highway route  
280 90 and the implementation of section 75 of chapter 6C of the General Laws. The study and any  
281 recommendations shall be submitted to the clerks of the senate and house of representatives and  
282 the joint committee on transportation not later than December 31, 2016.

283 SECTION 13. Pursuant to its authority under section 40 of chapter 131 of the General  
284 Laws, the commissioner of environmental protection shall promulgate rules regulating the  
285 dredging, filling or altering of land subject to coastal storm flowage.

286 SECTION 14. The executive office of energy and environmental affairs and the  
287 executive office of public safety and security may expend such sums as may be available from  
288 any account, appropriation or fund available to the respective executive offices or to any agency  
289 within those executive offices to carry out chapter 21P of the General Laws, including expenses  
290 in connection with the department's responsibilities under said chapter 21P and the cost of  
291 planning and for the development, redevelopment or improvement of land under said chapter  
292 21P.

293 SECTION 15. The regulations required pursuant to section 13 shall be promulgated not  
294 later than 180 days after the effective date of this act.

295 SECTION 16. The comprehensive adaptation management action plan advisory  
296 commission shall complete the first report required by subsection (b) of section 3 of chapter 21P  
297 of the General Laws not later than January 1, 2017 and shall complete a revised report at least  
298 once every 10 years thereafter.

299 SECTION 17. The first comprehensive adaptation management action plan required by  
300 section 2 of chapter 21P of the General Laws shall be completed not later than January 1, 2018.

301 SECTION 18. The 2030 statewide greenhouse gas emissions limit required by subsection  
302 (a) of section 4 of chapter 21N of the General Laws shall be adopted not later than January 1,  
303 2021.

304 SECTION 19. The 2040 statewide greenhouse gas emissions limit required pursuant to  
305 subsection (a) of section 4 of chapter 21N of the General Laws shall be adopted not later than  
306 January 1, 2031.