

Climate Protection and Green Economy

This Act addresses reducing statewide greenhouse gas emissions by 80 percent from 1990 levels by 2050. The Act directs the state department of environmental protection to determine the baseline emissions level in 1990. The legislation also authorizes regulations creating a statewide and regional registry of greenhouse gas emissions and requires businesses and utilities which emit greenhouse gases to report those emissions to the registry.

Submitted as:
Massachusetts
Chapter 298, Acts of 2008
Status: Enacted into law in 2008.

Suggested State Legislation

(Title, enacting clause, etc.)

1 Section 1. [*Short Title.*] This Act shall be cited as the “Climate Protection and Green
2 Economy Act.”

3
4 Section 2. [*Definitions.*] As used in this Act:

5 (1) “Allowance” means an authorization to emit, during a specified year, up to [1] ton of
6 carbon dioxide equivalent.

7 (2) “Alternative compliance mechanism” means an action undertaken by a greenhouse
8 gas emission source that achieves the equivalent reduction of greenhouse gas emissions over the
9 same time period as a direct emissions reduction, that is approved by the [department,] and that
10 is real, permanent, quantifiable, verifiable and enforceable.

11 (3) “Carbon dioxide equivalent” means the amount of carbon dioxide by weight that
12 would produce the same global warming impact as a given weight of another greenhouse gas,
13 based on the best available science, including from the Intergovernmental Panel on Climate
14 Change.

15 (4) “Department” means the state [department of environmental protection].

16 (5) “Direct emissions” means emissions from sources that are owned or operated, in
17 whole or in part, by an entity or facility including, but not limited to, emissions from factory
18 stacks, manufacturing processes and vents, and company-owned or company-leased motor
19 vehicles.

20 (6) “Direct emissions reduction” means a greenhouse gas emission reduction action made
21 by a greenhouse gas emissions source at that source.

22 (7) “Emission” means emission of a greenhouse gas into the air.

23 (8) “Emissions reduction measures” means programs, measures, standards, and
24 alternative compliance mechanisms authorized pursuant to this Act, applicable to sources or
25 categories of sources that are designed to reduce emissions of greenhouse gases.

26 (9) “Entity” means a person that owns or operates, in whole or in part, a source of
27 greenhouse gas emissions from a generator of electricity or a commercial or industrial site
28 including, but not limited to, a transportation fleet.

29 (10) “Executive office” means the state [executive office of energy and environmental
30 affairs].

31 (11)“Facility” means a building, structure or installation located on contiguous or
32 adjacent properties of an entity.

33 (12)“Greenhouse gas” means any chemical or physical substance that is emitted into the
34 air and that the [department] may reasonably anticipate will cause or contribute to climate
35 change including, but not limited to, carbon dioxide, methane, nitrous oxide, hydro-
36 fluorocarbons, per fluorocarbons and sulfur hexafluoride.

37 (13)“Greenhouse gas emissions limit” means an authorization, during a specified year, to
38 emit up to a level of greenhouse gases specified by the [secretary], expressed in tons of carbon
39 dioxide equivalents.

40 (14)“Greenhouse gas emissions source” means a source, or category of sources, of
41 greenhouse gas emissions with emissions that are at a level of significance, as determined by the
42 [secretary], that its participation in the program established under this Act will enable the
43 [secretary] to effectively reduce greenhouse gas emissions and monitor compliance with the
44 statewide greenhouse gas emissions limit.

45 (15)“Indirect emissions” means emissions associated with the consumption of purchased
46 electricity, steam and heating or cooling by an entity or facility.

47 (16)“Leakage” means the offset of a reduction in emissions of greenhouse gases within
48 the [state] by an increase in emissions of greenhouse gases outside the [state].

49 (17)“Market-based compliance mechanism” means (i) a system of market-based
50 declining annual aggregate emissions limitations for sources or categories of sources that emit
51 greenhouse gases or (ii) greenhouse gas emissions exchanges, banking, credits and other
52 transactions governed by rules and protocols established by the [secretary] or a [regional
53 greenhouse gas initiative], that result in the same greenhouse gas emissions reduction, over the
54 same time period, as direct compliance with a greenhouse gas emissions limit or emission
55 reduction measure adopted by the [executive office] pursuant to this Act.

56 (18)“Person” means an agency or political subdivision of the [state], a state, public or
57 private corporation or authority or an individual, trust firm, joint stock company, partnership,
58 association or other entity or group thereof or an officer, employee or agent thereof.

59 (19)“Secretary” means the [secretary of energy and environmental affairs].

60 (20)“Statewide greenhouse gas emissions” means the total annual emissions of
61 greenhouse gases in the [state], including all emissions of greenhouse gases from the generation
62 of electricity delivered to and consumed in the [state], accounting for transmission and
63 distribution line losses, whether the electricity is generated in the [state] or imported; provided,
64 however, that statewide greenhouse gas emissions shall be expressed in tons of carbon dioxide
65 equivalents.

66 (21)“Statewide greenhouse gas emissions limit” means the maximum allowable level of
67 statewide greenhouse gas emissions in a given year, as determined by the [secretary].

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69 Section 3. *[Regional Greenhouse Gas Registry and Reporting System.]*

70 (A) The [department] shall monitor and regulate emissions of greenhouse gases with the
71 goal of reducing those emissions.

72 (B) The [department] shall adopt regulations to require the reporting and verification of
73 statewide greenhouse gas emissions and to monitor and enforce compliance with this Act. The
74 regulations shall:

75 (1) establish a regional greenhouse gas registry and reporting system for
76 greenhouse gas emission sources; provided, however, that in establishing the greenhouse gas
77 registry and reporting system, the [department] may collaborate with other states or a regional
78 consortium;

79 (2) [annually] require the owner or operator of any facility that is required to
80 report air emissions data to the [department] pursuant to Title V of the federal Clean Air Act and
81 that has stationary emissions sources that emit greenhouse gases to report [annually] to the
82 regional registry direct stack emissions of greenhouse gases from such sources;

83 (3) require the owner or operator of a facility that has stationary emissions sources
84 that emit greenhouse gases in excess of [5,000] tons of greenhouse gases per year in carbon
85 dioxide equivalents to report [annually] to the regional registry direct emissions of greenhouse
86 gases from such sources; provided, however, that the [department] shall develop a simplified
87 estimation form to assist facilities in determining who shall report emissions and shall consider,
88 on an [annual] basis, requiring the expansion of reporting to a regional greenhouse gas registry;

89 (4) provide for the voluntary reporting of emissions of greenhouse gases to a
90 regional greenhouse gas registry by entities and facilities that are not required to submit
91 information pursuant to clauses (2) and (3); provided, however, that the greenhouse gas
92 emissions reported shall be of a type and format that the regional greenhouse gas registry can
93 accommodate;

94 (5) require reporting of greenhouse gas emissions from generation sources
95 producing all electricity consumed, including transmission and distribution line losses from
96 electricity generated within the [state] or imported from outside the [state]; provided, however,
97 that this requirement shall apply to all retail sellers of electricity, including electric utilities,
98 municipal electric departments and municipal light boards as defined in [insert citation];

99 (6) ensure rigorous and consistent accounting of emissions and provide reporting
100 tools and formats to ensure collection of necessary data; and

101 (7) ensure that greenhouse gas emissions sources maintain comprehensive records
102 of all reported greenhouse gas emissions.

103 (C) Clauses (2) and (3) of Section (3)(B) of this Act shall take effect not later than [insert
104 date.]

105 (D) Clauses (4) and (5) of Section (3)(B) of this Act shall be implemented not later than
106 [insert date].

107 (E) Sections 3(A) and 3(B) of this Act shall be implemented not later than [insert date].

108 (F) The [department] shall consult with the [secretary] on periodic review and updates of
109 emission reporting requirements as necessary; review existing and proposed state, federal and
110 international greenhouse gas emissions reporting programs; make reasonable efforts to promote
111 consistency among the programs established pursuant to this Act and other programs; and make
112 reasonable efforts to streamline reporting requirements on greenhouse gas emissions sources.

113 (G) The [department] shall [triennially] publish a state greenhouse gas emissions
114 inventory that includes comprehensive estimates of the quantity of greenhouse gas emissions in
115 the [state] for the last [three] years in which data is available. The first inventory shall be
116 published not later than [insert date].

117 (H) Notwithstanding any general or special law to the contrary, the [executive office of
118 energy and environmental affairs] shall promulgate regulations pursuant to Section 3 of this Act
119 not later than [insert date].

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121 Section 4. *[Greenhouse Gas Emission Limits.]*

122 (A) The [department] shall, pursuant to [insert citation], determine the statewide
123 greenhouse gas emissions level in calendar year 1990 and reasonably project what the emissions
124 level will be in calendar year 2020 if no measures are imposed to lower emissions other than
125 those formally adopted and implemented as of [January 1, 2009]. This projection shall hereafter
126 be referred to as the projected 2020 business as usual level.

127 (B) The [secretary] shall, in consultation with the [department] and the [department of
128 energy resources], adopt the following statewide greenhouse gas emissions limits:

129 (1) by [insert date], a 2020 statewide emissions limit and a plan to achieve that
130 limit pursuant to subsection (4) of this Section 4 (B);

131 (2) an interim 2030 emissions limit accompanied by plans to achieve this limit in
132 accordance with said subsection (4) of this Section 4 (B); provided, however, that the 2030
133 interim emissions limits shall maximize the ability of the [state] to meet the 2050 emissions
134 limit;

135 (3) an interim 2040 emissions limit accompanied by plans to achieve this limit in
136 accordance with said subsection (4) of this Section 4 (B); provided, however, that the 2040
137 interim emissions limit shall maximize the ability of the [state] to meet the 2050 emissions limit;
138 and

139 (4) a 2050 statewide emissions limit that is at least 80 percent below the 1990
140 level.

141 (C) Emissions levels and limits associated with the electric sector shall be established by
142 the [executive office] and the [department], in consultation with the [department of energy
143 resources], based on consumption and purchases of electricity from the regional electric grid,
144 taking into account the regional greenhouse gas initiative and the renewable portfolio standard.

145 (D) The [department] shall promulgate regulations not later than [insert date] establishing
146 a desired level of declining annual aggregate emission limits for sources or categories of sources
147 that emit greenhouse gas emissions. These regulations shall take effect on [insert date], and shall
148 expire on [insert date].

149 (E) The [secretary] shall adopt not later than [insert date], the 2020 statewide greenhouse
150 gas emissions limit pursuant to Section 4 (B) of this Act which shall be between 10 percent and
151 25 percent below the 1990 emissions level and a plan for achieving said reduction. The
152 [secretary] shall consult with all state agencies and regional authorities with jurisdiction over
153 sources of greenhouse gases on all elements of the emissions limit and plan that pertain to
154 energy-related matters including, but not limited to, electrical generation, load based-standards or
155 requirements, the provision of reliable and affordable electrical service and statewide fuel
156 supplies, to ensure the greenhouse gas emissions reduction activities to be adopted and
157 implemented by the [secretary] are complementary, non-duplicative and can be implemented in
158 an efficient and cost-effective manner. The 2020 statewide emissions limit and implementation
159 plan shall comply with this section.

160 (F) The [secretary] shall analyze the feasibility of measures to comply with the emissions
161 limit established in subsection (E) of this section. Such measures shall include, but not be limited
162 to, the electric generating facility aggregate limit established pursuant to [insert citation], direct
163 emissions reduction measures from other sectors of the economy, alternative compliance
164 mechanisms, market-based compliance mechanisms and potential monetary and nonmonetary
165 incentives for sources and categories of sources that the [secretary] finds are necessary or
166 desirable to facilitate the achievement of reductions of greenhouse gas emissions limits.

167 (G) The [secretary] shall consider all relevant information pertaining to greenhouse gas
168 emissions reduction goals and programs in other states and nations.

169 (H) The [secretary] shall evaluate the total potential costs and economic and
170 noneconomic benefits of various reduction measures to the economy, environment and public
171 health, using the best available economic models, emissions estimation techniques and other
172 scientific methods.

173 (I) The [secretary] shall take into account the relative contribution of each source or
174 source category to statewide greenhouse gas emissions and shall recommend a de minimis

175 threshold of greenhouse gas emissions below which emissions reduction requirements shall not
176 apply.

177 (J) The [secretary] shall identify opportunities for emissions reduction measures from all
178 verifiable and enforceable voluntary actions.

179 (K) The [secretary] shall conduct public hearings on the proposed 2020 emission limit
180 and implementing plan. The [secretary] shall conduct a portion of these workshops in regions
181 that have the most significant exposure to air pollutants, including, but not limited to,
182 communities with minority populations, communities with low-income populations, or both.

183 (L) The [secretary] shall update its plan for achieving the maximum technologically
184 feasible reductions of greenhouse gas emissions at least [once] every [5] years, including the
185 plans to implement the 2030, 2040 and 2050 statewide emission limits.

186 (M) Nothing in this Act shall restrict the [secretary of energy and environmental affairs]
187 from adopting greenhouse gas emissions limits or emissions reduction measures prior to [January
188 1, 2011], that are consistent with general or special laws or rules or regulations, imposing those
189 limits prior to [January 1, 2012], or providing early reduction credit, where appropriate, nor shall
190 this Act prevent the imposition of more stringent limits on emissions.

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192 Section 5. [*Monitoring Effects of Greenhouse Gas Regulations.*]

193 (A) The [secretary] shall monitor the implementation of regulations relative to climate
194 change and shall, every [5] years, publish a report which shall include recommendations
195 regarding such implementation. The [secretary] shall publish the first report not later than [insert
196 date].

197 (B) The report shall include, without limitation:

198 (1) whether regulations or other measures undertaken, including distribution of
199 emissions allowances, are equitable and minimize costs and maximize the total benefits to the
200 state and encourage early action to reduce greenhouse gas emissions;

201 (2) whether activities undertaken to comply with state regulations and efforts
202 disproportionately impact low-income communities;

203 (3) whether entities that have voluntarily reduced their greenhouse gas emissions
204 prior to the implementation of this Act receive appropriate credit for early voluntary reductions;

205 (4) whether activities undertaken pursuant to the regulations complement, and do
206 not interfere with, efforts to achieve and maintain federal and state ambient air quality standards
207 and reduce toxic air contaminant emissions;

208 (5) descriptions of overall societal benefits, including reductions in other air
209 pollutants, diversification of energy sources and other benefits to the economy, environment and
210 public health;

211 (6) whether state actions minimize the administrative burden of implementing and
212 complying with these regulations;

213 (7) whether state actions minimize leakage;

214 (8) descriptions of the significance of the contribution of each source or category
215 of sources to statewide emissions of greenhouse gases;

216 (9) whether greenhouse gas emissions reductions achieved are real, permanent,
217 quantifiable, verifiable and enforceable; and

218 (10) recommendations for future policy action.

219 (C) The report shall be filed with the [clerk of the house of representatives, the clerk of
220 the senate, the chairs of the house and senate committees on ways and means, the chairs of the
221 joint committee of telecommunications, utilities and energy and the chairs of the joint committee
222 on the environment, natural resources and agriculture].

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Section 6. *[Market-Based Compliance Mechanisms.]*

(A) The [secretary], in consultation with the [executive office of administration and finance], may consider the use of market-based compliance mechanisms to address climate change concerns; provided, however, that prior to the use of any market-based compliance mechanism, to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the [secretary] shall:

(1) consider the potential for direct, indirect and cumulative emission impacts from these mechanisms, including localized impacts in communities that are already adversely impacted by air pollution;

(2) design any market-based compliance mechanism to prevent any increase in the emissions of toxic air contaminants or criteria air pollutants, with particular attention paid to emissions of nitrous oxide, sulfur dioxide and mercury; and

(3) maximize additional environmental and economic benefits for the [state], as appropriate.

(B) The [secretary] may adopt regulations governing how market-based compliance mechanisms may be used by regulated entities subject to greenhouse gas emissions limits and mandatory emissions reporting requirements to achieve compliance with their greenhouse gas emissions limits.

(C) The [executive office] and the [department] may work with the participating regional greenhouse gas initiative states and other interested states and [Canadian Provinces] to develop a plan to expand market-based compliance mechanisms such as the regional greenhouse gas initiative to other sources and sectors necessary or desirable to facilitate the achievement of the greenhouse gas emissions limits.

(D) The [executive office] shall monitor compliance with and enforce any rule, regulation, order, emissions limitation, emissions reduction measure or market-based compliance mechanism adopted by the [executive office] or [department] pursuant to this Act. The [department] may impose a civil administrative penalty pursuant to [insert citation] for a violation of any rule, regulation, order, emissions limitation, emissions reduction measure or other measure adopted by the [executive office] pursuant to this Act.

Section 7. *[Advisory Committee to Oversee Greenhouse Emission Reduction Measures.]*

The [secretary] shall convene an [advisory committee] to advise the [executive office] in overseeing the greenhouse emissions reduction measures. The [advisory committee] shall consist of representatives from the following sectors: commercial, industrial and manufacturing; transportation; low-income consumers; energy generation and distribution; environmental protection; energy efficiency and renewable energy; local government; and academic institutions.

Section 8. *[Regulations to Reduce Energy Use, Promote Energy Efficiency and Promote Renewable Energy Sources.]*

In implementing its plan for statewide greenhouse gas emissions limits, the [state] and its agencies shall promulgate regulations that reduce energy use, increase efficiency and encourage renewable sources of energy in the sectors of energy generation, buildings and transportation.

Section 9. *[Advisory Committee to Analyze Strategies to Adapt to Climate Change.]*

The [secretary] shall convene an [advisory committee] to analyze strategies for adapting to the predicted impacts of climate change on this state. The [advisory committee] shall be chaired by

271 the [secretary], or their designee, and comprised of representatives with expertise in the
272 following areas: transportation and built infrastructure; commercial, industrial and manufacturing
273 activities; low income consumers; energy generation and distribution; land conservation; water
274 supply and quality; recreation; ecosystems dynamics; coastal zone and oceans; rivers and
275 wetlands; and local government. The [advisory committee] shall file a report of its findings and
276 recommendations regarding strategies for adapting to climate change not later than [insert date].
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278 Section 10. [*Factoring Foreseeable Climate Change Impacts into Decisions to Issue*
279 *Permits and Licenses.*] When considering and issuing permits, licenses and other administrative
280 approvals and decisions, the respective agency, department, board, commission or authority shall
281 also consider reasonably foreseeable climate change impacts, including additional greenhouse
282 gas emissions, and effects, such as predicted sea level rise.
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284 Section 11. [*Authority of Public Utility Commission; Obligations of Electrical Utilities;*
285 *Building or Expanding Certain Facilities.*] Nothing in this Act shall affect the authority of the
286 [state public utility commission] or the obligation of an electrical utility to provide customers
287 with safe and reliable electric service. Nothing in this Act shall preclude, prohibit, or restrict the
288 construction of a new facility or the expansion of an existing facility subject to regulation under
289 this chapter, if all applicable requirements are met and the facility is in compliance with
290 regulations adopted pursuant this Act.
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292 Section 12. [*Severability.*] [Insert severability clause.]
293

294 Section 13. [*Repealer.*] [Insert repealer clause.]
295

296 Section 14. [*Effective Date.*] [Insert effective date.]