

SENATE, NO. 2338

AN ACT TO PROTECT PUBLIC HEALTH AND AIR QUALITY BY REDUCING HARMFUL DIESEL EMISSIONS

*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 30 of the Massachusetts General Laws, as appearing in the 2006 official
2 edition, is hereby amended by adding, after section 39S, the following sections:

3 Section 39T. Use of Ultra Low Sulfur Diesel Fuel and Best Available Retrofit Technology by
4 the State

5 (a) For the purposes of this section only, the following terms shall have the following meanings:

6 "Best Available Retrofit Technology" means technology, verified by the United States
7 Environmental Protection Agency or California Air Resources Board for reducing the emission
8 of pollutants that achieves reductions in particulate matter emissions at the highest classification
9 level for diesel emission control strategies that is applicable to the particular engine and
10 application. Such technology shall in no event result in a net increase in the emission of
11 nitrogen oxides.

12 "Heavy duty vehicle" or "vehicle" means any on-road or nonroad vehicle powered by diesel fuel
13 and having a gross vehicle weight of greater than 14,000 pounds.

14

15 "Ultra low sulfur diesel fuel" means diesel fuel having sulfur content of 0.0015 per cent of
16 sulfur or less.

17 (b) Any diesel powered heavy duty vehicle that is owned by, operated by or on behalf of, or
18 leased by or operating under contract to a state agency and state and regional public authority
19 shall be powered by ultra low sulfur diesel fuel.

20 (c) Any diesel powered heavy duty vehicle that is owned by, operated by or on behalf of, or
21 leased by or operating under a contract to a state agency or state or regional public authority
22 with more than half of its governing body appointed by the governor shall utilize best available
23 retrofit technology for reducing the emission of pollutants. The Commissioner shall promulgate
24 regulations for the implementation of this subdivision specifying procedures for compliance
25 according to the following schedule:

26 (1) Not less than 33% of the vehicles covered by this subdivision shall employ best available
27 retrofit technology on or before December 31, 2008.

28 (2) Not less than 66% of the vehicles covered by this subdivision shall employ best available
29 retrofit technology on or before December 31, 2009.

30 (3) All vehicles covered by this subdivision shall employ best available retrofit technology on or
31 before December 31, 2010

32 (d) This subdivision shall not apply to:

33 (1) any vehicle subject to a lease or public works contract entered into or renewed prior to the
34 effective date of this section;

35 (2) vehicles that are specially equipped for emergency response by a state authority, office of
36 emergency management, sheriff's office, police department or fire department, as well as timber
37 harvesting equipment such as harvesters, wood chippers, log skidders, and other processing
38 equipment used exclusively off highway for timber harvesting and logging purposes, and farm
39 equipment;

40 (3) any on-road vehicle sold as "new" in compliance with the USEPA's 2007 Heavy-duty
41 Highway Diesel Standards" promulgated by USEPA and published in the Federal Register at 66
42 Fed. Reg. 5002 on January 18, 2001, or

43 (4) any nonroad vehicle sold as "new" in compliance with the USEPA's Tier 4 Nonroad Diesel
44 Standards" promulgated by USEPA and published in the Federal Register at 69 Fed. Reg. 38958
45 on June 29, 2004.

46 (e) In addition to other provisions for regulations in this section, the Commissioner shall
47 promulgate regulations as necessary and appropriate to carry out the provisions of this act
48 including but not limited to provision of waivers upon written finding by the Commissioner that
49 best available retrofit technology for reducing the emissions of pollutants as required by
50 subdivision (c) of this section is not available for an individual vehicle or class of vehicles.

51 (f) This section shall not apply where federal law precludes the state from imposing the
52 requirement of this section.

53 (g) On or before January 1, 2008 and every year thereafter, the Commissioner shall report to the
54 Governor and Legislature on the use of ultra low sulfur diesel fuel and the use of the best
55 available retrofit technology as required under this section. The information contained in this
56 report shall include, but not be limited to, for each state agency and public authority covered by
57 this section:

58 (1) the total number of diesel fuel-powered motor vehicles owned or operated by such agency
59 and authority;

60 (2) the number of such motor vehicles that were powered by ultra low sulfur diesel fuel;

61 (3) the total number of diesel fuel-powered motor vehicles owned or operated by such agency
62 and authority having a gross vehicle weight rating of more the 14,000 pounds;

63 (4) the number of such vehicles that utilized the best available retrofit technology, including a
64 breakdown by motor vehicle model, engine year and the type of technology used for each
65 vehicle;

66 (5) the number of such motor vehicles that are equipped with an engine certified to the
67 applicable 2007 Unites States Environmental Protection Agency standard for particulate matter
68 as set forth in Section 86.007-11 of Title 40 of the Code of Federal Regulations or to any
69 subsequent United States Environmental Protection Agency standard for particulate matter that
70 is at least as stringent; and

71 (6) all waivers, findings, and renewals of such findings, which, for each waiver, shall include
72 but not be limited to, the quantity of diesel fuel needed to power diesel fuel-powered motor

73 vehicles owned or operated by such agency and authority; specific information concerning the
74 availability of ultra low sulfur diesel fuel.

75 (h) The department shall, to the extent practicable, coordinate with regions which have proposed
76 or adopted heavy duty emission inspection programs to promote regional consistency in such
77 programs.

78 (i) Severability. If any clause, sentence, paragraph, section or part of this act shall be adjudged
79 by any court of competent jurisdiction to be invalid and after exhaustion of all further judicial
80 review, the judgment shall not affect, impair or invalidate the remainder thereof, but shall be
81 confined in its operation to the clause, sentence, paragraph, section or part of this act directly
82 involved in the controversy in which the judgment shall have been rendered.

83 Section 39U. Use of Diesel Retrofit Devices for Waste Haulers

84 (a) For the purposes of this section only, the following terms shall have the following meanings:

85 “Level 2 Control” means a Verified Diesel Emission Control Device that achieves a particulate
86 matter (PM) emission reduction of 50% or more compared to uncontrolled engine emission
87 levels.

88 “Level 3 Control” means a Verified Diesel Emission Control Device that achieves a particulate
89 matter (PM) emission reduction of 85% or more compared to uncontrolled engine emission
90 levels, or that reduces emissions to less than or equal to 0.01 grams of PM per brake
91 horsepower-hour. Level 3 Control includes repowering or replacing the existing diesel engine

92 with an engine meeting USEPA's 2007 Heavy-duty Highway Diesel Standards, or in the case of
93 a nonroad engine, an engine meeting the USEPA's Tier 4 Nonroad Diesel Standards.

94 (b) Any diesel powered waste collection and recycling vehicle in model years between and
95 including 1994 and 2006 that is owned, leased, or contracted to perform the removal or transfer
96 of municipal waste, including residential or commercial waste, or recycling services shall utilize
97 level 3 control retrofit technology for reducing the emission of pollutants. As of January 1,
98 2012, no waste collection or recycling vehicle in model years between and including 1994 and
99 2006 may be permitted to register without proper demonstration of the required level 3 control
100 retrofit technology. The Commissioner shall promulgate regulations for the implementation of
101 this subdivision specifying procedures for compliance according to the following schedule:

102 (1) Not less than 25% of the vehicles covered by this subdivision shall have level 3 control
103 retrofit technology on or before December 31, 2008.

104 (2) Not less than 50% of the vehicles covered by this subdivision shall have level 3 control
105 retrofit technology on or before December 31, 2009.

106 (3) Not less than 75% of the vehicles covered by this subdivision shall have level 3 control
107 retrofit technology on or before December 31, 2010.

108 (4) All vehicles covered by this subdivision shall have level 3 control retrofit technology on or
109 before December 31, 2011.

110 (c) Any diesel powered waste collection and recycling vehicle in model years 1993 and earlier
111 that is owned, leased, or contracted to perform the removal or transfer of municipal waste,

112 including residential or commercial waste, or recycling services shall utilize level 2 control
113 retrofit technology for reducing the emission of pollutants. As of January 1, 2011, no waste
114 collection or recycling vehicle in model years 1993 and earlier may be permitted to register
115 without proper demonstration of the required level 2 control retrofit technology. The
116 Commissioner shall promulgate regulations for the implementation of this subdivision
117 specifying procedures for compliance according to the following schedule:

118 (1) Not less than 25% of the vehicles covered by this subdivision shall have level 3 control
119 retrofit technology on or before December 31, 2008.

120 (2) Not less than 50% of the vehicles covered by this subdivision shall have level 3 control
121 retrofit technology on or before December 31, 2009.

122 (3) Not less than 75% of the vehicles covered by this subdivision shall have level 3 control
123 retrofit technology on or before December 31, 2010.

124 (4) All vehicles covered by this subdivision shall have level 3 control retrofit technology on or
125 before December 31, 2011.

126 (d) On or before January 1, 2008 and every year thereafter, the Commissioner shall report to the
127 Governor and Legislature on the use of level 3 and level 2 control retrofit technology on waste
128 collection and recycling vehicles required under this section. The information contained in this
129 report shall include, but not be limited to:

130 (1) the total number of diesel fuel-powered waste collection and recycling vehicles covered by
131 this section;

- 132 (2) the number of such diesel vehicles that were powered by ultra low sulfur diesel fuel;
- 133 (3) the total number of diesel fuel-powered waste collection and recycling vehicles having a
134 gross vehicle weight rating of more the 14,000 pounds;
- 135 (4) the number of such vehicles that were between and including model years 1994 and 2006;
- 136 (5) the number of such vehicles between and including model years 1994 and 2006 that utilized
137 level 3 control retrofit technology, including a breakdown by motor vehicle model, engine year
138 and the type of technology used for each vehicle;
- 139 (6) the number of such vehicles in model years 1993 and earlier;
- 140 (7) the number of such vehicles in model years 1993 and earlier that utilized level 2 control
141 retrofit technology, including a breakdown by motor vehicle model, engine year and the type of
142 technology used for each vehicle;
- 143 (8) the number of diesel waste collection and recycling vehicles that are equipped with an
144 engine certified to the applicable 2007 Unites States Environmental Protection Agency standard
145 for particulate matter as set forth in Section 86.007-11 of Title 40 of the Code of Federal
146 Regulations or to any subsequent United States Environmental Protection Agency standard for
147 particulate matter that is at least as stringent; and
- 148 (9) all waivers, findings, and renewals of such findings, which, for each waiver, shall include
149 but not be limited to, the quantity of diesel fuel needed to power diesel fuel-powered motor
150 vehicles owned or operated by such agency and authority; specific information concerning the
151 availability of ultra low sulfur diesel fuel.

152 (i) Severability. If any clause, sentence, paragraph, section or part of this act shall be adjudged
153 by any court of competent jurisdiction to be invalid and after exhaustion of all further judicial
154 review, the judgment shall not affect, impair or invalidate the remainder thereof, but shall be
155 confined in its operation to the clause, sentence, paragraph, section or part of this act directly
156 involved in the controversy in which the judgment shall have been rendered.

157 Section 39V. Diesel Emissions Reduction Funding Program

158 (a) Fund. The Diesel Emissions Reduction Fund (the "Fund") is hereby established as an
159 account in the state treasury.

160 (1) The fund shall be administered by the state treasurer for the benefit of the Diesel Emissions
161 Reduction Funding Program (the "Program") established under this section.

162 (2) Interest earned on the fund shall be credited to the Fund.

163 (3) The Fund consists of: (1) the contributions, fees, and surcharges under: (A) subsections 5-7;
164 and (B) penalties and fees deposited in the Fund pursuant with this act.

165 (4) Monies in the Fund may be used only to implement the Program, provided that a maximum
166 of two per cent of the money in the Fund may be used for administrative costs incurred by the
167 DEP and the state treasurer. Monies allocated to an eligible project but not expended in any
168 fiscal year may be carried over to succeeding fiscal years.

169 (5) A surcharge is hereby imposed on the retail sale, lease, or rental of new nonroad diesel
170 vehicles in an amount equal to one per cent of the sales price or the lease or rental amount.

171 (6) A surcharge is hereby imposed on every retail sale, lease or rental of every heavy duty
172 diesel vehicle that is of a model year of 1998 or earlier and that is sold or leased in this state.
173 The amount of the surcharge is 2.5% of the total consideration.

174 (7) In addition to the registration fees charged under section 33 of Chapter 90, a surcharge is
175 hereby imposed on the registration of a heavy duty diesel vehicle under that section in an
176 amount equal to ten percent of the total fees due for registration of such vehicle thereunder.
177 Said surcharges shall be remitted to the state treasurer for deposit in the Fund.

178 (8) The bonding authority is hereby authorized to issue up to \$10,000,000 annually before 2018
179 in bonds to be used solely to fund revolving loans to eligible diesel emission reduction projects
180 as described in this section.

181 (9) The state treasurer shall adopt any procedures needed for the collection, administration and
182 enforcement of the surcharge authorized by this subsection, and shall deposit all surcharges to
183 the credit of the Fund.

184 (a) Establishment and Administration of the Program. DEP, in consultation with the state
185 treasurer, shall establish by regulations promulgated pursuant to this act the Massachusetts
186 Diesel Emissions Reduction Funding Program in accordance with this act.

187 (A) DEP shall administer the Program and shall provide grants and low-cost revolving loans
188 from the Fund, on a competitive basis, to eligible projects to achieve significant reductions of
189 diesel particulate emissions and/or reduced exposure to diesel particulate matter.

190 (2) In administering the Program and in accordance with the requirements of this act, DEP shall:

- 191 (A) manage Program funds and oversee the Program;
- 192 (B) produce guidelines, protocols, and criteria for eligible projects;
- 193 (C) develop methodologies for evaluating project benefits and cost-effectiveness;
- 194 (D) develop procedures for monitoring whether the emissions reductions projected for projects
195 awarded grants under this chapter are actually achieved;
- 196 (E) prepare reports regarding the progress and effectiveness of the Program; and
- 197 (F) take all appropriate and necessary actions so that emissions reductions achieved through the
198 Program may be credited by USEPA to the appropriate emissions reduction objectives in the
199 state implementation plan.

200 (b) Applications.

201 (1) To receive a grant or loan under the Program, the applicant shall submit to DEP an
202 application at a time, in a manner, and including such information DEP may require.

203 (2) An application under this subsection shall include--

204 (A) a description of the air quality of the area in which the project fleets will operate;

205 (B) a description of the project proposed by the applicant, including--

206 (i) any certified engine configuration or verified technology proposed to be used or funded in
207 the project; and

- 208 (ii) the means by which the project will achieve a significant reduction in diesel emissions;
- 209 (C) an evaluation of the quantifiable and unquantifiable benefits of the emissions reductions of
210 the proposed project;
- 211 (D) an estimate of the cost of the proposed project;
- 212 (E) a description of the age and expected lifetime control of the equipment to be used or funded
213 in the proposed project;
- 214 (F) a description of the diesel fuel available in the areas to be served by the proposed project,
215 including the sulfur content of the fuel;
- 216 (G) provisions for the monitoring and verification of the project; and
- 217 (H) such other information as may be required by DEP.
- 218 (c) Eligibility.
- 219 (1) A proposed project must meet the requirements of this section to be eligible for a grant or
220 loan under the Program.
- 221 (2) Vehicles subject to the provisions of section 39T and section 39U are not eligible for
222 funding from the Program.
- 223 (3) DEP may consider for funding the following types of projects --
- 224 (A) Installation of a retrofit technology, including any incremental costs of a repowered or new
225 diesel engine, that significantly reduces particulate emissions through development and

226 implementation of a certified engine configuration or a verified diesel emission control device
227 for--

228 (i) a bus;

229 (ii) a medium-duty truck or a heavy-duty truck;

230 (iii) a commercial marine engine;

231 (iv) a locomotive; or

232 (v) a nonroad diesel engine or vehicle used in construction, handling of cargo, including at a
233 port or airport, agriculture, mining, or energy production; or

234 (B) programs or projects to reduce long-duration idling using verified technology involving a
235 vehicle or equipment described in subsection (A).

236 (4) In providing a grant or loan under the Program, and subject to the provisions of subsection
237 (c), DEP shall give priority to otherwise eligible projects that, as determined by DEP--

238 (A) maximize public health benefits;

239 (B) are the most cost-effective;

240 (C) serve areas--

241 (i) with the highest population density;

242 (ii) that are poor air quality areas, including areas identified by DEP as--

243 (I) in nonattainment or maintenance of national ambient air quality standards for a criteria
244 pollutant;

245 (II) Federal Class I areas; or

246 (III) areas with toxic air pollutant concerns;

247 (iii) that receive a disproportionate quantity of air pollution from a diesel fleets, including
248 truckstops, ports, rail yards, terminals, and distribution centers; or

249 (iv) that use a community-based multistakeholder collaborative process to reduce toxic
250 emissions;

251 (D) include a certified engine configuration or verified technology that has a long expected
252 useful life;

253 (E) will maximize the useful life of any certified engine configuration or verified technology
254 used or funded by the project; and,

255 (F) conserve diesel fuel

256 (5) For a proposed project to be eligible for Program funding, other than a project involving a
257 marine vessel or engine, not less than 75 percent of vehicle miles traveled or hours of operation
258 projected for the five years immediately following the award of a grant must be projected to
259 take place in this state. For a proposed project involving a marine vessel or engine, the vessel or
260 engine must be operated in the intercoastal waterways or bays adjacent to this state for a

261 sufficient amount of time over the lifetime of the project, as determined by DEP, to meet the
262 cost-effectiveness requirements of subsection (e).

263 (6) Each proposed project must meet the cost-effectiveness requirements of subsection (e).

264 (7) A proposed project based on the use of a certified engine configuration or verified
265 technology must document, in a manner acceptable to DEP, a reduction in particulate emissions
266 of at least 50 percent compared with the baseline emissions adopted by DEP for the relevant
267 engine year and application. After study of available emissions reduction technologies, after
268 public notice and comment, DEP may revise the minimum percentage reduction in particulate
269 emissions required by this subsection to improve the ability of the program to achieve its goals.

270 (8) If a baseline emissions standard does not exist for on-road or non-road diesels in a particular
271 category DEP, for purposes of this section, shall establish an appropriate baseline emissions
272 level for comparison purposes.

273 (9) DEP may approve payments to offset the incremental cost, over the expected lifetime of the
274 vehicle, of the use of qualifying fuel in a on-road or non-road diesel vehicle if the proposed
275 project as a whole, including the incremental fuel cost, meets the requirements of this
276 subchapter. DEP shall develop an appropriate method for converting incremental fuel costs
277 over the lifetime of the non-road diesel into an initial cost for purposes of determining cost-
278 effectiveness as required by subsection (e).

279 (d) Cost-effectiveness

280 (1) For purposes of this section, “cost-effectiveness” means the total dollar amount divided by
281 the total number of tons of particulate matter reduction attributable to that expenditure. In
282 calculating cost-effectiveness, one-time grants of money at the beginning of a project shall be
283 annualized using a time value of public funds or discount rate determined for each project by
284 DEP, taking into account the interest rate on bonds, interest earned by state funds, and other
285 factors DEP considers appropriate.

286 (2) DEP shall establish reasonable methodologies for evaluating project cost-effectiveness
287 consistent with subsection (e)(1) and with accepted methods.

288 (3) Except as provided by subsection (e)(7), DEP may not award a grant for a proposed project
289 the cost-effectiveness of which, calculated in accordance with subsections (e)(1) and (2) and
290 criteria developed thereunder, exceeds \$135,000 per ton of PM10 emissions. This subsection
291 does not restrict DEP authority under other law to require emissions reductions with a cost-
292 effectiveness that exceeds \$135,000 per ton.

293 (4) DEP may not award a grant that, net of taxes, provides an amount that exceeds the
294 incremental cost of the proposed project.

295 (5) DEP shall adopt guidelines for capitalizing incremental lease costs so those costs may be
296 offset by a grant under this section.

297 (6) In determining the amount of a grant under this section, DEP shall reduce the incremental
298 cost of a proposed new purchase, lease, retrofit, repower, or add-on equipment project by the
299 value of any existing financial incentive that directly reduces the cost of the proposed project,
300 including tax credits or deductions, other grants, or any other public financial assistance.

301 (7) Adjustment of cost-effectiveness. Based upon a study of available emissions reduction
302 technologies and costs and after public notice and comment, DEP may change the values of the
303 maximum grant award criteria established in subsection (e)(3) to account for inflation or to
304 improve the ability of the program to achieve its goals.