

SENATE No. 2608

The Commonwealth of Massachusetts

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

SENATE, July 16, 2018

The committee on Ways and Means to whom was referred the House Bill to increase renewable energy and reduce high-cost peak hours (House, No. 4756),-- reports, recommending that the same ought to pass with an amendment striking out all after the enacting clause and inserting in place thereof the text of Senate document numbered 2608 and by striking out the title and inserting in place thereof the following title “An Act to a promote clean energy future” (also based on House, Nos. 4737, 4739 and 4749) .

For the committee,
Karen E. Spilka

The Commonwealth of Massachusetts

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(2017-2018)**

1 SECTION 1. Section 9A of chapter 7 of the General Laws, as appearing in the 2016
2 Official Edition, is hereby amended by striking out the last 4 paragraphs and inserting in place
3 thereof the following 3 paragraphs:

4 The commonwealth shall ensure that 50 per cent of the motor vehicles owned or leased
5 by the commonwealth in the state fleet, including vehicles owned or leased by quasi-public
6 agencies, shall be zero emission vehicles by June 30, 2025. “Zero emission vehicle” shall mean a
7 battery electric vehicle, a plug-in hybrid vehicle or a fuel cell vehicle. In reaching that
8 requirement, the secretary shall prioritize for electrification any vehicles cited as medium or high
9 priority by the study commissioned by section 6 of chapter 448 of the acts of 2016.

10 The secretary shall submit to the clerks of the senate and house of representatives and the
11 chairs of the joint committee on transportation a statement annually, not later than July 1,
12 detailing the progress made in meeting the requirements of this section. The report shall include:
13 (i) a complete listing of vehicles leased, owned or assigned to each agency; and (ii) a description
14 of each vehicle, including the year, make and model, whether the vehicle is powered by an
15 internal combustion engine, a mild hybrid engine, a plug-in hybrid motor, a fully battery electric
16 motor, a hydrogen fuel cell electric motor, a compressed liquefied natural gas engine, a propane

17 engine or other means of propulsion. If a zero emission vehicle is not purchased or leased, the
18 secretary shall provide, in each instance, a specific explanation as to why a zero emission vehicle
19 could not have sufficiently fulfilled the intended functions.

20 Beginning in fiscal year 2026, the secretary shall ensure that 100 per cent of new motor
21 vehicles purchased or leased each year by the commonwealth shall be zero emission vehicles.
22 The secretary shall provide a written report to the clerks of the senate and house of
23 representatives and the chairs of the joint committee on transportation annually, not later than
24 July 1, explaining in detail all instances where a zero emission vehicle was not purchased or
25 leased and the reasons therefor.

26 SECTION 2. The first paragraph of subsection (a) of section 11E of chapter 12 of the
27 General Laws, as so appearing, is hereby amended by striking out the second sentence and
28 inserting in place thereof the following sentence:- The attorney general, through the office of
29 ratepayer advocacy, may intervene, appear and participate in administrative, regulatory or
30 judicial proceedings on behalf of any group of consumers in connection with any matter
31 involving a company doing business in the commonwealth and subject to the jurisdiction of the
32 department of public utilities or the department of telecommunications and cable under chapter
33 164, 164A, 164B, 165 or 166.

34 SECTION 3. Section 26A of chapter 21 of the General Laws, as so appearing, is hereby
35 amended by inserting after the word “effluent”, in line 67, the following words:- , hydraulic
36 fracturing fluid.

37 SECTION 4. Section 27 of said chapter 21, as so appearing, is hereby amended by adding
38 the following clause:-

39 (14) Enforce restrictions on drilling, waste treatment and disposal and mining activities
40 which have been enacted to protect the water quality and the natural resources of the
41 commonwealth.

42 SECTION 5. Section 42 of said chapter 21, as so appearing, is hereby amended by
43 inserting after the word “commonwealth”, in line 3, the following words:- , or into an injection
44 well or into a treatment works in the commonwealth.

45 SECTION 6. Said chapter 21 is hereby further amended by inserting after section 53A
46 the following section:-

47 Section 53B. (a) As used in this section, the following words shall have the following
48 meanings unless the context clearly requires otherwise:-

49 “Fluid”, any material or substance which flows or moves whether in semi-solid, liquid,
50 sludge, gas or any other form or state.

51 “Gas”, all natural gas, whether hydrocarbon or nonhydrocarbon, including hydrogen
52 sulfide, helium, carbon dioxide, nitrogen, hydrogen, casinghead gas and all other fluid
53 hydrocarbons not defined as oil.

54 “Hydraulic fracturing”, the process of pumping a fluid into or under the surface of the
55 ground in order to create fractures in rock to produce or recover oil or gas.

56 “Oil”, crude petroleum, oil and all hydrocarbons, regardless of specific gravity, that are in
57 the liquid phase in the reservoir and are produced at the wellhead in liquid form.

58 “Oil and gas”, oil and gas collectively, or either oil or gas, as the context may require to
59 give effect to the purposes of this chapter.

60 (b) For the period from January 1, 2019 to December 31, 2028, inclusive, no person shall
61 engage in hydraulic fracturing.

62 (c) For the period from January 1, 2019 to December 31, 2028, inclusive, no person shall
63 collect, store, treat or dispose of wastewater hydraulic fracturing fluid, wastewater solids, drill
64 cuttings or other byproducts from hydraulic fracturing.

65 SECTION 7. Section 1 of chapter 21N of the General Laws, as appearing in the 2016
66 Official Edition, is hereby amended by striking out the definition of “Direct emissions” and
67 inserting in place thereof the following definition:-

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

73 SECTION 8. Said section 1 of said chapter 21N, as so appearing, is hereby further
74 amended by inserting after the definition of “Greenhouse gas emissions source” the following
75 definition:-

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

78 greenhouse gas-emitting priority that emits or is capable of emitting a greenhouse gas when
79 burned.

80 SECTION 9. Said section 1 of said chapter 21N, as so appearing, is hereby further
81 amended by inserting after the word “of”, in line 50, the following words:- a greenhouse gas-
82 emitting priority or.

83 SECTION 10. Said section 1 of said chapter 21N, as so appearing, is hereby further
84 amended by striking out the definition of “Market-based compliance mechanism”, in lines 56 to
85 65, inclusive, and inserting in place thereof the following definition:-

86 “Market-based compliance mechanism”, any form of price compliance system imposed
87 on sources or categories of sources or any form of pricing mechanism imposed directly on
88 greenhouse gas-emitting priorities or on the distribution or sale of greenhouse gas-emitting
89 priorities which are designed to reduce emissions as required by this chapter including, but not
90 limited to: (i) a system of market-based declining annual aggregate emissions limitations for
91 sources or categories of sources that emit greenhouse gases; (ii) greenhouse gas emissions
92 exchanges, banking, credits and other transactions governed by rules and protocols established
93 by the secretary or a regional program that results in the same greenhouse gas emissions
94 reduction, over the same time period, as direct compliance with a greenhouse gas emissions limit
95 or emission reduction measure adopted by the executive office pursuant to this chapter; or (iii) a
96 system of charges or exactions imposed to reduce statewide greenhouse gas emissions in whole
97 or in part.

98 SECTION 11. Subsection (a) of section 2 of said chapter 21N, as so appearing, is hereby
99 amended by striking out the first sentence and inserting in place thereof the following sentence:-

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

103 SECTION 12. Subsection (b) of section 3 of said chapter 21N, as so appearing, is hereby
104 amended by striking out clauses (2) and (3) and inserting in place thereof the following 2
105 clauses:- (2) a 2030 statewide greenhouse gas emissions limit accompanied by plans to achieve
106 this limit in accordance with said section 4; provided, however, that the 2030 statewide
107 greenhouse gas emissions limit shall maximize the ability of the commonwealth to meet the 2050
108 statewide greenhouse gas emissions limit; (3) a 2040 statewide greenhouse gas emissions limit
109 accompanied by plans to achieve this limit in accordance with said section 4; provided, however,
110 that the 2040 statewide greenhouse gas emissions limit shall maximize the ability of the
111 commonwealth to meet the 2050 statewide greenhouse gas emissions limit.

112 SECTION 13. Subsection (a) of section 4 of said chapter 21N, as so appearing, is hereby
113 amended by inserting after the first sentence the following 2 sentences:- The secretary shall
114 further adopt the 2030 statewide greenhouse gas emissions limit pursuant to clause (2) of
115 subsection (b) of section 3, which shall be not less than 43 per cent below the 1990 emissions
116 level and shall plan to achieve that reduction pursuant to subsection (h) of section 4. The
117 secretary shall further adopt the 2040 statewide greenhouse gas emissions limit pursuant to
118 clause (3) of said subsection (b) of said section 3, which shall be not less than 62 per cent below
119 the 1990 emissions level and shall plan to achieve that reduction pursuant to said subsection (h)
120 of said section 4.

121 SECTION 14. Said subsection (a) of said section 4 of said chapter 21N, as so appearing,
122 is hereby further amended by striking out the last sentence and inserting in place thereof the
123 following sentence:- The 2020, 2030 and 2040 statewide greenhouse gas emissions limits and
124 implementation plans shall comply with this section.

125 SECTION 15. Said section 4 of said chapter 21N, as so appearing, is hereby further
126 amended by striking out, in line 17, the word "limit" and inserting in place thereof the following
127 word:- limits.

128 SECTION 16. Said section 4 of said chapter 21N, as so appearing, is hereby amended by
129 striking out, in line 29, the word "shall" and inserting in place thereof the following words:- , in
130 consultation with the department of public health, shall.

131 SECTION 17. Said section 4 of said chapter 21N, as so appearing, is hereby further
132 amended by striking out, in line 42, the words "emission limit and implementing plan" and
133 inserting in place thereof the following words:- , 2030 and 2040 statewide greenhouse gas
134 emissions limits and implementing plans.

135 SECTION 18. Said section 4 of said chapter 21N, as so appearing, is hereby further
136 amended by striking out subsection (h) and inserting in place thereof the following subsection:-

137 (h) The secretary shall issue a 2050 emissions reduction plan that shall describe in detail
138 the commonwealth's actions and methods for achieving the 2030, 2040 and 2050 emissions limit
139 required by subsection (b) of section 3. The 2050 emissions reduction plan shall: (i) address all
140 sources and categories of sources that emit greenhouse gas emissions; (ii) take into account the
141 imposition of market-based compliance mechanisms required in section 7A; (iii) indicate for
142 each source or category of sources how, to what extent and when the commonwealth will act to

143 reduce its emissions in order to achieve the 2050 emissions limit required by said subsection (b)
144 of said section 3; and (iv) include or be accompanied by any analysis quantitatively assessing
145 proposed and planned actions, methods, regulations and programs designed to reduce greenhouse
146 gas emissions for their economic, environmental and public health impacts, particularly those
147 that may benefit or burden low-income or moderate-income people. The 2050 emission
148 reduction plan shall be developed following public hearings. The secretary shall evaluate, adjust
149 if necessary and publish updates to the 2050 emissions reduction plan not less than once every 30
150 months, including assessments of the effectiveness, to date, of all actions, methods, regulations
151 and programs designed to reduce greenhouse gas emissions and the extent to which the actions,
152 methods, regulations and programs disproportionately impact low-income households and
153 minimize administrative burdens and leakage.

154 SECTION 19. Section 5 of said chapter 21N, as so appearing, is hereby amended by
155 inserting after the word “communities”, in line 10, the following words:- including, but not
156 limited to, economically-distressed manufacturing, economic sectors, economic subsectors or
157 individual employers located within those communities.

158 SECTION 20. Said chapter 21N is hereby further amended by striking out section 6, as
159 so appearing, and inserting in place thereof the following section:-

160 Section 6. In implementing its 2050 emissions reduction plan, the commonwealth and its
161 agencies shall promulgate regulations not later than December 31, 2023 regarding all sources or
162 categories of sources and all greenhouse gas-emitting priorities that are consistent with the plan
163 required by subsection (h) of section 4 and sufficient to achieve the statewide emissions limits
164 pursuant to section 3. The regulations shall be designed to ensure that the commonwealth

165 achieves its required emissions reductions equitably and in a manner that protects and, where
166 feasible, improves the condition of low-income and moderate-income persons while creating,
167 where feasible, additional employment and economic development in the commonwealth.

168 SECTION 21. Said chapter 21N is hereby further amended by inserting after section 7
169 the following 2 sections:-

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

175 The market-based compliance mechanisms established pursuant to this section shall: (i)
176 maximize the ability of the commonwealth to achieve the greenhouse gas emissions limits
177 established pursuant to this chapter;(ii) be designed to minimize disproportionate impacts on
178 low-income households; (iii) be designed to identify, with special attention to manufacturing,
179 economic sectors, economic subsectors or individual employers at risk of serious negative
180 impacts due to the market-based compliance mechanisms established pursuant to this section;
181 and (iv) be designed to mitigate impacts identified in clause (iii). The market-based compliance
182 mechanisms may be established by joining any existing market-based compliance mechanisms.
183 The secretary shall evaluate and adjust, if necessary, all market-based compliance mechanisms
184 adopted pursuant to this section at least once every 30 months to meet the requirements of this
185 section and to achieve greenhouse gas emissions limits. The regulations may be promulgated as
186 part of a coordinated regional effort with other states or Canadian Provinces to implement,

187 expand or join any other market-based compliance mechanisms. The department shall ensure it
188 has adequate resources to implement the requirements of this chapter.

189 Section 7B. Not later than September 30, 2023 and every 5 years thereafter, the secretary
190 or a designee shall publish a comprehensive energy plan that shall include and be based upon
191 reasonable projections of the commonwealth’s energy demands for electricity, transportation and
192 thermal conditioning and shall also include strategies for meeting those demands in a regional
193 context, prioritizing meeting energy demand through conservation, energy efficiency and other
194 demand-reduction resources in a manner that contributes to the commonwealth meeting the
195 limits for 2030 and 2040 pursuant to subsection (b) of section 3.

196 SECTION 22. Subsection (b) of section 21 of chapter 25 of the General Laws, as
197 appearing in the 2016 Official Edition, is hereby amended by adding the following paragraph:-

198 (4) At least once annually, the natural gas and electric utilities and energy efficiency
199 service companies shall distribute information about MassSave programs via billing statements
200 to their customers.

201 SECTION 23. Section 3 of chapter 25A, as so appearing, is hereby amended by inserting
202 after the definition of “Energy savings” the following 3 definitions:-

203 “Environmental justice”, the right to be protected from environmental pollution and to
204 live in and enjoy a clean and healthful environment regardless of race, income, national origin or
205 English language proficiency; provided, however, that “environmental justice” shall include the
206 equal protection and meaningful involvement of all people with respect to the development,
207 implementation and enforcement of environmental laws, regulations and policies and the
208 equitable distribution of environmental benefits.

209 “Environmental justice population”, a neighborhood or a population: (i)(A) determined
210 by the executive office of energy and environmental affairs or its subordinate agencies to have
211 experienced a disproportionate environmental impact since Jan, 1, 1998, or to have otherwise
212 been denied its enjoyment of environmental justice; (B) in which the annual median household
213 income is equal to or less than 110 per cent of the statewide median; or (C) in which minorities
214 comprise 25 per cent or more of the population; or (ii) identified by the executive office of
215 energy and environmental affairs or its subordinate agencies in an environmental justice strategy
216 issued pursuant to this chapter; provided, however, that “environmental justice population” shall
217 meet at least 1 of the requirements of subclauses (A) to (C), inclusive, of clause (i).

218 “Environmental justice household”, households within environmental justice populations.

219 SECTION 24. Said section 3 of said chapter 25A, as so appearing, is hereby further
220 amended by inserting after the definition of “Local government body” the following definition:

221 “Low-income households”, low-income households as defined under section 1 of chapter
222 40T.

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

226 SECTION 26. Said chapter 25A is hereby further amended by inserting after section 11I
227 the following section:-

228 Section 11J. (a) When creating, pursuant to general law, session law or other authority, a
229 solar incentive program, including, but not limited to, the solar incentive program established

230 pursuant to chapter 75 of the acts of 2016, the department shall design a program whose
231 economic and environmental benefits are equitably shared by low-income households,
232 environmental justice populations and other communities facing barriers to accessing the
233 program. Nothing in this section shall delay the commencement of the program or the
234 implementation prior to the first program review. The department may dedicate part of the
235 program to resolving other barriers to access if such barriers are identified. The department shall
236 specify in program design its plans to reach communities whose primary language is not English.

237 (b) In designing and modifying the program pursuant to subsection (a), the department
238 shall consider: (i) the proportion of benefits received by low-income households, environmental
239 justice households and other communities with barriers to access compared to benefits received
240 by other communities under the solar incentive program; and (ii) the distribution of benefits
241 received pursuant to other requirements and set-asides in any solar incentive program, including
242 set-asides for solar units less than or equal to 25 kW. In determining the minimum portion, the
243 department shall hold at least 3 public hearings in environmental justice communities or other
244 communities with barriers to access.

245 SECTION 27. Chapter 25A of the General Laws is hereby amended by adding the
246 following section:-

247 Section 17. (a) The department shall establish an energy storage system target program
248 for the deployment of energy storage systems by distribution company customers, distribution
249 companies and municipal lighting plants to achieve a statewide energy storage deployment target
250 of 2,000 megawatts by January 1, 2030 and a subsequent statewide energy storage deployment
251 target to be achieved by January 1, 2035. The department shall set annual statewide deployment

252 targets to be achieved in each distribution company's and municipal lighting plant's service
253 territory in order to reach the energy storage system targets required under this section.

254 (b) To achieve the annual targets established in subsection (a), the department may
255 consider a variety of deployment mechanisms and may require policies to encourage the cost-
256 effective deployment of energy storage systems including, but not limited to: (i) distribution
257 company or municipal lighting plant programs to encourage private deployment of energy
258 storage systems by their customers; (ii) procurement of cost-effective energy storage systems to
259 be owned and operated by a distribution company; provided, however, that any such
260 procurement shall finance the deployment of energy storage systems for the purpose of: (1) a
261 nonwires alternative to investment in distribution; (2) deferring investment in distribution
262 infrastructure that would otherwise be needed to address actual or forecasted overloads on
263 distribution circuits or at substations; or (3) improving the capability of the distribution system to
264 recover from adverse events that otherwise could result in long-term outages in critical areas of
265 the distribution system; (iii) the use of alternative compliance payments collected pursuant to
266 subsection (e) to fund a grant program for private development; and (iv) the use of energy storage
267 to replace fossil generation and the use of energy efficiency funds under section 19 of chapter 25
268 if the department determines that customer-owned energy storage provides sustainable peak load
269 reductions on either the electric or gas distribution systems and is otherwise consistent with
270 section 11G of this chapter.

271 (c) A distribution company shall not own or operate energy storage systems equal to
272 more than 20 per cent of the annual target established by the department for the distribution
273 company's service territory established in subsection (a) for the purpose of achieving the annual
274 targets; provided, however, that the department shall ensure that no distribution company shall

275 prevent or interfere with a customer or developer's ability to enter into agreements to own or
276 operate behind the meter energy storage systems.

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

282 (e) The department shall promulgate regulations to: (i) establish a carve-out of the
283 alternative energy portfolio standard obligation under section 11F1/2 for energy storage systems
284 as defined in section 1 of chapter 164; and (ii) allow each distribution company and municipal
285 lighting plant to discharge its obligations under this section by either procuring attributes from
286 energy storage systems that qualify under the carve-out established pursuant to this section or by
287 making an alternative compliance payment in an amount to be established by the department.
288 The regulations shall require distribution companies and municipal lighting plants to annually
289 submit to the department a report that shows it is in compliance with this section.

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

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

293 Section 18. (a) The department shall a establish an incentive program to support non-
294 solar renewable energy resources that are less than 5 megawatts and that qualify for the class I
295 renewable energy portfolio standard under section 11F. The program shall be designed to finance
296 the development, construction, and operation of renewable-energy distributed-generation

297 projects through a fixed price performance-based incentive that is designed to achieve annual
298 megawatt targets at reasonable cost through competitive processes established by the department.

299 (b) The incentive program shall be tariff-based and the department shall promulgate
300 regulations that, at a minimum: (i) establish the eligibility criteria for facilities to qualify under
301 the program; (ii) establish the methodology for establishing incentives; and (iii) direct the
302 distribution companies to jointly file a model tariff to implement the program with department of
303 public utilities, for its review and approval.

304 (c) The methodology for establishing incentive levels shall: (i) take into consideration
305 underlying system installation, soft, and fuel costs; (ii) take into account electricity revenues and
306 any federal or state incentives; (iii) rely on market-based mechanisms or price signals as much as
307 possible; (iv) differentiate incentives levels by size, location, and project type; (v) establish
308 annual targets for each technology type; (vi) ensure that the costs of the program are shared
309 collectively among all ratepayers of the distribution companies; and (vii) promote investor
310 confidence through long-term incentive revenue certainty and market stability.

311 (d) Attributes, as defined by the department, of the Class I renewable energy generating
312 sources that qualify under regulations established pursuant to this section shall be eligible for use
313 by retail electric suppliers pursuant to their obligations under section 11F.

314 SECTION 28. Chapter 30A of the General Laws is hereby amended by inserting after
315 section 10A the following section:-

316 Section 10B. Notwithstanding section 10, in any adjudicatory proceeding regarding a
317 petition, request for approval or investigation of a gas company or electric company, as those

318 terms are defined in section 1 of chapter 164, the following shall be permitted to participate as
319 full parties in the proceeding: (i) a municipality that is within the service area of such company;
320 (ii) a member of the general court whose district includes ratepayers of such company; and (iii) a
321 group of not less than 50 persons who are immediately and significantly impacted by such a
322 petition or request for approval or investigation and whose involvement would not unduly
323 broaden the issues in the proceeding.

324 SECTION 29. Section 16 of chapter 71 of the General Laws, as appearing in the 2016
325 Official Edition, is hereby amended by adding the following subsection:-

326 (s) To lease or license land to a business or other organization for periods not exceeding
327 30 years for the purpose of generating renewable energy; provided, however, that such use shall
328 not interfere with the educational programs being conducted by the district; provided further, that
329 no lease or license shall be executed until the expiration of 60 days after the date on which the
330 lease or license was voted on by the district committee; and provided further, that before the
331 expiration of this period, any member town of the regional school district may hold a town
332 meeting to express disapproval of the lease or license authorized by the district committee and if
333 at that meeting a majority of the voters present and voting disapprove of the lease or license
334 authorized by the district committee, the lease or license shall not be executed.

335 SECTION 30. Chapter 111 of the General Laws is hereby amended by inserting after
336 section 142O the following section:-

337 Section 142P. There shall be at least 1 air monitoring station within a 1-mile radius of a
338 working natural gas compressor station to collect data and verify compliance with the National
339 Ambient Air Quality Standards. Construction and maintenance of air monitoring stations shall be

340 funded through the building permit paid for by the operating energy corporation to the
341 department of environmental protection. Personnel shall be staffed through that department to
342 collect data on a weekly basis, varying between morning and evening collection times.

343 SECTION 31. Section 1B of chapter 164 of the General Laws, as appearing in the 2016
344 Official Edition, is amended by adding the following subsection:

345 (g)(1) Each distribution company shall offer to residential and small commercial and
346 industrial customers at least 1 option for a time-of-use rate, including differentials for energy
347 supply, transmission and distribution that is designed to reflect the cost of providing electricity at
348 different times of the day and year, but shall not include demand charges. Peak time periods for
349 each rate shall not be longer than 6 hours in length per day and, as consistent with cost causation,
350 price differentials shall be sufficient to motivate customer response. Each distribution company
351 shall provide each customer, at least once annually, a summary of available rate options with a
352 calculation of expected bill impacts under each option. Options for a time-of-use rate shall be
353 posted prominently on the website of each distribution company, including the ability to opt into
354 such a rate online, and additional educational material. If a customer opts into a time-of-use rate,
355 the distribution company shall install all necessary equipment within 60 days after the notice to
356 opt in. A customer may choose a different rate schedule after 1 year.

357 (2) If the department approves rates that include time-varying pricing on an opt-out basis,
358 the opt-in time of use rate structure may be discontinued but each distribution company shall
359 offer a time-varying rate to all residential and all small commercial and industrial customers at
360 all times. In considering an opt-out time-varying rate structure, the department shall consider the
361 impacts of such a structure on low-income and vulnerable consumers and shall take appropriate

362 mitigating actions, including the consideration of continuing low-income discount and other
363 selected categories of customers on non-time-varying rate structures and allowing these
364 categories of customers to opt into time-varying rates.

365 (3) The department shall promulgate rules and regulations necessary to carry out this
366 subsection which shall include, but not be limited to: (i) the procedure for procurement of time-
367 varying default service offerings; and (ii) separately accounting for the reconciliation of expenses
368 for time-varying default service procurement from customers on time-varying default service.

369 SECTION 32. Said chapter 164 is hereby further amended by inserting after section 1K
370 the following section:-

371 Section 1L. (a) As used in this section, the following words shall have the following
372 meanings unless the context clearly requires otherwise:

373 “Low-income customer”, a retail customer who is on a residential low-income discount
374 distribution rate as set forth in subsection (4) of section 1F or who participates in a low-income
375 energy assistance program.

376 “Residential retail customer”, a retail customer in the commonwealth who is on a
377 residential distribution rate.

378 (b) No supplier or entity acting on the supplier’s behalf shall:

379 (1) extend an electricity supply agreement with a residential retail customer beyond the
380 agreement’s stated term without receiving the customer’s affirmative written consent to do so at
381 least 2 months prior to the end of the electricity supply agreement’s stated term unless the rate
382 provided for the extended term is equal to or less than the rate applied to the stated terms; or

383 (2) charge a cancellation fee of greater than \$50 to a residential retail customer.

384 (c) As a condition of licensure under paragraph (1) of section 1F, each supplier shall:

385 (1) not less than quarterly, provide to the department: (i) a list detailing each rate the
386 supplier charged to residential retail customers; and (ii) the number of residential retail
387 customers charged each rate included in such list by rate class; provided, however, that the
388 department shall publish the list on the department's website, energyswitchma.gov, or a
389 successor website;

390 (2) not less than annually, provide data to the department concerning any renewable
391 energy certificates retired in connection with the generation service provided to individual
392 residential retail customers; provided, however, that such data shall include the geographic
393 location and fuel type of each such renewable energy certificate, the total cost of each renewable
394 energy certificate and whether each certificate is RPS Class I eligible pursuant to section 11F of
395 chapter 25A; and provided further, that the department shall publish such information on its
396 website, energyswitchma.gov, or a successor website;

397 (3) provide on its bills, if the electric supplier chooses to provide its own billing and
398 collection services, at a minimum, the requirements listed in subsection (d); and

399 (4) guarantee that each low-income customer shall pay a rate that is either equal to or less
400 than the fixed basic service rate charged by the low-income customer's electric distribution
401 company for the same period of time.

402 (d) Each electric distribution company that bills on behalf of a supplier pursuant to
403 section 1D shall include the following information on the first page of each bill for each
404 residential customer receiving electric generation service from a supplier:

405 (i) the electric generation service rate;

406 (ii) the term and expiration date of such rate;

407 (iii) the cancellation fee, if applicable;

408 (iv) notification that such rate is variable, if applicable;

409 (v) the fixed basic service rate for the same period;

410 (vi) the term and expiration date of the fixed basic service rate;

411 (vii) the dollar amount that would have been billed for the electric generation service
412 component had the residential retail customer been receiving fixed basic service;

413 (viii) an electronic link or internet web site address to the department's website,
414 energyswitchma.gov, or a successor website and a toll-free telephone number and other
415 information necessary to enable the residential retail customer to obtain further information or
416 make the switch to another supplier or to basic service; and

417 (ix) if a residential retail customer is enrolled in automatic electronic bill payments
418 and does not receive a bill through United States mail, a link to the customer's bill in electronic
419 mail with confirmation of bill payment.

420 An electric distribution company that implements the billing information requirements of
421 this subsection may recover from electric suppliers all reasonable costs for such implementation.

422 (e) Each electric distribution company shall submit a report to the department and to the
423 attorney general semi-annually that details the numbers of low-income customers and all other
424 residential retail customers, by supplier, for each zip code in the electric distribution company's
425 service territory. This report shall be published on the department's website, energyswitch.gov
426 or a successor website.

427 (f) A violation of the conditions of licensure under this section shall be punished pursuant
428 according to subsection (7) of section 1F of not less than \$1,000 per violation per day. In
429 addition, the attorney general may bring an action under section 4 of chapter 93A to enforce the
430 consumer protection provisions of this section and to obtain restitution, civil penalties, injunctive
431 relief and any other relief awarded pursuant to said chapter 93A.

432 (g) Not less than quarterly, the department shall publish each supplier's complaint data,
433 sourced from complaints made to the department and those made to the attorney general and the
434 distribution companies, as provided to the department annually, on the department's website,
435 energyswitchma.gov or a successor website. The complaint data shall include, but not be limited
436 to, the total number of complaints received regarding the supplier, the number of complaints
437 received for misleading or false marketing, the number of complaints for unauthorized switching,
438 the number of complaints for Do Not Call list violations and the number of complaints for
439 aggressive marketing.

440 (h) This section shall not apply to a supplier in the course of providing generation
441 services pursuant to sections 134, 136 and 137.

442 SECTION 33. Section 69H of said chapter 164, as appearing in the 2016 Official
443 Edition, is hereby amended by inserting after the word “environment”, in line 6, the following
444 words:- and public health.

445 SECTION 34. Said section 69H of said chapter 164, as so appearing, is hereby further
446 amended by striking out, in lines 20 and 21, the words “2 commissioners of the commonwealth
447 utilities commission” and inserting in place thereof the following words:- the commissioner of
448 public health, 1 commissioner of public utilities.

449 SECTION 35. Section 94A of said chapter 164, as so appearing, is hereby amended by
450 adding the following 2 paragraphs:-

451 Nothing in this section shall be construed to authorize the department to review and
452 approve contracts for natural gas pipeline capacity filed by electric companies.

453 As part of the review of a contract with a term of more than 1 year for new gas pipeline
454 capacity, the department shall determine whether such contract is in the public interest. The
455 department shall not approve such a contract unless, as part of its public interest determination,
456 the department finds that: (i) such contract is necessary to satisfy demand for gas by, and is cost-
457 effective for, in-state ratepayers; (ii) such contract compares favorably to other reasonably
458 available options in terms of its impact on rates, the economy, environment, climate, local
459 communities, public health, safety and welfare; (iii) the parties to the proposed contract have
460 attempted, in good faith, to identify and evaluate alternatives that would reduce or eliminate the
461 need for private land takings or public land disposition including, but not limited to, expanded
462 and more long-term utilization of existing gas infrastructure, distribution system repairs and
463 upgrades, contracts for gas storage along unconstrained pipeline corridors, enhancement of peak-

464 shaving measures and colocation of gas infrastructure with major roadways; and (iv) for
465 contracts exceeding a term of 3 years, the parties to the proposed contract have attempted, in
466 good faith, to identify and evaluate demand-side options to reduce or eliminate the need for new
467 gas infrastructure.

468 SECTION 36. Section 134 of said chapter 164, as so appearing, is hereby amended by
469 adding the following subsection:-

470 (c)(1) As used in this subsection, the following words shall have the following meanings
471 unless the context clearly requires otherwise:

472 “Alternative compliance payment” or “ACP”, an amount established by the department
473 of energy resources that retail electricity suppliers may pay in order to discharge their renewable
474 energy portfolio standard obligation required under section 11F of chapter 25A.

475 “Community empowerment contract” or “contract”, an agreement between a municipality
476 and the developer, owner or operator of a renewable energy project.

477 “Customer”, an electricity end-use customer of an electric utility distribution company
478 regardless of how that customer receives energy supply services.

479 “Department”, the department of public utilities.

480 “Large commercial customer”, a large commercial, industrial or institutional customer, as
481 further defined by the department of energy resources utilizing existing usage-based tariff
482 structures.

483 “Municipality”, a city or town or a group of cities or towns that is not served by a
484 municipal lighting plant and meet the eligibility criteria under paragraph (9).

485 “Participant”, a customer within a municipality that has entered into a community
486 empowerment contract; provided, however, that the customer did not opt out of, or is prevented
487 from participating in, the community empowerment contract under subsection (d).

488 “Renewable energy certificate”, a certificate representing the environmental attributes of
489 1 megawatt hour of electricity generated by a renewable energy project, the creation, use and
490 retirement of which is administered by ISO New England, Inc.

491 “Renewable energy portfolio standard”, the renewable energy portfolio standard
492 established in section 11F of chapter 25A.

493 “Renewable energy project” or “project”, a facility that generates electricity using a Class
494 1 renewable energy resource and is qualified by the department of energy resources as eligible to
495 participate in the renewable energy portfolio standard and to sell renewable energy certificates
496 under the program.

497 “Residential customer”, a utility distribution customer that is a private residence or group
498 of residences, as further defined by the department of energy resources, utilizing existing usage-
499 based tariff structures.

500 “Small commercial customers”, a small or medium commercial, industrial or institutional
501 utility distribution customer, as further defined by the department of energy resources, utilizing
502 existing usage-based tariff structures.

503 (2) A municipality may, on behalf of the electricity customers within the municipality,
504 enter into a community empowerment contract with a company that proposes to construct a
505 renewable energy project. A municipality may enter into more than 1 community empowerment
506 contract and may enter into new contracts at any time.

507 (3) A community empowerment contract shall be subject to the following conditions:

508 (i) the contract shall be between the municipality and the company proposing to construct
509 a renewable energy project; provided, however, that this section shall not authorize a
510 municipality to utilize its collateral, credit or assets as collateral or credit support to the
511 counterparty of the contract and a municipality may do so only as otherwise authorized by law;

512 (ii) the renewable energy project specified in the contract shall not have begun
513 construction prior to the contract having been entered into by the municipality;

514 (iii) the contract shall be structured as a contract for differences so as to stabilize
515 electricity prices for participants and shall specify a fixed price for the energy and renewable
516 energy certificates to be generated by the project; provided, however, that the contract shall also
517 specify a means by which the project's contracted amount of energy and renewable energy
518 certificates shall be sold to a third party, at a price established by the wholesale market or an
519 index and as agreed by the parties to the contract, and the proceeds from which shall be credited
520 to the amount owed from the participants to the project; provided further, that if the amount
521 earned in a sale exceeds the agreed fixed price, the participants shall be credited from the project
522 for the difference between the sale price and the contracted fixed price; and provided further, that
523 a contract shall not be an agreement to physically deliver electric energy to the participants but it
524 may require delivery of renewable energy certificates;

525 (iv) the contract shall specify whether renewable energy certificates from the renewable
526 energy project are to be provided and, if so provided, shall specify how the renewable energy
527 certificates are to be transmitted and disposed of or retired; provided, however, that renewable
528 energy certificates purchased through a contract may be: (A) assigned to the load of each
529 participant or subset of participants, as stipulated in the contract, so as to increase the amount of
530 renewable energy attributed to use by the participants in the aggregate; or (B) sold in a
531 transparent, competitive process, the proceeds from which shall be applied to the contract for
532 differences mechanism under clause (iii); and provided further, that a renewable energy
533 certificate purchased through a contract shall not be used by a basic service supply provider or
534 competitive supply provider to meet its requirements under the renewable energy portfolio
535 standard unless the renewable energy certificate is first sold to the supplier in a competitive,
536 transparent process under this clause;

537 (v) the contract shall have a term of not less than 10 years from the time the specified
538 renewable energy project commences operation;

539 (vi) the contract shall describe the calculations by which a charge or credit to a
540 participant or to the renewable energy project are calculated based on the contract for differences
541 mechanism under clause (iii); provided, however, that the calculations shall ensure full payment
542 or credit to the renewable energy project even if a participant does not make full payment of the
543 participant's distribution utility bill; provided further, that if there is a nonpayment of all or a
544 portion of a distribution utility bill, an increase in charges to the contract participants may be
545 used to ensure sufficient revenue to meet obligations to the project; and provided further, that the
546 contract shall specify a contract administrator who shall perform the calculations under this

547 subsection and determine, for implementation by the distribution utility, the charges and credits
548 due to the project, participants, distribution utility and others as required by the contract; and

549 (vii) the contract may exempt for differences mechanism residents of the municipality
550 who receive low-income electric rates.

551 (4) A town may enter into a community empowerment contract upon authorization by a
552 majority vote of town meeting, town council or other municipal legislative body. A city may
553 authorize a community empowerment contract by a majority vote of the city council or
554 municipal legislative body, with the approval of the mayor or the city manager in a Plan D or
555 Plan E form of government. Two or more municipalities may initiate a process jointly to
556 authorize community empowerment contracting by a majority vote of each municipality under
557 this paragraph. Prior to an authorizing vote, a public hearing shall be held to inform the
558 municipalities of the proposed contract, the impact on residents and information on how to opt
559 out of the contract if it proceeds. This hearing shall specify the proposed project under the
560 contract and the length of the contract. An entity that is not a party to the contract shall estimate
561 the contract's rate impacts under reasonable scenarios for future energy prices and the estimates
562 shall be presented. The proposed project and contract information, estimated rate impact on
563 constituents, procedure for customers to opt out of the proposed contract and information
564 regarding the public hearing shall also be mailed to the residents of the municipalities 30 days
565 before the hearing.

566 (5) The electricity customers within a municipality shall be required to participate in a
567 community empowerment contract; provided, however, that a customer may opt not to
568 participate in a contract if the customer provides notice to an administrator designated by the

569 municipality within 90 days after the vote authorizing a contract or, in the case of a residential
570 user receiving a low-income electric rate, at any time. No customer shall be a participant in a
571 contract if that customer uses more than 5 per cent of the total annual electricity usage of the
572 electricity customers located within a single municipality that is a party to the contract or, in the
573 case of a contract with a group of municipalities, 5 per cent of the total annual electricity usage
574 of the electricity customers located in the group of municipalities that are parties to the contract.
575 Residential and small commercial customers that establish service within a municipality after the
576 municipality enters into a community empowerment contract shall be required to participate in
577 any community empowerment contracts in effect for the municipality at the time the new service
578 is established. A large commercial customer within a municipality may become a participant
579 unless otherwise prohibited and, upon electing to become a participant, shall remain a participant
580 for the remainder of the community empowerment contract as long as the large commercial
581 customer continues to be located within the municipality.

582 (6) The department shall promulgate regulations, guidelines or orders that:

583 (i) establish the manner in which a municipality may request from a distribution utility,
584 and which the distribution utility shall provide in a timely manner, the summary historic load and
585 payment information of the electricity customers within the municipality that is necessary for a
586 municipality to request and analyze a proposal for a community empowerment contract;
587 provided, however, that the distribution utility may charge the municipality for verifiable,
588 reasonable and direct costs associated with providing the information as approved by the
589 department generally or on a case-by-case basis;

590 (ii) establish a procedure by which a municipality shall have a community empowerment
591 contract approved by the department; provided, however, that a community empowerment
592 contract shall not take effect until so approved and the department shall be obligated to and shall
593 approve a contract that meets the requirements under this section; and provided further, that in
594 establishing the approval procedure, the department shall adopt means to minimize the
595 administrative and legal costs to municipalities to the maximum extent possible;

596 (iii) establish guidelines or standards by which the contract administrator under clause
597 (vi) of paragraph (3) shall: (A) provide utility adjustments to charges to the distribution or credits
598 to participants via a line item on the distribution utility bill; and (B) provide information to the
599 distribution utility that is necessary to enable it to make or receive payments to or from the
600 project and to others as necessary; provided, however, that each community empowerment
601 contract shall be indicated on a participant's distribution utility bill by a line item specific to the
602 contract; provided further, that a distribution utility may recover verifiable and reasonable costs
603 for the implementation of this subsection from a contract party or participant except as provided
604 for in clause (iv); provided further, that should implementation of this subsection require changes
605 to the distribution utility company's billing system that would not otherwise be incurred, the cost
606 of implementing such changes shall, upon approval by the department as being verifiable,
607 reasonable and necessary to implement this subsection, be paid for by ACP funds or, if available
608 ACP funds are insufficient, by the Massachusetts Renewable Energy Trust Fund established
609 under section 9 of chapter 23J.

610 (iv) establish guidelines or standards by which distribution company customers may
611 receive or access accurate energy source disclosure information, taking into account the
612 renewable energy certificates that may be ascribed to each customer's electricity usage and

613 regardless of the source from which the renewable energy certificates were supplied or
614 purchased; provided, however, that should implementation of this subsection require changes to
615 the distribution utility company's billing system that would not otherwise be incurred, the cost of
616 implementing such changes shall, upon approval by the department as being verifiable,
617 reasonable and necessary to implement this subsection, be paid for by ACP funds or, if available
618 ACP funds are insufficient, by the Massachusetts Renewable Energy Trust Fund established
619 under section 9 of chapter 23J.

620 (7) The department of energy resources shall promulgate regulations or guidelines that:

621 (i) establish the manner in which, in the case of a community empowerment contract in
622 which the renewable energy certificates are to be assigned to participants, the renewable energy
623 certificates may be transmitted and retired appropriately and the energy source disclosure
624 information accurately provided to participants; and

625 (ii) establish recommended practices to ensure transparency and accountability on the
626 part of a municipality in entering into and managing a community empowerment contract,
627 including the means by which an executed community empowerment contract shall be available
628 for public inspection and recommendations for a municipality to follow in order to ensure
629 compliance with the requirements for entering into a community empowerment contract.

630 The department of energy resources shall also provide technical assistance to a
631 municipality regarding a community empowerment contract upon request.

632 (8) A community empowerment contract shall be in addition to, and aside from, an
633 electricity supply contract that a customer may have at the time of the contract or that that the

634 customer may later seek to establish. A municipality that enters into a community empowerment
635 contract under this subsection shall not be considered a wholesale or retail electricity supplier. A
636 community empowerment contract shall not require participants to change their choice of
637 electricity supplier regardless of whether the supplier is a competitive supplier or a basic service
638 supplier.

639 SECTION 37. Section 138 of said chapter 164, as so appearing, is hereby amended by
640 inserting after the word “entity”, in line 96, the following words:- or publicly-assisted housing
641 or its residents.

642 SECTION 38. Said section 138 of said chapter 164, as so appearing, is hereby further
643 amended by striking out, in lines 122 and 123, the words “is assigned 100 per cent of the output”
644 and inserting in place thereof the following words:- or publicly-assisted housing or its residents
645 are assigned 100 per cent of the output or net metering credits.

646 SECTION 39. Said section 138 of said chapter 164, as so appearing, is hereby further
647 amended by inserting after the definition of “Net metering facility of a municipality or other
648 governmental entity” the following definition:-

649 “Publicly-assisted housing”, housing as defined in section 1 of chapter 40T.

650 SECTION 40. Section 139 of said chapter 164, as so appearing, is hereby amended by
651 striking out, in lines 62 and 63, the words “and that are located in the same ISO-NE load zone
652 to” and inserting in place thereof the following words:- , regardless of which ISO-NE load zone
653 the customers are located in, to.

654 SECTION 41. Said section 139 of said chapter 164, as so appearing, is hereby further
655 amended by inserting after the word “charges”, in line 85, the second time it appears, the
656 following words:- , including demand charges as part of a monthly minimum reliability
657 contribution except as authorized under subsection (j).

658 SECTION 42. Said section 139 of chapter 164 of the General Laws, as so appearing, is
659 hereby amended by striking out subsection (f) and inserting in place thereof the following
660 subsection:-

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

664 SECTION 43. Subsection (i) of said section 139 of said chapter 164, as so appearing, is
665 hereby amended by adding the following 3 sentences:- Any facility which is at least 75 per cent
666 owned by, or at least 75 per cent of which is producing net metering credits for, 3 or more
667 individual residential customers, including a neighborhood net metering facility, in which no one
668 residential customer owns more than 60 kilowatts of design capacity or receives more credits
669 than the amount of credits produced annually by a facility with a 60 kilowatt design capacity
670 shall be exempt from subsections (b½) and (k) and may net meter and accrue Class I net
671 metering credits. Any such facility shall also be exempt from any limit on the aggregate net
672 metering capacity set by subsection (f). An agricultural net metering facility utilizing anaerobic
673 digestion technology or an anaerobic digestion net metering facility shall be exempt from
674 aggregate net metering capacity caps under subsection (f) and may net meter and accrue Class I,
675 II, or III net metering credits.

676 SECTION 44. Said section 139 of said chapter 164, as so appearing, is hereby further
677 amended by inserting after the word “system”, in line 150, the following words:- ;provided,
678 however, that a distribution company shall not assess a demand charge unless it is a charge based
679 on demand during a predetermined portion of the hours of a day defined as peak hours of system
680 demand and unless the distribution company has informed all of its customers of the manner in
681 which any such demand charges are assessed; and provided further, that a distribution company
682 shall only assess a demand charge if metering functionality or technology is available to the
683 customer at a reasonable cost to provide the customer with near real time access to electricity
684 usage data.

685 SECTION 45. Said section 139 of said chapter 164, as so appearing, is hereby further
686 amended by striking out, in lines 175 to 177, inclusive, the words “; provided that, the date
687 designated by the department shall be not later than December 31, 2018”.

688 SECTION 46. Said chapter 164 is hereby further amended by adding the following
689 section:-

690 Section 146. (a) For the purposes of this section, “lost and unaccounted for gas” shall
691 mean an amount of gas that is the difference between the total gas purchased by a gas company
692 and the sum of: (i) total gas delivered to customers; and (ii) total gas used by a gas company in
693 the conduct of its operations.

694 (b) The department shall issue regulations requiring all gas companies to report to the
695 department, in a uniform manner, lost and unaccounted for gas for each year. Such standards
696 shall include: (i) a method using operational and billing data to determine the total amount of lost
697 and unaccounted for gas and to identify and measure each of its components; and (ii) a method

698 using engineering characteristics and operational data to identify and measure all sources and
699 locations where lost and unaccounted for gas occurs in the natural gas systems.

700 (c) The department may grant waivers from regulatory requirements as necessary for the
701 development of innovative projects to reduce lost and unaccounted for gas. Such innovative
702 projects shall be intended to reduce costs to ratepayers and to reduce greenhouse gas emissions.

703 An application for a waiver shall include the goals of the innovative project, the expected
704 cost, the expected benefit to ratepayers and the expected reduction in greenhouse gas emissions.

705 SECTION 47. Section 83B of chapter 169 of the acts of 2008, inserted by section 12 of
706 chapter 188 of the acts of 2016, is hereby amended by adding the following definition:-

707 “Offshore wind energy transmission”, transmission that delivers electricity from offshore
708 wind energy generation to the transmission system on the mainland.

709 “Offshore wind energy transmission developer”, a provider of electric transmission for
710 offshore wind energy generation.

711 SECTION 48. Subsection (b) of section 83C of said chapter 169, as appearing in said
712 section 12 of said chapter 188, is hereby amended by striking out, in lines 16 and 17, the words
713 “; provided, however” and inserting in place thereof the following words:- and may specify that
714 the distribution companies in coordination with the department of energy resources may
715 competitively procure and that the distribution companies may select any proposals for offshore
716 wind energy transmission sufficient to deliver energy generation procured pursuant to this
717 section from designated wind energy areas for which an initial federal lease was issued on a
718 competitive basis after January 1, 2012 that may be developed independent of such offshore

719 wind energy generation; provided, however, that such transmission service shall be made
720 available for use by more than 1 wind energy generation project and shall not exceed the
721 generation capacity required by this section; provided further, that any selection of offshore wind
722 energy transmission shall be the most cost-effective mechanism for procuring reliable, low-cost
723 offshore wind energy transmission service for ratepayers in the commonwealth; and provided
724 further.

725 SECTION 49. Subsection (d) of said section 83C of said chapter 169, as so appearing, is
726 hereby amended by inserting after the word “bid”, in line 11, the following words :- or
727 independently as offshore wind energy transmission.

728 SECTION 50. Section 16 of chapter 298 of the acts of 2008 is hereby amended by
729 striking out, in lines 3 and 4, the words “, and shall expire on December 31, 2020”.

730 SECTION 51. The secretary of energy and environmental affairs shall conduct a detailed,
731 quantitative modeling and analysis of the commonwealth’s energy economy and emissions,
732 which shall be sufficient to identify multiple technically and economically-feasible pathways
733 to reduce statewide emissions consistent with the 2050 emissions limit required by subsection (b)
734 of section 3 of chapter 21N of the General Laws. Such modeling and analysis shall include back-
735 casting planning considerations and may be conducted in conjunction with other states or regional
736 entities as part of an analysis of reducing regional emissions by 2050 to a level consistent with
737 those required by said chapter 21N. The secretary shall publish the results of its modeling and
738 analysis and shall make the model, all model assumptions and all input and output data available
739 for public inspection and use. The secretary shall file a report of its findings with the clerks of
740 the senate and house of representatives, the senate and house committees on ways and means and

741 the joint committee on telecommunications, utilities and energy not later than December 31,
742 2020.

743 SECTION 52. (a) Notwithstanding any general or special law to the contrary, the
744 department of energy resources may analyze and recommend offshore wind energy generation
745 solicitations and procurements of up to 5,000 megawatts of aggregate nameplate capacity by
746 December 31,2035 if the department, after investigation, makes a written finding that procuring
747 more than the 1,600 megawatts required by section 83C of chapter 169 of the acts of 2008 is
748 consistent with the commonwealth's energy policy, including the policies established in said
749 chapter 169 and chapter 298 of the acts of 2008 and after consideration of the economic benefits
750 of additional nameplate capacity, the effect on commercial fisheries and operations and the
751 impact on ratepayers, including distribution company customers. The department shall publish a
752 plan to effectuate any such additional solicitations and procurements which shall include the
753 recommendations of the joint procurement taskforce established in subsection (c). The plan shall
754 also identify any potential adverse impacts on the commercial and recreational marine fisheries
755 of the commonwealth in addition to potential methods to mitigate those impacts. Notwithstanding
756 the requirements of this section, as part of the plan, the department may require different
757 solicitation, evaluation and selection of parties as required by said section 83C of said chapter
758 169 if such changes are recommended by the joint procurement taskforce or will benefit
759 distribution company customers. The department shall hold at least 1 public hearing to consider
760 the economic benefits of up to 5,000 megawatts of aggregate nameplate capacity and the impact
761 of such subsequent solicitations and procurements on the commonwealth's energy policies under
762 this subsection, the commonwealth's fisheries and commercial fishing industry and on

763 ratepayers, including distribution company customers. The plan required to be published under
764 this subsection shall be filed with the clerks of the senate and the house of representatives.

765 (b) Notwithstanding any general or special law to the contrary, the department of energy
766 resources may analyze and recommend clean energy generation solicitations and procurements
767 for more than the 9,450,000 megawatts-hours as required by section 83D of chapter 169 of the
768 acts of 2008 if the department, after investigation, makes a written finding that doing so is
769 consistent with the commonwealth's energy policy, including the policies established in said
770 chapter 169 and chapter 298 of the acts of 2008 and after consideration of the economic benefits
771 of additional clean energy generation and the impact on ratepayers, including distribution
772 company customers. The department shall publish a plan to effectuate any such additional
773 solicitations and procurements which shall include the recommendations of the joint
774 procurement taskforce established in subsection (c). Notwithstanding the requirements of this
775 section, as part of the plan, the department may require different solicitation, evaluation and
776 selection of parties as required by said section 83D of said chapter 169 if such changes are
777 recommended by the joint procurement taskforce or will benefit distribution company customers.
778 The department shall hold at least 1 public hearing to consider the economic benefits of more
779 than 9,450,000 megawatts-hours of clean energy generation and the impact of such subsequent
780 solicitations and procurements on the commonwealth's energy policies under this subsection and
781 on ratepayers, including distribution company customers. The plan required to be published
782 under this subsection shall be filed with the clerks of the senate and the house of representatives.

783 (c) There shall be a joint procurement taskforce consisting of the commissioner of energy
784 resources, the attorney general and representatives of the distribution companies to conduct a
785 review of the procurements conducted pursuant to sections 83C and 83D of chapter 169 of the

786 acts of 2008 to identify and report on the challenges and strengths in the respective procurement
787 processes and to make recommendations to improve the process for future procurements. The
788 taskforce shall: (i) compare the requirements of sections 83C and 83D of said chapter 169 to
789 similar procurements in other states; (ii) examine the makeup of the procurement evaluation and
790 selection teams; (iii) review the evaluation metrics as identified in the request for proposals and
791 applied in the evaluation process; (iv) analyze the selection process utilized; (v) review the
792 consideration given to economic impacts; (vi) consider the impact and feasibility of reducing the
793 timeline of implementation between procurements under section 83C of said chapter 169; and
794 (vii) analyze the impact of the procurements on distribution customers and energy markets. The
795 taskforce shall make recommendations on improvements to the procurement process including,
796 but not limited to: (1) changing the solicitation parties, the evaluation team and the selection
797 team; (2) the appropriate role of the distribution companies in the process; (3) the evaluation
798 metrics; (4) the impact of additional procurements on the price and availability of renewable
799 energy credits pursuant to section 11F of chapter 25A of the General Laws; and (5) the efficacy
800 of additional procurements. The task force shall file its report with the clerks of the senate and
801 house of representative, the house and senate committees on ways and means and the joint
802 committee on telecommunications, utilities and energy not later than December 31, 2019.

803 SECTION 53. (a) The department of environmental protection shall promulgate
804 regulations requiring producers, importers and wholesale distributors that sell, supply or offer for
805 sale transportation fuels in the commonwealth to report to the department all sales of
806 transportation fuel sales made in the commonwealth and the source of any fuel sold to the
807 department. The regulations shall require the Department of Environmental Protection to
808 compute and track the individual and collective lifecycle greenhouse gas emissions of all fuels,

809 as well as the carbon intensity of each fuel, that are reported by regulated entities on an annual
810 basis.

811 (b) All sales, lifecycle greenhouse gas emissions and carbon intensity data collected or
812 computed by the department pursuant to the regulations required by subsection (a) shall be
813 published by the department in an annual report that shall be made available to the public.

814 SECTION 54. The Massachusetts Department of Transportation, in consultation with the
815 department of state police, shall conduct a feasibility study on authorizing an electric vehicle as
816 defined in section 16 of chapter 25A of the General Laws to travel in lanes designated for use by
817 high-occupancy vehicles notwithstanding the number of occupants in the vehicle. The study shall
818 include, but not be limited to: (i) an examination of existing capacity in lanes designated for use
819 by high-occupancy vehicles; (ii) the impact of additional electric vehicles in the lanes; and (iii) a
820 plan to properly differentiate eligible electric vehicles to ensure appropriate access to the
821 designated lanes. The department shall file a report on the results of the study with the clerks of
822 the senate and the house of representatives and the chairs of the joint committee on
823 transportation not later than July 31, 2019.

824 SECTION 55. The Massachusetts Department of Transportation, in consultation with the
825 executive office of energy and environmental affairs, shall develop and implement a program to
826 promote private electric vehicle ownership with the goal of ensuring that 25 per cent of motor
827 vehicles owned or leased in the commonwealth shall be electric vehicles by December 31, 2028.
828 The department shall promulgate regulations necessary to implement this program.

829 SECTION 56. Notwithstanding any general or special law to the contrary, the department
830 of public utilities, in consultation with the department of energy resources, shall develop a plan

831 to facilitate the authorization and regulation of the creation of new municipal light districts in
832 municipalities that choose to undertake such action. The plan shall include, but not be limited to,
833 the acquisition or creation of the necessary infrastructure and mechanisms to acquire and deliver
834 electricity to customers within the district. The department shall submit the plan to the clerks of
835 the senate and the house of representatives and the chairs of the joint committee on
836 telecommunications, utilities and energy not later than December 31, 2018.

837 SECTION 57. Notwithstanding any general or special law to the contrary, no new
838 natural gas compressor station shall be located in an area that is less than 0.5 miles in linear
839 distance from: (i) a playground;(ii) a licensed day care center; (iii) a school; (iv) a church; (v) an
840 environmental justice population neighborhood; (vi) an area of critical environmental concern as
841 determined by the secretary of environmental affairs under 301 CMR 12.00; (vii) a waterway
842 preserved and protected for water-dependent uses under chapter 91; or (viii) an area occupied by
843 residential housing. Linear distance shall be measured from any point along a natural gas
844 compressor station to the outermost point of buildings or areas in clauses (i) to (viii), inclusive;
845 provided, however, that repairs or replacements that do not increase the capacity of a natural gas
846 compressor station in operation prior to January 1, 2019, shall not be subject to this section. For
847 the purposes of this section, “environmental justice population neighborhood” shall mean a
848 neighborhood with an annual median household income of not more than 65 per cent of the
849 statewide median income or with a segment of the population that consists of residents that is not
850 less than 25 per cent minority, foreign born or lacking in English language proficiency based on
851 the most recent United States census.

852 SECTION 58. (a) As used in this section, the following words shall have the following
853 meanings unless the context clearly requires otherwise:

854 “Board”, the pension reserves investment management board established in section 23 of
855 chapter 32 of the General Laws.

856 “Company”, a sole proprietorship, organization, association, corporation, partnership,
857 joint venture, limited partnership, limited liability partnership, limited liability company or other
858 entity or business association, including all wholly-owned subsidiaries, majority-owned
859 subsidiaries, parent companies or affiliates of such entities or business associations that exist for
860 profit-making purposes.

861 “Direct holdings”, all securities of a company held directly by the public fund or in an
862 account or fund in which the public fund owns all shares or interests.

863 “Fossil fuel company”, a company identified by a Global Industry Classification System
864 code in 1 of the following sectors: (i) coal and consumable fuels; (ii) integrated oil and gas; or
865 (iii) oil and gas exploration and production.

866 “Indirect holdings”, all securities of a company held in an account or fund, including a
867 mutual fund, managed by at least 1 person not employed by the public fund and in which the
868 public fund owns shares or interests together with other investors not subject to this section.

869 “Public fund”, the Pension Reserves Investment Trust Fund established in subdivision (8)
870 of section 22 of chapter 32 of the General Laws or the pension reserves investment management
871 board charged with managing the pooled investment fund consisting of the assets of the State
872 Employees’ and Teachers’ Retirement Systems and the assets of local retirement systems under
873 the control of the board.

874 "Thermal coal", coal used to generate electricity, including coal which is burned to create
875 steam to run turbines; provided, however, "thermal coal" shall not include metallurgical coal or
876 coking coal used to produce steel.

877 "Thermal coal company", a publicly-traded company that generates at least 50 per cent of
878 its revenue from the mining of thermal coal as determined by the board.

879 (b) Notwithstanding any general or special law to the contrary, within 30 days after the
880 effective date of this act, the public fund shall facilitate the identification of all thermal coal and
881 fossil fuel companies in which the fund owns direct or indirect holdings.

882 (c) Notwithstanding any general or special law to the contrary, the public fund shall take
883 the following actions in relation to thermal coal companies in which the fund owns direct or
884 indirect holdings:

885 (i) sell, redeem, divest or withdraw all publicly-traded securities of each thermal coal
886 company identified pursuant to subsection (b) before December 31, 2020;

887 (ii) if recommended by the commission established in subsection (d), sell, redeem, divest
888 or withdraw all publicly-traded securities of each fossil fuel company identified pursuant to
889 subsection (b) according to the following schedule: (i) at least 33 per cent of such assets shall be
890 removed from the public fund's assets under management before December 31, 2022; (ii) 67 per
891 cent of such assets shall be removed from the public fund's assets under management before
892 December 31, 2024; and (iii) 100 per cent of such assets shall be removed from the public fund's
893 assets under management before December 31, 2025.

894 The public fund shall not acquire new assets or securities of thermal coal companies or, if
895 so recommended by the commission established in subsection (d), fossil fuel companies.

896 (d) There shall be a special commission to investigate and study divestment of the public
897 fund from fossil fuel companies, but not including thermal coal companies, as proposed by the
898 schedule in subsection (c). The commission shall evaluate the benefits of divestment from fossil
899 fuels, not including thermal coal, compared to any potential increased risk that divestment may
900 pose to the commonwealth's pension funds and retirees.

901 The commission shall consist of: the state treasurer or a designee who shall serve as
902 chair; the executive director of the public employee retirement administration commission or a
903 designee; a member of the Retired State, County and Municipal Employees Association of
904 Massachusetts; an active member of the Service Employees International Union who shall be
905 designated by the state council; and 3 private citizens to be appointed by the governor who shall
906 have expertise and current employment in environment, social and governance-related finance,
907 institutional divestment or climate science.

908 The commission shall consult with experts in the relevant fields of economics, wealth
909 management, fiduciary law and environmental sciences. The report shall include, but not be
910 limited to: (i) recommendations on defining fossil fuel companies; (ii) a sensitivity analysis of
911 the potential impact of divestment on the fund's return on investment, including an analysis of
912 the potential impact that divestment from fossil fuel companies may have on the amortization
913 schedules for the commonwealth's pension funds; (iii) an analysis and recommendations as to
914 how to best incorporate assessment of carbon risk into the investment policy statement; (iv) an
915 analysis of the potential environmental and policy benefits derived from divestment from fossil

916 fuel companies; (v) recommendations on divestment of indirect holdings, particularly regarding
917 potential exceptions for mutual funds and index funds that may invest in fossil fuel companies;
918 (vi) analysis of the potential impact that divestment may pose to companies and employees based
919 in the commonwealth; and (vii) recommendations on effective administration and oversight of
920 fossil fuel divestment.

921 The commission shall file its report and its recommendations, together with an actuarial
922 analysis, if any, with the clerks of the senate and house of representatives, the chairs of the senate
923 and house committees on ways and means and the chairs of the joint committee on public service
924 not later than April 1, 2019.

925 (e) Notwithstanding this section, any requirement to divest the public fund from thermal
926 coal or other fossil fuel companies shall not apply to indirect holdings in actively-managed
927 investment funds; provided, however, that the public fund shall submit letters to the managers of
928 the investment funds containing thermal coal or other fossil fuel companies requesting that they
929 consider removing remove such companies from the investment fund or create a similar actively-
930 managed fund with indirect holdings devoid of such companies. If the manager creates a similar
931 fund, the public fund shall replace all applicable investments with investments in the similar fund
932 in an expedited timeframe consistent with prudent investing standards. For the purposes of this
933 section, private equity funds shall be deemed to be actively-managed investment funds.

934 (f) Notwithstanding any general or special law to the contrary, the public fund may cease
935 divesting from companies under subsection (c), reinvest in companies from which it divested
936 under said subsection (c) or continue to invest in companies from which it has not yet divested
937 upon clear and convincing evidence showing that the total and aggregate value of all assets under

938 management by or on behalf of the public fund becomes: (i) equal to or less than 99.5 per cent;
939 or (ii) 100 per cent less 50 basis points of the net value of all assets under management by or on
940 behalf of the public fund in the previous year as a direct result of divestment. Cessation of
941 divestment, reinvestment or any subsequent ongoing investment authorized by this section shall
942 be strictly limited to the minimum steps necessary to avoid the contingency set forth in the
943 preceding sentence. For any cessation of divestment and in advance of any cessation authorized
944 by this subsection, the public fund shall provide a written report to the attorney general, the
945 senate and house committees on ways and means and the joint committee on public service,
946 updated semi-annually thereafter as applicable, setting forth the reasons and justification,
947 supported by clear and convincing evidence, for its decisions to cease divestment, to reinvest or
948 to remain invested in thermal coal.

949 This subsection shall also apply to any divestment of the public fund from fossil fuel
950 companies.

951 (g) Present, future and former board members of the public fund, jointly and individually,
952 state officers and employees and investment managers under contract with the public fund shall
953 be indemnified from the General Fund and held harmless by the commonwealth from all claims,
954 demands, suits, actions, damages, judgments, costs, charges and expenses, including court costs
955 and attorneys' fees, and against all liability, losses and damages of any nature whatsoever that
956 such present, future or former board members, state officers and employees and investment
957 managers shall or may at any time sustain by reason of any decision to restrict, reduce or
958 eliminate investments in fossil fuel companies.

959 (h) The public fund shall file a copy of the lists of thermal coal in which the fund owns
960 direct or indirect interests with the clerks of the senate and the house of representatives and the
961 attorney general within 30 days after of the effective date of this act. Annually thereafter, the
962 public fund shall file a report with the clerks of the senate and the house of representatives and
963 the attorney general which shall includes: (i) all investments sold, redeemed, divested or
964 withdrawn in compliance with subsection (c); and (ii) all prohibited investments from which the
965 public fund has not yet divested under said subsection (c). This subsection shall also apply to any
966 divestment of the public fund from fossil fuel companies.

967 SECTION 59. The secretary of transportation and the Massachusetts Bay Transportation
968 Authority control board established in section 200 of chapter 46 of the acts of 2015, in
969 consultation with the executive office of energy and environmental affairs, shall develop and
970 complete a detailed plan for the full electrification of all of the authority's passenger vehicles,
971 including buses, ferries and commuter rail lines. The plan for electrification of the commuter rail
972 shall include the procurement by purchase, lease or other method of electric locomotives, electric
973 multiple unit equipment or a combination of both. The plan shall include the design and
974 construction of high level platforms at all stations on each line. The overall plan shall include a
975 detailed project schedule including all necessary procurement activities, leading to all of the
976 authority's passenger vehicles being electric by December 31, 2030. The plan shall be filed with
977 the clerks of the senate and house of representatives and the chairs of the joint committee on
978 transportation and shall be made publicly available on the Massachusetts Department of
979 Transportation's website not later than December 31, 2019.

980 SECTION 60. The secretary of energy and environmental affairs, in consultation with
981 the secretary of administration and finance, shall file with the with the clerks of the senate and

982 house of representatives a cost-benefit analysis report which shall include, but not be limited to,
983 an analysis of environmental and climate change implications, on the impacts to consumers and
984 state, municipal government and school districts of any actions taken to comply with chapter 298
985 of the acts of 2008. The report shall be filed not later than December 31, 2021.

986 SECTION 61. Notwithstanding any general or special law to the contrary, the state board
987 of building regulations and standards established in section 93 of chapter 143 of the General
988 Laws shall form a working group that may include representatives of the following trades:
989 planning; real estate sales and brokerage; homebuilding; and solar installation to study the
990 feasibility of requiring the installation of solar powered systems in newly-constructed housing as
991 amendments to the state building and electric codes, and the feasibility of regulatory methods to
992 promote housing that consumes a total amount of annual energy that is substantially equivalent
993 to the amount of renewable energy generated on site, also known as net-zero housing. The
994 working group shall report to the general court the result of its study and its recommendations, if
995 any, together with drafts of legislation or regulations necessary to carry its recommendations into
996 effect, by filing the same with the clerks of the senate and house of representatives not later than
997 July 1, 2019.

998 SECTION 62. The Massachusetts Bay Transportation Authority shall issue a report on
999 the development of a power management system to capture and reuse energy produced from
1000 regenerative braking with authority trains. The report shall be filed with the clerks of the senate
1001 and the house of representatives not later than December 31, 2019.

1002 SECTION 63. Clause (3) of subsection (a) section 11F of chapter 25A of the General
1003 Laws, as appearing in section 25, shall apply to 2019 and each year thereafter.

1004 SECTION 64. Sections 41, 42 and 44 shall apply to any monthly minimum reliability
1005 contribution, including a monthly minimum reliability contribution approved by the department
1006 of public utilities to take effect on or before December 31, 2018. Any monthly minimum
1007 reliability contribution approved by the department of public utilities prior to the effective date of
1008 this section and said sections 41, 42 and 44 that does not meet the requirements of said sections
1009 shall be refiled for review and approval by the department before taking effect.

1010 SECTION 65. The 2030 statewide greenhouse gas emissions limit required by subsection
1011 (a) of section 4 of chapter 21N of the General Laws shall be adopted not later than January 1,
1012 2021.

1013 SECTION 66. The 2040 statewide greenhouse gas emissions limit required pursuant to
1014 subsection (a) of section 3 of chapter 21N of the General Laws shall be adopted not later than
1015 January 1, 2021.

1016 SECTION 67. The department of energy resources shall establish the annual statewide
1017 deployment targets to be achieved in each distribution company's and municipal lighting plant's
1018 service territory in order to reach the 2,000 megawatt energy storage system target pursuant to
1019 subsection (a) of section 17 of chapter 25A of the General Laws not later than December 31,
1020 2018.

1021 SECTION 68. Anaerobic digestion facilities that are both operational and qualified as
1022 Class I renewable energy generating sources under section 11F of chapter 25A of the General
1023 Laws prior to the effective date of section 17 of said chapter 25A shall be eligible to participate
1024 in the incentive program via a one-time procurement for the class I renewable generation
1025 attributes created by existing anaerobic digestion facilities. The department shall determine

1026 eligibility criteria for existing anaerobic digestion facilities to participate in the one-time
1027 procurement, with the total megawatts being procured equal to the combined capacity of all
1028 eligible facilities. The 1-time procurement shall include a ceiling price equal to or greater than
1029 the alternative compliance payment rate, not to exceed double the alternative compliance
1030 payment rate established by the department under said section 11F of said chapter 25A.

1031 SECTION 69. The department of energy resources shall establish a pilot program for
1032 anaerobic digestion technology that utilizes solid waste or organic materials otherwise eligible
1033 under section 138 of chapter 164 of the General Laws up to 6 megawatts.

1034 SECTION 70. The department of energy resources shall establish the subsequent
1035 statewide energy storage deployment target required pursuant to subsection (a) of section 17 of
1036 chapter 25A of the General Laws not later than December 31, 2020.

1037 SECTION 71. The regulations required pursuant to clause (i) of the first paragraph of
1038 section 7A of chapter 21N of the General Laws shall be promulgated and in effect not later than
1039 December 31, 2020.

1040 SECTION 72. The regulations required pursuant to clause (ii) of the first paragraph of
1041 section 7A of chapter 21N of the General Laws shall be promulgated and in effect not later than
1042 December 31, 2021.

1043 SECTION 73. The regulations required pursuant to clause (iii) of the first paragraph of
1044 section 7A of chapter 21N of the General Laws shall be promulgated and in effect not later than
1045 December 31, 2022.

1046 SECTION 74. The regulations required by section 53 shall be promulgated within 180
1047 days after the effective date of this act and shall take effect within 180 days after promulgation.

1048 SECTION 75. Subsection (g) of section 1B of chapter 164 of the General Laws shall
1049 take effect on July 2, 2019.

1050 SECTION 76. Section 146 of chapter 164 of the General Laws shall take effect on
1051 January 1, 2020; provided, however, that the regulations required to implement said section 146
1052 of said chapter 164 shall be promulgated and in effect not later than December 31, 2019.

1053 SECTION 77. The regulations, guidelines or orders required by paragraphs (6) and (7) of
1054 subsection (c) of section 134 of chapter 164 of the General Laws shall be promulgated not more
1055 than 6 months after the effective date of this act.

1056 SECTION 78. Section 1L of chapter 164 of the General Laws shall take effect on
1057 January 1, 2019; provided, however, that the department shall promulgate regulations to
1058 implement said section 1L of said chapter 164 not later than January 1, 2019.

1059 SECTION 79. The 2050 emissions reduction plan required pursuant to subsection (h) of
1060 section 4 of chapter 21N of the General Laws shall be completed not later than December 31,
1061 2025.

1062 SECTION 80. Section 57 shall take effect upon a determination by the attorney general
1063 that the section is constitutional.