

HOUSE No. 5060

The Commonwealth of Massachusetts

The committee of conference on the disagreeing votes of the two branches with reference to the Senate amendments (striking out all after the enacting clause and inserting in place thereof the text contained in Senate document numbered 2842) and by striking out the title and inserting in place thereof the following title: “An Act driving climate policy forward.” of the House Bill advancing offshore wind and clean energy (House, No. 4524), reports recommending passage of the accompanying bill (House, No. 5060 July 21, 2020).

Jeffrey N. Roy	Michael J. Barrett
Tackey Chan	Cynthia Stone Creem
Bradley H. Jones, Jr.	Bruce E. Tarr

HOUSE No. 5060

The Commonwealth of Massachusetts

**In the One Hundred and Ninety-Second General Court
(2021-2022)**

An Act driving clean energy and offshore wind.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

1 SECTION 1. Chapter 23 of the General Laws is hereby amended by adding the following
2 section:-

3 Section 26. (a) As used in this section, the term “employment value” shall mean the
4 economic value of a particular occupation to the individual and the community, including but not
5 limited to considerations of the entry wage, growth rate in employment, and present and
6 projected average annual open positions for the occupation in the commonwealth.

7 (b) For the purpose of promoting access to academic and technical skills that prepare the
8 workforce for high-demand occupations in the commonwealth, the executive office of labor and
9 workforce development shall provide the department of elementary and secondary education,
10 annually, not later than February 1, a list of occupations in high-demand industries in the
11 commonwealth that either require an industry-recognized certification or for which such
12 certification will materially enhance a job applicant’s opportunities for employment or increased
13 compensation. The list shall include, but not be limited to: (i) the related workforce needs and

14 shortages in each region of the commonwealth; and (ii) recommendations on potential courses
15 and programming in public schools that can effectively contribute to providing credentials for
16 high-demand industries in the commonwealth. The list shall include occupations with high
17 employment value; provided, that the top 20 per cent of occupations shall be high-demand
18 occupations; provided, however, that no occupation shall be included on the list which has an
19 annual salary or wage in an amount less than 70 per cent of the average annual salary or wage in
20 the commonwealth, unless the certification for such an occupation is stackable to another
21 industry certification and required for the next level of occupation which does meet the 70 per
22 cent wage criterion.

23 (c) The executive office of labor and workforce development, in consultation with the
24 department of elementary and secondary education, shall make the list created pursuant to
25 subsection (b) available to all school districts in the commonwealth and post the list publicly on
26 the executive office of labor and workforce development’s website.

27 SECTION 2. Section 1 of chapter 23J of the General Laws, as appearing in the 2020
28 Official Edition, is hereby amended by striking out the definition of “Board” and inserting in
29 place thereof the following 2 definitions:-

30 “Affiliate”, any business which directly or indirectly controls or is controlled by or is
31 under direct or indirect common control of another business including, but not limited to, any
32 business with which a business is merged or consolidated, or which purchases all or substantially
33 all of the assets of a business.

34 “Board”, the board of directors of the center.

35 SECTION 3. Said section 1 of said chapter 23J, as so appearing, is hereby further
36 amended by inserting after the definition of “Center” the following definition:-

37 “Certified offshore wind company”, an offshore wind company that has been certified by
38 the center for participation in the Massachusetts offshore wind industry investment program and
39 the offshore wind tax incentive program established in section 8A.

40 SECTION 4. Said section 1 of said chapter 23J, as amended by section 3 of this act, is
41 hereby further amended by striking out the definition of “Certified offshore wind company” and
42 inserting in place thereof the following definition:-

43 “Certified offshore wind company”, an offshore wind company that has been certified by
44 the center for participation in the Massachusetts offshore wind industry investment program.

45 SECTION 5. Said section 1 of said chapter 23J, as so appearing, is hereby further
46 amended by inserting after the definition of “Fund” the following 2 definitions:-

47 “Offshore wind company”, a business corporation, partnership, firm, unincorporated
48 association or other entity engaged in offshore wind development, manufacturing or
49 commercialization in the commonwealth and any affiliate thereof, which is, or the members of
50 which are, subject to taxation under chapter 62, 63, 64H or 64I.

51 “Offshore wind organization”, a non-profit institution, adult and community learning
52 service provider, labor organization, regional employment board, public or private higher
53 education institution, vocational-technical education institution, designated port management
54 agency or entity or other entity engaged in offshore wind development that is not an offshore
55 wind company.

56 SECTION 6. Section 1 of chapter 23J of the General Laws, as appearing in the 2020
57 Official Edition, is hereby amended by striking out the definitions of “Clean energy” and “Clean
58 energy research” and inserting in place thereof the following 2 definitions:-

59 “Clean energy”, advanced and applied technologies that significantly reduce or eliminate
60 the use of energy from non-renewable sources including, but not limited to: (i) energy efficiency;
61 (ii) demand response; (iii) energy conservation; or (iv) technologies powered, in whole or in part,
62 by the sun, wind, water, geothermal energy, including networked geothermal and deep
63 geothermal energy, hydrogen produced by non-fossil fuel sources and methods, alcohol, fuel
64 cells, fusion energy or any other renewable, non-depletable or recyclable fuel; provided,
65 however, that “clean energy” shall include an alternative energy generating source as defined in
66 clauses (i) to (vi), inclusive, of subsection (a) of section 11F½ of chapter 25A.

67 "Clean energy research", advanced and applied research in new clean energy technologies
68 including: (i) solar photovoltaic; (ii) solar thermal; (iii) wind power; (iv) geothermal energy,
69 including networked geothermal and deep geothermal energy; (v) wave and tidal energy; (vi)
70 advanced hydropower; (vii) energy transmission and distribution; (viii) energy storage; (ix)
71 renewable biofuels, including ethanol, biodiesel and advanced biofuels; (x) renewable,
72 biodegradable chemicals; (xi) advanced thermal-to-energy conversion; (xii) fusion energy; (xiii)
73 hydrogen produced by non-fossil fuel sources and methods; (xiv) carbon capture and
74 sequestration; (xv) energy monitoring; (xvi) green building materials; (xvii) energy efficiency;
75 (xviii) energy-efficient lighting; (xix) gasification and conversion of gas to liquid fuels; (xx)
76 industrial energy efficiency; (xxi) demand-side management; and (xxii) fuel cells; provided,
77 however, that "clean energy research" shall not include advanced and applied research in coal,
78 oil, natural gas or nuclear power other than fusion energy.

79 SECTION 7. Said chapter 23J is hereby further amended by striking out section 13,
80 inserted by section 14 of chapter 8 of the acts of 2021, and inserting in place thereof the
81 following section:-

82 Section 13. (a) There shall be within the center a clean energy equity workforce and
83 market development program to provide workforce training, educational and professional
84 development, job placement, startup opportunities and grants to: (i) certified minority-owned and
85 women-owned small business enterprises; (ii) other businesses or communities underrepresented
86 in the clean energy workforce or clean energy industry; (iii) individuals residing within an
87 environmental justice or low-income community; (iv) current and former workers from the fossil
88 fuel industry; and (v) federally and state recognized tribes within the commonwealth. The
89 program shall promote participation, inclusive of federally and state recognized tribes in the
90 commonwealth, in the commonwealth's energy efficiency, clean energy and clean heating and
91 cooling industries and promote access to employment opportunities in clean energy, clean
92 transportation, electrification, and energy efficiency. The program shall: (i) identify the
93 employment potential of the energy efficiency and clean energy industries and the skills and
94 training needed for workers in those fields; (ii) maximize energy efficiency and clean energy
95 employment opportunities for members of federally and state recognized tribes in the
96 commonwealth, certified minority-owned and women-owned small business enterprises, other
97 businesses or communities underrepresented in the clean energy workforce or clean energy
98 industry and individuals residing within an environmental justice or low-income community; (iii)
99 provide grants and support to expand employment in the clean energy, clean transportation,
100 building electrification and energy efficiency sectors, including employment with organizations
101 promoting climate resilience in those communities with a focus on mitigating the impacts of

102 extreme heat and other climate-driven disasters, to federally and state recognized tribes in the
103 commonwealth, certified minority-owned and women-owned small business enterprises, other
104 businesses or communities underrepresented in the clean energy workforce or clean energy
105 industry and community-based organizations and organizations serving environmental justice
106 and low-income communities; (iv) identify barriers to the creation of clean energy employment
107 opportunities for federally and state recognized tribes in the commonwealth and certified
108 minority-owned and women-owned small business enterprises; (v) document shortcomings,
109 including relevant statistical benchmarks and indicators, in past and current efforts to diversify
110 workforces employed on projects and in positions in the various clean energy sectors; (vi)
111 identify near-term employment opportunity and workforce diversification goals consistent with
112 the state's clean energy and climate change requirements; (vii) focus on developing skills,
113 training and employment opportunities for minority-owned businesses; (viii) make
114 recommendations to the general court for policies to promote employment growth, workforce
115 diversity and access to jobs in the clean energy industry; and (ix) identify opportunities for
116 collaboration and mentorship between grant recipients and vocational schools receiving grants.

117 (b) There shall be a program coordinator to administer the program established in
118 subsection (a). In addition to administering the program set forth in subsection (a), the program
119 coordinator shall prepare guidance on best practices to promote diversity, equity and inclusion
120 opportunities in the clean energy industry. Offshore wind developers, as defined in section 83B
121 of chapter 169 of the acts of 2008, as amended, may consult the program coordinator in the
122 development of diversity, equity and inclusion opportunity provisions within their proposals
123 pursuant to clause (v) of paragraph (1) of subsection (e) of section 83C of said chapter 169, and
124 the program coordinator shall provide feedback and recommendations. The program coordinator

125 shall produce an annual report detailing: (i) the activities of the clean energy equity workforce
126 and market development program; (ii) the progress on workforce diversity plans and supplier
127 diversity program plans submitted by offshore wind developers pursuant to said subclause (K) of
128 clause (v) of paragraph (1) of subsection (e) of said section 83C of said chapter 169; and (iii)
129 plans for continued programming by the center to achieve the commonwealth's diversity, equity
130 and inclusion goals.

131 (c) The department of public utilities shall annually direct the electric and gas distribution
132 companies and municipal aggregators with certified energy plans to jointly transfer funds
133 collected pursuant to section 19 of chapter 25 to the center for the purposes of implementing the
134 clean energy equity workforce and market development program; provided, that the electric and
135 gas distribution companies and municipal aggregators with certified energy plans shall transfer
136 not less than \$12,000,000 no later than December 31 each year. Such transfer shall not reduce
137 the amount expended on low-income programs pursuant to subsection (c) of said section 19 of
138 said chapter 25.

139 SECTION 8. Section 14 of said chapter 23J, inserted by section 11 of chapter 24 of the
140 acts of 2021, is hereby repealed.

141 SECTION 9. Said chapter 23J is hereby further amended by adding the following
142 section:-

143 Section 15. (a) There shall be established and placed within the center a separate fund to
144 be known as the Clean Energy Investment Fund to be administered by the center. The fund shall
145 be credited with: (i) revenue from appropriations or other money authorized by the general court
146 and specifically designated to be credited to the fund; (ii) interest earned on such revenue; and

147 (iii) funds from public and private sources and other gifts, grants and donations to support the
148 clean energy industry. All amounts credited to the fund shall be used solely for activities and
149 expenditures consistent with the public purposes of the fund as set forth in subsection (b),
150 including the ordinary and necessary expenses of administration and operation associated with
151 the fund. Amounts credited to the fund shall not be subject to further appropriation, and any
152 money remaining in the fund at the end of a fiscal year shall not revert to the General Fund.

153 (b) The center shall make expenditures from the fund for the purposes of:

154 (i) advancing clean energy research and technology by assisting commonwealth-based
155 investors, entrepreneurs and institutions, inclusive of federally recognized tribes within the
156 commonwealth, involved in the clean energy industry;

157 (ii) deploying clean energy technologies to advance compliance with the statewide
158 greenhouse gas emission limits and sublimits established pursuant to chapter 21N;

159 (iii) providing clean energy industry-related workforce development and technical
160 training programs for public higher education and vocational-technical education institutions;

161 (iv) developing a regional strategy, inclusive of federally recognized tribes within the
162 commonwealth, for regional employment boards to support the development of the clean energy
163 industry; provided, however, that the regional employment boards shall publish their findings as
164 an addendum to their workforce development blueprints;

165 (v) supporting infrastructure including, but not limited to, port and canal infrastructure
166 development related to supporting the clean energy industry in the commonwealth, including on
167 tribal lands;

168 (vi) matching funds to secure future federal funding to support the clean energy industry
169 and clean energy research in the commonwealth, including on tribal lands;

170 (vii) supporting research and development in the clean energy industry including, but not
171 limited to, the interrelationship between clean energy infrastructure and existing natural habitats,
172 ecosystems and dependent species;

173 (viii) supporting improved outcomes from the development of clean energy resources;

174 (ix) supporting the long-term coexistence and sustainability of the fishing and clean
175 energy industries; and

176 (x) providing for the necessary and reasonable administrative and personnel costs of the
177 center or of the executive office of energy and environmental affairs related to administering the
178 fund.

179 (c) The fund's activity shall be included in the annual report required by the second
180 paragraph of section 5.

181 SECTION 10. Section 2 of said chapter 23J, as so appearing, is hereby amended by
182 striking out subsection (b) and inserting in place thereof the following subsection:-

183 (b) The center shall be governed and its corporate powers exercised by a board of
184 directors consisting of 15 directors: 1 of whom shall be the secretary of energy and
185 environmental affairs or their designee, who shall serve as a chair; 1 of whom shall be the
186 secretary of housing and economic development or their designee; 1 of whom shall be the
187 secretary of administration and finance or their designee; 1 of whom shall be the secretary of
188 labor and workforce development or their designee; 1 of whom shall be the president of the

189 University of Massachusetts or their designee; 1 of whom shall be the executive director of the
190 Massachusetts Workforce Alliance, Inc.; 1 of whom shall be the commissioner of energy
191 resources or their designee; 2 of whom shall be appointed by the speaker of the house of
192 representatives, 1 of whom shall be a union representative and 1 of whom shall be the president
193 of a Massachusetts state university or college; 2 of whom shall be appointed by the senate
194 president, 1 of whom shall have knowledge of electricity distribution, generation, supply or
195 power or energy economics; and 4 of whom shall be appointed by the governor, 1 of whom shall
196 be a venture capitalist or a chief executive officer of a Massachusetts-based clean energy
197 corporation with expertise in clean energy technologies in the commonwealth, 1 of whom shall
198 be the president of a Massachusetts community college or their designee and 2 of whom shall be
199 presidents of a Massachusetts private college or university or their designees. Each of the 4
200 directors appointed by the governor, the 2 directors appointed by the speaker of the house of
201 representatives and the 2 directors appointed by the senate president shall serve for a term of 5
202 years. A director shall be eligible for reappointment. A director may be removed from their
203 appointment by the governor for cause. A person appointed to fill a vacancy in the office of an
204 appointed director of the board shall be appointed in a like manner and shall serve for only the
205 unexpired term of the director.

206 SECTION 11. Said section 2 of said chapter 23J, as so appearing, is hereby further
207 amended by striking out, in line 66, the word “Six” and inserting in place thereof the following
208 word:- Eight.

209 SECTION 12. Subsection (a) of section 3 of said chapter 23J, as so appearing, is hereby
210 amended by adding the following clause:-

211 (32) to serve as a focal point, and provide state-wide coordination, for offshore wind
212 initiatives; provided, that said responsibilities shall include, but shall not be limited to: (i)
213 working with public and private higher education institutions in the commonwealth to coordinate
214 and strengthen offshore wind research activities in the commonwealth; (ii) strengthening
215 collaborative research and development between higher education institutions and companies
216 located within the commonwealth; (iii) addressing critical barriers facing offshore wind
217 companies in the commonwealth; (iv) assessing and reporting on infrastructure requirements that
218 support the growing offshore wind industry in the commonwealth; (v) supporting the growth of
219 an offshore wind supply chain in the commonwealth; (vi) supporting and developing offshore
220 wind training initiatives; and (vii) supporting and growing offshore wind innovation and
221 entrepreneurship in the commonwealth.

222 SECTION 13. Section 8 of said chapter 23J, as so appearing, is hereby amended by
223 inserting after the figure "15A,", in line 4, the following words:- "municipally-owned institutions
224 of higher education and".

225 SECTION 14. Said section 8 of said chapter 23J, as so appearing, is hereby further
226 amended by inserting after the word "section", in line 20, the following words:- , public
227 elementary and secondary schools.

228 SECTION 15. Said section 8 of said chapter 23J, as so appearing, is hereby further
229 amended by striking out the third sentence and inserting in place thereof the following sentence:-
230 The grants shall include matching grants to such public institutions of higher education,
231 municipally-owned institutions of higher education, public elementary and secondary schools
232 and such vocational technical schools for the development of small-scale renewable clean energy

233 generating sources, energy storage technologies, energy efficiency innovations and energy
234 transmission and distribution innovations including, but not limited to: (i) photovoltaic
235 installations; (ii) wind energy; (iii) ocean thermal, wave or tidal energy; (iv) fuel cells; (v)
236 hydrogen produced by non-fossil fuel sources and methods; (vi) landfill gas; (vii) natural flowing
237 water and hydroelectric; (viii) low-emission advanced biomass power conversion technologies
238 using biomass fuels including, but not limited to, agricultural or food wastes; (ix) renewable
239 biogas, biodiesel or organic refuse-derived fuel; (x) geothermal energy, including networked
240 geothermal and deep geothermal energy; and (xi) fusion energy; provided, however, that the
241 matching grants shall not be awarded for such development if it includes as sources coal, oil or
242 natural gas resources other than the sources enumerated here or nuclear power other than fusion
243 energy.

244 SECTION 16. Said chapter 23J is hereby further amended by inserting after section 8 the
245 following section:-

246 Section 8A. (a) There shall be established and placed within the center a Massachusetts
247 offshore wind industry investment program that shall be administered by the center, in
248 consultation with the department of revenue. The purpose of the program shall be to develop and
249 expand offshore wind industry-related employment opportunities in the commonwealth and to
250 promote renewable energy-related economic development in the commonwealth by supporting
251 and stimulating manufacturing and related supply chain capacity in the offshore wind industry.
252 Certified offshore wind companies shall be eligible for participation in the program, which shall
253 consist of the offshore wind tax incentive program established in subsection (d) and access to
254 expenditures pursuant to the Massachusetts Offshore Wind Industry Investment Trust Fund
255 established in section 9A.

256 (b) The center may, upon a majority vote of the board, certify an offshore wind company
257 as a certified offshore wind company upon: (i) the timely receipt, as determined by the center, of
258 a certification proposal supported by independently verifiable information, signed under the
259 pains and penalties of perjury by a person expressly authorized to contract on behalf of the
260 offshore wind company and shall include, but not be limited to, an estimate of the projected new
261 state revenue the offshore wind company expects to generate during the period for which the
262 company seeks certification, together with a plan that shall include, but not be limited to: (1)
263 precise goals and objectives, by which the offshore wind company proposes to achieve the
264 projected new state revenue; (2) an estimate of the number of permanent full-time employees to
265 be hired or retained; (3) an estimate of the year in which the company expects to hire or retain
266 the employees; (4) an estimate of the projected average salaries of said employees; (5) an
267 estimate of the projected taxable income pursuant to chapter 62 generated by said employees; (6)
268 an estimate of the methods by which the company shall obtain new employees and pursue a
269 diverse workforce; and (7) if applicable, an estimate of the company's planned capital
270 investment in the commonwealth; and (ii) findings made by the center, based on the certification
271 proposal, documents submitted therewith and any additional investigation by the center that shall
272 be incorporated in its approval, that: (1) the offshore wind company is likely to contribute
273 substantially to the manufacture, fabrication and assembly within the commonwealth of domestic
274 supply chain components of the offshore wind industry; (2) the offshore wind company has a
275 substantial likelihood of meeting all statutory requirements and any other criteria that the center,
276 in consultation with the department of revenue, may prescribe including, but not limited to,
277 criteria in the following areas: (A) leveraging additional funding or attracting additional
278 resources to the commonwealth; (B) increasing the manufacture, fabrication and assembly within

279 the commonwealth of domestic supply chain components of the offshore wind industry; and (C)
280 creating employment in the commonwealth; and (3) the offshore wind company has a substantial
281 likelihood of meeting its state revenue, employment growth and applicable capital investment
282 projections, as specified in the certification proposal, over the period for which it receives
283 benefits.

284 (c)(1) Certification granted pursuant to subsection (b) shall be valid for 5 years starting
285 with the tax year in which certification is granted. Each certified offshore wind company shall
286 file an annual report with the center and the department of revenue detailing whether it has met
287 the specific targets established in the proposal pursuant to clause (i) of subsection (b).

288 (2) The certification of an offshore wind company may be revoked by the center after an
289 independent investigation by the center, in consultation with the department of revenue, and a
290 determination that the certified offshore wind company is in material noncompliance with its
291 certification proposal; provided, however, that the center shall review said certified offshore
292 wind company at least annually. Revocation shall take effect on the first day of the tax year in
293 which the center determines the certified offshore wind company to be in material
294 noncompliance. The commissioner of revenue shall, as of the effective date of the revocation,
295 disallow any credits, exemptions or other tax benefits allowed by the original certification of tax
296 benefits under this section. The department of revenue shall issue regulations to establish a
297 process to recapture the value of any credits, exemptions or other tax benefits allowed by the
298 certification under this section. For the purposes of this paragraph, “material noncompliance”
299 shall mean the failure of a certified offshore wind company to substantially achieve the new state
300 revenue, job growth and capital investment projections set forth in its certification proposal or

301 any other act, omission or misrepresentation by the certified offshore wind company that
302 frustrates the public purpose of the Massachusetts offshore wind industry investment program.

303 (3) Nothing in this subsection shall limit any legal remedies available to the
304 commonwealth against any certified offshore wind company.

305 (d) There shall be established an offshore wind tax incentive program. The center, in
306 consultation with the department of revenue, may annually authorize incentives, including those
307 established in subsections (aa) and (bb) of section 6 of chapter 62 and sections 38KK and 38LL
308 of chapter 63, that shall not exceed \$35,000,000 annually. The center, in consultation with the
309 department of revenue, may limit the incentives to a specific dollar amount or time duration or in
310 any other manner deemed appropriate by the department of revenue; provided, however, that the
311 department of revenue shall only allocate the incentives among certified offshore wind
312 companies.

313 The center shall provide an estimate to the secretary of administration and finance of the
314 tax cost of extending benefits to a proposed project before certification, as approved by the
315 commissioner of revenue, based on reasonable projections of project activities and costs. Tax
316 incentives shall not be available to a certified offshore wind company unless expressly granted
317 by the secretary of administration and finance in writing.

318 SECTION 17. Said section 8A of said chapter 23J, as inserted by section 12 of this act, is
319 hereby amended by striking out subsection (a) and inserting in place thereof the following
320 subsection:-

321 Section 8A. (a) There shall be established and placed within the center a Massachusetts
322 offshore wind industry investment program that shall be administered by the center, in

323 consultation with the department of revenue. The purpose of the program shall be to develop and
324 expand offshore wind industry-related employment opportunities in the commonwealth and to
325 promote renewable energy-related economic development in the commonwealth by supporting
326 and stimulating manufacturing and related supply chain capacity in the offshore wind industry.
327 Certified offshore wind companies shall be eligible for participation in the program, which shall
328 consist of access to expenditures pursuant to the Massachusetts Offshore Wind Industry
329 Investment Trust Fund established in section 9A.

330 SECTION 18. Said section 9 of said chapter 23J, as so appearing, is hereby further
331 amended by inserting after the word “projects” , in line 118, the following words:- including
332 networked geothermal and deep geothermal energy.

333 SECTION 19. Section 9 of said chapter 23J, as so appearing, is hereby amended by
334 striking out, in line 55the words “and (vi)” and inserting in place thereof following words:- “(vi)
335 the achievement of the greenhouse gas reduction limits and sublimits established in chapter 21N;
336 (vii) the facilitation of clean energy supply chain opportunities; and (viii).

337 SECTION 20. Said chapter 23J is hereby further amended by striking out section 9A,
338 inserted by section 13 of chapter 102 of the acts of 2021, and inserting in place thereof the
339 following section:-

340 Section 9A. (a) There shall be established and placed within the center a trust fund to be
341 known as the Massachusetts Offshore Wind Industry Investment Trust Fund to be held by the
342 center separate and apart from its other funds. The trust fund shall be credited with: (i) any
343 appropriations, bond proceeds or other monies authorized by the general court and specifically
344 designated to be credited thereto; (ii) funds from public and private sources and other gifts,

345 grants and donations; and (iii) any income derived from the investment of amounts credited to
346 the trust fund. All amounts credited to the trust fund shall be held in trust and used solely for
347 activities and expenditures consistent with the public purpose of the trust fund pursuant to
348 subsection (b), and the ordinary and necessary expenses of administration and operation
349 associated with the trust fund. All available monies in the trust fund that are unexpended at the
350 end of each fiscal year shall not revert to the General Fund and shall be available for expenditure
351 in the subsequent fiscal year.

352 (b) To advance the following public purposes for the offshore wind industry in the
353 commonwealth, the center shall make expenditures from the trust fund to:

354 (1) promote the manufacture, fabrication and assembly within the commonwealth of
355 domestic supply chain components of the offshore wind industry and new or existing advanced
356 technologies and offshore wind research;

357 (2) advance clean energy research, technology and innovation by assisting
358 commonwealth-based investors, entrepreneurs and institutions, inclusive of federally and state
359 recognized tribes within the commonwealth, involved in the offshore wind energy industry;

360 (3) convene and manage multi-institutional research teams, including a state-wide
361 research partnership tasked with coordinating between member institutions, the center, federal
362 partners, partners from other states and international partners;

363 (4) stimulate increased financing for the siting and expansion of permanent offshore wind
364 manufacturing facilities in the commonwealth by providing financing for the construction or
365 expansion of new or substantially renovated facilities;

366 (5) provide funding for planning, technical and program support to assist a certified
367 offshore wind company with interconnection studies or plans;

368 (6) support the revitalization and development of ports in the commonwealth to support
369 the offshore wind industry;

370 (7) prepare individuals for offshore wind careers by supporting workforce training
371 provided at: (i) state and municipal public higher education institutions, private higher education
372 institutions and vocational-technical education institutions, including basic safety training and
373 basic technical training programs; provided, that the center shall prioritize awards to education
374 institutions seeking accreditation in internationally recognized training standards, including, but
375 not limited to, standards developed by the Global Wind Organisation; (ii) state and municipal
376 public higher education institutions, private higher education institutions and vocational-
377 technical education institutions for the development, expansion and promotion of offshore wind
378 professional certificate programs and courses tailored to careers in the offshore wind industry;
379 (iii) state and municipal public higher education institutions, private higher education institutions
380 and vocational-technical education institutions for the sponsorship of award, scholarship and
381 paid internship programs to support the education and training of individuals seeking careers in
382 the offshore wind industry; provided, that the center shall prioritize the promotion of careers in
383 the skilled trades, water transportation, operations and maintenance and other occupations that
384 the center may identify as high priority; and (iv) regional employment boards, to develop
385 regional strategies to support the development of the offshore wind industry, which strategies
386 may be published as addenda to their workforce development blueprints; provided, that
387 recipients of funds under this clause shall demonstrate a commitment to workforce training for
388 members of socially or economically disadvantaged communities;

389 (8) secure future federal funding to support the offshore wind industry;

390 (9) support the development and coordination of secondary, vocational-technical and
391 higher education programs related to the offshore wind industry;

392 (10) support site remediation, preparation and ancillary infrastructure improvement
393 projects related to the manufacture, fabrication, and assembly within the commonwealth of
394 domestic supply chain components of the offshore wind industry;

395 (11) provide funding for planning, technical and program support to enable a
396 municipality or group of municipalities with an approved municipal load aggregation plan
397 authorized pursuant to section 134 of chapter 164, or with approved aggregations authorized
398 pursuant to section 137 of said chapter 164 and other private aggregations with plans approved
399 by the center, to enter into a long-term contract to purchase electricity from an offshore wind
400 developer; and

401 (12) otherwise further the public purposes set forth in this section.

402 (c) In furtherance of the public purposes set forth in subsection (b), the center may
403 expend monies from the trust fund to: (i) make grants, contracts, loans, equity investments,
404 energy production credits, bill credits or rebates available to customers; (ii) provide financial or
405 debt service obligation assistance; or (iii) take any other action, in such forms, under such terms
406 and conditions and under such selection procedures as the center deems appropriate and
407 otherwise in a manner consistent with good business practices; provided, that the center shall
408 conduct, when practicable, competitive procurements; provided further, that the center shall
409 endeavor to leverage the full range of resources, expertise and participation of other state and
410 federal agencies and instrumentalities in the design and implementation of programs conducted

411 pursuant to this section; and provided further, that the board shall determine and incorporate into
412 the minutes of its proceedings a finding that any such action is calculated to advance the public
413 purpose and public interests set forth in this section.

414 (d) The center shall make no expenditure from the trust fund unless: (i) the expenditure
415 has been approved by a majority vote of the board; (ii) the recipient is an offshore wind company
416 or offshore wind organization; provided, that an offshore wind company that has not been
417 certified pursuant to section 8A shall not receive an award in an amount greater than \$5,000,000;
418 (iii) the center finds, to the extent possible, that a definite benefit to the commonwealth's
419 economy may reasonably be expected from said expenditure; and (iv) the expenditure conforms
420 with any rules the board may adopt to administer the trust fund. In evaluating a request or
421 application for funding, the center shall consider the following: (i) the appropriateness of the
422 project; (ii) whether the project has significant potential to expand employment; (iii) the project's
423 potential to enhance technological advancements; (iv) the project's potential for leveraging
424 additional funding or attracting resources to the commonwealth; and (v) the project's potential to
425 promote manufacturing in the commonwealth.

426 (e) Subject to the approval of the board and not inconsistent with any strategic or annual
427 operational plans, investment activity of monies from the trust fund by the center may include:
428 (i) an equity fund to provide risk capital to offshore wind companies, offshore wind
429 organizations and projects; (ii) a debt fund to provide loans to offshore wind companies, offshore
430 wind organizations, projects, intermediaries and end-users; and (iii) a market growth assistance
431 fund to be used to attract private capital to the equity and debt funds. To implement these
432 investment activities, the center may retain, through a bid process, public or private sector
433 investment fund managers, who shall have prior knowledge and experience in fund management

434 and possess related skills in offshore wind, renewable energy or related development, to direct
435 the investment activity described in this section and to seek other fund co-sponsors to contribute
436 public and private capital from the commonwealth and other states; provided, however, that such
437 capital shall be appropriately segregated. Subject to the approval of the board, the managers may
438 retain necessary services and consultants to carry out the purposes of the trust fund. The
439 managers shall develop a business plan to guide investment decisions, which shall be approved
440 by the board before any expenditure from the trust fund and which shall be consistent with the
441 plan for the trust fund as adopted by the board.

442 (f) The center shall not make expenditures from or commit the assets of the trust fund if
443 the amount of the trust fund is less than the minimum requirement established by the board.

444 SECTION 21. Section 1 of chapter 23M of the General Laws, as appearing in the 2020
445 Official Edition, is hereby amended by striking out the definition of “Commercial energy
446 improvements” and inserting in place thereof the following definition:-

447 “Commercial energy improvements”, any new construction, renovation or retrofitting of
448 a qualifying commercial or industrial property to reduce energy consumption or installation of
449 renewable energy systems to serve qualifying commercial or industrial property; provided,
450 however, that such new construction, renovation, retrofit or installation is permanently fixed to
451 such qualifying commercial or industrial property.

452 SECTION 22. Section 21 of chapter 25 of the General Laws is hereby amended by
453 striking out, in lines 9 and 91, as so appearing, the words “April 30” and inserting in place
454 thereof, in each instance, the following words:- March 31.

455 SECTION 23. Said section 21 of said chapter 25 is hereby further amended by inserting
456 after the word “technologies”, in line 58, as so appearing, the following words:- including, but
457 not limited to, programs that combine efficiency and electrification with renewable generation
458 and storage.

459 SECTION 24. Said section 21 of said chapter 25 is hereby further amended by striking
460 out the word “and”, inserted by section 24 of chapter 8 of the acts of 2021, the last time it
461 appears.

462 SECTION 25. The first sentence of paragraph (2) of subsection (b) of said section 21 of
463 said chapter 25, as most recently amended by said section 24 of said chapter 8, is hereby further
464 amended by adding the following 3 clauses:- ; (xi) no spending on incentives, programs or
465 support for systems, equipment, workforce development or training as it relates to new fossil fuel
466 equipment unless such spending is for a backup thermal energy source for a heat pump; (xii)
467 consideration of historic and present program participation by low and moderate-income
468 households, including households that rent; (xii) strategies and investments that the programs
469 will undertake to achieve equitable access and reduce or eliminate any disparities in program
470 uptake; and (xiii) a method for capturing the following data to assess the plan’s services to low-
471 income ratepayers: (A) the total number of ratepayers per municipality served; (B) the total
472 energy efficiency surcharge dollars paid by ratepayers as part of their utility bills per
473 municipality served; and (C) the total energy efficiency surcharge dollars recovered by
474 ratepayers in the form of incentives per municipality served, delineated by utility and sector,
475 including residential, residential low-income, commercial and industrial.

476 SECTION 26. Said section 21 of said chapter 25 is hereby further amended by inserting
477 after the word “bodies,” in line 75, as appearing in the 2020 Official Edition, the following
478 words:- maximizing net climate, environmental and equity impacts.

479 SECTION 27. Said section 21 of said chapter 25 is hereby further amended by striking
480 out, in line 121, as so appearing, the figure “90” and inserting in place thereof the following
481 figure:- 120.

482 SECTION 28. Said section 21 of said chapter 25 is hereby further amended by inserting
483 after the word “section”, in line 124, the following words:- and considered climate,
484 environmental and equity benefits,

485 SECTION 29. Said section 21 of said chapter 25, as most recently amended by section 28
486 of chapter 8 of the acts of 2021, is hereby further amended by adding the following subsection:-

487 (f) The need for a program administrator to prepare for meetings with the council during
488 the department’s 120-day review period after submission of a plan shall not constitute good
489 cause in a motion for an extension of time to respond to discovery or in a motion for an
490 extension of time to respond to a record request.

491 SECTION 30. Section 22 of said chapter 25 is hereby amended by striking out subsection
492 (d), as amended by sections 29 and 30 of said chapter 8, and inserting in place thereof the
493 following subsection:-

494 (d) The electric and natural gas distribution companies and municipal aggregators shall
495 provide quarterly reports to the council on the implementation of their respective plans. The
496 reports shall include: (i) a description of the program administrator’s progress in implementing

497 the plan; (ii) a summary of the savings secured to date; (iii) a quantification of the degree to
498 which the activities undertaken pursuant to each plan contribute to meeting all greenhouse gas
499 emission limits and sublimits imposed by law or regulation; (iv) in order to assess the plan’s
500 services to low-income ratepayers: (A) the total number of ratepayers per municipality served;
501 (B) the total energy efficiency surcharge dollars paid by ratepayers as part of their utility bills per
502 municipality served; and (C) the total energy efficiency surcharge dollars recovered by
503 ratepayers in the form of incentives per municipality served, delineated by utility and sector,
504 including residential, residential low-income, commercial and industrial; and (v) such other
505 information as the council shall determine. The council shall provide an annual report to the
506 department and the joint committee on telecommunications, utilities and energy on the
507 implementation of the plan. The annual report shall include descriptions of the programs,
508 expenditures, cost-effectiveness and savings and other benefits during the previous year and a
509 quantification of the degree to which the activities undertaken pursuant to each plan contribute to
510 meeting all greenhouse gas emission limits and sublimits imposed by law or regulation. The
511 quarterly and annual reports shall be made available to the public.

512 SECTION 31. SECTION 29. Section 6 of chapter 25A of the General Laws, as appearing
513 in section 31 of said chapter 8, is hereby amended by striking out, in line 52, the words “exceed
514 the costs of such improvements” and inserting in place thereof the following words:-, exceed
515 required energy code requirements at the time of project permitting or the project meets another
516 nationally-recognized building standard for energy performance as deemed appropriate by the
517 department of energy resources in coordination with the Massachusetts Development Finance
518 Agency.

519 SECTION 32. Section 11F of chapter 25A of the General Laws is hereby amended by
520 striking out, in line 40, 81 and 82 and 114, as appearing in the 2020 Official Edition, the word
521 “biomass”.

522 SECTION 33. Said section 11F of said chapter 25A is hereby further amended by
523 striking out, in lines 41, 82 and 115, as so appearing, the word “wood, by-products” and inserting
524 in place thereof, in each instance, the following word:- by-products.

525 SECTION 34. Subsection (b) of said section 11F of said chapter 25A, as so appearing, is
526 hereby amended by striking out the second sentence.

527 SECTION 35. Said section 11F of said chapter 25A is hereby further amended by
528 inserting after the word “gas”, in line 145, as so appearing, the following words:- , woody
529 biomass.

530 SECTION 36. Section 14 of said chapter 25A, as so appearing, is hereby amended by
531 striking out, in line 3, the words “total project cost of \$100,000 or less” and inserting in place
532 thereof the following words:- maximum total project cost as set by the commissioner every 2
533 years.

534 SECTION 37. Section 16 of said chapter 25A, as so appearing, is hereby amended by
535 inserting after the word “section”, in line 1, the following words:- and section 19,

536 SECTION 38. Subsection (a) of said section 16 of said chapter 25A, as so appearing, is
537 hereby amended by adding the following 2 definitions:-

538 “Qualifying zero-emission vehicle”, a new or used motor vehicle: (i) that is a zero-
539 emission vehicle; (ii) that has been manufactured primarily for use on public streets, roads and

540 highways; (iii) that is registered within the commonwealth; (iv) whose purchaser's or lessee's
541 primary residence or business location is within the commonwealth; and (v) whose purchaser or
542 lessee files proof of primary residency and each qualifying vehicle's registration within the
543 commonwealth not later than 90 days after purchase.

544 "Zero-emission vehicle", a motor vehicle that produces no engine exhaust carbon
545 emissions.

546 SECTION 39. Section 17 of said chapter 25A, as so appearing, is hereby amended by
547 adding the following subsection:-

548 (e) Anaerobic digestion biogas-to-energy and landfill gas-to-energy facilities, referred to
549 in this subsection as "anaerobic digestion facilities",) that are in located in the commonwealth
550 and are both operational and qualified as Class I renewable energy generating sources under
551 section 11F prior to November 7, 2018 shall be eligible to participate in the Clean Peak Standard
552 incentive program via a 1-time procurement for Class I renewable energy certificates which are
553 generated by existing anaerobic digestion facilities. The department shall determine eligibility
554 criteria for existing anaerobic digestion facilities to participate in the 1-time procurement, with
555 the total megawatt-hours being procured equal to the combined capacity of all eligible facilities
556 for up to a 10-year term beginning January 1, 2023. The megawatt-hour quantities shall be bid on
557 a unit contingent basis. The 1-time procurement shall include a floor price sufficient to stimulate
558 the development of anaerobic digestion facilities.

559 SECTION 40. Said chapter 25A is hereby further amended by adding the following 2
560 sections:-

561 Section 19. (a) There shall be an Electric Vehicle Adoption Incentive Trust Fund to be
562 expended, without further appropriation, by the department of energy resources for funding
563 electric vehicle incentive programs consistent with this section. The fund shall be credited with:
564 (i) money from public and private sources, including gifts, grants and donations; (ii) interest
565 earned on such money; (iii) any other money authorized by the general court and specifically
566 designated to be credited to the fund; and (iv) any funds provided from other sources. No
567 expenditure from the fund shall cause the fund to be deficient at the close of a fiscal year.
568 Revenues deposited in the fund that are unexpended at the end of a fiscal year shall not revert to
569 the General Fund and shall be available for expenditure in the following fiscal year.

570 (b)(1) The department shall establish a program of rebates and other financial incentives
571 to parties, including federally and state recognized tribes in the commonwealth, that purchase or
572 lease a new or used qualifying zero-emission vehicle in the commonwealth. The program shall
573 apply to individual and corporate fleet purchases and leases of passenger cars and light duty,
574 medium duty and heavy duty trucks, buses and vans; provided, however, that no rebate or other
575 financial incentive shall be made available under this section for a used zero-emission vehicle
576 that was bought new or used within the previous 24 months, a zero-emission vehicle that is a
577 passenger car or light duty truck with a sales price that exceeds \$55,000 or for a zero-emission
578 vehicle that is leased for a period of less than 36 months. The department shall set a maximum
579 sales price for medium duty or heavy duty trucks, buses and vans.

580 (2) The program may include a point-of-sale rebate model for individual purchases that
581 offers consumers savings at the point of purchase or lease.

582 (3) The department shall offer a program to provide low-income individuals with a
583 \$1,500 rebate which shall be in addition to the rebate provided for in subsection (c); provided,
584 however, that the department shall establish income guidelines and other requirements for said
585 low-income program.

586 (c) The department shall provide a rebate of not less than \$3,500 and not more than
587 \$5,000 for a qualifying zero-emission vehicle that is a passenger car or a light duty truck and
588 meets the requirements under subsection (b).

589 (d) The department shall provide a rebate, to be set by the department, which shall not be
590 less than \$4,500, for the purchase or lease of: (i) a qualifying zero-emission vehicle that is a
591 medium duty or heavy duty truck, bus or van; or (ii) a qualifying zero-emission vehicle under
592 said subsection (b) if an individual is purchasing or leasing the vehicle and trading in a vehicle
593 with market value that has an internal combustion engine that is not an electric vehicle as defined
594 in section 16; provided, however, that the vehicle with an internal combustion engine has been
595 continuously registered for the previous 2 years: (A) in the commonwealth; and (B) to the
596 consumer or the consumer's immediate family; provided further, that within a fiscal year, the
597 total dollar value of rebates provided pursuant to this subsection shall not exceed a percentage,
598 which shall be established by the department, of the total dollar value of rebates projected to be
599 provided pursuant to this section within said fiscal year; provided further, that the department
600 shall make reasonable efforts to achieve accuracy in making said projection.

601 (e) The department shall publish and regularly update cumulative data regarding usage
602 of the programs established pursuant to this section including, but not limited to, the number and
603 dollar value per calendar year of rebates and incentives provided, sortable by: (i) zip code,

604 municipality, make, model, dealership and whether ownership is personal or corporate; (ii)
605 vehicle type; and (iii) vehicle weight. Such information shall be published annually, not later
606 than September 30, on a website maintained or provided for by the department. Annually, the
607 department shall compile the data required to be collected under this subsection in a report to be
608 filed not later than September 30 for the previous calendar year with the senate and house
609 committees on ways and means, the joint committee on transportation and the joint committee on
610 telecommunications, utilities and energy. The report shall include an analysis of the programs
611 established in this section including, but not limited to, by examining historic and present
612 participation of low-income and moderate-income households, examining participation among
613 demographic groups, including data by race and ethnicity, and recommending strategies and
614 investments to reduce or eliminate any disparities in program participation ; provided, however,
615 that, every 3 years, the report shall also examine the cost-effectiveness of the programs in
616 reducing greenhouse gas emissions, using recent multi-year data. Annually, not later than June
617 30, the department shall provide the underlying disaggregated dataset used to populate the
618 database including, but not limited to, vehicle-level data, to the Massachusetts Department of
619 Transportation.

620 (f) The department shall establish a linguistically diverse and culturally competent
621 outreach campaign, which shall be print accessible and accessible to English language learners,
622 to inform dealers, vehicle salespeople, consumers and businesses in underserved communities,
623 communities with high percentages of low-income households and communities with high
624 proportions of high emissions vehicles about the programs and incentives established pursuant to
625 this section. The department may expend not more than 5 per cent of money in the fund for said
626 outreach campaign.

627 (g) The department may promulgate regulations to implement this section.

628 Section 20. (a) For purposes of this section, the following words shall have the following
629 meanings, unless the context clearly requires otherwise:-

630 “Building”, a building or multiple buildings on a parcel, or any grouping of buildings
631 designated by the department as an appropriate reporting unit for the purposes of this section.

632 “Energy”, electricity, natural gas, steam, hot or chilled water, heating oil, propane or
633 other products designated by the department that are used for heating, cooling, lighting,
634 industrial and manufacturing processes, water heating, cooking, clothes drying or other purposes.

635 “Gross floor area”, the total floor area contained within a building measured to the
636 external face of the external walls.

637 “Large building”, a building with at least 20,000 square feet of gross floor area; provided,
638 however, that the department may establish by regulation a lower threshold for a building to be
639 considered a large building under this section.

640 “Owner”, the owner of record of a building or a designated agent thereof including, but
641 not limited to, an association or organization of unit owners responsible for management of a
642 condominium, the board of directors of a cooperative apartment corporation or the net lessee of a
643 building subject to a net lease with a term of not less than 30 years, inclusive of all renewal
644 options.

645 (b) Annually, not later than March 30, the department shall publish on its website a list of
646 buildings that qualify as large buildings for the purpose of this section.

647 (c) Annually, not later than June 30, each electric, gas and steam distribution company
648 shall report to the department the total amounts of electricity, natural gas and steam used during
649 the previous calendar year by each large building in the commonwealth that has an account with
650 the distribution company.

651 (d) Annually, not later than June 30, owners of large buildings shall report to the
652 department any energy used during the previous calendar year that is not covered by subsection
653 (b); provided, however, that an owner shall not be required to report energy ordered, delivered
654 and charged directly to a tenant if the owner sends a written request for energy use information
655 to the tenant not later than April 30 of the same year, does not receive a response from the tenant
656 by June 25 of the same year and provides evidence of the request to the department.

657 (e) The department shall establish a deadline extension and alternative compliance
658 pathway process for owners who, in the judgment of the department, demonstrate cause for such
659 a deadline extension and alternative compliance pathway.

660 (f) Annually, not later than October 31, the department shall make available on its
661 website energy use information for the previous calendar year for each large building on a
662 building-specific basis. The department shall use appropriate practices to prevent the public
663 disclosure of personally identifying information regarding owners and tenants. The information
664 shall be published in database format, fully text-searchable and readily sortable by municipality,
665 zip code and all the data elements in the database. The department shall also prepare an annual
666 comprehensive report on large building energy performance utilizing the information and data
667 collected under this subsection. The database and each annual report shall be public records.

668 (g) The department shall ensure that electric and gas distribution companies provide
669 owners of buildings subject to this section with up-to-date information about energy efficiency
670 opportunities, including incentives in utility-administered or other energy efficiency programs.

671 (h) The department may establish civil penalties for failure to comply with the
672 requirements of this section; provided, however, that no such penalty shall be assessed on or
673 passed through to a lessee of a unit within a large building that comprises less than 5 per cent of
674 the total gross floor area of the large building; and provided further, that civil penalties under this
675 subsection shall not exceed \$150 per day.

676 (i) Nothing in this section shall prohibit the enforcement of large building reporting
677 requirements previously established by the city of Boston or the city of Cambridge and further
678 amendments or improvement thereto that exceed the requirements established pursuant to this
679 section.

680 SECTION 41. Section 2A of chapter 61A of the General Laws is hereby amended by
681 striking out subsections (b) and (c), as appearing in the 2020 Official Edition, and inserting in
682 place thereof the following 3 subsections:-

683 (b) In addition to the use provided for in subsection (a), land used primarily and directly
684 for agricultural purposes pursuant to section 1 or land used primarily and directly for
685 horticultural use pursuant to section 2 may, in addition to being used primarily and directly for
686 agriculture or horticulture, be used to site a renewable energy generating source as defined in
687 subsection (b) of section 11F of chapter 25A that qualifies in accordance with a solar incentive
688 program for agriculture or horticulture sectors developed by the department of energy resources,

689 if such renewable energy generating source does not impede the continued use of the land for
690 agricultural or horticultural purposes pursuant to this chapter.

691 (c) Land used primarily and directly for agricultural purposes pursuant to section 1 or
692 land used primarily and directly for horticultural purposes pursuant to section 2 shall be deemed
693 to be in agricultural or horticultural use pursuant to this chapter if used to simultaneously site a
694 renewable energy generating source pursuant to subsection (a) or subsection (b).

695 (d) Renewable energy generating sources located on land used primarily and directly for
696 agricultural purposes pursuant to section 1 or land used primarily and directly for horticultural
697 purposes pursuant to section 2 shall be subject to the provisions afforded to land used for
698 agriculture under section 3 of chapter 40A.

699 SECTION 42. Section 13 of said chapter 61A, as so appearing, is hereby amended by
700 inserting after the word “years”, in line 35, the following words:- , or 10 years where the land has
701 been used to simultaneously site a renewable energy generating source pursuant to section 2A.,.

702 SECTION 43. Section 6 of chapter 62 of the General Laws, as so appearing, is hereby
703 amended by adding the following 2 subsections:-

704 (aa)(1) A taxpayer, to the extent authorized by the offshore wind tax incentive program
705 established in subsection (d) of section 8A of chapter 23J, may be allowed a refundable jobs
706 credit against the tax liability imposed under this chapter in an amount determined by the
707 Massachusetts clean energy technology center established in section 2 of chapter 23J, in
708 consultation with the department.

709 (2) A taxpayer taking a credit under this subsection shall commit to the creation of a
710 minimum of 50 net new permanent full-time employees in the commonwealth.

711 (3) A credit allowed under this subsection shall reduce the liability of the taxpayer under
712 this chapter for the taxable year. If a credit claimed under this subsection by a taxpayer exceeds
713 the taxpayer's liability as otherwise determined under this chapter for the taxable year, 90 per
714 cent of such excess credit, to the extent authorized by the offshore wind tax incentive program,
715 shall be refundable to the taxpayer. Excess credit amounts shall not be carried forward to other
716 taxable years.

717 (4) The department shall issue the refundable portion of the jobs credit without further
718 appropriation and in accordance with the cumulative amount, including the current year costs of
719 incentives allowed in previous years, which shall not exceed \$35,000,000 annually as set forth in
720 subsection (d) of section 8A of chapter 23J.

721 (bb)(1) As used in this subsection, the following words shall, unless the context clearly
722 requires otherwise, have the following meanings:

723 "Capital investment", expenses incurred for the site preparation and construction, repair,
724 renovation, improvement, or equipping of a building, structure, facility, or other improvements
725 to real property, including, but not limited to, site-related utility and transportation infrastructure
726 improvements.

727 "Center", the Massachusetts clean energy technology center established in section 2 of
728 chapter 23J.

729 "Certified offshore wind company", as defined in section 1 of chapter 23J.

730 “Offshore wind facility”, any building, complex of buildings, or structural components of
731 buildings, including water access infrastructure, and all machinery and equipment used in the
732 manufacturing, assembly, development or administration of component parts that are primarily
733 used to support the offshore wind industry.

734 “Owner”, a taxpayer subject to tax under this chapter that: (i) holds title to an offshore
735 wind facility; or (ii) ground leases the land underlying the facility for at least 50 years.

736 “Tenant”, a taxpayer subject to tax under this chapter that is a lessee in an offshore wind
737 facility.

738 (2) An owner or tenant, to the extent authorized by the offshore wind tax incentive
739 program established in section 8A of chapter 23J, may take a refundable credit against the taxes
740 imposed by this chapter in an amount, as determined by the center, of up to 50 per cent of its
741 total capital investment in an offshore wind facility. The total amount of tax credit awarded
742 pursuant to this subsection shall be distributed in equal parts over the 5 taxable years that
743 correspond to the period in which the owner or tenant is certified pursuant to said section 8A of
744 said chapter 23J.

745 (3) An owner shall be eligible for a tax credit authorized under this subsection if the
746 owner demonstrates to the department that: (i) the owner is a certified offshore wind company;
747 (ii) the owner’s total capital investment in the offshore wind facility equals not less than
748 \$35,000,000; and (iii) the offshore wind facility will employ not less than 200 new full-time
749 employees by the fifth year of the owner’s certification period under section 8A of chapter 23J.

750 (4) A tenant shall be eligible for a tax credit authorized pursuant to this subsection if the
751 tenant demonstrates to the department that: (i) the tenant is a certified offshore wind company;

752 (ii) the owner has made a total capital investment in the facility that equals not less than
753 \$35,000,000; (iii) the tenant occupies a leased area of the offshore wind facility that represents
754 not less than 25 per cent of the owner's capital investment in the facility; and (iv) the tenant will
755 employ, in the aggregate with other tenants at the offshore wind facility, not less than 200 full-
756 time employees by the fifth year of the tenant's certification period pursuant to section 8A of
757 chapter 23J. The amount of tax credits awarded to a tenant under this subsection for a taxable
758 year shall not exceed the tenant's total lease payments for occupancy of the offshore wind
759 facility for the taxable year.

760 (5) An owner or tenant taking a credit authorized in this subsection shall not take the
761 credits authorized in subsection (g) or (aa) in the same taxable year.

762 (6) The department shall issue the refundable portion of the credit without further
763 appropriation and in accordance with the cumulative amount, including the current year costs of
764 incentives allowed in previous years, which shall not exceed \$35,000,000 annually as set forth in
765 subsection (d) of section 8A of chapter 23J.

766 (7) The department shall promulgate such rules and regulations as are necessary to
767 administer the credit established in this subsection.

768 SECTION 44. Chapter 63 of the General Laws is hereby amended by inserting after
769 section 38JJ the following 2 sections:-

770 Section 38KK. (a)(1) A corporation subject to tax under this chapter, to the extent
771 authorized by the offshore wind tax incentive program established in subsection (d) of section
772 8A of chapter 23J, may be allowed a refundable jobs credit against the tax liability imposed

773 under this chapter in an amount determined by the Massachusetts clean energy technology center
774 established in section 2 of chapter 23J, in consultation with the department.

775 (2) A corporation taking a credit under this section shall commit to the creation of a
776 minimum of 50 net new permanent full-time employees in the commonwealth.

777 (3) A credit allowed under this section shall reduce the liability of the corporation under
778 this chapter for the taxable year. If a credit claimed under this section by a corporation exceeds
779 the corporation's liability as otherwise determined under this chapter for the taxable year, 90 per
780 cent of such excess credit, to the extent authorized by the offshore wind tax incentive program,
781 shall be refundable to the corporation. Excess credit amounts shall not be carried forward to
782 other taxable years.

783 (4) The department shall issue the refundable portion of the jobs credit without further
784 appropriation and in accordance with the cumulative amount, including the current year costs of
785 incentives allowed in previous years, which shall not exceed \$35,000,000 annually as set forth in
786 subsection (d) of section 8A of chapter 23J.

787 Section 38LL. (a) As used in this section, the following words shall, unless the context
788 clearly requires otherwise, have the following meanings:-

789 "Capital investment", expenses incurred for the site preparation and construction, repair,
790 renovation, improvement, or equipping of a building, structure, facility, or other improvements
791 to real property, including, but not limited to, site-related utility and transportation infrastructure
792 improvements.

793 “Center”, the Massachusetts clean energy technology center established in section 2 of
794 chapter 23J.

795 “Certified offshore wind company”, as defined in section 1 of chapter 23J.

796 “Offshore wind facility”, any building, complex of buildings, or structural components of
797 buildings, including water access infrastructure, and all machinery and equipment used in the
798 manufacturing, assembly, development or administration of component parts that are primarily
799 used to support the offshore wind industry.

800 “Owner”, a taxpayer subject to tax under this chapter that: (i) is a corporation that holds
801 title to an offshore wind facility; or (ii) ground leases the land underlying an offshore wind
802 facility for at least 50 years.

803 “Tenant”, a taxpayer subject to tax under this chapter that is a lessee in an offshore wind
804 facility.

805 (b) An owner or tenant, to the extent authorized by the offshore wind tax incentive
806 program established in section 8A of chapter 23J, may take a refundable credit against the tax
807 imposed by this chapter in an amount, as determined by the center, of up to 50 per cent of its
808 total capital investment in an offshore wind facility. The total amount of tax credit awarded
809 pursuant to this section shall be distributed in equal parts over the 5 taxable years that correspond
810 to the period in which the owner or tenant is certified pursuant to said section 8A of said chapter
811 23J.

812 (c) An owner shall be eligible for a tax credit authorized under this section if the owner
813 demonstrates to the department that: (i) the owner is a certified offshore wind company; (ii) the

814 owner's total capital investment in the offshore wind facility equals not less than \$35,000,000;
815 and (iii) the offshore wind facility will employ not less than 200 new full-time employees by the
816 fifth year of the owner's certification period under section 8A of chapter 23J.

817 (d) A tenant shall be eligible for a tax credit authorized pursuant to this section if the
818 tenant demonstrates to the department that: (i) the tenant is a certified offshore wind company;
819 (ii) the owner of the offshore wind facility has made a total capital investment in the facility that
820 equals not less than \$35,000,000; (iii) the tenant occupies a leased area of the offshore wind
821 facility that represents not less than 25 per cent of the owner's capital investment in the facility;
822 and (iv) the tenant will employ, in the aggregate with other tenants at the offshore wind facility,
823 not less than 200 full-time employees by the fifth year of the tenant's certification period under
824 section 8A of chapter 23J. The amount of tax credits awarded under this section to a tenant for a
825 taxable year shall not exceed the tenant's total lease payments for occupancy of the offshore
826 wind facility for the taxable year.

827 (e) An owner or tenant taking a credit authorized in this section shall not take the credits
828 authorized in section 38N or 38KK in the same taxable year.

829 (f) The department shall issue the refundable portion of the credit without further
830 appropriation and in accordance with the cumulative amount, including the current year costs of
831 incentives allowed in previous years, which shall not exceed \$35,000,000 annually as set forth in
832 subsection (d) of section 8A of chapter 23J.

833 (g) The department shall promulgate such rules and regulations as are necessary to
834 administer the credit established in this section.

835 SECTION 45. Chapter 6C of the General Laws is hereby amended by adding the
836 following section:-

837 Section 78. The department shall create an anonymized and aggregated database of motor
838 vehicle types and locations. In so doing, the department shall consult with at least 1 member
839 organization of the Massachusetts Association of Regional Planning Agencies and with the
840 department of energy resources. The database shall consist of data for the most recently available
841 12 months, shall be updated annually, shall consist of data readily sortable by municipality and
842 zip code and shall contain the: (i) total number of passenger fossil fuel-powered vehicle
843 registrations; (ii) total number of passenger hybrid vehicle registrations; (iii) total number of
844 passenger zero-emission vehicle registrations; (iv) total number of commercial fossil fuel-
845 powered vehicle registrations; (v) total number of commercial hybrid vehicle registrations; (vi)
846 total number of commercial zero-emission vehicle registrations; (vii) total number of vehicle
847 miles traveled by passenger fossil fuel-powered vehicles over a defined 12-month period; (viii)
848 total number of vehicle miles traveled by passenger hybrid vehicles over a defined 12-month
849 period; (ix) total number of vehicle miles traveled by passenger zero-emission vehicles over a
850 defined 12-month period; (x) total number of vehicle miles traveled by commercial fossil fuel-
851 powered vehicles over a defined 12-month period; (xi) total number of vehicle miles traveled by
852 commercial hybrid vehicles over a defined 12-month period; and (xii) total number of vehicle
853 miles traveled by commercial zero-emission vehicles over a defined 12-month period. Annually,
854 not later than June 30, the department shall update the database for the previous calendar year.
855 Annually, not later than September 30, the department shall compile a summary report of the
856 data in the database and post the report on its website.

857 Upon request, the department shall provide the data to a member organization of the
858 Massachusetts Association of Regional Planning Agencies or a municipality to aid in the
859 deployment of electric vehicles and related infrastructure.

860 SECTION 46. Subsection (d) of section 4 of chapter 93B of the General Laws, as
861 appearing in the 2020 Official Edition, is hereby amended by adding the following paragraph:-

862 (4) to sell in-state any new vehicle that is not a zero-emission vehicle. For the purposes
863 of this paragraph, “vehicle” shall mean a passenger car or light duty truck and “zero-emission
864 vehicle” shall have the same meaning as defined in section 16 of chapter 25A.

865 SECTION 47. Chapter 159A¹/₂ of the General Laws is hereby amended by adding the
866 following section:-

867 Section 12. (a) The division shall establish a program to reduce greenhouse gas emissions
868 from transportation network vehicles. To the extent permitted under federal law, the program
869 shall establish requirements for transportation network companies including, but not limited to,
870 vehicle electrification and greenhouse gas emissions requirements. Such requirements shall
871 include, but not be limited to, a requirement for said companies to submit biennial plans to
872 gradually increase zero emission transportation network vehicles and reduce greenhouse gas
873 emissions to meet goals set by the executive office of energy and environmental affairs. If the
874 division determines that vehicle electrification requirements alone would be sufficient to achieve
875 the greenhouse gas emissions goals set by the executive office of energy and environmental
876 affairs, then it may establish requirements for vehicle electrification without establishing separate
877 requirements for greenhouse gas emissions. The division shall, to the extent practicable,

878 minimize any negative impacts of the program on drivers from low-income and moderate-
879 income communities and support the goal of clean mobility in such communities.

880 (b) The division shall establish regulations to implement the program established in this
881 section.

882 SECTION 48. Section 5 of chapter 161A of the General Laws, as appearing in the 2020
883 Official Edition, is hereby amended by inserting after the word “standards”, in line 105, the
884 following words:- , climate and the reduction of greenhouse gas emissions, environmental
885 resiliency.

886 SECTION 49. Said section 5 of said chapter 161A, as so appearing, is hereby further
887 amended by inserting after the word “act,”, in line 111, the following words:- capital investments
888 that result in reductions of greenhouse gas emissions.

889 SECTION 50. Said section 5 of said chapter 161A, as so appearing, is hereby further
890 amended by inserting after the word “maintenance,”, in line 116, the following words:- address
891 climate change-related vulnerabilities.

892 SECTION 51. The fourth paragraph of subsection (g) of said section 5 of said chapter
893 161A, as so appearing, is hereby amended by inserting after the first sentence the following 3
894 sentences:- The program shall include a clear, comprehensive and specific plan to implement the
895 requirements under section 6A of chapter 448 of the acts of 2016, which shall include, but not be
896 limited to, alterations, updates, land acquisitions and new construction of bus garages,
897 maintenance facilities and charging and fueling equipment, as may be necessary to meet the
898 requirements. The plan shall prioritize the deployment of zero-emission buses on routes that
899 serve underserved communities and communities with a high percentage of low-income

900 households. Each rolling 5-year plan shall report on the progress in meeting the requirements
901 under said section 6A of said chapter 448 including, but not limited to, the number of zero-
902 emission passenger buses operated, the number of non-zero emission passenger buses operated,
903 barriers to increased numbers of zero-emission passenger buses, if any, and recommended
904 legislative or regulatory action needed to address barriers or otherwise promote compliance.

905 SECTION 52. Section 1 of chapter 164 of the General Laws, as so appearing, is hereby
906 amended by inserting after the definition of “Department” the following definition:-

907 “Distributed energy resources”, small-scale power generation or storage technology, not
908 greater than 20 megawatts, including, but not limited to, resources that are in front of or behind
909 the customer meter, electric storage resources, intermittent generation, distributed generation,
910 demand response, energy efficiency, thermal storage and electric vehicles and their supply
911 equipment that may provide an alternative to, or an enhancement of, the traditional electric
912 power system and are located on an electric utility’s distribution system or on a subsystem of the
913 utility’s distribution system.

914 SECTION 53. Section 139 of said chapter 164 of the General Laws, as amended by
915 chapter 8 of the acts of 2021, is hereby amended by striking out subsection (i) and inserting in
916 place thereof the following subsection:-

917 (i) A Class I net metering facility shall be exempt from subsections (b1/2) and (k) and
918 from the aggregate net metering capacity of facilities that are not net metering facilities of a
919 municipality or other governmental entity under subsection (f) and may net meter and accrue
920 Class I net metering credits if it is generating renewable energy and the nameplate capacity of the
921 facility is equal to or less than 25 kilowatts. A Class I net metering facility with a capacity

922 greater than 25 kilowatts, Class II net metering facility or Class III net metering facility with an
923 executed interconnection agreement with a distribution company on or after January 1, 2021
924 shall be exempt from the aggregate net metering capacity of facilities that are not net metering
925 facilities of a municipality or other governmental entity under subsection (f) and may net meter
926 and accrue Class I, Class II, or Class III market net metering credits if it is generating renewable
927 energy and serves on-site load other than parasitic or station load; provided, that any credits
928 accrued in excess of its annual electricity consumption for the period running from April through
929 the following March shall be credited or paid out for such excess credits at the utility's avoided
930 cost rate.

931 SECTION 54. Said section 139 of said chapter 164, as so amended, is hereby further
932 amended by adding the following subsection:-

933 (1) A Class I, Class II or Class III solar net metering facility shall be eligible to, or shall
934 continue to, receive net metering credits as otherwise provided by this section if such facility is
935 on the same parcel as any number of other such solar net metering facilities and if: (i) the net
936 metering facilities are placed on a government-owned parcel; provided, however, that all
937 facilities on the single parcel do not exceed an aggregate limit of 10 megawatts; (ii) the net
938 metering facilities are placed on a single parcel of land where all buildings on that parcel
939 comprise low or moderate income housing as defined in section 20 of chapter 40B; (iii) each net
940 metering facility is placed on a separate and distinct rooftop where no 2 systems occupy the same
941 rooftop; provided, however, that all facilities on the single parcel do not exceed an aggregate
942 limit of 2 megawatts; (iv) each net metering facility installed on the same rooftop is
943 interconnected behind a meter of a separate customer; provided, however, that all the facilities on
944 the single parcel do not exceed an aggregate limit of 10 megawatts; or (v) the additional net

945 metering facilities are installed not less than 1 year after any previously installed facility was
946 placed into service; provided, however, that all facilities on the single parcel do not exceed an
947 aggregate limit of 2 megawatts. If all the net metering facilities located on a single parcel are net
948 metering facilities of a municipality, the aggregate limit shall be 10 megawatts per single parcel
949 for purposes of this subsection. For purposes of this subsection, a solar net metering facility
950 installed as a canopy over a parking area shall be considered to be installed on a rooftop.

951 SECTION 55. Section 141 of said chapter 164, as appearing in the 2020 Official Edition,
952 is hereby amended by striking out the first sentence and inserting in place thereof the following
953 sentence:- In all decisions or actions regarding rate designs, the department shall consider the
954 impacts of such actions on: (i) on-site generation; (ii) the replacement of gas infrastructure with
955 utility-scale non-emitting renewable thermal energy infrastructure; (iii) the reduction of
956 greenhouse gases as mandated by chapter 21N to reduce energy use; (iv) efforts to increase
957 efficiency and encourage non-emitting renewable sources of energy; (v) the findings of utility-
958 scale renewable thermal energy pilots approved by the department of public utilities pursuant to
959 section 99 of chapter 8 of the acts of 2021; (vi) data collected related to the design and operation
960 of networked geothermal demonstration projects approved by the department of public utilities
961 pursuant to chapter 102 of the acts of 2021, including data on any reduction of lost and
962 unaccounted for gas as defined in section 147; and (vii) the use of new financial incentives to
963 support energy efficiency efforts.

964 SECTION 56. Section 142 of said chapter 164, as so appearing, is hereby amended by
965 inserting after the word “power”, in line 3, the following words:- and utility-scale non-emitting
966 renewable thermal energy.

967 SECTION 57. The department of public utilities shall convene a stakeholder working
968 group to develop recommendations for regulatory and legislative changes that may be necessary
969 to align gas system enhancement plans developed pursuant to section 145 of chapter 164 of the
970 General Laws with the applicable statewide greenhouse gas emission limits and sublimits
971 established pursuant to chapter 21N and the commonwealth's emissions strategies. The working
972 group shall be convened not later than October 1, 2022 and shall include: the attorney general, or
973 a designee; the commissioner of energy resources, or a designee; the chairman of the department
974 of public utilities, or a designee; the commissioner of environmental protection, or a designee;
975 the chairs of the joint committee on telecommunications, utilities and energy, or their designees;
976 1 representative of each natural gas local distribution company; and 8 members appointed by the
977 secretary of energy and environmental affairs, 1 of whom shall be an advocate for low-income
978 residents of the commonwealth, 1 of whom shall be an advocate for middle-income residents of
979 the commonwealth, 1 of whom shall be a representative of municipalities or groups of
980 municipalities, 1 of whom shall be a representative of a labor union representing gas distribution
981 workers, 1 of whom shall be a representative of a nonprofit organization with expertise in energy
982 supply and demand, 1 of whom shall be a representative of a nonprofit organization with
983 expertise in the transition to clean thermal energy, 1 of whom shall be a representative of a
984 nonprofit organization with expertise in public health and 1 of whom shall be a representative of
985 a nonprofit environmental organization. The working group shall consider the gas system
986 enhancement plans' impacts on, and implications for, public health, safety, equity, affordability,
987 reliability, reductions in greenhouse gas emissions and cost recovery for repair and replacement
988 of pipeline infrastructure including, but not limited to, embedded costs, potential stranded assets
989 and opportunity costs and benefits; provided, however, that said working group shall evaluate

990 opportunities to advance utility-scale renewable thermal energy under said section 145 of said
991 chapter 164; and provided further, that any change recommended shall enable natural gas local
992 distribution companies to maintain a safe and reliable gas distribution system during the
993 commonwealth's transition to net zero emissions. The working group shall submit its report to
994 the department of public utilities, the joint committee on telecommunications, utilities and
995 energy, the senate and house committees on global warming and climate change and the clerks of
996 the senate and house of representatives not later than July 31, 2023.

997 SECTION 58. Section 145 of chapter 164, as so appearing, is hereby amended by striking
998 out the definition of "Eligible infrastructure replacement" and inserting in place thereof the
999 following definition:-

1000 "Eligible infrastructure replacement", a replacement or an improvement of existing
1001 infrastructure of a gas company that: (i) is made on or after January 1, 2015; (ii) is designed to
1002 improve public safety or infrastructure reliability; (iii) does not increase the revenue of a gas
1003 company by connecting an improvement for a principal purpose of serving new customers; (iv)
1004 reduces, or has the potential to reduce, lost and unaccounted for natural gas through a reduction
1005 in natural gas system leaks; (v) is not included in the current rate base of the gas company as
1006 determined in the gas company's most recent rate proceeding; (vi) may include use of advanced
1007 leak repair technology approved by the department to repair an existing leak-prone gas pipe to
1008 extend the useful life of the such gas pipe by no less than 10 years; and (vii) may include
1009 replacing gas infrastructure with utility-scale non-emitting renewable thermal energy
1010 infrastructure.

1011 SECTION 59. Said chapter 164 of the General Laws is hereby further amended by
1012 inserting after section 147, the following section:-

1013 Section 147A. For the purposes of this section, the following term shall have the
1014 following meaning:-

1015 “Non-emitting renewable thermal infrastructure project,” a utility-scale project that
1016 replaces natural gas distribution infrastructure with distribution infrastructure that supplies
1017 heating, or heating and cooling, from fuel sources whose combustion does not emit greenhouse
1018 gases, as defined by section 1 of chapter 21N; provided, however, that a “non-emitting
1019 renewable thermal infrastructure project” may include, but shall not be limited to, a networked
1020 geothermal system.

1021 SECTION 60. Said chapter 164 is hereby further amended by inserting after section 92A
1022 the following 2 sections:-

1023 Section 92B. (a) The department shall direct each electric company to develop an
1024 electric-sector modernization plan to proactively upgrade the distribution and, where applicable,
1025 transmission systems to: (i) improve grid reliability, communications and resiliency; (ii) enable
1026 increased, timely adoption of renewable energy and distributed energy resources; (iii) promote
1027 energy storage and electrification technologies necessary to decarbonize the environment and
1028 economy; (iv) prepare for future climate-driven impacts on the transmission and distribution
1029 systems; (v) accommodate increased transportation electrification, increased building
1030 electrification and other potential future demands on distribution and, where applicable,
1031 transmission systems; and (vi) minimize or mitigate impacts on the ratepayers of the

1032 commonwealth, thereby helping the commonwealth realize its statewide greenhouse gas
1033 emissions limits and sublimits under chapter 21N.

1034 (b) An electric-sector modernization plan developed pursuant to subsection (a) shall
1035 describe in detail each of the following elements: (i) improvements to the electric distribution
1036 system to increase reliability and strengthen system resiliency to address potential weather-
1037 related and disaster-related risks; (ii) the availability and suitability of new technologies
1038 including, but not limited to, smart inverters, advanced metering and telemetry, and energy
1039 storage technology for meeting forecasted reliability and resiliency needs, as applicable; (iii)
1040 patterns and forecasts of distributed energy resource adoption in the company's territory and
1041 upgrades that might facilitate or inhibit increased adoption of such technologies; (iv)
1042 improvements to the distribution system that will enable customers to express preferences for
1043 access to renewable energy resources; (v) improvements to the distribution system that will
1044 facilitate transportation or building electrification; (vi) improvements to the transmission or
1045 distribution system to facilitate achievement of the statewide greenhouse gas emissions limits
1046 under chapter 21N; (vii) opportunities to deploy energy storage technologies to improve
1047 renewable energy utilization and avoid curtailment; (viii) alternatives to proposed investments,
1048 including changes in rate design, load management and other methods for reducing demand,
1049 enabling flexible demand and supporting dispatchable demand response; and (ix) alternative
1050 approaches to financing proposed investments, including, but not limited to, cost allocation
1051 arrangements between developers and ratepayers and, with respect to any proposed investments
1052 in transmission systems, cost allocation arrangements and methods that allow for the equitable
1053 allocation of costs to, and the equitable sharing of costs with, other states and populations and
1054 interests within other states that are likely to benefit from said investments. For all proposed

1055 investments and alternative approaches, each electric company shall identify customer benefits
1056 associated with the investments and alternatives including, but not limited to, safety, grid
1057 reliability and resiliency, facilitation of the electrification of buildings and transportation,
1058 integration of distributed energy resources, avoided renewable energy curtailment, reduced
1059 greenhouse gas emissions and air pollutants, avoided land use impacts and minimization or
1060 mitigation of impacts on the ratepayers of the commonwealth.

1061 (c) In developing a plan pursuant to subsection (a), an electric company shall:

1062 (i) prepare and use 3 planning horizons for electric demand, including a 5-year forecast, a
1063 10-year forecast and a demand assessment through 2050 to account for future trends, including
1064 but not limited to future trends in the adoption of renewable energy, distributed energy resources,
1065 and energy storage and electrification technologies necessary to achieve the statewide
1066 greenhouse gas emission limits and sublimits under chapter 21N;

1067 (ii) consider and include a summary of all proposed and related investments, alternatives
1068 to these investments and alternative approaches to financing these investments that have been
1069 reviewed, are under consideration or have been approved by the department previously; and

1070 (iii) solicit input, such as planning scenarios and modeling, from the Grid Modernization
1071 Advisory Council established in section 92C, respond to information and document requests
1072 from said Council and conduct technical conferences and a minimum of 2 stakeholder meetings
1073 to inform the public, appropriate state and federal agencies, and companies engaged in the
1074 development and installation of distributed generation, energy storage, vehicle electrification
1075 systems and building electrification systems.

1076 (d) An electric company shall submit its first plan for review, input and recommendations
1077 to the Grid Modernization Advisory Council established in section 92C by April 1, 2023, and
1078 thereafter once every five years in accordance with a schedule determined by the department;
1079 provided, that the plan shall be submitted to the Grid Modernization Advisory Council not later
1080 than 120 days before the electric company files the plan with the department; and provided
1081 further, that the Grid Modernization Advisory Council shall return the plan to the company with
1082 recommendations not later than 70 days before the company files the plan with the department.
1083 An electric company shall submit its plan, together with a demonstration of the Grid
1084 Modernization Advisory Council's review, input and recommendations, including, but not
1085 limited to, a list of each individual recommendation, the status of each recommendation and an
1086 explanation of whether and why each recommendation was adopted, adopted as modified or
1087 rejected, along with a statement of any unresolved issues, to the department in accord with a
1088 schedule determined by the department. The electric company shall be permitted to include in
1089 base electric distribution rates all prudently incurred plant additions that are used and are useful.
1090 The department shall promptly consider the plan and shall provide an opportunity for interested
1091 parties to be heard in a public hearing. The department shall approve, approve with modifications
1092 or reject the plan within 7 months of submittal. In order to be approved, a plan shall provide net
1093 benefits for customers and meet the criteria enumerated in clauses (i) to (vi), inclusive, of
1094 subsection (a).

1095 (e) An electric-sector modernization plan developed by an electric company pursuant to
1096 subsection (a) shall propose discrete, specific, enumerated investments to the distribution and,
1097 where applicable, transmission systems, alternatives to such investments and alternative
1098 approaches to financing such investments, that facilitate grid modernization, greater reliability,

1099 communications and resiliency, increased enablement of distributed energy resources, increased
1100 transportation electrification, increased building electrification and the minimization or
1101 mitigation of ratepayer impacts, in order to meet the statewide greenhouse gas emissions limits
1102 and sublimits under chapter 21N. An electric company shall submit 2 reports per year to the
1103 department and the joint committee on telecommunications, utilities and energy on the
1104 deployment of approved investments in accord with any performance metrics included in the
1105 approved plans.

1106 Section 92C. (a) There shall be a Grid Modernization Advisory Council to consist of the
1107 commissioner of energy resources, or a designee, who shall serve as chair; the attorney general,
1108 or a designee; the commissioner of environmental protection, or a designee; 13 members to be
1109 appointed by the governor: 1 of whom shall be a representative of middle-income and low-
1110 income residential consumers, 1 of whom shall be a representative from a local agency
1111 administering the low-income weatherization assistance program, 1 of whom shall be a
1112 representative of the environmental advocacy community, 1 of whom shall be a representative of
1113 an environmental justice community organization, 1 of whom shall be a representative of the
1114 transmission scale renewable energy industry with expertise in projects of greater than 20
1115 megawatts, 1 of whom shall be a representative of the distributed generation scale renewable
1116 energy industry with expertise in projects of less than 5 megawatts, 1 of whom shall be a
1117 representative of the energy storage industry, 1 of whom shall be a representative of the electric
1118 vehicle industry, 1 of whom shall be a representative of the building electrification industry, 1 of
1119 whom shall be a representative of municipal or regional interests, 1 of whom shall have technical
1120 and engineering expertise in interconnecting clean energy, 1 of whom shall be a representative of
1121 businesses, including large commercial and industrial end-use customers; and 1 member from

1122 each electric company operating in the commonwealth who shall serve as non-voting members.
1123 Members shall serve for terms of 5 years and may be reappointed.

1124 (b) The council shall seek to encourage least-cost investments in the electric distribution
1125 systems, alternatives to the investments or alternative approaches to financing investments that
1126 will facilitate the achievement of the statewide greenhouse gas emission limits and sublimits
1127 under chapter 21N and increase transparency and stakeholder engagement in the grid planning
1128 process. The council shall review and provide recommendations on electric-sector modernization
1129 plans developed pursuant to subsection (a) of section 92B that maximize net customer benefits
1130 and demonstrate cost-effective investments in the distribution grid, including investments to
1131 enable interconnection of, and communication with, distributed energy resources and
1132 transmission-scale renewable energy resources, facilitate electrification of buildings,
1133 transportation and other sectors, improve grid reliability and resiliency, minimize or mitigate
1134 impacts on ratepayers throughout the commonwealth and reduce impacts on and provide benefits
1135 to low-income ratepayers throughout the commonwealth. The council shall cooperate and
1136 coordinate with the clean energy transmission working group..

1137 (c) The council shall annually submit to the department a proposal regarding the level of
1138 funding required for the retention of expert consultants and reasonable administrative costs. The
1139 proposal shall be approved by the department either as submitted or as modified by the
1140 department. The department shall allocate funds sufficient for these purposes from the natural
1141 gas and electric efficiency funding authorized under section 19 of chapter 25; provided, however,
1142 that such allocation shall not exceed 1 per cent of such funding on an annual basis. The
1143 consultants used under this section shall be experts in energy distribution and transmission,
1144 energy efficiency, or energy finance, and shall be independent.

1145 SECTION 61. Section 83B of chapter 169 of the acts of 2008, as inserted by section 12
1146 of chapter 188 of the acts of 2016, is hereby amended by striking out the definitions of “Firm
1147 service hydroelectric generation” and “Long-term contract” and inserting in place thereof the
1148 following 5 definitions:-

1149 “Firm energy delivery”, dispatchable non-emitting energy provided in a long-term
1150 contract with guaranteed continuous availability at rated power for 1 or more discrete multi-day
1151 periods of extreme heat and cold weather, low non-dispatchable power production, or other grid
1152 contingencies, as designated by the department of energy resources, to ensure electric reliability
1153 and security in a zero-carbon electric system; provided, however, that “firm energy delivery”
1154 may include, but shall not be limited to, energy from multiple non-emitting energy generation
1155 resources and energy storage systems managed in a coordinated manner, in addition to other
1156 market services.

1157 “Firm service hydroelectric generation”, hydroelectric generation provided without
1158 interruption, for 1 or more discrete periods designated in a long-term contract, including, but not
1159 limited to, multiple hydroelectric run-of-the-river generation units managed in a portfolio that
1160 creates firm service through the diversity of multiple units.

1161 “Long-duration energy storage system”, an energy storage system, as defined in section 1
1162 of chapter 164 of the General Laws, that is capable of dispatching energy at its full rated capacity
1163 for a period greater than 10 hours.

1164 “Long-term contract”, a contract for a period of 15 to 20 years for offshore wind energy
1165 generation pursuant to section 83C or for clean energy generation pursuant to section 83D;
1166 provided, however, that a contract for offshore wind energy generation pursuant to said section

1167 83C may include terms and conditions for renewable energy credits associated with the offshore
1168 wind energy generation that exceed the term of generation under the contract.

1169 “Mid-duration energy storage system”, an energy storage system, as defined in section 1
1170 of chapter 164 of the General Laws, that is capable of dispatching energy at its full rated capacity
1171 for a period greater than 4 hours and up to 10 hours.

1172 SECTION 62. Section 83C of said chapter 169, inserted by said section 12 of said
1173 chapter 188, is hereby amended by striking out subsections (a) to (e), inclusive, as most recently
1174 amended by section 69 of chapter 24 of the acts of 2021 and inserting in place thereof the
1175 following 6 subsections:-

1176 (a) To facilitate the financing of offshore wind energy generation resources in the
1177 commonwealth, every distribution company shall, in coordination with the department of energy
1178 resources, jointly and competitively solicit proposals for offshore wind energy generation;
1179 provided, however, that: (i) the solicitation process shall be deemed competitive by the
1180 department of public utilities if the distribution companies receive at least 3 bids from 3 different
1181 companies, not including affiliates, whether the levelized price per megawatt hour, plus
1182 associated transmission costs, of the proposed project is equal to or less than the levelized price
1183 per megawatt hour, plus associated transmission costs, of the previous procurement; (ii) if at
1184 least 3 reasonable bids complying with clause (i) have been received, each distribution company
1185 shall enter into long-term contracts that are cost-effective and promote economic development in
1186 the commonwealth: (iii) if the solicitation process yield 2 or less bids from different companies,
1187 not including affiliates, the department of public utilities shall deem the solicitation process
1188 competitive if the levelized price per megawatt hour, plus the associated transmission costs, is

1189 equal to or less than the levelized price per megawatt hour of the previous procurement; (iv) if 2
1190 or fewer reasonable bids in compliance with clause (iii) have been received, each distribution
1191 company shall enter into long-term contracts that are cost-effective and promote economic
1192 development in the commonwealth; (v) should the solicitation process yield 2 or fewer bids from
1193 different companies not including affiliates, but the lowest levelized price per megawatt hour,
1194 plus the associated transmission cost is higher than the previous procurement the department of
1195 public utilities shall deem the solicitation competitive if the department of public utilities
1196 determines that the levelized price per megawatt hour would be equal to or lower than the
1197 levelized price of the previous procurement after any adjustments made for inflation and for
1198 direct and reasonably certain commitments made on or after July 1, 2022 to capital investments
1199 in the manufacture, fabrication and assembly within the commonwealth of domestic supply chain
1200 components of the offshore wind industry; and (vi) if 2 or fewer reasonable bids in compliance
1201 with clause (v) have been received, each distribution company shall enter into long-term
1202 contracts that are cost-effective and promote economic development in the commonwealth.
1203 Long-term contracts executed pursuant to this section shall be subject to the approval of the
1204 department of public utilities and shall be apportioned among the distribution companies. The
1205 department of public utilities may rely on information or surveys from ISO New England, Inc.,
1206 third-party consultants, National Laboratories or surveys of previous awardees in making its
1207 competitiveness determination.

1208 (b) The timetable and method for solicitations of long-term contracts shall be proposed
1209 by the department of energy resources in coordination with the distribution companies using a
1210 competitive bidding process and shall be subject to review and approval by the department of
1211 public utilities. The department of energy resources shall consult with the distribution companies

1212 and the attorney general regarding the choice of solicitation methods. A solicitation may be
1213 coordinated and issued jointly with other New England states or entities designated by those
1214 states. The distribution companies, in coordination with the department of energy resources, may
1215 conduct 1 or more competitive solicitations through a staggered procurement schedule developed
1216 by the department of energy resources; provided, however, that the schedule shall ensure that the
1217 distribution companies enter into cost-effective long-term contracts for offshore wind energy
1218 generation equal to approximately 5,600 megawatts of aggregate nameplate capacity not later
1219 than June 30, 2027, including capacity authorized pursuant to section 21 of chapter 227 of the
1220 acts of 2018; provided further, that individual solicitations shall seek proposals for not less than
1221 400 megawatts of aggregate nameplate capacity of offshore wind energy generation resources.
1222 The staggered procurement schedule shall be developed by the department of energy resources
1223 and shall specify that any subsequent solicitation shall occur within 24 months of a previous
1224 solicitation. Proposals received pursuant to a solicitation under this section shall be subject to
1225 review by the department of energy resources and the executive office of housing and economic
1226 development in consultation with the independent evaluator and the electric distribution
1227 companies shall offer technical advice. As part of the evaluation process, the department of
1228 energy resources shall produce a numeric score for each bid's economic development
1229 commitments and for plans for financial and technical assistance to support wildlife and habitat
1230 monitoring.

1231 (c) The department of energy resources may condition the determination of any winning
1232 bid upon a bidder's inclusion of regional or project-specific transmission costs or, alternatively,
1233 upon the bidder's agreement to utilize transmission procured in a separate solicitation conducted
1234 by the department. The department shall give preference to proposals that demonstrate benefits

1235 from: (i) direct and reasonably certain commitments made on or after July 1, 2022 to capital
1236 investments in the manufacture, fabrication and assembly within the commonwealth of domestic
1237 supply chain components of the offshore wind industry; (ii) mitigation, minimization and
1238 avoidance of detrimental environmental and socioeconomic impacts, including through
1239 meaningful consultation with impacted environmental and socioeconomic stakeholders,
1240 including federally and state recognized tribes and commercial and recreational fishing; (iii)
1241 support for workforce harmony and community benefits through workforce agreements with
1242 appropriate labor organizations for construction, renovation, reconstruction, alteration,
1243 installation, demolition, expansion, maintenance and repair; (iv) employment opportunities for
1244 members of federally and state recognized tribes in the commonwealth, workers from low-
1245 income communities and certified minority-owned and women-owned small business enterprises
1246 in the commonwealth; (v) the maximization, to the extent feasible, of economic development and
1247 employment contributions to the commonwealth; (vi) additional benefits to low-income
1248 communities and low-income ratepayers in the commonwealth, including opportunities for
1249 diversity, equity and inclusion; (vii) minimization and mitigation, to the extent feasible, of
1250 ratepayer impacts; (viii) commitments to enter into long-term contracts to purchase offshore
1251 wind energy with businesses, nonprofit organizations, a municipality or group of municipalities
1252 with an approved municipal load aggregation plan pursuant to section 134 of chapter 164 of the
1253 General Laws or other government entities directly or through an aggregation pursuant to section
1254 137 of said chapter 164; (ix) energy storage, including new and existing mid-duration and long-
1255 duration energy storage systems; and (x) resources able to guarantee firm energy delivery. The
1256 department of energy resources shall, in consultation with the independent evaluator, issue a
1257 final, binding determination of the winning bid; provided, however, that the final contract

1258 executed shall be subject to review by the department of public utilities, and the department of
1259 public utilities may allow contractual adjustments for project cost differentials attributable to the
1260 utilization or non-utilization of separate transmission procured by the commonwealth. The
1261 department of energy resources may require additional solicitations to fulfill the requirements of
1262 this section. If the department of energy resources, in consultation with the independent
1263 evaluator, determines that reasonable proposals were not received pursuant to a solicitation, the
1264 department may terminate the solicitation and may require additional solicitations to fulfill the
1265 requirements of this section.

1266 (d) In developing proposed long-term contracts, the distribution companies shall consider
1267 long-term contracts for renewable energy certificates, for energy and for a combination of both
1268 renewable energy certificates and energy. A distribution company may decline to pursue a
1269 contract if the contract's terms and conditions would require the contract obligation to place an
1270 unreasonable burden on the distribution company's balance sheet after consultation with the
1271 department of energy resources; provided, however, that the distribution company shall take all
1272 reasonable actions to structure the contracts, pricing or administration of the products purchased
1273 under this section to prevent or mitigate an impact on the balance sheet or income statement of
1274 the distribution company or its parent company, subject to the approval of the department of
1275 public utilities; and provided further, that mitigation shall not increase costs to ratepayers. If a
1276 distribution company deems all contracts to be unreasonable, the distribution company shall
1277 consult with the department of energy resources and, within 20 days of the date of its decision,
1278 submit a filing to the department of public utilities. The filing shall include, in the form and
1279 detail prescribed by the department of public utilities, documentation supporting the distribution
1280 company's decision to decline the contract. Following a distribution company's filing, and

1281 within 4 months of the date of filing, the department of public utilities shall approve or reject the
1282 distribution company's decision and may order the distribution company to reconsider any
1283 contract. The department of public utilities shall take into consideration the department of energy
1284 resources' recommendations on the distribution company's decision. The department of energy
1285 resources may require additional solicitations to fulfill the requirements of this section.

1286 (e)(1) The department of public utilities shall promulgate regulations consistent with this
1287 section. The regulations shall: (i) allow developers of offshore wind energy generation to submit
1288 proposals for long-term contracts consistent with this section; (ii) require that a proposed long-
1289 term contract executed by the distribution companies under a proposal be filed with, and
1290 approved by, the department of public utilities before becoming effective; (iii) provide for an
1291 annual remuneration for the contracting distribution company equal to 2.25 per cent of the
1292 annual payments under the contract to compensate the company for accepting the financial
1293 obligation of the long-term contract; provided, however, that such provision shall be acted upon
1294 by the department of public utilities at the time of contract approval; (iv) require associated
1295 transmission costs to be incorporated into a proposal; provided, however, that, to the extent there
1296 are regional or project-specific transmission costs included in a bid, the department of public
1297 utilities may, if it finds such recovery to be in the public interest, authorize or require the
1298 contracting parties to seek recovery of such transmission costs from other states or from
1299 benefitted entities or populations in other states through federal transmission rates, consistent
1300 with policies and tariffs of the Federal Energy Regulatory Commission; and (v) require that
1301 proposals meet the following criteria: (A) where feasible, create and foster economic
1302 development and quality, high-demand jobs in the commonwealth; (B) provide enhanced
1303 electricity reliability, system safety and energy security; (C) contribute to reducing winter

1304 electricity price spikes; (D) be cost effective and beneficial to electric ratepayers in the
1305 commonwealth over the term of the contract, taking into consideration potential costs and
1306 benefits to the ratepayers, including potential economic and environmental benefits and
1307 opportunities to equitably allocate costs to, and equitably share costs with, other states and
1308 populations within other states that may benefit from offshore wind generation procured by the
1309 commonwealth; (E) avoid line loss and mitigate transmission costs to the extent possible and
1310 ensure that transmission cost overruns, if any, are not borne by ratepayers; (F) adequately
1311 demonstrate project viability in a commercially reasonable timeframe; (G) allow offshore wind
1312 energy generation resources to be paired with energy storage systems, including new and
1313 existing mid-duration and long-duration energy storage systems; (H) include an initial
1314 environmental and fisheries mitigation plan for the construction and operation of such offshore
1315 wind facilities, including consideration of commercial, recreational and indigenous fishing
1316 rights; (I) mitigate impacts to the marine environment by providing financial and technical
1317 assistance to support robust monitoring of wildlife and habitat through contributions to regional
1318 and tribal research efforts; (J) include benefits to environmental justice populations and low-
1319 income ratepayers in the commonwealth; and (K) include opportunities for diversity, equity and
1320 inclusion, including, at a minimum, a workforce diversity plan and a supplier diversity program
1321 plan.

1322 (e)(2) A proposed long-term contract shall be subject to the review and approval of the
1323 department of public utilities. As part of its approval process, the department of public utilities
1324 shall consider recommendations by the attorney general, which shall be submitted to the
1325 department within 45 days following the filing of a proposed long-term contract with the
1326 department. The department of public utilities shall take into consideration the department of

1327 energy resources' recommendations on the potential costs and benefits to the rate payers,
1328 including economic and environmental benefits and opportunities to equitably allocate costs to,
1329 and equitably share costs with, other states and populations within other states that may benefit
1330 from offshore wind generation procured by the commonwealth, and the requirements of chapter
1331 298 of the acts of 2008 and chapter 21N of the General Laws. The department of public utilities
1332 shall consider the potential costs and benefits of the proposed long-term contract and shall
1333 approve a proposed long-term contract if the department finds that the proposed contract is in the
1334 public interest and is a cost-effective mechanism for procuring beneficial, reliable renewable
1335 energy on a long-term basis, taking into account the factors outlined in this section. A
1336 distribution company shall be entitled to cost recovery of payments made under a long-term
1337 contract approved under this section.

1338 SECTION 63. Said section 83C of said chapter 169, as so amended, is hereby further
1339 amended by striking out subsection (m) and inserting in place thereof the following subsection:-

1340 (m) The plan required in subclause (H) of clause (v) of paragraph (1) subsection (e) shall
1341 include, but shall not be limited to, a detailed description of the best management practices and
1342 any on-site or off-site mitigation the applicant shall employ, informed by the latest science at the
1343 time the plan is made, that will avoid, minimize and mitigate impacts to wildlife, including, but
1344 not limited to: threatened or endangered species such as North Atlantic right whales, coastal and
1345 marine habitats; natural resources; ecosystems; and traditional or existing water-dependent uses,
1346 including, but not limited to, commercial and recreational fishing. The plan shall include pre-
1347 construction and post-construction monitoring to understand the effects of facilities on marine
1348 and avian species.

1349 SECTION 64. Chapter 75 of the acts of 2016 is hereby amended by inserting after section
1350 11, the following new section:-

1351 Section 11A. The department of energy resources shall promulgate regulations to include
1352 in the solar incentive program established in section 11, and in any successor solar incentive
1353 program, additional incentives for pollinator-friendly solar installations; provided, that
1354 pollinator-friendly solar installations for ground-mounted solar panels shall remove vegetation as
1355 part of said installation; provided further, that said installations shall be certified by a recognized
1356 pollinator-friendly solar photovoltaic certification program at a higher education institution in the
1357 commonwealth or have obtained another equivalent certification as determined by said
1358 department; and provided further, that the department shall develop criteria for said installations
1359 that include facility size.

1360 The department shall offer rebates to reduce the costs of complying with pollinator-
1361 friendly requirements. Said rebates shall be approved by the department of public utilities and be
1362 recoverable from distribution company ratepayers through a separate pollinator adder.

1363 SECTION 65. Section 3 of chapter 448 of the acts of 2016 is hereby amended by striking
1364 out the words “may include requirements for electric vehicle charging for residential and
1365 appropriate commercial buildings as amendments to the state building and electric code” and
1366 inserting in place thereof the following words:- shall include requirements for electric vehicle
1367 charging for residential and commercial buildings as amendments to the state building code and
1368 the state electric code.

1369 SECTION 66. Said chapter 448 is hereby further amended by inserting after section 6 the
1370 following section:-

1371 Section 6A. (a) Not later than December 31, 2030, each purchase or lease of a passenger
1372 bus by the Massachusetts Bay Transportation Authority shall be a zero-emission vehicle.

1373 (b) Not later than December 31, 2040, all passenger buses operated by the Massachusetts
1374 Bay Transportation Authority shall be exclusively zero-emission passenger buses.

1375 SECTION 67. Section 99 of chapter 8 of the acts of 2021 is hereby amended by striking
1376 the fifth sentence.

1377 SECTION 68. Said section 99 of said chapter 8 is hereby further amended by adding the
1378 following 3 paragraphs:-

1379 The department shall ensure the accuracy and transparency of the data, findings and
1380 outcomes of the pilot projects authorized pursuant to this section by requiring each gas company
1381 taking part in a pilot project to report to the department on the status of said project on a semi-
1382 annual basis, until completion of each such pilot project as determined by the department. The
1383 report shall include, but not be limited to, the: (i) stage and progress of each pilot project in
1384 which the company is participating; (ii) barriers encountered by each project to developing and
1385 providing service to end users; (iii) number of customers served by each project; (iv) costs of
1386 each project; (v) number of jobs retained or created by each project; and (vi) any other data,
1387 findings and information the department deems to be in the public interest. The department shall
1388 post and make publicly available each such report on its website. Following the completion, as
1389 determined by the department, of the pilot project or projects undertaken by the gas company,
1390 the department may require each gas company taking part in 1 or more pilot projects to report to
1391 the department: (A) a roadmap and plan to abandon existing gas infrastructure that is not cost
1392 effective and to transition to non-emitting renewable energy sources, including but not limited to

1393 renewable thermal infrastructure projects; (B) a roadmap and plan to evolve existing gas
1394 infrastructure that is cost effective to transition to non-emitting renewable energy sources,
1395 including but not limited to thermal infrastructure projects; (C) a roadmap and plan to: (1)
1396 maintain existing gas infrastructure that provides service to a use or location for which, at the
1397 time that the report is prepared, there is no cost-effective technical option to transition to non-
1398 emitting renewable energy sources, including but not limited to thermal infrastructure projects;
1399 and (2) reduce greenhouse gas emissions from existing gas infrastructure that the gas company
1400 plans to maintain; and (D) such other information as the department may require.

1401 Within 9 months of the completion, as determined by the department, of the pilot project
1402 or projects undertaken by each gas company, the department shall publish a third-party
1403 evaluation of the data, findings and outcomes of each said pilot or pilots; provided, however, that
1404 that a credible and reliable third-party evaluation of said pilot that meets the requirements of this
1405 section is not already underway or in the process of being published by another entity. After
1406 taking said report or reports into consideration, the department shall determine whether to
1407 recommend to the general court that gas companies be authorized to generate and sell, or
1408 distribute and sell, renewable thermal energy within the commonwealth; provided, however, that
1409 the department may delay any such determination until sufficient data as determined by the
1410 department is provided by such pilots. In making said determination, the department shall
1411 consider potential benefits and potential costs. Potential benefits shall include, but not be limited
1412 to, replacing natural gas with a clean energy resource, advancing building electrification,
1413 improving the public health of areas with disproportionate environmental or public health
1414 burdens and contributing to achieving the greenhouse gas emissions limits and sublimits set forth
1415 in chapter 21N of the General Laws. In estimating potential benefits, the department shall

1416 calculate the social value of greenhouse gas emissions reductions. Potential costs shall include
1417 but not be limited to the projected expense of generation and distribution, the impact on the
1418 energy budgets of both participating and non-participating customers within the commonwealth
1419 and the implications for the emergence of a competitive market to generate, distribute and sell
1420 renewable thermal energy resources in the commonwealth.

1421 The department may promulgate rules or regulations to implement this section.

1422 SECTION 69. Notwithstanding any other special or general law to the contrary there
1423 shall be a commission established to investigate and make recommendations to remove barriers
1424 to the further development of agrivoltaic projects. For the purposes of this section, agrivoltaic
1425 shall refer to the dual operation of a solar photovoltaic facility and agriculture on a single piece
1426 of land.

1427 The commission shall include: the secretary of energy and environmental affairs or
1428 designee; the commissioner of energy resources or designee; the commissioner of agricultural
1429 resources or designee; the chairs of the joint committee on telecommunications, utilities and
1430 energy or their designees; the chairs of the joint committee on the environment, natural resources
1431 and agriculture or their designees; the president of the Cranberry Growers Association, Inc. or
1432 designee; the president of Massachusetts Audubon Society, Inc. or designee; and 3 members
1433 appointed by the speaker of the house of representatives, 1 of whom shall be a representative
1434 from the solar industry who shall have developed an agrivoltaic project currently in operation in
1435 the commonwealth and who shall be appointed from a list jointly created and provided by the 2
1436 clean energy member organizations with the largest number of Massachusetts-based solar
1437 members, 1 of whom shall be a representative from a farmer member organization based in the

1438 commonwealth, and 1 of whom shall be a representative from a land conservation or open space
1439 non-profit headquartered in the commonwealth; and 3 members appointed by the senate
1440 president, 1 of whom shall be a representative from the solar industry from a list jointly created
1441 and provided by the 2 clean energy member organizations with the largest number of
1442 Massachusetts-based solar members, 1 of whom shall be a representative from a farm land non-
1443 profit organization with an office in the commonwealth and 1 of whom shall be a representative
1444 from a regional planning agency. The commission shall have 3 chairs, drawn from its
1445 membership, 1 of whom shall be appointed by the governor, 1 of whom shall be appointed by the
1446 house chair of the joint committee on telecommunications, utilities and energy and 1 of whom
1447 shall be appointed by the senate chair of the joint committee on telecommunications, utilities and
1448 energy.

1449 The commission shall review available research and data on the effects of dual operation
1450 of solar photovoltaic facilities and agriculture on single pieces of land, solicit and consider
1451 relevant stakeholder comments and develop recommendations for legislative and regulatory
1452 changes to facilitate the installation of agrivoltaic projects in the commonwealth with due
1453 consideration given to land use impacts and categorizations, water quality, soil health and food
1454 production. The commission shall review best practices for third party certification, including,
1455 but not limited to: consistent standards, streamlined review and quality control and verification.
1456 The commission shall review best practices on carbon accounting and other methods for
1457 quantifying the greenhouse gas emissions sequestered with respect to agricultural land and shall
1458 make recommendations on the use of such practices. The commission shall work with the
1459 executive office of energy and environmental affairs to gather information and data to quantify

1460 how agrivoltaic projects may contribute to meeting the greenhouse gas emission reductions
1461 requirements of chapter 21N of the General Laws.

1462 The commission shall conduct not fewer than three public hearings in conveniently
1463 accessible locations throughout the commonwealth. The executive office of energy and
1464 environmental affairs shall provide administrative support for the operations of the commission.
1465 The commission shall submit a report and recommendations, together with any drafts of
1466 legislation that may be useful in carrying out its recommendations and otherwise putting them
1467 into effect, by filing the same with the clerks of the house of representatives and the senate not
1468 later than November 1, 2023.

1469 SECTION 70. (a) Notwithstanding any general or special law to the contrary, the
1470 department of energy resources may competitively solicit and procure proposals for offshore
1471 wind energy transmission; provided, that offshore wind developers as defined in section 83B of
1472 chapter 169 of the acts of 2008 as amended by chapter 188 of the acts of 2016 shall be permitted
1473 to submit proposals pursuant to this section; provided further, that such transmission service shall
1474 be made available for use by more than 1 wind energy generation project. The department may
1475 coordinate with the department of public utilities, electric distribution companies, other New
1476 England states or entities designated by those states and ISO New England Inc. or a successor
1477 organization, in the solicitation and procurement of proposals for offshore wind energy
1478 transmission. The department shall be permitted to select 1 proposal, multiple proposals or no
1479 proposals; provided, however, that the department may select proposals that include federal
1480 funding in the form of a match, grant or loan, or through ownership and operation by the United
1481 States government, cost sharing among states or recovery of transmission costs through federal

1482 transmission rates, consistent with policies and tariffs of the Federal Energy Regulatory
1483 Commission.

1484 (b) In conducting the procurement for offshore wind energy transmission, the department
1485 of energy resources shall take into consideration the total amount of transmission needed to
1486 maintain electric system reliability, avoid unnecessary upgrade costs to the existing transmission
1487 grid, achieve the commonwealth's offshore wind and decarbonization goals and obtain
1488 demonstrable benefits to the consumer and environment. The department may consider proposals
1489 that include, but shall not be limited to, upgrading the existing grid, extending the grid closer to
1490 offshore wind locations, determining or upgrading optimal landfall approaches, or
1491 interconnecting between offshore substations. The department may modify a procurement, prior
1492 to selecting a proposal, in order to satisfy federal eligibility criteria.

1493 (c) If no solicitation has been undertaken per this section by September 31, 2023, the
1494 department of energy resources shall submit a statement of determination to the clerks of the
1495 house of representatives and the senate and the chairs of the joint committee on
1496 telecommunications, utilities and energy, that provides a comprehensive explanation of their
1497 decision.

1498 (d) Nothing in this section shall prevent the procurement of new offshore wind energy
1499 generation in accordance with the solicitation schedule prescribed in subsection (b) of section
1500 83C of chapter 169 of the acts of 2008.

1501 SECTION 71. (a) Notwithstanding any general or special law or regulation to the
1502 contrary, there shall be an Clean Energy Transmission Working Group for the purposes of
1503 providing a comprehensive cost analysis of major transmission infrastructure upgrades that may

1504 be needed to deliver clean energy generation procured pursuant to the laws of the commonwealth
1505 for the use of residents of the commonwealth and the region. Such comprehensive analysis shall
1506 give special attention to the need to equitably allocate costs to, and share costs with, benefitted
1507 populations outside the commonwealth, and shall include policy recommendations that may be
1508 needed to equitably recover such costs.

1509 (b) The working group shall consist of 17 members or their designees: 1 of whom shall
1510 be the chair of the department of public utilities, who shall serve as co-chair; 1 of whom shall be
1511 the commissioner of energy resources, who shall serve as co-chair; 1 of whom shall be the
1512 attorney general; 2 of whom shall be the co-chairs of the joint committee on telecommunications,
1513 utilities, and energy; 6 of whom shall be appointed by the governor from a list of persons
1514 submitted by the following organizations and associations: the American Society of Civil
1515 Engineers, the Associated Industries of Massachusetts, Inc., the Massachusetts Taxpayers
1516 Foundation, Inc., the National Consumer Law Center, Inc., the Acadia Center, and the Northeast
1517 Clean Energy Council, Inc.; and 6 persons to be appointed by the governor, 1 of whom shall be a
1518 representative of or consultant to the offshore wind industry, 1 of whom shall be a representative
1519 of or consultant to the solar energy industry, 1 of whom shall be an economist with knowledge of
1520 electricity transmission, distribution, generation and power supply, 1 of whom shall be a
1521 representative of municipal interests or a regional public entity, and 2 of whom shall be
1522 representatives of investor-owned utilities in the commonwealth. A vacancy on the working
1523 group shall be filled in the manner in which the original appointment was made. Members of the
1524 working group shall receive no compensation for their services. The working group may request
1525 from all state agencies such information and assistance as the task force may require.

1526 (c) The working group shall assess and report to the general court on any necessary
1527 transmission upgrades that may be required to support the deployment of clean energy projects
1528 that may interconnect into the commonwealth for the benefit of residents of the commonwealth
1529 and the region, including but not limited to offshore wind projects. This assessment shall
1530 consider both in-state transmission upgrades as well as any regional transmission upgrades that
1531 may be necessary to accommodate the commonwealth's clean energy requirements and shall
1532 provide recommendations on any actions or initiatives that may be undertaken by ISO New
1533 England Inc., the Federal Energy Regulatory Commission, and other regional and state-level
1534 entities that may be helpful or necessary to funding, securing or approving such upgrades. The
1535 assessment shall include a cost-benefit analysis to identify regulatory and legal challenges
1536 associated with obtaining and streamlining tariff approvals to accommodate increased clean
1537 energy penetration across New England. The working group shall also assess and review cost-
1538 allocation measures adopted in other jurisdictions that aim to spread transmission upgrade costs
1539 equitably among ratepayers and developers across the states and regions. The working group
1540 shall meet periodically and shall solicit technical assistance from transmission engineering
1541 experts, cost allocation experts, additional electric companies, consumer organizations, and other
1542 regional energy market participants, including the New England States Committee on Electricity
1543 LLC managers.

1544 (d) The working group shall convene its first meeting not later than April 1, 2023 and
1545 shall submit a report, along with any recommendations for legislative and regulatory actions at
1546 the state, regional, and federal level, not later than December 31, 2023 to the clerks of the house
1547 of representatives and the senate and the chairs of the joint committee on telecommunications,
1548 utilities and energy.

1549 SECTION 72. Notwithstanding any general or special law to the contrary, each
1550 distribution company, as defined in section 1 of chapter 164 of the General Laws, shall, not later
1551 than October 31, 2023, file with the department of public utilities: (i) at least 1 electric rate tariff,
1552 which addresses operational parameters, to apply to energy storage systems interconnected to
1553 their distribution network; and (ii) notice of its intent to promptly file with the Federal Energy
1554 Regulatory Commission a wholesale distribution service rate schedule to apply to standalone
1555 energy storage systems that are interconnected to their distribution network but are transacting in
1556 New England's wholesale electricity markets. The distribution companies shall identify the costs
1557 to the distribution network not recouped through project sponsor-funded interconnection
1558 upgrades or otherwise paid directly by the project sponsor and design rates to recoup the
1559 distribution company's net costs in a manner similar to how they are incurred by the distribution
1560 company, without unduly impeding the participation of energy storage systems in power markets
1561 and other uses of such systems that provide benefits to the electric grid.

1562 SECTION 73. Notwithstanding any general or special law to the contrary, any funds not
1563 expended prior to the effective date of this act in the Offshore Wind Energy Career Training
1564 Trust Fund established in section 14 of chapter 23J of the General Laws shall be transferred by
1565 the comptroller from said fund to the Massachusetts Offshore Wind Industry Investment Trust
1566 Fund established in section 9A of said chapter 23J.

1567 SECTION 74. (a) Notwithstanding any general or special law to the contrary, the
1568 department of elementary and secondary education, in consultation with the executive office of
1569 labor and workforce development, shall develop and implement a pilot program for the purpose
1570 of helping students acquire academic and technical skills that will prepare them for high-demand
1571 jobs in the commonwealth in the offshore wind industry identified pursuant to section 26 of

1572 chapter 23 of the General Laws, as inserted by section 1 of this act; provided, however, that
1573 programming shall include jobs in the offshore wind supply chain, including, but not limited to,
1574 manufacturing, construction, assembly, shipping and operations and maintenance, and any
1575 additional credentialed programming in support of the offshore wind industry.

1576 (b) The department shall reimburse each school district at a rate of: (i) \$750 for each
1577 student in the district who earns an offshore wind industry-recognized certification for an
1578 occupation that has a high employment value or relevant industry-recognized certification that is
1579 recognized by any public institution of higher learning in the commonwealth as a basis for
1580 academic credit at such institution, and (ii) \$600 for each student in the district who earns an
1581 industry-recognized certification in the offshore wind industry that does not meet the criteria of
1582 clause (i) but addresses regional demands identified by the local MassHire Workforce Board.
1583 Any school district receiving a certification award for the offshore wind industry pilot
1584 credentialing program shall allocate at least 80 per cent of any certification award to the school
1585 whose students obtained the qualifying certification; provided, that the allocation may not be
1586 used to supplant funds otherwise provided for the basic operation of the school; and provided
1587 further, that any school receiving a certification award shall use the award to support or maintain
1588 the program, including the payment of stipends for instructors and the subsidization of fees for
1589 low-income students to obtain the certification. The department shall develop the criteria
1590 necessary to carry out the offshore wind industry pilot credentialing program and may
1591 promulgate any regulations necessary to operate the pilot program.

1592 (c) Not later than February 1, 2023, and annually for the duration of the pilot program,
1593 the department of elementary and secondary education shall submit an annual report on the
1594 progress of the pilot program established pursuant to subsection (a), including, but not limited to:

1595 (i) the number of public school students participating in the pilot seeking certifications for high-
1596 demand occupations in the offshore wind industry; (ii) the number of such students participating
1597 in the pilot who are low-income, English language learners and students with disabilities; (iii) the
1598 specific types of certifications earned by students, including the number of each such
1599 certification earned; and (iv) recommendations on how to bring high-skill, high-demand
1600 credentialing programs to scale statewide, including any necessary funding considerations.

1601 (d) Notwithstanding any general or special law to the contrary, the Massachusetts clean
1602 energy technology center may transfer not more than \$3,000,000 from the Massachusetts
1603 Offshore Wind Industry Investment Trust Fund established under section 9A of chapter 23J of
1604 the General Laws to the department of elementary and secondary education; provided, that said
1605 funds shall also be expended by the department to reimburse school districts for initial costs
1606 incurred as a result of participation in the pilot program, including, but not limited to, the
1607 acquisition of required materials and equipment and the hiring of qualified teachers.

1608 SECTION 75. Notwithstanding any general or special law to the contrary, the department
1609 of public utilities shall implement the requirements in subsection (a) of section 92B of chapter
1610 164 of the General Laws within 30 days of the effective date of this act.

1611 SECTION 76. Notwithstanding any general or special law to the contrary, the governor
1612 shall make appointments to the Grid Modernization Advisory Council established in section 92C
1613 of chapter 164 of the General Laws within 30 days of the effective date of this act.

1614 SECTION 77. Notwithstanding any general or special law or rule, regulation or order to
1615 the contrary, the department of public utilities shall not approve any company-specific plan filed
1616 pursuant to the DPU Docket No. 20-80, Investigation by the Department of Public Utilities on its

1617 own Motion into the Role of Gas Local Distribution Companies as the Commonwealth Achieves
1618 its Target 2050 Climate Goals, prior to conducting an adjudicatory proceeding with respect to
1619 such plan.

1620 SECTION 78. Notwithstanding any special or general law to the contrary, the
1621 Massachusetts Department of Transportation shall provide each regional transit authority
1622 established under chapter 161B of the General Laws with assistance to create an electric bus
1623 rollout plan that includes: (i) a goal to transition to zero-emission buses; provided, however, that
1624 the goal shall not require an internal combustion engine bus to be unnecessarily retired before the
1625 end of its useful life; (ii) identification of the types of zero-emission bus technologies a regional
1626 transit agency may deploy; (iii) a schedule for construction of facilities and related infrastructure
1627 modifications or upgrades required to deploy and maintain a zero-emission bus fleet including,
1628 but not limited to, charging, fueling and maintenance facilities; provided, however, that the
1629 schedule shall identify potential sites for each facility; (iv) a schedule for zero-emission and
1630 conventional internal combustion engine bus purchases and lease options identifying: (A) the bus
1631 and fuel type; (B) the number of zero-emission buses being purchased; and (C) the number of
1632 internal combustion engine buses being retired; (v) prioritization of the deployment of zero-
1633 emission buses on routes in underserved communities and communities with a high percentage
1634 of low-income households; (vi) a training plan for zero-emission bus operators and maintenance
1635 and repair staff; and (vii) identification of potential funding sources.

1636 SECTION 79. Notwithstanding any general or special law to the contrary, there shall be a
1637 commercial fisheries commission to develop and recommend strategies, methods and tools to
1638 promote the sustainability of the commonwealth's commercial fishing industry including, but not
1639 limited to, harvesting, processing and production and sales and distribution. The commission

1640 shall address subjects including the responsible development of offshore energy projects,
1641 mitigation and support strategies to ensure the long-term sustainability of fisheries in the
1642 commonwealth, the creation of a comprehensive infrastructure to enable effective dialogue
1643 between fishing industry stakeholders and those involved in the development of marine-based
1644 energy generation and transmission projects including, but not limited to, the offshore generation
1645 and transmission. The commission shall consist of: the director of marine fisheries and the
1646 director of coastal zone management, who shall serve as co-chairs; the secretary of energy and
1647 environmental affairs or the secretary's designee; and 16 members appointed by the governor, 1
1648 of whom shall be from the Massachusetts Seafood Collaborative from a list of 3 nominees
1649 submitted by its board of directors, 1 of whom shall be from the Massachusetts Fishing
1650 Partnership from a list of 3 nominees submitted by its board of directors, 1 of whom shall be
1651 from the Stellwagen Bank Charter Boat Association from a list of 3 nominees submitted by its
1652 board of directors, 1 of whom shall be from the Responsible Offshore Development Alliance
1653 from a list of 3 nominees submitted by its board of directors, 1 of whom shall be from the
1654 Fisheries Survival Fund from a list of 3 nominees submitted by its board of directors, 1 of whom
1655 shall be from the Northeast Seafood Coalition from a list of 3 nominees submitted by its board of
1656 directors, 1 of whom shall be from the Gloucester Fishermen's Wives from a list of 3 nominees
1657 submitted by its board of directors, 1 of whom shall be from the Offshore Mariners Wives
1658 Association from a list of 3 nominees submitted by its board of directors, 1 of whom shall be
1659 from the Massachusetts Lobstermen's Association from a list of 3 nominees submitted by its
1660 board of directors, 1 of whom shall be from the Gloucester Fishing Community Preservation
1661 Fund from a list of 3 nominees submitted by its board of directors, 1 of whom shall be from the
1662 New Bedford Fishing Heritage Center from a list of 3 nominees submitted by its board of

1663 directors, 1 of whom shall be from the Cape Cod Commercial Fishermen's Alliance from a list of
1664 3 nominees submitted by its board of directors, 1 of whom shall be from the Center for
1665 Sustainable Fisheries, Inc from a list of 3 nominees submitted by its board of directors, 1 of
1666 whom shall be from the Gloucester Fisheries Commission from a list of 3 nominees submitted by
1667 its board of directors, 1 of whom shall be from the School for Marine Science and Technology at
1668 the University of Massachusetts Dartmouth and 1 of whom shall be from the Harbor
1669 Development Commission doing business as the New Bedford Port Authority from a list of 3
1670 nominees submitted by the commissioners.

1671 The commission shall meet not less than 4 times each year and shall produce a report
1672 annually that shall be published electronically by the executive office of energy and
1673 environmental affairs. The executive office shall provide administrative support for the
1674 operations of the commission and file its report with the clerks of the senate and house of
1675 representatives. This section shall expire 8 years after the effective date of this act.

1676 SECTION 80. (a) The department of energy resources, in consultation with the
1677 Massachusetts clean energy technology center, shall conduct a study (i) how to optimize the
1678 cost-effective deployment and utilization of both new and existing mid-duration and long-
1679 duration energy storage systems, as defined in section 83B of chapter 169 of the acts of 2008,
1680 inserted by section 12 of chapter 188 of the acts of 2016, in the commonwealth and investigate
1681 the necessity, costs and benefits of requiring distribution companies, as defined in section 1 of
1682 chapter 164 of the General Laws, to jointly and competitively conduct energy storage systems
1683 solicitations and procurements of up to 4,800 gigawatt hours of stored energy from renewable
1684 generation delivered to periods of high demand each year; (ii) other methods to help increase the
1685 utilization of energy storage systems; (iii) the state of energy storage systems currently in

1686 development; (iv) the cost effectiveness of providing tax incentives under section 5 of chapter 59
1687 of the General Laws or section 6 of chapter 64H of the General Laws for energy storage systems;
1688 (v) the cost effectiveness of financing mechanisms and incentives, including the use of
1689 alternative compliance payments and the use of energy efficiency funds provided pursuant to
1690 section 19 of chapter 25 of the General Laws to assist in funding energy storage systems installed
1691 at customer's premises; (vi) the location patterns of energy storage systems currently in use; and
1692 (vii) opportunities for future expansion in energy storage. The study shall consider the
1693 performance of said systems under frequent deployment, barriers to deployment or utilization
1694 and incentives and programs that could facilitate their deployment or utilization.

1695 (b) Based on its study, the department shall, not later than December 31, 2023, submit a
1696 report and recommendations to the clerks of the senate and house of representatives and to the
1697 chairs of the joint committee on telecommunications, utilities, and energy. The report shall
1698 include, but not be limited to, the extent to which the storage systems: (i) contribute to
1699 compliance with the statewide greenhouse gas emissions limits and sublimits under chapter 21N
1700 of the General Laws, including, but not limited to, the sublimit of electric power, pursuant to
1701 section 3A of said chapter 21N; (ii) promote the integration of offshore wind energy and other
1702 renewable sources; (iii) enable firm energy delivery from renewable energy resources during
1703 periods of low energy demand to periods of high energy demand; (iv) enhance the reliable
1704 delivery and security of electricity to consumers; (v) minimize ratepayer costs; (vi) contribute to
1705 the decarbonization and operational resilience of critical emergency infrastructure including, but
1706 not limited to, cooling centers designed to provide relief for vulnerable urban residents from
1707 extreme heat that are co-located in schools, senior centers, libraries and health centers; and (vii)
1708 contribute to the decarbonization of healthcare institutions including, but not limited to, hospitals

1709 and other healthcare providers. The department of energy resources shall provide
1710 recommendations to the secretary of energy and environmental affairs not later than 9 months
1711 after the effective date of this act, including numerical deployment targets for both new and
1712 existing mid-duration and long-duration energy storage systems, which the secretary shall
1713 incorporate into the setting of numerical benchmarks for energy storage capacity pursuant to
1714 clause (xi) of section 5 of said chapter 21N.

1715 (c) If the study finds it beneficial to the commonwealth, the department of energy
1716 resources shall require solicitations and procurements in accordance with the study
1717 recommendations; provided, that the procurements shall: (i) contribute to compliance with
1718 statewide greenhouse gas emissions limits and sublimits under said chapter 21N; (ii) promote the
1719 integration of offshore wind energy and other renewable sources; (iii) transport energy from
1720 periods of low energy demand to periods of high energy demand; provided, that such
1721 transportation is coordinated with the renewable generation produced in lower demand periods
1722 under solicitations performed pursuant to subsection (b) of section 83C of chapter 169 of the acts
1723 of 2008 or other renewable sources; (iv) enhance the reliable delivery of electricity to
1724 Massachusetts consumers; and (v) minimize ratepayer costs.

1725 (d) The department of energy resources may promulgate regulations to implement this
1726 section consistent with the study recommendations, including, but not limited to, the
1727 methodology by which distribution companies shall develop solicitations, if applicable, pursuant
1728 to this section. SECTION 79. (a) There shall be within the executive office of energy and
1729 environmental affairs, but not subject to the control of the office, an intergovernmental
1730 coordinating council to implement an electric vehicle charging infrastructure deployment plan.
1731 The council shall consist of the following 11 members: the secretary of energy and

1732 environmental affairs or designee, who shall designate the chair of the council; the commissioner
1733 of environmental protection or designee; the commissioner of energy resources or designee; the
1734 secretary of the Massachusetts Department of Transportation or designee; the general manager of
1735 the Massachusetts Bay Transportation Authority or designee; the secretary of housing and
1736 economic development or designee; the secretary of administration and finance or designee; the
1737 executive director of a regional planning agency or designee, who shall be appointed by the
1738 governor; the commissioner of public utilities or designee; and the chairs of the joint committee
1739 on telecommunications, utilities and energy or their designees. The council shall assess and
1740 report on strategies and plans necessary to deploy electric vehicle charging infrastructure to
1741 establish an equitable, interconnected, accessible and reliable electric vehicle charging network.
1742 The deployment plan shall facilitate: (i) compliance with the greenhouse gas emissions limits
1743 and sublimits set pursuant to sections 3 and 3A of chapter 21N of the General Laws, with
1744 emphasis on compliance with the emissions limits and sublimits set for 2025 and 2030; (ii)
1745 attainment of the numerical benchmarks for electric vehicles and electric vehicle charging
1746 stations set pursuant to section 5 of said chapter 21N; (iii) cessation, by December 31, 2035, of
1747 in-state sales of non-zero-emission vehicles; and (iv) advancement of access to, and affordability
1748 of, electric vehicle charging and fueling.

1749 The assessment shall include, but not be limited to: (i) the present condition of, and future
1750 needs for, road and highway electrification; (ii) estimates of the number and type of electric
1751 vehicle charging stations needed in public and private sector settings including, but not limited
1752 to, parking lots for public transit stations, commercial and industrial settings and single
1753 occupancy, double occupancy and multiple-occupancy residential structures; (iii) suggestions for
1754 optimal locations for electric vehicle charging stations in urban, suburban and rural areas

1755 including, but not limited to, low-income and moderate-income communities; (iv) discussion of
1756 distribution, transmission and storage infrastructure and technology needed; (v) discussion of
1757 present and projected future costs and methods of financing those costs; (vi) discussion of
1758 technological advances in charging stations and related infrastructure, equipment and technology
1759 including, but not limited to, advances that may aid in collecting data, connecting via remote
1760 communications, providing mobile charging, assisting in grid management and assisting in the
1761 integration of renewable energy resources; (vii) discussion of strategies to maintain electric
1762 vehicle charging stations in full and continuous working order; (viii) recommendations to assist
1763 governmental and private sector officials in installing charging stations and related infrastructure,
1764 equipment and technology, including within proximity of on-street parking; and (ix)
1765 identification and discussion of current policies and recommendations for policies, laws and
1766 regulatory actions that may facilitate the provision of charging stations and related infrastructure,
1767 equipment and technology including, but not limited to, cybersecurity requirements and best
1768 practices.

1769 (b) The council shall regularly seek data and input related to electric vehicle charging
1770 stations, fueling stations and related infrastructure, equipment, equipment maintenance and
1771 technology, from stakeholders, which stakeholders shall include, but not be limited to, investor-
1772 owned and publicly-owned electric utilities, state and local transportation agencies, companies
1773 involved in products, services, technologies and data collection related to clean energy charging
1774 and fueling, automobile manufacturers, groups representing environmental, energy and climate
1775 perspectives, and groups representing consumers including, but not limited to, low-income
1776 consumers.

1777 (c) The executive office of energy and environmental affairs shall provide administrative
1778 support to the council. In conducting and updating the assessment under this section, the council
1779 shall hold at least 3 public hearings in geographically diverse areas of the commonwealth.

1780 (d) The council shall issue an initial assessment to the senate and house
1781 committees on ways and means and the joint committee on telecommunications, utilities and
1782 energy not later than 12 months after the effective date of this act and shall reconsider and revise
1783 its assessment at least once every 2 years. The council shall make its assessments publicly
1784 available on the website of each secretariat with a member serving on the council.

1785 (e) The council shall coordinate grant programs under each secretariat serving on the
1786 council to ensure a holistic, coordinated and comprehensive deployment of electric vehicle
1787 charging infrastructure.

1788 (f) There shall be established a Charging Infrastructure Deployment Fund for the purpose
1789 of ensuring a holistic, coordinated and comprehensive deployment of electric vehicle charging
1790 infrastructure. The fund shall be credited with: (i) revenue from appropriations or other money
1791 authorized by the general court and specifically designated to be credited to the fund; (ii) interest
1792 earned on such revenue; and (iii) funds from public and private sources and other gifts, grants
1793 and donations. All amounts credited to the fund shall be used solely for activities and
1794 expenditures consistent with the purposes of this section, including the ordinary and necessary
1795 expenses of administration and operation of the fund. Any money remaining in the fund at the
1796 end of a fiscal year shall not revert to the General Fund.

1797 SECTION 81. The department of energy resources may coordinate with one or more
1798 New England states undertaking competitive solicitations to consider projects for long-term

1799 clean energy generation, transmission or capacity for the benefit of residents of the
1800 commonwealth and the region. If the department of energy resources, in consultation with the
1801 Attorney General, determines, not later than December 31, 2022, that a project would satisfy all
1802 of the benefits listed below, the electric distribution companies shall enter into cost-effective
1803 long-term contracts. In its determination, the department of energy resources shall determine if
1804 any proposals (i) provide cost-effective clean energy generation to electric ratepayers in the
1805 commonwealth and the region over the term of the contract; (ii) provide the benefits of clean
1806 energy and associated transmission towards meeting the commonwealth's decarbonization goals;
1807 (iii) where possible, avoid, minimize, or mitigate, to the maximum extent practicable,
1808 environmental impacts, impacts on commercial and recreational fishing industries, and impacts
1809 to low-income populations; (iv) reduce ratepayer costs in winter months and improve energy
1810 security during winter months; (v) demonstrate progress toward obtaining required permit
1811 approvals and interconnection, and (vi) have credible project schedule and construction plans,
1812 including plans for financing and stakeholder engagement. For purposes of this section, a long-
1813 term contract shall be a contract with a term of 10 to 20 years. Eligible clean energy generation
1814 resources must (i) have a commercial operation date on or after January 1, 2022; and (ii) be
1815 qualified by the department of energy resources as eligible to participate in the renewable energy
1816 portfolio standard program under section 11F of chapter 25A of the General Laws. Associated
1817 transmission costs must be incorporated into a proposal. All proposed contracts shall be subject
1818 to the review and approval of the department of public utilities. The department of public utilities
1819 shall consider both potential costs and benefits of such contracts and shall only approve a
1820 contract upon a finding that it is cost-effective, taking into account the factors outlined in this
1821 section.

1822 SECTION 82. (a) The Massachusetts School Building Authority shall conduct an
1823 assessment of elementary and secondary school buildings relative to energy efficiency, building
1824 conditions, safety, and public health. The assessment shall include cataloging the age and
1825 condition of any building systems relying on the on-site combustion of fossil fuels. The
1826 assessment shall be conducted in coordination with ongoing assessments or surveys of the
1827 authority. The authority shall determine the means of conducting the assessment which may
1828 include a representative sample of schools. In planning said assessment, the authority shall
1829 consult with the department of public health, the department of elementary and secondary
1830 education and the department of energy resources.

1831 Following completion of the assessment, the department of public health, in consultation
1832 with the Massachusetts School Building Authority, the department of elementary and secondary
1833 education, and the department of energy resources, shall develop, and report on, methods, best
1834 practices, and standards for achieving green and healthy schools strategies to for the students of
1835 the commonwealth. Methods, best practices, and standards may involve, but shall not be limited
1836 to: (i) increasing energy efficiency, increasing electrification, and shifting to fossil-free fuels; (ii)
1837 efficiently using resources, including, but not limited to, low flow water fixtures; (iii) improving
1838 water and air quality, ventilation, and air circulation systems; (iv) maintaining thermal comfort,
1839 humidity, and temperature controls; and (v) taking other actions the department may determine.

1840 The department of public health shall issue a report on the methods, best practices and
1841 standards and may include recommendations to prioritize schools with the greatest needs,
1842 consider the unique environmental differences of schools located in urban, industrial, rural and
1843 other areas facing site challenges, and consider the need to address historic patterns of inequity in
1844 education and schools including, but not limited to, patterns of inequity involving students in

1845 special education programs. The report shall include a projected cost estimates for implementing
1846 its recommendations in a cost-effective manner.

1847 (b) The report shall be published on the website of the department of public health and
1848 submitted to the house and senate committees on ways and means, the joint committee on
1849 telecommunications, utilities and energy, the joint committee on public health, and the joint
1850 committee on education not later than December 31, 2024.

1851 (c) Any findings or recommendations may be used to guide the department of elementary
1852 and secondary education in its implementation of item 1599-2055 of section 2A of chapter 102
1853 of the acts of 2021.

1854 SECTION 83. (a) For the purposes of this section, the following terms shall have the
1855 following meanings unless the context clearly requires otherwise:

1856 “Fossil fuel-free”, as defined by a city or town to include, but not be limited to, an entire
1857 building or entire condominium unit that does not, in support of its operation after construction,
1858 utilize coal, oil, natural gas, other fuel hydrocarbons, including synthetic equivalents, or other
1859 fossil fuels.

1860 “Local approval”, by a majority vote of the: (i) city council with the approval of the
1861 mayor in the case of a city with a mayor elected to serve as the chief executive officer of the city;
1862 (ii) city council in every other city; (iii) annual town meeting or a special town meeting called for
1863 that purpose in the case of a municipality with a town meeting form of government; or (iv) town
1864 council in the case of a municipality with a town council form of government.

1865 (b) The department of energy resources shall establish a demonstration project in which
1866 cities and towns may, notwithstanding chapter 40A of the General Laws, section 13 of chapter
1867 142 of the General Laws and chapter 164 of the General Laws or any other general or special law
1868 to the contrary, adopt and amend general or zoning ordinances or by-laws that restrict or prohibit
1869 new building construction or major renovation projects that are not fossil fuel-free, and enforce
1870 restrictions and prohibitions on new building construction and major renovation projects that are
1871 not fossil fuel-free, including through the withholding or conditioning of building permits;
1872 provided, that said restrictions and prohibitions shall not apply to research laboratories for
1873 scientific or medical research or to medical offices regulated by the department of public health
1874 as a health care facility.

1875 The department shall approve not more than 10 applications for participation in the
1876 demonstration project under this section. No city or town shall apply for acceptance into the
1877 demonstration project until it has received local approval and has submitted a home rule petition
1878 to the general court on the subject matter of this section; provided, that the department shall issue
1879 approvals under this section to not more than 10 applications in the order in which cities and
1880 towns have submitted or submit home rule petitions to the general court; provided further, that
1881 the department shall, in the interest of increasing housing diversity in the commonwealth,
1882 withhold approval of an application by a city or town applying to participate in the
1883 demonstration project until such time as said city or town has: (i) met the 10 per cent housing
1884 affordability threshold set under chapter 40B of the General Laws or has been granted safe
1885 harbor status through an approved Housing Production Plan by the department of housing and
1886 community development or (ii) has approved a zoning ordinance or by-law that provides for at
1887 least 1 district of reasonable size in which multi-family housing is permitted as of right;

1888 provided, that such multi-family housing shall be without age restrictions and shall be suitable
1889 for families with children; provided, further, that a city or town that met the 10 per cent
1890 affordability threshold as of December 21, 2020, shall be deemed to have satisfied the
1891 requirements of this paragraph. For the purposes of this section, multi-family housing shall be a
1892 building with 3 or more residential dwelling units or 2 or more buildings on the same lot with
1893 more than 1 residential dwelling unit in each building and a district of reasonable size shall: (i)
1894 have a minimum gross density of 15 units per acre, subject to any further limitations imposed by
1895 section 40 of chapter 131 of the General Laws and title 5 of the state environmental code
1896 established pursuant to section 13 of chapter 21A of the General Laws. If said city or town fails
1897 to: (i) meet the 10 per cent housing affordability threshold or receive safe harbor status within 18
1898 months of the effective date of this act or (ii) approve such a multifamily zoning ordinance or by-
1899 law within 18 months of the effective date of this act, said application shall expire and be
1900 deemed void, at which time the department shall, in lieu of approving said application, approve a
1901 substitute application from a city or town that (i) has met the 10 per cent housing affordability
1902 threshold or received safe harbor status or has a zoning ordinance or by-law that complies with
1903 this section; provided, that the department may act on substitute applications without respect to
1904 the order of submission of home rule petitions to the general court; provided further, that the
1905 total number of communities approved for participation in the demonstration project shall at no
1906 point exceed 10.

1907 (c) Nothing in this section shall inhibit or interfere with the department's obligation to
1908 promulgate a municipal opt-in specialized stretch energy code that includes, but shall not be
1909 limited to, net-zero building performance standards and a definition of net-zero building under
1910 section 31 of chapter 8 of the acts of 2021 nor shall anything in this section limit the ability for

1911 any community to opt in to such specialized code following its promulgation; provided,
1912 however, that nothing in this section shall interfere with the department's authority to set
1913 restrictions or limitations on fossil fuel construction necessary to meet the department's
1914 obligation to promulgate the specialized stretch energy code's net-zero building performance
1915 standards and definition of net-zero building designed to achieve compliance with the
1916 commonwealth's statewide greenhouse gas emission limits and sublimits established pursuant to
1917 chapter 21N of the General Laws.

1918 (d) The department shall collect data from cities and towns approved under this section to
1919 monitor impacts on emissions, building costs, operating costs and other criteria as set by the
1920 department in consultation with participating cities and towns. Not later than September 30,
1921 2024, and every year thereafter, the electric and gas distribution companies shall collect and
1922 annually report to the department, in a form approved by the department, the anonymized
1923 monthly totals of electricity and gas consumed, and corresponding electricity and gas bill
1924 amount, for each consumer (i) residing in a newly constructed building or major renovation
1925 project subject to the demonstration in each municipality participating in the demonstration; and
1926 (ii) residing in a newly constructed building or major renovation project in a number of
1927 comparable municipalities, as selected by the department, not participating in the demonstration.
1928 The department shall make said data available on its website in a machine-readable format and
1929 shall annually update the data for the duration of the demonstration. Not later than September 30,
1930 2025, and every two years thereafter, the department shall compile a report to be filed not later
1931 than September 30 for the two previous calendar years with the senate and house committees on
1932 ways and means, the joint committee on housing and the joint committee on
1933 telecommunications, utilities and energy. The report shall summarize the data required to be

1934 collected under this paragraph and shall include, but not be limited to, an analysis of the net
1935 reduction in emissions (i) for each newly constructed building or major renovation project
1936 subject to the demonstration in each municipality participating in the demonstration; and (ii) for
1937 each comparable newly constructed building or major renovation project in a number of
1938 comparable municipalities, as selected by the department, not participating in the demonstration.
1939 The report shall also analyze impacts on housing production, if any; housing affordability, if any,
1940 including electric bills, heating bills, and other operating costs; housing affordability for persons
1941 of low and moderate income, if any, including electric bills, heating bills, and other operating
1942 costs; and any other matters set forth by the department after consultation with municipalities
1943 and with individuals, organizations, and institutions knowledgeable about issues of housing and
1944 emissions reductions. The report shall also include recommendations for the continuation or
1945 termination of the demonstration project.

1946 (e) The department of energy resources, in consultation with the executive office of
1947 energy and environmental affairs and the executive office of housing and economic
1948 development, may promulgate regulations to implement this section.

1949 SECTION 84. (a) The secretary of the executive office of energy and environmental
1950 affairs, in consultation with the department of energy resources and the department of public
1951 utilities, shall investigate the advantages and disadvantages of using or participating in regional
1952 or multi-state competitive market-based mechanisms, structures, systems or competitive
1953 solicitations in order to facilitate the development of clean energy generation resources,
1954 including but not limited to offshore wind energy generation, to meet the commonwealth's clean
1955 energy needs and comply with the statewide greenhouse gas emission limits and sublimits
1956 established pursuant to chapter 21N of the General Laws, while providing benefits for the

1957 commonwealth. Such mechanisms, structures, systems or competitive solicitations may include
1958 long-term contracts, ISO New England Inc. administered markets or any other exchanges,
1959 banking, credits, charges, exactions or electricity transactions consistent with rules and protocols
1960 established by state regulation designed to achieve the statewide greenhouse gas emissions limits
1961 and sub-limits required by said chapter 21N.

1962 (b) Not later than March 1, 2023, the secretary shall submit to the clerks of the senate and
1963 house of representatives a report on the executive office's investigation of the advantages and
1964 disadvantages of using or participating in regional or multi-state market-based mechanisms,
1965 structures, systems or competitive solicitations to facilitate the development of clean energy
1966 generation resources. The report shall include recommendations by the secretary on regional or
1967 multi-state mechanisms, structures, systems or competitive solicitations to facilitate the
1968 development of clean energy generation resources. If the secretary finds that use of such a
1969 market-based mechanism, structure, system or competitive solicitation would be beneficial to the
1970 commonwealth, the secretary may act pursuant to subsection (c).

1971 (c) Pursuant to subsections (a) and (b), the secretary and the department of energy
1972 resources may adopt regulations establishing or governing such market-based mechanisms,
1973 structures, systems, or competitive solicitations which may include long-term contracts, ISO
1974 New England Inc. administered markets or any other exchanges, banking, credits, charges,
1975 exactions, or electricity transactions consistent with rules and protocols established by state
1976 regulation, including in cooperation with other states in the ISO New England Inc. service area,
1977 in order to reduce greenhouse gas emissions from sources or categories of sources and comply
1978 with the statewide greenhouse gas emission limits and sublimits established pursuant to chapter
1979 21N of the General Laws.

1980 SECTION 85. The Massachusetts clean energy technology center shall develop a guide
1981 and website to provide information about the costs and availability of electric vehicles and shall
1982 develop an annual projection of the availability of such vehicles in the next year. The projection
1983 shall be posted electronically and filed with the clerks of the senate and house of representatives.

1984 SECTION 86. (a) For purposes of this section, “zero-emission school bus” shall mean a
1985 school bus that produces no engine exhaust carbon emissions.

1986 (b) The department of elementary and secondary education, in consultation with the
1987 department of energy resources, shall prepare a report that analyzes: (i) the number of fossil fuel-
1988 powered school buses in use in the commonwealth, delineated by school district; (ii) the number
1989 of zero-emission school buses in use in the commonwealth, delineated by school district; (iii) the
1990 annual cost of operating fossil fuel-powered school buses including, but not limited to, the cost
1991 of purchasing or contracting to use fossil fuel-powered buses and purchasing fossil fuels; (iv) the
1992 annual cost of operating zero-emission school buses including, but not limited to, the cost of
1993 purchasing or contracting to use zero-emission buses and the cost of purchasing or contracting to
1994 use charging stations and related charging infrastructure; (v) the projected cost differential
1995 between the sale or contracted use of fossil fuel-powered and zero-emission school buses; (vi)
1996 the estimated cost to replace fossil fuel-powered school buses with zero-emission school buses;
1997 (vii) the estimated environmental benefits of replacing fossil fuel-powered school buses with
1998 zero-emission school buses including, but not limited to, carbon reductions and related health
1999 benefits; (viii) the number of school districts that own their school bus fleets and the number of
2000 school districts that rent, lease or contract for school bus services; (ix) recommendations on how
2001 to structure a state incentive program to replace or support the replacement of all fossil fuel-
2002 powered school buses with zero-emission school buses; and (x) additional information relevant

2003 to informing a statewide plan to replace or support the conversion of all school buses from fossil
2004 fuel-powered school buses to zero-emission school buses.

2005 (c) The department shall file the report with the clerks of the senate and house of
2006 representatives, the house and senate committees on ways and means, the joint committee on
2007 education, the joint committee on telecommunications, utilities and energy and the joint
2008 committee on transportation not later than June 15, 2023.

2009 SECTION 87. Sections 30 to 33, inclusive, shall take effect upon their passage and shall
2010 not apply to any biomass facility qualified by the department of energy resources as a renewable
2011 energy generating source pursuant to section 11F of chapter 25A of the General Laws as of
2012 January 1, 2022.

2013 SECTION 88. (a) Not later than 180 days after the effective date of this act, the
2014 Massachusetts Department of Transportation, in consultation with the Massachusetts Bay
2015 Transportation Authority, shall issue a comprehensive analysis of any problems and challenges
2016 that may have existed concerning the operation of electric vehicle charging stations at service
2017 plazas located on the Massachusetts Turnpike, in parking lots at commuter rail stations and in
2018 parking lots of subway stations for the time period between July 1, 2021, and June 30, 2022,
2019 including but not limited to: a comprehensive record of charging station service outages
2020 identified by location; copies of any contracts or contractual provisions regarding the servicing,
2021 maintenance and repair of said charging stations; copies of correspondence between the
2022 department and other parties regarding efforts to service, maintain and repair said charging
2023 stations; estimates of downtime by individual charging station; identification of any software or
2024 hardware malfunctions or any shortages of labor or parts that may have contributed significantly

2025 to excessive equipment downtime or to said problems and challenges; identification of any
2026 software or hardware malfunctions or any shortages of labor or parts that pose a significant risk
2027 of contributing to equipment downtime or to said problems and challenges in the future;
2028 recommendations on addressing any such malfunctions, shortages, excessive downtime,
2029 problems and challenges and avoiding their recurrence; and comprehensive comments and
2030 recommendations regarding lessons to be learned with respect to the effective future deployment
2031 of electric vehicle charging infrastructure within the commonwealth.

2032 (b) Not later than July 1, 2023 the Massachusetts Department of Transportation, working
2033 in cooperation with the Massachusetts Bay Transportation Authority and regional transit
2034 authorities, shall make provision for installing and maintaining in good working order electric
2035 vehicle charging stations for public use at: (i) all service plazas located on the Massachusetts
2036 Turnpike; (ii) parking lots of at least 5 commuter rail stations; (iii) parking lots of at least 5
2037 subway stations; and (iv) a parking lot of at least 1 ferry terminal. Charging stations should be of
2038 a quantity and type appropriate to the pattern of utilization expected at each site.

2039 SECTION 89. (a) Not later than 6 months after the effective date of this act, distribution
2040 companies as defined in section 1 of chapter 164 of the General Laws shall submit proposals to
2041 the department of public utilities for approval to offer rate credits or rebates to consumers that
2042 charge their electric vehicles during off-peak hours. The rebate or credit amount shall include the
2043 value of: (i) avoided energy and capacity costs; (ii) avoided transmission costs; (iii) avoided
2044 distribution costs; (iv) improved grid reliability; (v) capacity benefits in the form of demand-
2045 induced price reduction effects; (vi) avoided greenhouse gas emissions; and (vii) public health
2046 benefits. The department shall coordinate rate credits and rebate amounts to minimize
2047 unnecessary differences and shall approve the rebates not later than June 30, 2023.

2048 (b)(1) For the purposes of this subsection, “time-of-use rate” shall mean a rate designed
2049 to reflect the cost of providing electricity to a consumer charging an electric vehicle at an electric
2050 vehicle charging station at different times of the day.

2051 (2) Not later than 12 months after the effective date of this act, distribution companies as
2052 defined in section 1 of chapter 164 of the General Laws, shall submit proposals to the department
2053 for approval to offer a time-of-use rate. The proposals shall not include additional demand
2054 charges. The proposals shall include a separate opt-in residential time-of-use rate for electric
2055 vehicle owners or lessees. In evaluating proposals for approval, the department shall consider the
2056 effect of the proposal on: (i) energy conservation; (ii) optimal and efficient use of a distribution
2057 company’s facilities and resources; (iii) benefits to transmission and distribution systems; (iv)
2058 equitable rates for electric consumers; and (v) greenhouse gas emissions reductions. The
2059 proposals shall ensure equitable participation by all electric vehicle owners and lessees. Not later
2060 than October 31, 2025 the department shall issue at least 1 order that responds to distribution
2061 company proposals to offer a time-of-use rate.

2062 SECTION 90. Not later than 6 months after the effective date of this section, the
2063 Massachusetts Department of Transportation, in consultation with the regional transit authorities,
2064 shall develop and issue recommendations for a comprehensive program of incentives for the
2065 authorities to develop and maintain buses and other vehicles that produce zero emissions. The
2066 recommendations shall be submitted to the clerks of the senate and house of representatives.

2067 SECTION 91. The division established in section 23 of chapter 25 of the General Laws
2068 shall promulgate the regulations pursuant to section 12 of chapter 159A½ of the General Laws
2069 not later than October 1, 2023 and shall implement the vehicle electrification and greenhouse gas

2070 emissions requirements for transportation network companies pursuant to said section 12 of said
2071 chapter 159A½ not later than April 1, 2024.

2072 SECTION 92. The department of energy resources shall promulgate regulations to
2073 implement section 20 of chapter 25A of the General Laws within 1 year of the effective date of
2074 said section 20 of said chapter 25A.

2075 SECTION 93. Section 23 shall take effect upon its passage and shall apply to energy
2076 efficiency plans beginning with the 2025 to 2027 plan.

2077 SECTION 94. Section 20 of chapter 25A of the General Laws, inserted by section 38,
2078 shall take effect on July 1, 2024.

2079 SECTION 95. Section 45 shall take effect upon the secretary of energy and
2080 environmental affairs' certification in writing to the state secretary that a similar requirement
2081 regarding the sale of zero-emission vehicles has taken effect in the state of California; provided,
2082 however, that said section 45 shall not take effect prior to January 1, 2035 unless otherwise
2083 authorized by section 142k of chapter 111 of the General Laws.

2084 SECTION 96. Sections 3, 43 and 44 of this act are hereby repealed.

2085 SECTION 97. Sections 4 and 17 shall take effect on July 31, 2032.

2086 SECTION 98. Subsection (d) of section 8A of chapter 23J, as inserted by section 16 of
2087 this act, is hereby repealed.

2088 SECTION 99. Sections 96 and 98 shall take effect on July 31, 2032.