

**SENATE . . . . . No. 2144**

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**The Commonwealth of Massachusetts**

PRESENTED BY:

*Jason M. Lewis*

*To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled:*

The undersigned legislators and/or citizens respectfully petition for the adoption of the accompanying bill:

An Act relative to building energy and decarbonization.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	
<i>Jason M. Lewis</i>	<i>Fifth Middlesex</i>	
<i>James B. Eldridge</i>	<i>Middlesex and Worcester</i>	<i>3/6/2023</i>

**SENATE . . . . . No. 2144**

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By Mr. Lewis, a petition (accompanied by bill, Senate, No. 2144) of Jason M. Lewis and James B. Eldridge for legislation relative to building energy and decarbonization. Telecommunications, Utilities and Energy.

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[SIMILAR MATTER FILED IN PREVIOUS SESSION  
SEE SENATE, NO. 2202 OF 2021-2022.]

**The Commonwealth of Massachusetts**

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**In the One Hundred and Ninety-Third General Court  
(2023-2024)**  
\_\_\_\_\_

An Act relative to building energy and decarbonization.

*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. Said Section 1 of chapter 23M is further amended by inserting the  
2 following definitions:-

3           “District heating and cooling system”, a local system consisting of a central generation  
4 source and network of pipes that use hot water, chilled water, or steam to provide space heating,  
5 cooling and/or hot water to multiple buildings.

6           “Energy storage system”, a commercially available technology that is capable of  
7 absorbing energy, storing it for a period of time and thereafter dispatching the energy; provided,  
8 however, that an energy storage system shall (1) use mechanical, chemical or thermal processes  
9 to store energy that was generated for use at a later time; (2) store thermal energy for direct

10 heating or cooling use at a later time in a manner that avoids the need to use electricity at that  
11 later time; (3) use mechanical, chemical or thermal processes to store energy generated from  
12 renewable resources for use at a later time; or (4) use mechanical, chemical or thermal processes  
13 to capture or harness waste electricity and to store the waste electricity generated from  
14 mechanical processes for delivery at a later time.

15 “Microgrid”, a group of interconnected loads and distributed energy sources within  
16 clearly defined electrical boundaries that acts as a single controllable entity with respect to the  
17 grid and that connects and disconnects from such grid to enable it to operate in both grid  
18 connected and island mode.

19 SECTION 2. Subsection (c) of said section 21 of chapter 25 is hereby amended by  
20 inserting before the last sentence the following:-

21 The council shall not approve plans that it determines do not demonstrate alignment with  
22 Chapter 21N greenhouse gas emissions limits and sublimits during the three-year plan term.

23 SECTION 3. Section 22 of said chapter 25 of the General laws are hereby amended by  
24 striking out subsection (b) and inserting in place thereof the following:-

25 (b) The council shall, as part of the approval process by the department, seek to maximize  
26 net climate, environmental, equity, and economic benefits through energy efficiency, load  
27 management, and non-combustion renewable energy resources and to achieve energy, capacity,  
28 climate and environmental goals through a sustained and integrated statewide energy efficiency  
29 effort. The council shall review and approve demand resource program plans and budgets, work  
30 with program administrators in preparing energy resource assessments, determine the economic,  
31 system reliability, climate and air quality benefits of efficiency, non-combustion renewable

32 energy, and load management resources, conduct and recommend relevant research, and  
33 recommend long term efficiency, renewable energy, and load management goals to achieve  
34 climate, environmental, and equity goals in a cost-effective manner. Approval of efficiency and  
35 demand resource plans and budgets shall require a two-thirds majority vote. Approval shall not  
36 be granted unless the council determines that program administrators have demonstrated the  
37 plan's alignment with Chapter 21N greenhouse gas emissions limits and sublimits.

38 The council shall, as part of its review of plans, examine opportunities to offer joint  
39 programs providing similar efficiency measures that save more than 1 fuel resource or to  
40 coordinate programs targeted at saving more than one fuel resource. Any costs for joint programs  
41 shall be allocated equitably among the efficiency programs. The council shall establish annually  
42 increasing targets for serving populations traditionally underserved by the program including but  
43 not limited to moderate-income ratepayers, renter ratepayers, ratepayers whose primary language  
44 is not English, small business ratepayers and ratepayers in Environmental Justice communities.

45 SECTION 4. Section 2 of chapter 25a is amended by striking out the first sentence in the  
46 second paragraph and inserting in place thereof:-

47 There shall be within the department 4 divisions: (i) a division of energy efficiency,  
48 which shall work with the department of public utilities regarding energy efficiency programs;  
49 (ii) a division of renewable and alternative energy development, which shall oversee and  
50 coordinate activities that seek to maximize the installation of renewable and alternative energy  
51 generating sources that will provide benefits to ratepayers, advance the production and use of  
52 biofuels and other alternative fuels as the division may define by regulation, and administer the  
53 renewable portfolio standard and the alternative portfolio standard; (iii) a division of building

54 energy and emissions reductions which shall oversee and coordinate activities that seek to  
55 maximize building sector decarbonization; and (iv) a division of green communities, which shall  
56 serve as the principal point of contact for municipalities and other governmental bodies  
57 concerning all matters under the jurisdiction of the department of energy resources.

58 SECTION 5. Section 6 of said chapter 25A is hereby amended by inserting after clause  
59 (14) the following:-

60 (15) Regulations adopted by this section shall be reviewed and updated in increments of  
61 not less than three years and in alignment with the same cycle as the International Energy  
62 Conservation Code; provided further that the department in consultation with the board of  
63 building regulations and standards shall hold hearings to review such updates including not less  
64 than 3 held in different counties of the commonwealth for each review or update cycle with  
65 appropriate and reasonable advance notice to said communities.

66 SECTION 6. Section 10 of said chapter 25A is hereby amended by striking subsection  
67 (b) in its entirety and inserting in place thereof the following new subsection:-

68 (b) The division shall establish a green communities program. The purpose of the  
69 program shall be to provide technical and financial assistance, in the form of grants and loans, to  
70 municipalities and other local governmental bodies that qualify as green communities and or  
71 green plus communities under this section. These loans and grants shall be used to finance all or  
72 a portion of the costs of studying, designing, constructing and implementing energy efficiency  
73 and climate change mitigation activities, including but not limited to, energy conservation and  
74 renewable energy measures and projects; procurement of energy management services;  
75 installation of energy management systems; adoption of demand side reduction initiatives;

76 deployment of energy storage, microgrids, or district energy systems connected to renewable  
77 energy generation; purchase of zero-emissions vehicles; installation of electric vehicle charging  
78 equipment or infrastructure, or related technologies; coordination of residential or small business  
79 clean energy outreach, technical assistance, or financing programs; and the adoption of energy  
80 efficiency policies. They shall also be used to finance the siting and construction of renewable  
81 and alternative energy projects on municipally-owned land.

82 SECTION 7. Said section 10 of said chapter 25A is hereby further amended by inserting  
83 after subsection (c) the following new subsection:-

84 (c ½ ) To qualify as a green plus community, a municipality or other governmental body  
85 shall: (1) file an application with the division in a form and manner to be prescribed by the  
86 division; (2) establish a greenhouse gas emissions baseline inventory for residential, commercial  
87 and industrial buildings sited within the municipality, which may also include transportation,  
88 waste, and other sources of emissions within the municipality; (3) put in place a comprehensive  
89 plan whose implementation begins within 1 year from the date of initial participation in the  
90 program, designed to reduce the greenhouse gas emissions baseline inventory by a percentage  
91 approved by the division that is not less than 20 per cent within 5 years of initial participation in  
92 the program; (4) adopt the municipal opt-in specialized stretch energy code established in  
93 subsection 14 of Section 6 of chapter 25A; and (5) fulfill qualifications subsection 2 through 6  
94 inclusive of the green community program as described in section (c) or be served by a  
95 municipal lighting plant.

96 Preference shall be given to those municipalities that include additional sources of  
97 emissions within their greenhouse gas emissions baseline inventory. Not later than one year after

98 the adoption of this section, the division shall adopt a tracking system for community-wide  
99 greenhouse gas emissions, to include but not be limited to the building, transportation, energy,  
100 land use, and waste sectors, that can be used by municipalities. The secretary may waive these  
101 requirements based on a written finding that due to unusual circumstances, a municipality cannot  
102 reasonably meet all of the requirements and the municipality has committed to alternative  
103 measures that advance the purposes of the green plus communities program as effectively as  
104 adherence to the requirements.

105 SECTION 8. Said section 10 of said chapter 25A is hereby further amended in subsection  
106 (d) by striking the figure “20,000,000” and inserting in place thereof “40,000,000 with not less  
107 than \$10,000,000 going to green plus communities”.

108 SECTION 9. Said chapter 25A is hereby amended by adding after Section 20 the  
109 following sections:-

110 Section 20. (a) For the purposes of this section the following words shall have the  
111 following meanings:-

112 “building emissions”, greenhouse gas emissions as expressed in metric tons of carbon  
113 dioxide equivalent emitted as a result of operating a covered building and calculated in  
114 accordance with rules promulgated by the department.

115 “building emissions intensity”, for a covered building, the number obtained by dividing  
116 the building emissions by the gross floor area for such building, expressed in metric tons of  
117 carbon dioxide equivalent per square foot per year.

118 (b) The purpose of the building energy and emissions reduction division shall be to  
119 establish and administer programs and regulations for assessing annual energy use in and  
120 emissions from buildings to further the goal of achieving emissions limits and sublimits  
121 established in Chapter 21N. The division shall collaborate with other department divisions, the  
122 department of housing and economic development, MassDevelopment, Massachusetts Clean  
123 Energy Center, the net zero energy building advisory council established in section 23 of this  
124 chapter and other relevant stakeholders on the development of programs and regulations, as  
125 appropriate. The division shall take all reasonable steps to inform the owners of buildings of their  
126 obligations under this section in advance including but not limited to materials developed for  
127 outreach and education made available on the division's website. Said materials shall be  
128 available in English and in other languages commonly spoken in the commonwealth. Such  
129 outreach shall include a list of city, state, federal, private and utility incentive programs related to  
130 building energy reduction, renewable energy, or building retrofits for which buildings reasonably  
131 could be eligible.

132 (c) The division shall promulgate regulations establishing annual carbon intensity limits  
133 on building emissions or a building energy performance standard or a combination thereof for  
134 covered buildings in alignment with emissions limits and sublimits established in Chapter 21N.  
135 Covered buildings shall be established by the division and reflect a phased-in schedule that shall  
136 begin no later than January 1, 2026 beginning with large buildings no smaller than 20,000 square  
137 feet to be defined by the division and shall include all building types by 2028 and all buildings  
138 by 2032. The division may include exemptions for small accessory buildings or structures with  
139 no or minimal space conditioning, to be defined in regulations. Phases may be defined by, but  
140 are not limited to being defined by, size and type, such as commercial and industrial properties,



141 residential buildings, and other specialized typologies. The building performance limits shall be  
142 set for periods of not more than five years and emissions limits shall decrease over time at a pace  
143 to at least align with emissions limits and sublimits established in Chapter 21N.

144 (d) The division shall promulgate regulations for alternative methods of compliance with  
145 building emissions intensity limits, energy use performance standards or a combination thereof  
146 as established by the division including but not limited to adjustments for the use of on-site  
147 renewable energy generation, adjustments for special categories of buildings or for special use,  
148 accommodations or support for buildings housing low- or moderate-income occupants, and  
149 alternative compliance payments. Alternative compliance payments shall be established such that  
150 low- and moderate-income households and small businesses are charged reduced amounts  
151 proportionate with their ability to pay. The division shall also establish fines for noncompliance  
152 which shall be higher than alternative compliance payments. Both alternative compliance  
153 payments and fines shall be deposited into the building energy retrofit program trust fund  
154 established in section 20 of this chapter.

155 (e) The division shall create and manage an online portal for the submission of required  
156 data by building owners, including the building's baseline emissions and energy use for year one  
157 of the program and annual reports on that data thereafter.

158 (f) The division shall establish an annual deadline for receiving reports from building  
159 owners and a deadline extension or hardship waiver process for owners who, in the judgment of  
160 the division, demonstrate cause for a deadline extension or hardship waiver.

161 (g) Except as otherwise provided in this statute or otherwise provided by regulation, after  
162 a building is deemed a covered building, it shall not exceed the annual building performance  
163 limits for such building as determined by the division.

164 (h) The division shall make building information and data available to the public on its  
165 website. For each building, the information made available shall include, but is not limited to,  
166 building identification information and building emissions and energy data.

167 The department shall utilize such practices as are necessary to prevent the public  
168 disclosure of personal information regarding owners and tenants, and maintain a quality  
169 assurance process to improve the accuracy and completeness of the available information. The  
170 department shall provide owners with the opportunity to submit contextual information related to  
171 data and shall disclose such information on its website upon request by the owner. The website  
172 shall be made available in English and multiple other languages commonly spoken in the  
173 commonwealth.

174 (i) The division shall prepare an annual report that shall be posted on the department's  
175 website and filed with the house and senate committees on ways and means and the joint  
176 committee on telecommunications, utilities and energy not later than December 31. The report  
177 shall include, but is not limited to, analysis on implementation of, compliance with, and results  
178 from the program including progress towards emissions limits and sublimits established in  
179 Chapter 21N. The division shall make available to a regional planning agency, municipality or  
180 other public agency requesting such information any data set forth in this section, utilizing such  
181 practices as are necessary to prevent the public disclosure of personal information regarding  
182 owners and tenants.

183 (j) The division shall promulgate regulations governing the building performance  
184 program after holding not less than 3 hearings held in different counties of the commonwealth.

185 Section 21. (a) There shall be a grant and loan program within the division known as the  
186 Building Energy and Emissions Retrofit Funding Program, hereafter referred to as the program,  
187 for the purpose of encouraging and supporting building owners to invest in deep energy retrofits  
188 and whole-building energy performance upgrades to their properties that reduce greenhouse gas  
189 emissions, create healthier homes and buildings, and are in alignment with achieving the GWSA  
190 limits and sublimits established under Chapter 21N. Eligible projects for funding shall include  
191 pre-weatherization barrier mitigation, pre-electrification barrier mitigation, and renewable energy  
192 systems, if part of a more comprehensive deep energy retrofit or whole-building energy  
193 performance upgrade. Conversions from one fossil fuel system to another or additions of fossil  
194 fuel systems or infrastructure shall not be funded by these programs.

195 The division shall develop the program in consultation with the net zero energy building  
196 advisory council established in section 23 of this chapter, the Department of Housing and  
197 Community Development, the Department of Public Utilities, the Department of Environmental  
198 Protection, the Energy Efficiency Advisory Council, the Department of Public Health, and the  
199 Massachusetts Clean Energy Center. Nothing in this section guarantees an individual or  
200 corporation a right to the benefits provided in this section.

201 (b) The division shall design and implement the program, which shall include a  
202 certification process to certify qualified expenses for a grant or loan under this section.  
203 Applications for the program shall be reviewed and grants or loans shall be awarded on no less  
204 than an annual basis.

205 (c) The division shall, (i) promote awareness of the program, including through  
206 coordination with relevant trade groups, community-based organizations, nonprofits,  
207 municipalities, regional planning agencies, and by integration in economic development  
208 marketing campaigns; and (ii) adopt measurable goals, performance measures, and an audit  
209 strategy to assess the utilization and performance of the program.

210 (d) The division shall prioritize regionally diverse investments in (i) property that is  
211 located in an environmental justice community as defined in section 62 of chapter 30; (ii)  
212 property that is low- or moderate-income or rental housing; (iii) property owned by  
213 municipalities; and (iv) projects that improve public health outcomes.

214 (e) The incentives shall be funded, at least in part, by the building energy retrofit program  
215 trust fund established in section 20 of chapter 25A. To the extent possible, the program shall seek  
216 to leverage existing state and federal programs including, but not limited to, Massachusetts  
217 School Building Authority and the Massachusetts Public Library Construction Program.

218 (f) The division shall promulgate rules, regulations and guidelines for the administration  
219 and oversight of this chapter which shall include definitions of deep energy retrofit, pre-  
220 weatherization barriers, and pre-electrification barriers and may allow for municipalities to  
221 establish or continue their own municipal program so long as it meets or exceeds the greenhouse  
222 gas emissions reductions of the Building Energy Retrofit Funding Program. The department shall  
223 commence awarding funds no later than January 1, 2025.

224 Section 22. (a) The commissioner shall create and administer the building energy retrofit  
225 program trust fund into which shall be deposited: (i) any revenues or other financing sources  
226 directed to the fund by appropriation; (ii) bond revenues authorized by the general court and

227 designated to be credited to the fund; (iii) any income derived from the investment credited to the  
228 fund; (iv) funds from public or private sources including, but not limited to, gifts, federal or  
229 private grants, donations, rebates and settlements received by the commonwealth that are  
230 designated to be credited to the fund; and (v) all other amounts credited or transferred into the  
231 fund from any other source.

232 (b) There shall be established upon the books of the commonwealth a separate fund to be  
233 known as the Building Energy Retrofit Trust Fund. There shall be credited to said fund all  
234 amounts received through (i) any revenues or other financing sources directed to the fund by  
235 appropriation; (ii) bond revenues authorized by the general court and designated to be credited to  
236 the fund; (iii) any income derived from the investment credited to the fund; (iv) funds from  
237 public or private sources including, but not limited to, gifts, federal or private grants, donations,  
238 rebates and settlements received by the commonwealth that are designated to be credited to the  
239 fund; and (v) all other amounts credited or transferred into the fund from any other source. All  
240 amounts credited to the fund shall be held in trust and shall be available for expenditure, without  
241 further appropriation, by the department for activities of the department related to section 18 and  
242 section 19 of this chapter. Any unexpended balance in the fund at the close of a fiscal year shall  
243 remain in the fund and shall be available for expenditure in the following fiscal year; provided  
244 however, that the fund shall not be in deficit at the end of any state fiscal year.

245 (c) The operating and administrative expenses shall not exceed 5 per cent of the annual  
246 total revenue expended from the fund.

247 (d) Annually, not later than December 1 of each year, the commissioner shall report on  
248 the activities of the fund to the clerks of the house of representatives, the senate and to the house

249 and senate committees on ways and means, and the net zero energy building advisory council  
250 established in section 23 of this chapter. The report shall include an accounting of expenditures  
251 made from the fund with a description of the purpose of each expenditure, an accounting of  
252 amounts credited to the fund and any unexpended balance remaining in the fund.

253           Section 23. (a) The commissioner shall establish a net zero energy building advisory  
254 council which shall review and provide feedback on the implementation of programs under the  
255 building energy and emissions performance division with a focus on supporting development of  
256 net zero buildings in the commonwealth in alignment with the targets established in chapter 21N.  
257 The council shall be chaired by the commissioner or a designee and members shall include, but  
258 are not limited to: (i) The attorney general, or a designee; (ii) at least two residents of  
259 environmental justice communities as defined in section 62 of chapter 30; (iii) at least two  
260 certified minority-owned or women-owned small business enterprises that perform clean energy  
261 services; (iv) one representative of the public institutions of higher education included in section  
262 5 of chapter 15A; (v) one representative of the MassHire State Workforce Board; (vi) one  
263 representative of the energy efficiency advisory council established in section 22 of chapter 25  
264 who does not represent a state agency or utility that is otherwise seated on the council; (vii) one  
265 representative of a building trade association; (viii) one representative of the labor community;  
266 (ix) one residential architect; (x) one commercial architect; (xi) one building engineer; (xii) one  
267 non-profit that specializes in clean energy efficiency research; (xiii) one representative of the  
268 low-income energy affordability network; (xiv) two representatives of commonwealth cities and  
269 towns, one rural and one suburban; (xv) one representative of a regional planning agency; and  
270 (xvi) one expert in land use.

271 Non-voting members shall include the secretary of housing and community development  
272 or their designee; the commissioner of the department of public health or their designee the  
273 commissioner of the department of environmental protection or their designee; the CEO of  
274 Massachusetts Clean Energy Center or their designee; a representative of an investor-owned  
275 utility, and a representative of a municipal lighting plant or municipal light plant industry  
276 association.

277 Interested parties shall apply to the commissioner for designation as members. There  
278 shall be members from each county of the commonwealth represented on the council. In their  
279 initial appointments, the commissioner shall designate one third of members to serve for one  
280 year, one third to serve for a term of two years and the remaining third to serve for a term of  
281 three years and their successors shall serve for terms of three years.

282 The advisory board may convene working groups. Such working groups may include  
283 individuals external to the advisory board. The commissioner shall invite the appropriate federal,  
284 state and local agencies and authorities to participate.

285 (b) The advisory council shall meet at least 4 times a year and shall hold at least 2 public  
286 hearings each year. The council shall review and monitor the recommendations for expenditure  
287 of grants and programs in the secretariat. In the event the council or members of the council  
288 disapproves of any such recommendation it may file a report noting its objection with the  
289 governor, the house and senate committees on ways and means and the joint committee on  
290 environment, natural resources and agriculture.

291 (c) Not later than December 1 of each year, the Department shall report on the activities  
292 of the council to the clerks of the house of representatives and the senate, to the house and senate

293 committees on ways and means and to the chairs of the joint committee on telecommunications,  
294 utilities and energy.

295 SECTION 10. Subsection (o) of Section 94 of chapter 143 is hereby amended by adding  
296 at the end:-

297 “If the energy provisions of the state building code are not updated within said one year  
298 of any revision to the International Energy Conservation Code (IECC), the Board shall report on  
299 the status of approval of the latest International Energy Conservation Code and steps being taken  
300 to move towards expedient adoption. Reports shall be filed with the chairs of the joint committee  
301 on telecommunication, utilities and energy, the joint committee on Consumer Protection and  
302 Professional Licensure the clerk of the house of representatives, and the clerk of the senate no  
303 later than 30 days beyond the one-year deadline described in this section, and again every 6  
304 months, until the past due IECC provisions and any more stringent amendments are adopted.”

305 SECTION 11. The Department of Energy Resources, in consultation with Massachusetts  
306 Clean Energy Center, the Board of Building Regulations and Standards and the secretary of  
307 housing and economic development, shall issue a written report to the clerk of the house of  
308 representatives, the clerk of the senate and the joint committee on telecommunications, utilities,  
309 and energy within one year of adoption of this act which shall include, but is not limited to,  
310 analysis on the feasibility and timing for adopting the following: (i) mass timber buildings taller  
311 than five stories; (ii) reduction of embodied carbon; (iii) carbon storage in building materials;  
312 (iv) modular building systems; and (v) healthy non-toxic building materials.

313 The report shall include recommendations for any legislation that may be required to  
314 adopt these or other innovations in the commonwealth.



315 SECTION 12. Notwithstanding any special or general law, rule or regulation to the  
316 contrary, not later than January 1, 2025, the opt-in specialized stretch energy code as developed  
317 and promulgated under section 6 of chapter 25A shall be incorporated into the Stretch Energy  
318 Code in Appendix 115AA of the Massachusetts building energy code. Upon such incorporation,  
319 municipalities that previously adopted the opt-in specialized stretch energy code shall be part of  
320 the Stretch Energy Code in Appendix 115AA of the Massachusetts building energy code with no  
321 action required.

322 SECTION 13. Notwithstanding any special or general law, rule or regulation to the  
323 contrary, not later than January 1, 2028, the state board of building regulations and standards  
324 shall incorporate the Stretch Energy Code in Appendix 115AA of the Massachusetts building  
325 energy code into the base energy provisions of the state building code issued by the state board  
326 of building regulations under section 93 of chapter 143.