

**SENATE . . . . . No. 2148**

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**The Commonwealth of Massachusetts**

PRESENTED BY:

***Cynthia Stone Creem***

*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 the future of heat in the Commonwealth.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	
<i>Cynthia Stone Creem</i>	<i>First Middlesex and Norfolk</i>	
<i>Lori A. Ehrlich</i>	<i>8th Essex</i>	
<i>Jack Patrick Lewis</i>	<i>7th Middlesex</i>	<i>2/23/2021</i>

**SENATE . . . . . No. 2148**

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By Ms. Creem, a petition (accompanied by bill, Senate, No. 2148) of Cynthia Stone Creem, Lori A. Ehrlich and Jack Patrick Lewis for legislation relative to the future of heat in the Commonwealth. Telecommunications, Utilities and Energy.

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**The Commonwealth of Massachusetts**

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

An Act relative to the future of heat in the Commonwealth.

*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. Section 9 of chapter 21N of the General Laws, as appearing in the 2018  
2 Official Edition, is hereby amended by striking out, in line 2, the word “utility”, and inserting in  
3 place thereof, the following words:- “company or a gas company”.

4           SECTION 2. Said section 9 of chapter 21N, as so appearing, is hereby amended by  
5 striking out, in line 3, the “.” after the word “service”, and inserting the following:-

6           “or with safe and reliable gas service, provided however that the department of public  
7 utilities shall actively encourage a transition from the use of gas or other emitting fuels to the use  
8 of non-emitting renewable sources of energy.”.

9           SECTION 3. Subsection (a) of section 3 of chapter 23J of the General Laws, as appearing  
10 in the 2018 Official Edition, is hereby amended by striking out, in line 179, the word “and”.

11 SECTION 4. Said subsection (a) of section 3 of chapter 23J, as so appearing, is hereby  
12 amended by striking out, in line 180, the “.”, and inserting in place thereof the following:- “;  
13 and”.

14 SECTION 5. Said subsection (a) of section 3 of chapter 23J, as so appearing, is hereby  
15 amended by inserting after paragraph 31 the following paragraph:-

16 “(32) to issue gas transition bonds, as defined in section 145 of chapter 164, for the  
17 benefit of a gas company, as defined in section 1 of said chapter 164, determined by the  
18 department of public utilities to be eligible for said bond financing pursuant to section 145A of  
19 said chapter 164. Such gas transition bonds shall constitute "bonds" for purposes of subsections  
20 (d) to (k), inclusive, of section 8 and of section 9 of Chapter 23G.”.

21 SECTION 6. Subsection (b) of section 9 of said chapter 23J, as so appearing, is hereby  
22 amended by striking out, in line 33, the word “and”.

23 SECTION 7. Said subsection (b) of section 9 of chapter 23J, as so appearing, is hereby  
24 amended by striking out, in line 37, the “.”, and inserting in place thereof the following new  
25 clause:-

26 “; and (iv) by funding research, design, and evaluation of pilots to promote energy  
27 innovation.”.

28 SECTION 8. Subsection (c) of said section 9 of chapter 23J, as so appearing, is hereby  
29 amended by inserting after the word “of”, in line 40, the following word:- “non-emitting”.

30 SECTION 9. Said subsection (c) of section 9 of chapter 23J, as so appearing, is hereby  
31 amended by inserting after the word “facilities”, in line 45, the following:-

32           “and with the distribution and consumption of non-renewable or emitting fuels, including  
33 but not limited to, oil, hydrogen derived from fossil fuel, gases that contain methane, and other  
34 hydrocarbon fuels;”.

35           SECTION 10. Said subsection (c) of section 9 of chapter 23J, as so appearing, is hereby  
36 amended by inserting after the word “for,” in line 53, the following word:- “non-emitting”.

37           SECTION 11. Subsection (d) of said section 9 of chapter 23J, as so appearing, is hereby  
38 amended by inserting after the word “the”, in line 75, the following word:- “non-emitting”.

39           SECTION 12. Said subsection (d) of section 9 of chapter 23J, as so appearing, is hereby  
40 amended by inserting after the words “of”, in line 76, the following word:- “non-emitting”.

41           SECTION 13. Said subsection (d) of section 9 of chapter 23J, as so appearing, is hereby  
42 amended by striking out, in line 77, the “;” after the word “commonwealth”, and inserting in  
43 place thereof the following:-

44           “and the use by gas customers in the commonwealth of non-emitting renewable thermal  
45 energy, including utility-scale geothermal energy, as the primary sources of energy;”.

46           SECTION 14. Chapter 23J of the General Laws is hereby amended by inserting after  
47 section 9 the following section:-

48           Section 9A. (a) There is hereby established and placed within the center a separate fund  
49 to be known as the gas transition trust fund. The center shall hold the gas transition trust fund in  
50 an account or accounts separate from other funds. There shall be credited to the gas transition  
51 trust fund (i) all cost savings allocated to the gas transition trust fund under section 145A of  
52 chapter 164 and (ii) any other funds directed to the gas transition trust fund. All amounts credited

53 to the gas transition trust fund shall be held in trust and used solely for activities and  
54 expenditures consistent with the permitted purposes of the gas transition trust fund as set forth in  
55 subsection (b), including the ordinary and necessary expenses of administration and operation  
56 associated with the gas transition trust fund. Unless otherwise specified, all monies of the gas  
57 transition trust fund, from whatever source derived, shall be paid to the treasurer of the center.  
58 Such monies shall be deposited, in the first instance, by the treasurer in national banks, in trust  
59 companies, savings banks and cooperative banks chartered under the laws of the commonwealth,  
60 or in other banking companies in compliance with section 34 of chapter 29. Funds in these  
61 accounts shall be paid out on the warrant or other order of the treasurer of the center and the  
62 director of the gas transition trust fund or other person that the board may authorize to execute  
63 warrants. Any unexpended balance in the gas transition trust fund at the close of a fiscal year  
64 shall remain in the gas transition trust fund and shall be available for expenditure in the  
65 following fiscal year; provided however, that the gas transition trust fund shall not be in deficit at  
66 the end of any state fiscal year.

67 (b) The center may make expenditures from the gas transition trust fund for the following  
68 purposes:

69 (i) to replace gas appliances with electric appliances as needed to enable a customer to  
70 connect to the non-emitting renewable thermal infrastructure project as provided in section 145A  
71 of chapter 164 and to enable service to a building by a non-emitting renewable thermal  
72 infrastructure project. The Massachusetts clean energy technology center shall be responsible  
73 for determining the cost to upgrade appliances and for overseeing the installation of such  
74 appliances. The Massachusetts clean energy technology center shall set a cap on compensation to  
75 the building owner or occupant for such new appliances; provided, however that a landlord shall

76 certify in writing to the Massachusetts clean energy technology center that such landlord will not  
77 transfer the cost of appliances paid for by the gas transition trust fund to any tenant. The  
78 secretary of energy and environmental affairs may, within 12 months of enactment of this  
79 section, promulgate regulations or directives for the implementation of this requirement.

80 (ii) to ensure that a low-income consumer has the opportunity to connect to the new non-  
81 emitting renewable thermal infrastructure project as provided in section 145A of chapter 164,  
82 including by adding or upgrading insulation, electric wiring and capacity as needed. The  
83 Massachusetts clean energy technology center shall set a cap on compensation to the building  
84 owner or occupant; provided, however, that a landlord shall certify in writing to the  
85 Massachusetts clean energy technology center that such landlord will not transfer the cost of  
86 upgrades paid for by the gas transition trust fund to any tenant. The secretary of energy and  
87 environmental affairs may, within 12 months of the enactment of this section, promulgate  
88 regulations or directives for the implementation of this requirement.

89 (iii) to retrain individuals who work on gas pipeline infrastructure. Such retraining shall  
90 support the transition from jobs on gas infrastructure to comparable jobs on thermal pipes or  
91 other aspects of a non-emitting renewable thermal infrastructure project. The Massachusetts  
92 clean energy technology center shall oversee such retraining program and may allocate funds to a  
93 training facility or a gas company for retraining of existing employees.

94 (c) The center shall provide a report to the secretary and the department at the end of each  
95 fiscal year that summarizes expenditures from the gas transition trust fund over the prior 12  
96 months.

97 SECTION 15. Chapter 25 of the General Laws is hereby amended by inserting after  
98 section 1 the following new section:-

99 Section 1A. In discharging its responsibilities under this chapter and chapter 164, the  
100 department shall, with respect to itself and the entities it regulates, prioritize safety, security,  
101 reliability of service, affordability, equity and reductions in greenhouse gas emissions to meet  
102 statewide greenhouse gas emission limits and sublimits established pursuant to chapter 21N.

103 SECTION 16. Subsection (a) of section 19 of chapter 25 of the General Laws, as  
104 appearing in the 2018 Official Edition, is hereby amended by striking out, in line 5, the “.” after  
105 the word “programs”, and inserting in place thereof the following:-

106 “, and renewable energy programs where the sole or primary sources of energy are non-  
107 emitting, including but not limited to heat pumps for heating and cooling.”.

108 SECTION 17. Said subsection (a) of section 19 of chapter 25, as so appearing, is hereby  
109 amended by striking out, in line 23, the word “and”.

110 SECTION 18. Said subsection (a) of section 19 of chapter 25, as so appearing, is hereby  
111 amended by striking out, in line 25, the “.” after the word “consumers”, and inserting in place  
112 thereof the following new clause:-

113 “; and (iv) whether past programs have reduced greenhouse gas emissions in accordance  
114 with the mandates of chapter 21N.”.

115 SECTION 19. Subsection (b) of said section 19 of chapter 25, as so appearing, is hereby  
116 amended by striking out, in line 32, the “.” after the word “programs”, and inserting in place  
117 there of the following:-

118 “, renewable energy programs where the sole or primary sources of energy are non-  
119 emitting, including but not limited to heat pumps for heating and cooling.”.

120 SECTION 20. Said subsection (b) of section 19 of chapter 25, as so appearing, is hereby  
121 amended by striking out, in line 29, the “.” after the word “practicable” and inserting in place  
122 thereof the following:-

123 “, and maximizing the use of sources of non-emitting renewable energy and adopting  
124 climate change mitigation strategies to reduce greenhouse gas emissions pursuant to the  
125 mandates of chapter 21N.”.

126 SECTION 21. Subsection (a) of section 20 of said chapter 25, as so appearing, is hereby  
127 amended by inserting after the word “of”, in line 2, the following:-

128 “15 mills per therm for all gas customers and a mandatory charge of”.

129 SECTION 22. Subsection (a) of section 11F 1/2 of chapter 25A of the General Laws, as  
130 appearing in the 2018 Official Edition, is hereby amended by striking out, in line 3, the “.” after  
131 the word “commonwealth”, and inserting in place thereof the following:-

132 “and for all retail gas suppliers selling gas for useful non-emitting renewable thermal  
133 energy to end-use customers in the commonwealth.”.

134 SECTION 23. Said subsection (a) of section 11F 1/2 of chapter 25A, as so appearing, is  
135 hereby amended by inserting after the word “sources.”, in line 11, the following:-

136 “Every such retail electric supplier and every such retail gas supplier shall obtain and  
137 retire annually alternative energy credits generated by non-emitting renewable thermal energy  
138 technologies.”.



139 SECTION 24. Said subsection (a) of section 11F 1/2 of chapter 25A, as so appearing, is  
140 hereby amended by inserting after the word “gas”, in line 30, the following:-

141 “and renewable natural gas, except renewable natural gas made from food waste or  
142 sewage and used on-site”.

143 SECTION 25. Said subsection (a) of section 11F 1/2 of chapter 25A, as so appearing, is  
144 hereby amended by inserting after the word “energy”, in line 31, the following:-

145 “used on-site”.

146 SECTION 26. Said subsection (a) of section 11F 1/2 of chapter 25A, as so appearing, is  
147 hereby amended by striking out, in line 33, the word “and” and inserting in place thereof the  
148 following:- “;”.

149 SECTION 27. Said subsection (a) of section 11F 1/2 of chapter 25A, as so appearing, is  
150 hereby by striking out, in line 33, the “.” after the word “power”, and inserting in place thereof  
151 the following:-

152 “; and (G) any combustion, burning or thermal gasification of liquid biofuel, hydrogen  
153 derived from fossil fuel and renewable natural gas, including biomass made from harvested  
154 trees.”.

155 SECTION 28. Said section 11F 1/2 of chapter 25A, as so appearing, is hereby amended  
156 by inserting after subsection (e), the following new subsection:-

157 “(f) The department shall determine the requirement for each retail electric supplier and  
158 each retail gas supplier to obtain and annually retire renewable thermal alternative energy credits,  
159 provided, however, that such requirement shall be proportional to the annual thermal energy

160 purchased by each such supplier's customers and shall be established so as to effect a transition  
161 for all customers in the commonwealth to non-emitting renewable thermal energy technologies  
162 by December 31, 2050.”.

163 SECTION 29. Section 1 of chapter 164 of the General Laws, as appearing in the 2018  
164 Official Edition, is hereby amended by inserting after the word “electricity”, in lines 203-204,  
165 the following:-

166 “provided, however, that such thermal energy will reduce emissions of greenhouse gases  
167 in accordance with chapter 21N; and provided further”.

168 SECTION 30. Said section 1 of chapter 164, as so appearing, is hereby amended by  
169 striking out, in line 204, the following words:- “provided, however,”.

170 SECTION 31. Section 1D of said chapter 164, as so appearing, is hereby amended by  
171 inserting after the word “program.”, in line 29, the following new paragraph:-

172 “Gas distribution companies shall include in their annual service quality standards reports  
173 submitted to the department under section 1I of this chapter the percentage and amount of funds  
174 allocated to each factor in the local distribution adjustment factors fund, including the following:  
175 energy efficiency, renewable energy, environmental response, consultants for the office of the  
176 attorney general under section 11E of chapter 12, and residential assistance. Such reports shall  
177 also include the costs of political or promotional advertising as defined by section 33A of this  
178 chapter, and the cost replacement of gas infrastructure under sections 145 and 145A of this  
179 chapter.”.

180 SECTION 32. Subsection (a) of section 1E of said chapter 164, as so appearing, is hereby  
181 amended by inserting after the word “standards”, in lines 6-7, the following word:- “for”.

182 SECTION 33. Section 76 of said chapter 164, as so appearing, is hereby amended by  
183 inserting after the word “the”, in line 5, the following public health and”.

184 SECTION 34. Section 141 of said chapter 164, as so appearing, is hereby amended by  
185 inserting after the word “efficiency,”, in line 4, the following:-

186 “, the replacement of gas infrastructure with utility-scale non-emitting renewable thermal  
187 energy infrastructure and the reduction of greenhouse gases as mandated by chapter 21N to  
188 reduce energy use, increase efficiency and encourage non-emitting renewable sources of energy,  
189 including the reduction of lost and unaccounted for gas as defined in section 147.”.

190 SECTION 35. Said section 141 of chapter 164, as so appearing, is hereby amended by  
191 inserting after the word “discount.”, in line 7, the following:-

192 “The department shall not approve a rate design or other plan that includes payment by a  
193 gas company or an electric company of fees or other costs associated with membership in a trade  
194 association or similar associations whose purpose is to promote natural gas or renewable gas as  
195 sources of clean energy, nor shall the department approve a rate design or other plan that  
196 includes costs for an advertising or public relations campaign that promotes natural gas or  
197 renewable gas as sources of clean energy without disclosing the public health and safety hazards  
198 of natural gas and renewable gas and their components and their effects on greenhouse gas  
199 emissions and the mandates of chapter 21N.”.

200 SECTION 36. Section 142 of said chapter 164, as so appearing, is hereby amended by  
201 inserting after the word “power”, in line 3, the following:- “and utility-scale non-emitting  
202 renewable thermal energy”.

203 SECTION 37. Said section 142 of chapter 164, as so appearing, is hereby amended by  
204 inserting after the word “manner.”, in line 5, the following:-

205 “The department shall issue regulations to expand municipal aggregation provided in  
206 section 134 of this chapter to authorize a municipality or group of municipalities to establish  
207 district energy where it will result in reducing greenhouse gas emissions, reducing consumer cost  
208 and improving public health and safety. The Department shall hold a public hearing regarding  
209 mechanisms for evaluating the public health effects of natural gas.”.

210 SECTION 38. Subsection (a) of section 145 of said chapter 164, as so appearing, is  
211 hereby amended by inserting after the word “public”, in line 7, the following:- “health and  
212 public”.

213 SECTION 39. Said subsection (a) of section 145 of chapter 164, as so appearing, is  
214 hereby amended by inserting after the word “proceeding”, in line 14, the following:-

215 “Such eligible infrastructure replacement may include replacing gas infrastructure with  
216 utility-scale renewable thermal energy infrastructure, provided, however, that such utility-scale  
217 renewable thermal energy infrastructure (i) shall be exempt from the requirements of sections  
218 69(G) through 69(S) of this chapter; (ii) shall be deemed to be both an energy transmission  
219 system and an energy generation system; and (iii) shall comply with the mandates of chapter  
220 21N to reduce greenhouse gas emissions by reducing energy use, increasing efficiency and  
221 encouraging non-emitting renewable sources of energy.”

222 SECTION 40. Said subsection (a) of section 145 of chapter 164, as so appearing, is  
223 hereby amended by inserting after the word “proceeding”, in line 14, the following:-

224 ““Gas pipe life extension repair project”, a project that uses advanced pipe repair  
225 technology approved by the department to repair an existing fully depreciated leak-prone gas  
226 pipe to extend the useful life of such gas pipe by no less than 10 years.”

227 SECTION 41. Subsection (b) of said section 145 of chapter 164, as so appearing, is  
228 hereby amended by striking out the word “may”, in line 19, and inserting in place thereof, the  
229 following word:- “shall”.

230 SECTION 42. Said subsection (b) of section 145 of chapter 164, as so appearing, is  
231 hereby amended by inserting after the word “public”, in line 21, the following:- “health and  
232 public”.

233 SECTION 43. Subsection (c) of said section 145 of chapter 164, as so appearing, is  
234 hereby amended by striking out the word “and”, in line 33.

235 SECTION 44. Said subsection (c) of section 145 of chapter 164, as so appearing, is  
236 hereby amended by striking out the “.”, in line 34, and inserting in place thereof the following  
237 new clauses:-

238 “; (vii) infrastructure proposed to be replaced, including replacement of gas infrastructure  
239 with utility-scale renewable thermal energy infrastructure where the primary source of energy is  
240 non-emitting; (viii) work plans including location by street segments of leak-prone infrastructure  
241 scheduled to be replaced as required by this section; (ix) how the replacement infrastructure  
242 complies with the mandates of chapter 21N to reduce greenhouse gas emissions by reducing

243 energy use, increasing efficiency and encouraging non-emitting renewable sources of energy, (x)  
244 proposals for gas pipe life extension repair projects; and (xi) proposals for a specific repair on  
245 existing infrastructure that prevents the need to replace a pipe having a grade 3 leak identified as  
246 having a significant environmental impact as defined by section 144 (c), provided, however that  
247 such repair shall be cost effective and shall comply with applicable safety regulations related to  
248 pipeline infrastructure. Such plan filed with the department may include an alternative other than  
249 gas to provide renewable thermal energy where the primary sources of energy are non-  
250 emitting.”.

251 SECTION 45. Said subsection (c) of section 145 of chapter 164, as so appearing, is  
252 hereby amended by striking out, in line 46, the “.” after the word “section”, and inserting in place  
253 thereof the following:-

254 “, provided, however, that no depreciation associated with the replacement of  
255 infrastructure delivering natural gas shall be claimed by such gas company after 2050 unless  
256 such infrastructure delivers thermal energy from non-emitting renewable sources of energy.”.

257 SECTION 46. Said subsection (c) of section 145 of chapter 164, as so appearing, is  
258 hereby amended by inserting after the word “years”, in line 49, the following:-

259 “, a report of any remaining leak-prone infrastructure by street segment remaining in the  
260 service territory of the gas company”.

261 SECTION 47. Subsection (d) of said section 145 of chapter 164, as so appearing, is  
262 hereby amended by inserting after the word “leaks”, in line 62, the following:-

263           ", compliance with the mandates of chapter 21N to reduce greenhouse gas emissions by  
264 reducing energy use, increasing efficiency and encouraging non-emitting renewable sources of  
265 energy.”.

266           SECTION 48. Said subsection (d) of section 145 of chapter 164, as so appearing, is  
267 hereby amended by inserting after the word “public, in line 63, the following words:- “health and  
268 public”.

269           SECTION 49. Subsection (h) of said section 145 of chapter 164, as so appearing, is  
270 hereby amended by inserting after the word “section.”, in line 111, the following:-

271           “Such regulations may permit and structure a performance-based financial incentive to a  
272 gas company to build utility-scale non-emitting renewable thermal energy infrastructure eligible  
273 under subsection (c)(2), provided, however, that such infrastructure complies with the mandates  
274 of chapter 21N to reduce greenhouse gas emissions by reducing energy use, increasing efficiency  
275 and encouraging non-emitting renewable sources of energy. Such regulations shall be  
276 promulgated within 12 months of the effective date of this provision.”.

277           SECTION 50. Said section 145 of chapter 164, as so appearing, is hereby amended by  
278 inserting after subsection (h), the following new subsections:-

279           “(i) The department shall authorize the use of advanced gas repair technologies in a gas  
280 pipe life extension repair project; such technologies may include repair of a joint by keyhole  
281 sealing, encapsulation or cast iron joint sealing robot (CISBOT), or pipe lining. The department  
282 shall determine necessary safety measures and monitoring for restored pipes.

283 (j) Within 30 days of receipt of any plan submitted to the department by a gas company  
284 for replacement or improvement of any existing infrastructure pursuant to this section, the  
285 department shall send such plan to the municipality whose service territory is covered by such  
286 plan. Within 30 days of approval of such plan, the department shall send such approval to the  
287 municipality whose service territory is covered by such plan.”

288 SECTION 51. Chapter 164 of the General Laws is hereby amended by inserting after  
289 section 145, the following new section:-

290 Section 145A. (a) For the purposes of this section, the following words shall have the  
291 following meanings:-

292 “Gas transition bond”, a bond, note, certificate of participation or beneficial interest, or  
293 other evidence of indebtedness or ownership, issued pursuant to an executed indenture financing  
294 document, or other agreement of the financing entity, secured by or payable from ratepayer  
295 payments.

296 “Networked geothermal system”, a utility-scale renewable thermal energy distribution  
297 infrastructure consisting of underground distribution pipelines that connect distributed thermal  
298 sources and thermal storage, including geothermal boreholes, to provide customers with thermal  
299 energy for heating, or heating and cooling. Such a system may include heat pumps on the utility  
300 side of the meter that are owned by a gas company as part of its distribution infrastructure.

301 “Non-emitting renewable thermal infrastructure project”, a utility-scale project that  
302 replaces natural gas distribution infrastructure with distribution infrastructure that supplies  
303 heating, or heating and cooling, from fuel sources whose combustion does not emit greenhouse



304 gases, as defined by section 1 of chapter 21N. A non-emitting renewable thermal infrastructure  
305 project may include, but is not limited to, a networked geothermal system.

306 “Secretary”, the secretary of energy and environmental affairs.

307 (b) The department may approve the use of gas transition bonds issued by the  
308 Massachusetts development finance agency pursuant to section 3(a)(36) of chapter 23G for a  
309 plan proposed by a gas company pursuant to subsection (d) of this section. A gas transition bond  
310 shall not constitute a debt or liability of the commonwealth or of any political subdivision  
311 thereof, other than the Massachusetts development finance agency, and shall not constitute a  
312 pledge of the full faith and credit of the commonwealth or any of its political subdivisions, other  
313 than the Massachusetts development finance agency, but shall be payable solely from the funds  
314 provided therefor pursuant to the provisions of this section. Each bond shall contain on the face  
315 thereof the following statement: Neither the full faith and credit nor the taxing power of the  
316 Commonwealth of Massachusetts is pledged to the payment of the principal of, or interest on,  
317 this bond.

318 (c) The issuance of a gas transition bond pursuant to section 3(a)(36) of chapter 23G and  
319 this section shall not obligate the commonwealth, or any political subdivision thereof, to levy or  
320 to pledge any form of taxation therefor or to make any appropriation for its payment. A gas  
321 transition bond shall be nonrecourse to the credit of the Massachusetts development finance  
322 agency as the financing entity or any assets of a gas company other than rate payments.

323 (d) (1) A plan filed by a gas company pursuant to subsection (b) of section 145 may  
324 include a proposal to use gas transition bonds to finance a non-emitting renewable thermal  
325 infrastructure project. A non-emitting renewable thermal infrastructure project may connect to

326 backup sources of power that use fuel sources whose combustion emit greenhouse gases. Such  
327 plan shall include, but need not be limited to: (i) the information required by subsection (c) of  
328 section 145; (ii) the estimated cost savings as defined in subsection (f) of this section; (iii) the  
329 number of participating consumers and buildings; and (iv) the number of participating low-  
330 income consumers as determined by section 1F(4)(i).

331 (2) A consumer shall be deemed to be participating in a non-emitting renewable thermal  
332 infrastructure project if prior to such project the consumer had utilized natural gas or other  
333 carbon-based fuel and if such consumer upon completion of such project will receive service  
334 from such project or from an alternative non-greenhouse-gas emitting fuel source.

335 (3) A building shall be deemed to participate in a non-emitting renewable thermal  
336 infrastructure project if prior to the project the building had utilized natural gas or other carbon-  
337 based fuel and if such building upon completion of such project will receive heating from such  
338 project or from an alternative non-greenhouse-gas emitting fuel source.

339 (4) Notwithstanding anything to the contrary in section 145, a non-emitting renewable  
340 thermal infrastructure project financed in whole or in part by gas transition bonds may provide  
341 service to new customers.

342 (e) (1) The department may, within 12 months of enactment of this section, promulgate  
343 regulations or directives for the use of gas transition bonds for a non-emitting renewable thermal  
344 infrastructure project, provided, however, that such project meets the conditions required in  
345 subsections (e) (2) and (3) of this section.

346 (2) The department shall approve a plan by a gas company to use gas transition bonds for  
347 a non-emitting renewable thermal infrastructure project, provided that the project meets the

348 following conditions: (i) that gas transition bonds must provide at least 65 percent of the funding  
349 for a non-emitting renewable thermal infrastructure project, provided, however, that the interest  
350 rate on such gas transition bonds is less than the rate of return on the equity of such gas  
351 company; (ii) that gas transition bonds must be rated AA or Aa or better by a national statistical  
352 rating organized recognized by the United States Securities and Exchange Commission at the  
353 time of issuance, provided, however, that the department may approve a different rating if it  
354 determines that such rating would promote the improvement of public health and public safety,  
355 reduce greenhouse gas emissions, address environmental justice, minimize financial risk, or  
356 maximize the costs savings of a project; (iii) that the gas company ensures that each consumer  
357 and building participating in a non-emitting renewable thermal infrastructure project will have a  
358 reliable source of non-emitting renewable thermal service; provided, however, that if a consumer  
359 or building owner chooses not to participate in a non-emitting renewable thermal infrastructure  
360 project for a reason other than technical infeasibility, then such consumer or building owner shall  
361 arrange and pay for an alternative thermal service; and (iv) that any additional conditions are met  
362 that the department may determine to be appropriate to promote the improvement of public  
363 health and public safety, reducing greenhouse gas emissions, addressing environmental justice,  
364 minimizing financial risk, reducing the cost of energy to the consumer, or maximizing the costs  
365 savings of a project.

366 (3) The department shall prioritize environmental justice communities, as defined by the  
367 secretary, and low-income consumers in its approval of the use of gas transition bonds in  
368 financing a non-emitting renewable thermal infrastructure project.

369 (f)(1) The department shall calculate the cost savings from the use of gas transition bonds  
370 rather than traditional financing for projects approved under section 145 by using the provisions

371 of subsection (f)(1)(A) and (B), and any additional provisions deemed appropriate by the  
372 department:

373 (A) for the portion of a non-emitting renewable thermal infrastructure project that is  
374 financed by gas transition bonds, the difference in interest rate for such bonds and the interest  
375 rate on debt approved for other projects in the plan filed by a gas company pursuant to  
376 subsection (b) of section 145. If a plan filed pursuant to subsection (b) of said section 145  
377 proposes only to use gas transition bonds for a non-emitting thermal infrastructure project, then  
378 the interest rate for such bonds shall be compared to the most recent interest rate on debt  
379 approved by the department for such gas company; and

380 (B) for the portion of a non-emitting renewable thermal infrastructure project that is  
381 financed by gas transition bonds but would otherwise be financed by the equity of a gas  
382 company, the difference between the interest rate for such gas transition bonds and the return on  
383 equity approved for other projects in the plan filed by a gas company pursuant to subsection (b)  
384 of said section 145. If a plan filed pursuant to subsection (b) of said section 145 proposes only to  
385 use gas transition bonds for a non-emitting renewable thermal infrastructure project, then the  
386 return on equity shall be calculated as the most recent return on equity approved by the  
387 department for such gas company.

388 (2) For purposes of calculating cost savings under subsection (d)(1)(ii) of this section, a  
389 gas company may use the interest rates for debt and return on equity proposed in the plan filed  
390 pursuant to subsection (b) of said section 145.

391 (g) All cost savings generated by the use of gas transition bonds by a gas company shall  
392 be deposited by the department into the Gas Transition Trust Fund established under section

393 [9A] of chapter 23J, and shall be used for the purposes outlined in section [9A] of chapter 23J.  
394 A gas company shall provide the department and Massachusetts clean energy technology center  
395 details of an approved non-emitting renewable thermal infrastructure project, including the  
396 number of participating consumers and buildings and such other information requested by the  
397 Massachusetts clean energy technology center to determine the costs to install appliances and  
398 upgrade buildings to connect consumers and buildings to a non-emitting renewable thermal  
399 infrastructure project.

400 (h) A gas company shall submit an annual report to the department regarding the  
401 company's use of gas transition bonds. Such report shall include: (i) the costs and cost savings  
402 associated with the use of gas transition bonds; (ii) the total number of square footage of  
403 buildings transitioned to each non-emitting renewable thermal infrastructure project; (iii) the  
404 total number of consumers transitioned to each non-emitting renewable thermal infrastructure  
405 project; (iv) the number of low-income consumers transitioned to each non-emitting renewable  
406 thermal infrastructure project; (v) the impact of a non-emitting renewable thermal infrastructure  
407 project on greenhouse gas emissions, public health, ratepayer bills, and the reliability and safety  
408 of the thermal delivery system of such gas company; and (vi) such other information as required  
409 by the department. If a social cost of carbon is adopted by the secretary, such social cost of  
410 carbon shall be included in the calculation of costs and savings. Such annual reports may, under  
411 the discretion of the department, be incorporated into other filings by a gas company, provided  
412 that such reports shall be available for review by the public.

413 (i) Three years following the enactment of this section, the department shall collate data  
414 collected pursuant to subsection (h) of this section and shall file a report with the governor, the  
415 secretary of energy and environmental affairs, and the clerks of the house of representatives and

416 the senate who shall forward such report to the president of the senate, the speaker of the house  
417 of representatives, the chairs of the house and senate committees on ways and means, and the  
418 house and senate chairs of the joint committee on telecommunications, utilities and energy on the  
419 use of gas transition bonds for non-emitting renewable thermal infrastructure projects. The  
420 department shall include in such report data collected by the Massachusetts clean energy  
421 technology center data on the use of funds pursuant to subsection (g) of this section.

422 (j) Three years following the enactment of this act, the secretary of energy and  
423 environmental affairs, in consultation with the department of public utilities, the department of  
424 energy resources, and the attorney general, shall determine whether the use of gas transition  
425 bonds should be expanded. When making this determination, the secretary shall consider: (i) the  
426 maximum amount of gas transition bonds that can be utilized; (ii) the types of projects that can  
427 be financed with gas transition bonds; (iii) additional use of funds for a non-emitting renewable  
428 thermal infrastructure project from (A) the MassSave program pursuant to section 19 of chapter  
429 25, (B) the Massachusetts Clean Energy Technology Center, or (C) the department of energy  
430 resources; and (iv) other conditions as determined by the secretary. The determination by the  
431 secretary shall be made in a proceeding that is open to comment by the public.

432 (k) The department may, within 12 months of the enactment of this section, promulgate  
433 regulations or directives as needed to implement the requirements of this section.

434 SECTION 52. Chapter 164 of the General Laws is hereby amended by inserting after  
435 section 145, the following new section:-

436 Section 145B. (a) For the purposes of this section, the following words shall have the  
437 following meanings:-

438 “Gas transition bond”, a bond, note, certificate of participation or beneficial interest, or  
439 other evidence of indebtedness or ownership, issued pursuant to an executed indenture financing  
440 document, or other agreement of the financing entity, secured by or payable from ratepayer  
441 payments.

442 “Non-emitting renewable thermal infrastructure project”, a utility-scale project that  
443 replaces natural gas distribution infrastructure with distribution infrastructure that supplies  
444 heating, or heating and cooling, from fuel sources whose combustion does not emit greenhouse  
445 gases, as defined by section 1 of chapter 21N. A non-emitting renewable thermal infrastructure  
446 project may include, but is not limited to, a networked geothermal system.

447 (b) The department may approve a proposal by a gas company to use gas transition bonds  
448 to finance a non-emitting renewable thermal infrastructure project for a new building or multi-  
449 building development.

450 (c) The department may promulgate regulations or directives as needed to implement this  
451 section.

452 SECTION 53. Chapter 164 of the General Laws is hereby amended by inserting after  
453 section 147, the following new section:-

454 Section 147A. (a) For the purposes of this section, the following words shall have the  
455 following meanings:-

456 “Non-emitting renewable thermal infrastructure project,” a utility-scale project that  
457 replaces natural gas distribution infrastructure with distribution infrastructure that supplies  
458 heating, or heating and cooling, from fuel sources whose combustion does not emit greenhouse

459 gases, as defined by section 1 of chapter 21N. A non-emitting renewable thermal infrastructure  
460 project may include, but is not limited to, a networked geothermal system.

461 (b) a gas company shall submit an annual report to the department regarding the  
462 company's plan to transition its existing gas infrastructure to non-emitting renewable thermal  
463 infrastructure projects that advance the greenhouse gas emission reduction requirements of  
464 chapter 21N of the General Laws. Such report shall include the following information: (i) the  
465 company's plan to abandon existing gas infrastructure that is not cost effective to transition to a  
466 non-emitting renewable thermal infrastructure project; (ii) the company's plan to evolve existing  
467 gas infrastructure that is cost effective to transition to a non-emitting renewable thermal  
468 infrastructure project; (iii) the company's plan to (A) maintain existing gas infrastructure that  
469 provides service to a use for which, at the time that the report is prepared, there is no technical  
470 option to transition to a non-emitting renewable thermal infrastructure project and (B) reduce  
471 greenhouse gas emissions from existing gas infrastructure that the gas company plans to  
472 maintain; and (iv) such other information as the department may require.

473 (c) In determining whether it is cost effective to transition existing gas infrastructure to  
474 non-emitting renewable thermal infrastructure, a gas company shall consider factors such as the  
475 existing infrastructure's leak status, current depreciation, schedule of future depreciation, impact  
476 on public health and public safety, and the impact of transitioning to a non-emitting renewable  
477 thermal infrastructure on the reduction of greenhouse gas emissions as required by chapter 21N.

478 (d) A report required by subsection (b) may, under the discretion of the department, be  
479 incorporated into other filings by a gas company, provided that such reports shall be available for  
480 review by the public.



481           (e) The department shall, within 12 months of the enactment of this section, promulgate  
482 regulations or directives as needed to implement the requirements of this section.