

HOUSE No. 2411

The Commonwealth of Massachusetts

PRESENTED BY:

Patricia A. Duffy, (BY REQUEST)

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 reducing non-ionizing radiation in early to higher education.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	DATE ADDED:
<i>Kirstin Beatty</i>	<i>149 Central Park Drive, Holyoke, MA 01040</i>	<i>1/16/2025</i>

HOUSE No. 2411

By Representative Duffy of Holyoke (by request), a petition (accompanied by bill, House, No. 2411) of Kirstin Beatty relative to reducing non-thermal non-ionizing radiation exposures from technology and electricity. Public Health.

The Commonwealth of Massachusetts

**In the One Hundred and Ninety-Fourth General Court
(2025-2026)**

An Act reducing non-ionizing radiation in early to higher education.

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. The legislature finds and confirms all of the following:-

2 Whereas, several countries prohibit wireless in public schools; California and several
3 countries limit strong fields from electricity in public schools - yet Massachusetts has done
4 nothing.

5 Whereas, fields and poor power quality from electricity can be limited through shielding,
6 filters, and other design, but wireless is essentially unshielded and unregulated.

7 Whereas, only 50 studies led the U.S. Surgeon General to warn the public of tobacco's
8 cancer risks, but hundreds and perhaps thousands of studies show harm caused by non-thermal
9 non-ionizing radiation, which includes both electricity and wireless.

10 Whereas, FCC wireless guidelines fail to acknowledge wireless harm, despite numerous
11 studies showing concrete harm such as based on examination of blood, cells, human

12 epidemiology, animal autopsy, and extended animal exposure studies, the latter including from
13 research by the U.S. National Toxicological Program and the Italian Ramazzini Institutes
14 indicating heart damage, DNA damage, and tumors including deadly glioblastomas.

15 Whereas, strong fields and poor power quality from electricity can harm health, with
16 numerous statistical findings of increased cancer as well as other diseases -- in 2002 the
17 International Agency for Research on Cancer (IARC) classed these frequencies as possibly
18 carcinogenic based on increased leukemia risks in epidemiological studies but epidemiological
19 studies also show increased neurological diseases such as amyotrophic lateral sclerosis (ALS)
20 and Alzheimer's.

21 Whereas, approximately a thousand studies show non-ionizing radiation that is a million
22 times below legal limits set by the FCC still disrupts calcium function, and because calcium is
23 essential to cell signaling this effect disrupts many biological processes.

24 Whereas, the federal government fosters wireless schools by subsidizing only wireless
25 connectivity through its federal E-rate program, despite studies showing that youth are more
26 susceptible to harm than adults and despite evidence of increased mental health disturbance and
27 learning disabilities from exposures.

28 Whereas, the mission of the department and board of elementary and secondary
29 education fails to acknowledge any role in fostering environmental health, and thus the drive to
30 use technology is unchecked by physical and mental health considerations.

31 Resolved, that the policy goals of this act shall be to actively reduce non-thermal non-
32 ionizing radiation exposures from technology and electricity by establishing a process for public

33 schools and higher education; providing guidance and evaluation through state boards; and
34 rectifying the public education mission to include attention to environmental health.

35 SECTION 2. Chapter 71 of the General Laws is hereby amended by adding after section
36 97 the following new section:-

37 Section 98. (a) Definitions. As used in this section, the following words shall have the
38 following meanings:

39 "Collocation" means the act of siting facilities on an existing structure without the need to
40 construct a new support structure and without a substantial change in the size of an existing
41 wireless service facility.

42 "Distributed antenna system" means a network system consisting of one or more nodes
43 connected by a fiber system to a wireless service provider's base transceiver station or other
44 location.

45 "Mobile service" means the same as defined in 47 USC § 153(33), as may be amended.

46 "Non-ionizing radiation" means electric and magnetic fields emitted from frequencies
47 ranging from 0 hertz through 300 gigahertz.

48 "Small cell network" means a network consisting of one or more nodes connected,
49 directly or indirectly, by fiber to a wireless service provider's mobile switching center or other
50 point of interconnection.

51 "Structure" means a pole, tower, base station, or other building, whether or not it has an
52 existing antenna facility, that is used or to be used for the provision of personal wireless service
53 (whether on its own or commingled with other types of services).

54 “Telecommunications service” means the offering of telecommunications for a fee
55 directly to the public, or to such classes of users as to be effectively available directly to the
56 public, regardless of the facilities used.

57 (b) To the extent possible and within its means, every public school shall eliminate man-
58 made non-ionizing radiation emissions known or likely to be harmful. To the extent possible and
59 within its means, every public school shall establish measures and take action to reduce man-
60 made non-ionizing radiation emissions which are (1) potentially harmful; (2) unintentional; or
61 (3) of unknown effect.

62 (c) Initial measures. Every public or independent school shall insure, as long as any
63 wireless antennas exist on school property and transmit, that such antennas are set to emit the
64 minimum of power density possible for the minimum time necessary with the minimum of
65 pulsing and data.

66 Every public school shall prioritize prompt replacement of wireless broadband and
67 telecommunications connectivity in favor of hard-wired access, and shall educate its students and
68 staff on reducing non-ionizing radiation exposures at school and at home for better health.

69 Upon resetting any existing wireless antennas to end or minimize transmissions, every
70 public school shall establish routine monitoring systems to insure wireless transmissions do not
71 restart.

72 (d) Continuing measures. Every public school shall set objectives to methodically reduce
73 all non-ionizing radiation exposures, reasonable deadlines to meet these objectives, and shall
74 keep public records of progress towards each objective as well as a public record of why any
75 objectives have not been obtained.

76 (e) Wireless Infrastructure. All public public schools and associated school districts shall
77 prohibit use of school property for construction of facilities to provide telecommunications
78 service and other mobile services including, but not limited to, (1) site distributed antenna
79 systems and small cell networks; (2) any structure; and (3) collocation of distributed antenna
80 systems and small cell networks on existing wireless communications infrastructure. Where such
81 facilities are preexisting the public school district shall seek, to the extent within its means and
82 with the support of the Commonwealth, removal of such facilities.

83 (f) Accountability. Administration and good faith progress towards all of the objectives
84 of this section shall be a component of any public school or district review.

85 SECTION 3. Chapter 15A of the General Laws is hereby amended by adding after
86 Section 15 the following section:-

87 Section 15A. (a) Definitions. As used in this section, the following words shall have the
88 following meanings:

89 "Collocation" means the act of siting facilities on an existing structure without the need to
90 construct a new support structure and without a substantial change in the size of an existing
91 wireless service facility.

92 "Distributed antenna system" means a network system consisting of one or more nodes
93 connected by a fiber system to a wireless service provider's base transceiver station or other
94 location.

95 "Mobile service" means the same as defined in 47 USC § 153(33), as may be amended.

96 “Non-ionizing radiation” means electric and magnetic fields emitted from frequencies
97 ranging from 0 hertz through 300 gigahertz.

98 “Small cell network” means a network consisting of one or more nodes connected,
99 directly or indirectly, by fiber to a wireless service provider's mobile switching center or other
100 point of interconnection.

101 “Structure” means a pole, tower, base station, or other building, whether or not it has an
102 existing antenna facility, that is used or to be used for the provision of personal wireless service
103 (whether on its own or commingled with other types of services).

104 “Telecommunications service” means the offering of telecommunications for a fee
105 directly to the public, or to such classes of users as to be effectively available directly to the
106 public, regardless of the facilities used.

107 (b) To the extent feasible, every public or independent institution of higher education
108 located in the Commonwealth of Massachusetts and authorized to grant degrees pursuant to any
109 general or special law shall eliminate exposures to man-made non-ionizing radiation known or
110 likely to be harmful. To the extent feasible, every institution shall establish measures and take
111 action to reduce exposures to man-made non-ionizing radiation which is (1) potentially harmful;
112 (2) unintentional; or (3) of unknown effect.

113 (c) Initial measures. Institutions shall take the following initial steps. Every institution
114 shall insure, as long as any wireless antennas exist on school property and transmit, that such
115 antennas are set to emit the minimum of power density possible for the minimum time necessary
116 with the minimum of pulsing and data.

117 Every institution shall prioritize prompt replacement of wireless broadband and
118 telecommunications connectivity in favor of hard-wired access, and shall educate its students and
119 staff on reducing non-ionizing radiation exposures at school and at home for better health.

120 Upon resetting any existing wireless antennas to end or minimize transmissions, every
121 institution shall establish routine monitoring systems to insure wireless transmissions do not
122 reset.

123 (d) Continuing measures. Every institution shall set objectives to methodically reduce all
124 non-ionizing radiation exposures, reasonable deadlines to meet these objectives, and shall keep
125 public records of progress towards each objective as well as a public record of why any
126 objectives have not been obtained.

127 (e) Wireless Infrastructure. All institutions shall prohibit use of campus property for
128 construction of facilities to provide telecommunications service and other mobile services
129 including, but not limited to, (1) site distributed antenna systems and small cell networks; (2) any
130 structure; and (3) collocation of distributed antenna systems and small cell networks on existing
131 wireless communications infrastructure. Where such facilities are preexisting the institution shall
132 seek, to the extent within its means and with the support of the Commonwealth, removal of such
133 facilities.

134 SECTION 4. Chapter 71 of the General Laws is hereby amended by adding after section
135 97 the following section:-

136 Section 99. (a) The department of elementary and secondary education, working with the
137 board of elementary and secondary education, shall develop guidance and recommendations to

138 assist schools in reducing man-made non-ionizing radiation exposures which are (1) known or
139 likely to be harmful; (2) potentially harmful; (3) unintentional; or (4) of unknown effect.

140 (b) Development. Guidelines shall be based on current science independent of industry
141 influence and shall adopt a cautionary stance. Guidelines shall provide varying approaches in
142 order to account for the variable financial abilities and circumstances of school districts. The
143 department shall consider practices that protect the health and safety of public school students
144 and staff, and may consult with experts provided the following conditions are met: (1) the expert
145 is acknowledged and named in publication of relevant findings; (2) the expert has an appropriate
146 professional and educational background for the expertise provided; and (3) the expert is free of
147 conflicts of interest and free of industry clients, the latter excepting engineers contracted with
148 industry only to reduce non-ionizing radiation exposures.

149 The department shall annually review and update guidance affecting, but not limited to,
150 the purchase, installation, and use of broadband services, digital devices, electrical equipment,
151 lighting, and telecommunications services.

152 (c) Adoption. From the recommendations, the board of elementary and secondary
153 education shall select those which can quickly and easily be adopted without a financial burden
154 and require adoption as soon as can be arranged. For the remainder, the board of elementary and
155 secondary education shall set reasonable deadlines for adoption, and shall prioritize measures
156 which dramatically reduce detrimental exposures and improve health. The board of elementary
157 and secondary education shall annually review and update as necessary.

158 Regardless of board guidance, any school in the Commonwealth shall be allowed to set
159 more stringent goals to further reduce non-ionizing radiation exposures.

160 (d) The board of elementary and secondary education shall develop a procedure to
161 evaluate the administration and good faith efforts of public schools to reduce non-ionizing
162 radiation in accordance with state and federal law. The evaluation shall be designed in a manner
163 which limits the digital reporting requirements and bureaucratic burden.

164 (e) If financial or other obstacles block the intent of this section, the secretary of
165 education shall submit to the Governor and the state legislature an explanation.

166 SECTION 5. Chapter 15A of the General Laws is hereby amended by adding after
167 section 44 the following section:-

168 Section 45. (a) To assist public and independent institutions authorized to grant degrees
169 pursuant to any general or special law, the board of higher education shall develop guidance and
170 recommendations in reducing man-made non-ionizing radiation exposures which are (1) known
171 or likely to be harmful; (2) potentially harmful; (3) unintentional; or (4) of unknown effect.

172 (b) Development. Guidelines shall be based on current science independent of industry
173 influence and shall adopt a cautionary stance. Guidelines shall provide varying approaches in
174 order to account for the variable circumstances of institutions. The board shall consider practices
175 that protect the health and safety of public school students and staff, and may consult with
176 experts provided the following conditions are met: (1) the expert is acknowledged and named in
177 publication of findings; (2) the expert has an appropriate professional and educational
178 background for the expertise provided; and (3) the expert is free of conflicts of interest and free
179 of industry clients, the latter excepting engineers contracted with industry only to reduce non-
180 ionizing radiation exposures.

181 The board shall annually review and update guidance affecting, but not limited to, the
182 purchase, installation, and use of broadband services, digital devices, electrical equipment,
183 lighting, and telecommunications services.

184 (c) Adoption. From the recommendations, the board shall select those which can quickly
185 and easily be adopted without a financial burden and require adoption as soon as can be
186 arranged. For the remainder, the board shall set reasonable deadlines for adoption, and shall
187 prioritize measures which dramatically reduce detrimental exposures and improve health. The
188 board shall annually review and update as necessary.

189 Regardless of board guidance, any institution in the Commonwealth shall be allowed and
190 encouraged to set more stringent goals to further reduce non-ionizing radiation exposures.

191 (d) Accountability. The board shall develop a procedure to evaluate the administration
192 and good faith efforts of every public and independent institution of higher education in the
193 Commonwealth to reduce non-ionizing radiation in accordance with state and federal law. The
194 evaluation shall be designed in a manner which limits the digital reporting and bureaucratic
195 burden.

196 SECTION 6. Chapter 15D of the General Laws is hereby amended by adding after
197 section 11 the following section:-

198 Section 11A. (a) The board of early education and care shall develop early education
199 guidance and recommendations to reduce exposures to man-made non-ionizing radiation
200 exposures which are (1) known or likely to be harmful; (2) potentially harmful; (3) unintentional;
201 or (4) of unknown effect. The board of early education and care may choose to coordinate with
202 the department of elementary and secondary education.

203 (b) Development. Guidelines shall be based on current science independent of industry
204 influence and shall adopt a cautionary stance. Guidelines shall provide varying approaches in
205 order to account for the variable conditions of early education facilities. The board shall consider
206 practices that protect the health and safety of public school students and staff, and may consult
207 with experts provided the following conditions are met: (1) the expert is acknowledged and
208 named in publication of relevant findings; (2) the expert has an appropriate professional and
209 educational background for the expertise provided; and (3) the expert is free of conflicts of
210 interest and free of industry clients, the latter excepting engineers contracted with industry only
211 to reduce non-ionizing radiation exposures.

212 With respect to wireless, the board of early education and care shall prioritize
213 establishing hard-wired over wireless connections and elimination of wireless transmitters near
214 or in child care areas. With respect to fields from electricity, the board shall support measures to
215 limit proximity to children and field strength.

216 The board of early education and care shall annually review and update guidance
217 affecting, but not limited to, the purchase, installation, and use of broadband services, digital
218 devices, electrical equipment, lighting, and telecommunications services.

219 (c) Adoption. From the recommendations, the board shall select those which can quickly
220 and easily be adopted without a financial burden and require adoption as soon as can be
221 arranged. For the remainder, the board shall set reasonable deadlines for adoption, and shall
222 prioritize measures which dramatically reduce detrimental exposures and improve health. The
223 board shall annually review and update as necessary.

224 Regardless of board guidance, any early education facility in the Commonwealth shall be
225 allowed to set more stringent goals to further reduce non-ionizing radiation exposures.

226 SECTION 7. Section 1 of chapter 69 of the General Laws is hereby amended by striking
227 out the last sentence and inserting in place the following sentence:-

228 It is therefore the intent of this title to ensure: (1) that each public school classroom
229 provides the conditions for all pupils to engage fully in learning as an inherently meaningful and
230 enjoyable activity without threats to their sense of security or self-esteem, (2) a consistent
231 commitment of resources sufficient to provide a high quality public education to every child, (3)
232 a respectful process for attending to student academic needs and developing talents; (4) an
233 effective system for supporting positive school climates, teacher quality, and professionalism;
234 and (5) insuring the environmental health and safety of public school classrooms by supporting
235 and developing policies and procedures designed to improve and monitor environmental health
236 of public school buildings.