

SENATE No. 1981

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 requiring state procurement of low-carbon building materials.

PETITION OF:

NAME:

Cynthia Stone Creem

DISTRICT/ADDRESS:

Norfolk and Middlesex

SENATE No. 1981

By Ms. Creem, a petition (accompanied by bill, Senate, No. 1981) of Cynthia Stone Creem for legislation to require state procurement of low-carbon building materials. State Administration and Regulatory Oversight.

The Commonwealth of Massachusetts

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

An Act requiring state procurement of low-carbon building materials.

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

1 SECTION 1. Chapter 7C of the General Laws, as appearing in the 2020 Official Edition,
2 is hereby amended by adding the following section:-

3 Section 73. (a) For the purposes of this section, the following words shall have the
4 following meanings unless the context clearly requires otherwise:

5 “Division”, the division of capital asset management and maintenance.

6 “Eligible material”, the following materials, when used in the construction of an eligible
7 project: (i) asphalt and asphalt mixtures; (ii) cement and concrete mixtures; (iii) glass; (iv) post-
8 tension steel; (v) reinforcing steel; (vi) structural steel; (vii) wood structural elements; (viii)
9 insulation; or (ix) other materials the division designates by rule after consultation with the
10 technical advisory committee.

11 "Eligible project", a building project for which a state agency issues a solicitation on or
12 after January 1, 2024; provided, that "eligible project" shall not include any maintenance
13 program for the upkeep of a capital facility or any road, highway, or bridge project.

14 "Emergency procurement", a procurement conforming to the requirements of section 8 of
15 chapter 30B.

16 "Global warming potential", a numeric value that measures the total contribution to
17 global warming from the emission of greenhouse gases, or the elimination of greenhouse gas
18 sinks.

19 "Greenhouse gas", any chemical or physical substance that is emitted into the air and that
20 the department of environmental protection may reasonably anticipate will cause or contribute to
21 climate change including, but not limited to, carbon dioxide, methane, nitrous oxide,
22 hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

23 "Technical advisory committee", the committee described in subsection (h).

24 (b) By January 1, 2024, the division shall establish by policy a maximum acceptable
25 global warming potential for each category of eligible materials used in an eligible project. The
26 initial maximum acceptable global warming potential for each eligible material shall be set by
27 the division after consultation with the technical advisory committee and shall be no higher than
28 the 75th percentile of national industry global warming potential emissions for that material;
29 provided that if sufficient data is available for a category of eligible material at the regional level,
30 the division shall set a maximum acceptable global warming potential for that eligible material
31 that is no higher than the 75th percentile of regional industry global warming potential emissions
32 for that material. The division shall determine the 75th percentile of national industry global

33 warming potential emissions for each material by consulting nationally or internationally
34 recognized databases of environmental product declarations and may include transportation-
35 related emissions as part of the global warming potential emissions. The division shall express
36 the maximum acceptable global warming potential as a number that states the maximum
37 acceptable global warming potential for each category of eligible materials. The global warming
38 potential shall be provided in a manner that is consistent with criteria in an environmental
39 product declaration. The division, in consultation with the technical advisory committee, may
40 establish additional subcategories within each eligible material with distinct maximum
41 acceptable global warming potential limits. The policy may permit maximum acceptable global
42 warming potential for each eligible material category in the aggregate. In establishing a
43 maximum acceptable global warming potential for each category of eligible materials used in an
44 eligible project, the division may consult with any other relevant department or division of state
45 government.

46 By January 1, 2026, and every two years thereafter, division shall review the maximum
47 acceptable global warming potential for each category of eligible materials and may adjust the
48 number for any eligible material to reflect industry conditions after consultation with the
49 technical advisory committee. The division shall not adjust the number upward for any eligible
50 material. In administering this section, the division shall strive to achieve a continuous reduction
51 of greenhouse gas emissions over time.

52 (c) For any solicitation for a contract for the design of an eligible project, a state agency
53 shall require the designer who is awarded the contract to include in project specifications when
54 final construction documents are released, for each eligible material proposed to be used in the
55 eligible project, a requirement for the contractor submit a current environmental product

56 declaration, type III, as defined by the international organization for standardization's standard
57 14025:2006, or a similarly robust life cycle assessment method chosen by the division that has
58 uniform standards in data collection. The environmental product declaration shall demonstrate
59 that the eligible materials proposed to be used in the eligible project meet the maximum
60 acceptable global warming potential for each category of eligible materials.

61 (d) For any solicitation for a contract for an eligible project, a state agency shall specify
62 the eligible materials that will be used in the project and reasonable minimum usage thresholds
63 below which the requirements of this section shall not apply. The department, in consultation
64 with the technical advisory committee, shall specify the threshold amount by rule. A state agency
65 may include in a specification for solicitations for an eligible project a global warming potential
66 for any eligible material that is lower than the maximum acceptable global warming potential for
67 that material as determined pursuant to subsection (b) of this section.

68 (e) A contractor that is awarded a contract for an eligible project shall not install any
69 eligible materials on the project until the contractor submits an environmental product
70 declaration for that material pursuant to subsection (c) of this section. The environmental product
71 declaration shall be deemed approved if it complies with the original specification required by
72 subsection (c) of this section. If an environmental product declaration is not available for an
73 eligible material, the contractor shall notify the division and install an alternative eligible
74 material with an environmental product declaration.

75 (f) A state agency may waive the requirements of subsection (c) when it conducts an
76 emergency procurement for eligible materials or when it determines that: (1) a relevant product
77 category rule does not exist; (2) requiring an environmental product declaration will

78 impermissibly reduce competition for public contracts or otherwise contravene the requirements
79 of state procurement law; (3) requiring an environmental product declaration would
80 unreasonably affect the state agency's specifications or requirements for eligible materials or
81 impair the state agency's construction activities; (4) an environmental product declaration is not
82 necessary to measure or quantify greenhouse gas emissions; (5) a product that meets the
83 maximum acceptable global warming potential for a category of eligible materials is not
84 reasonably priced or is not available on a reasonable basis at the time of design or construction;
85 or (6) determines after consultation with the technical advisory committee that other
86 considerations outweigh the need for requiring an environmental product declaration. Each state
87 agency shall report the waivers it awards to the division.

88 (g) Beginning in 2024, and in each year thereafter, the division shall prepare a report for
89 the general court, in consultation with the technical advisory committee, that includes the
90 following information: (i) for the report prepared in 2024 only, a description of the method that
91 division used to develop the maximum acceptable global warming potential for each category of
92 eligible materials; (ii) what the division has learned about how to identify and quantify embodied
93 carbon in building materials, including life cycle costs; (iii) any obstacles the division as well as
94 bidding contractors have encountered in identifying and quantifying embodied carbon in
95 building materials; and (iv) any other matters the division, in consultation with the technical
96 advisory committee, deems relevant, material or important to highlight or recommend to the
97 general court.

98 (h) The division, in conjunction with the department of energy resources, shall establish a
99 technical advisory committee to assist the division with issues related to implementing the policy
100 described in subsection (b). Members of the technical advisory committee shall include, but shall

101 not be limited to, representatives from the division, the department of energy resources, the
102 Massachusetts clean energy technology center, the department of environmental protection,
103 construction firms engaged in construction and maintenance of eligible projects, suppliers of
104 eligible materials, construction and material supplier industry associations, workers in
105 construction or manufacturing industries, environmental organizations, and public institutions of
106 higher education. The commissioner of the division shall serve as chair of the technical advisory
107 committee. The division shall appoint a replacement for any vacancy on the technical advisory
108 committee. A majority of the members of the technical advisory committee shall constitute a
109 quorum. The technical advisory committee must meet at least four times within each calendar
110 year at times and places specified by the call of the chair. Members of the technical advisory
111 committee are not entitled to compensation or reimbursement for expenses and serve as
112 volunteers on the technical advisory committee. The division and the department of energy
113 resources shall provide staff support to the technical advisory committee.

114 The technical advisory committee shall: (1) recommend quantities of eligible materials
115 below which the department need not require an environmental product declaration; (2) advise
116 the division as needed to prepare the reports required under subsection (g); (3) advise and guide
117 the department concerning: (i) the extent to which environmental product declarations or
118 similarly robust life cycle assessment methods are available or are in development; (ii) the time
119 within which a contractor must submit an environmental product declaration and any related
120 information; (iii) how to properly analyze or interpret an environmental product declaration; (iv)
121 the content of and criteria for devising, adopting and implementing the policy described in
122 subsection (b); (v) potential changes to the design or implementation of the policy described in
123 subsection (b) in light of technological advances and the need to maintain reasonable

124 competition for public contracts; (vi) the maximum acceptable global warming potential for each
125 eligible material; (vii) other matters the technical advisory committee deems necessary to
126 achieve the goals of the program. The technical advisory committee may recommend to the
127 division additional materials for designation as eligible materials.

128 SECTION 2. Chapter 81 of the General Laws, as appearing in the 2020 Official Edition,
129 is hereby amended by adding the following section:-

130 Section 33. (a) For the purposes of this section, the following words shall have the
131 following meanings unless the context clearly requires otherwise:

132 “Eligible material”, includes (1) concrete, including ready mix concrete, shotcrete,
133 precast concrete and concrete masonry units; (2) asphalt paving mixtures; (3) steel, including
134 rebar, reinforcing steel and structural steel, hot-rolled sections, hollow sections, plate steel and
135 cold-formed steel; and (4) other materials the department designates by rule after consultation
136 with the technical advisory committee.

137 “Emergency procurement”, a procurement conforming to the requirements of section 8 of
138 chapter 30B.

139 “Global warming potential”, a numeric value that measures the total contribution to
140 global warming from the emission of greenhouse gases, or the elimination of greenhouse gas
141 sinks.

142 "Greenhouse gas", any chemical or physical substance that is emitted into the air and that
143 the department of environmental protection may reasonably anticipate will cause or contribute to

144 climate change including, but not limited to, carbon dioxide, methane, nitrous oxide,
145 hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

146 “Technical advisory committee”, the committee described in subsection (i).

147 (b) The department, not later than January 1, 2024, shall establish a program for
148 greenhouse gas reduction that: (1) assesses the greenhouse gas emissions attributable to eligible
149 materials the department uses in the department’s construction and maintenance activities for
150 state highways; (2) conducts life cycle assessments of a selected set of the department’s
151 construction and maintenance activities; and (3) devises strategies for reducing greenhouse gas
152 emissions that shall include, but are not limited to: (i) improving pavement and bridge
153 conditions; and (ii) establishing by policy a maximum acceptable global warming potential for
154 each category of eligible material the department uses in the department’s construction and
155 maintenance activities for state highways. In administering this section, the department shall
156 strive to achieve a continuous reduction of greenhouse gas emissions over time.

157 In establishing the program, the department shall identify and disclose in any reports the
158 department produces all relevant measurement difficulties, deficiencies in needed data,
159 assumptions, uncertainties, technological limitations, costs associated with assessment and
160 implementation, and any other relevant limitations of methodology, practice or implementation.

161 (c) In devising the strategies described in subsection (b), the department, at a minimum,
162 shall consider and evaluate: (1) advancements in materials and engineering as applied to
163 greenhouse gas emission reduction; (2) regional variability in the quality and durability of
164 aggregates and other components of eligible materials; (3) the types and effects of fuels available
165 for use in manufacturing, transporting and using eligible materials; (4) the quality and

166 performance of the eligible materials; and (5) any other factors that the department, in
167 consultation with the technical advisory committee, deems relevant and useful.

168 (d) The department may conduct the assessments and devise the strategies described in
169 subsection (b) separately for each of the six highway districts, accounting for differences among
170 the districts with respect to the availability of eligible materials, fuel and other necessary
171 resources and the quantity of eligible materials the department uses or plans to use.

172 (e) In procuring eligible materials for the program described in subsection (b), the
173 department shall require contractors to submit an environmental product declaration, type III, as
174 defined by the international organization for standardization's standard 14025:2006, or a
175 similarly robust life cycle assessment method chosen by the division that has uniform standards
176 in data collection, before the contractor installs the eligible materials, unless the department: (1)
177 conducts an emergency procurement for the eligible materials; (2) determines that a relevant
178 product category rule does not exist; (3) determines that requiring an environmental product
179 declaration will impermissibly reduce competition for public contracts or otherwise contravene
180 the requirements of state procurement law; (4) determines that requiring an environmental
181 product declaration would unreasonably affect the department's specifications or requirements
182 for eligible materials or impair the department's construction or maintenance activities; (5)
183 determines that an environmental product declaration is not necessary to measure or quantify
184 greenhouse gas emissions; or (6) determines after consultation with the technical advisory
185 committee that other considerations outweigh the need for requiring an environmental product
186 declaration or that a construction or maintenance activity would use less than a threshold amount
187 of eligible materials. The department, in consultation with the technical advisory committee,
188 shall specify the threshold amount by rule.

189 (f) Notwithstanding subsection (b), in procuring asphalt paving mixtures, the department
190 may allow contractors to submit an environmental product declaration within a reasonable time
191 after executing a public contract for constructing roads or acquiring materials or within the time
192 required for such declaration or assessment to be prepared, but not later than the date on which
193 the contractor completes performance of the public contract.

194 (g) The department may not use an environmental product declaration as a consideration
195 in ranking or scoring a bid or proposal before January 1, 2025, but thereafter may consider an
196 environmental product declaration if the department determines that doing so is beneficial and if,
197 after consulting with the technical advisory committee, construction contractors, material
198 suppliers and other stakeholders, the department devises a scoring methodology that ensures
199 fairness among bidders.

200 (h) Each year by not later than December 31 the department shall file a report with the
201 joint committee on transportation, the house and senate committees on global warming and
202 climate change, and the house and senate committees on ways and means detailing the progress
203 of the program. The department shall prepare each annual report in consultation with the
204 technical advisory committee and the report, at a minimum, shall include: (1) a description of the
205 department's efforts to design and implement the program, an evaluation of the department's
206 success in reducing greenhouse gas emissions by means of environmental product declarations
207 and recommendations as to whether to expand the program; and (2) any other matters the
208 department, in consultation with the technical advisory committee, deems relevant, material or
209 important to highlight or recommend to the general court.

210 (i) The department shall establish a technical advisory committee to assist the department
211 with issues related to implementing the program described in subsection (b). Members of the
212 technical advisory committee shall include, but shall not be limited to, representatives from the
213 department of transportation, the department of energy resources, the Massachusetts clean
214 energy technology center, the department of environmental protection, construction firms
215 engaged in transportation construction and maintenance, suppliers of eligible materials,
216 construction and material supplier industry associations, workers in construction or
217 manufacturing industries, environmental organizations, and public institutions of higher
218 education. The highway administrator shall serve as chair of the technical advisory committee.
219 The department shall appoint a replacement for any vacancy on the technical advisory
220 committee. A majority of the members of the technical advisory committee shall constitute a
221 quorum. The technical advisory committee must meet at least four times within each calendar
222 year at times and places specified by the call of the chair. Members of the technical advisory
223 committee are not entitled to compensation or reimbursement for expenses and serve as
224 volunteers on the technical advisory committee. The department shall provide staff support to the
225 technical advisory committee.

226 The technical advisory committee shall: (1) recommend quantities of eligible materials
227 below which the department need not require an environmental product declaration; (2) advise
228 the department as needed to prepare the reports required under subsection (h); (3) advise and
229 guide the department concerning: (i) the extent to which environmental product declarations or
230 similarly robust life cycle assessment methods are available or are in development; (ii) which of
231 the department's construction and maintenance activities are appropriate for inclusion in the
232 program described in subsection (b); (iii) the time within which a contractor must submit an

233 environmental product declaration and any related information; (iv) how to properly analyze or
234 interpret an environmental product declaration; (v) the content of and criteria for devising,
235 adopting and implementing the strategies described in subsection (b); (vi) potential changes to
236 the design or implementation of the program described in subsection (b) in light of technological
237 advances and the need to maintain reasonable competition for public contracts; and (vii) other
238 matters the technical advisory committee deems necessary to achieve the goals of the program.
239 The technical advisory committee may recommend to the department additional materials for
240 designation as eligible materials.

241 SECTION 3. The Massachusetts clean energy technology center established in section 2
242 of chapter 23J shall create a grant program to assist manufacturers of eligible materials, as
243 defined in section 73 of chapter 7C and section 33 of chapter 81, in developing environmental
244 product declarations, type III, as defined by the international organization for standardization's
245 standard 14025:2006.