HOUSE DOCKET, NO. 1033 FILED ON: 1/18/2023

HOUSE . . . . . No. 764

The Commonwealth of Massachusetts

PRESENTED BY:

Michelle L. Ciccolo and Steven Owens

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 incorporating embodied carbon into state climate policy.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	DATE ADDED:
Michelle L. Ciccolo	*15th Middlesex*	*1/18/2023*
Steven Owens	*29th Middlesex*	*1/18/2023*
Margaret R. Scarsdale	*1st Middlesex*	*2/13/2023*
Lindsay N. Sabadosa	*1st Hampshire*	*3/2/2023*
Joanne M. Comerford	*Hampshire, Franklin and Worcester*	*3/2/2023*
Natalie M. Higgins	*4th Worcester*	*4/10/2023*
Jason M. Lewis	*Fifth Middlesex*	*4/10/2023*
Tommy Vitolo	*15th Norfolk*	*4/10/2023*
Carmine Lawrence Gentile	*13th Middlesex*	*5/18/2023*
Kristin E. Kassner	*2nd Essex*	*6/12/2023*
Samantha Montaño	*15th Suffolk*	*6/22/2023*

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By Representatives Ciccolo of Lexington and Owens of Watertown, a petition (accompanied by bill, House, No. 764) of Michelle L. Ciccolo, Steven Owens and others for legislation to establish guidelines and recommendations for best practices for industry entities to measure, track, and reduce emissions from embodied carbon of buildings. Environment and Natural Resources.

The Commonwealth of Massachusetts

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

An Act incorporating embodied carbon into state climate policy.

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

SECTION 1. Chapter 21N of the General Laws is hereby amended by adding the following section:-

Section 12. (a) For the purposes of this section, the following terms shall have the following meanings:

"Department", the department of energy resources.

"Embodied carbon", the carbon dioxide and carbon dioxide equivalent emissions associated with materials and construction processes throughout the whole lifecycle of a building or infrastructure.

"Environmental product declaration" or "EPD", a Type III environmental product declaration, as defined by the International Organization for Standardization (ISO) standard

21930 and the relevant product category rule for each type of concrete product or a similarly robust life-cycle assessment method that conforms to ISO 21930 and the relevant product category rule for each type of concrete product.

"Life-cycle assessment" or "LCA", an assessment that is used to calculate the environmental primary and secondary impacts, of a product, service, or process, over the lifetime of that product, service, or process.

(b) The Massachusetts state climate chief, in consultation with the department, shall establish an Embodied Carbon Advisory Board. Members of the advisory board shall be appointed by the climate chief and shall include, but not be limited to: (i) 2 licensed professional engineers; (ii) 2 licensed registered architects; (iii) 2 representatives of the construction industry; (iv) 2 representatives of an accredited school of civil engineering; (v) 2 representatives from affordable housing organizations (vi) 1 representative from the Massachusetts Clean Energy Center; (vii) 1 representative from the Massachusetts Building Commissioners and Inspectors Association; (viii) 1 representative from the Board of Building Regulations and Standards and (ix) 1 representative each from the executive office of transportation, the executive office of housing and community development, the department of energy resources, the Division of Capital Asset Management and Maintenance, and the department of environmental protection.

The climate chief shall consider geographic diversity when making appointments to the Embodied Carbon Advisory Board.

(c) The Office of Climate Innovation and Resilience shall provide staffing support and funding to the Embodied Carbon Advisory Board, including sufficient funding for

administration, research, legal assistance, public outreach, publications, a public website, consulting and other functions.

(d) The department, in consultation with the Embodied Carbon Advisory Board and the Massachusetts climate chief shall conduct an assessment of the current state of professional literacy of embodied carbon and strategies to measure, monitor, and reduce embodied carbon across relevant industry practitioners, including but not limited to (i) structural engineers, (ii) electrical engineers (iii) mechanical engineers (iv) plumbing engineers, (v) architects, (vi) building inspectors, and (vii) general contractors. Following the assessment, the department, in consultation with the Embodied Carbon Advisory Board and in collaboration with the Division of Professional Licensure, shall provide recommendations for best approaches, including courses and certifications, to advance industry literacy.

(e) The department, in consultation with the Embodied Carbon Advisory Board and the Massachusetts climate chief, shall establish guidelines and recommendations for best practices for industry entities to measure, track, and reduce emissions from embodied carbon of buildings. The Embodied Carbon Advisory Board may establish guidelines and recommendations for best practices for industry entities to measure, track, and reduce emissions from embodied carbon in infrastructure. The guidelines shall include best practices for conducting a life-cycle analysis of buildings and benchmarking emissions of new construction and renovation building projects as well as environmental product declarations for building materials.

(f) Notwithstanding any special or general law, rule, or regulation to the contrary, the department shall incorporate provisions that advance the measurement and reduction of

embodied carbon into the stretch energy code in appendix 115AA of the Massachusetts building energy code.

(g) The updates to the stretch code and specialized stretch energy code under section 6 of chapter 25A shall be developed, adopted, and incorporated as an appendix to the state building code on a timeline set by the Embodied Carbon Advisory Board in consultation with the department and in alignment with the conclusions drawn from the state of literacy assessment under subsection (d).

SECTION 2. Clause (14) of section 6 of chapter 25A of the General Laws is hereby amended by inserting after the words “net-zero building performance standards” the following words:- “, the measurement and reduction of embodied carbon”

SECTION 3. (a) The members of the Embodied Carbon Advisory Board shall be appointed no later than 6 months after the effective date of this act.

(b) The guidelines and recommendations relative to embodied and operational carbon shall be issued by the department of energy resources no later than 1 year after the formation of the Embodied Carbon Advisory Board.

(c) No later than 1 year after the formation of the Embodied Carbon Advisory Board, the Massachusetts state climate chief, in consultation with the Embodied Carbon Advisory Board and the department, shall submit a report to the clerks of the house of representatives and the senate detailing the best policy mechanisms to measure, monitor, and reduce embodied carbon across all building types in the Commonwealth. This report shall consider interactions between embodied carbon and operational carbon to ensure policy recommendations to reduce embodied carbon also contribute to the reduction of operational carbon. This report shall include the best

approaches to integrate the reduction of embodied carbon into the Massachusetts state building code, including the stretch and specialized stretch energy code as under section 96 of chapter 143 of the General Laws and state amendments to the International Building Code sections. This report shall further include best practices to incentivize and enhance the re-use of building materials and decrease building demolition, where beneficial.