
Local Government Committee

HB 1458

Brief Description: Reducing embodied carbon emissions of buildings and building materials.

Sponsors: Representatives Duerr, Doglio, Hunt, Mena, Berry, Reed, Ramel, Parshley, Peterson, Scott, Pollet and Hill.

Brief Summary of Bill

- Requires the State Building Code Council to adopt rules relating to embodied carbon emissions reduction standards for building projects and establishes three paths through which building projects may comply with those rules.
- Requires the Department of Commerce to establish a standard form for embodied carbon emissions reductions to be reported for a building project and establish a database for reporting information.
- Requires the 2030 State Building Code to achieve a 30 percent reduction in embodied carbon emissions for permitted construction.

Hearing Date: 2/5/25

Staff: Elizabeth Allison (786-7129).

Background:

State Building Code.

The State Building Code establishes minimum performance standards and requirements for construction and construction materials in the state, consistent with accepted standards of engineering, fire, and life safety. The State Building Code is comprised of a number of model codes and standards, developed and published by international and national organizations, which are adopted by reference in the State Building Code Act. Model codes and standards adopted in

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the State Building Code Act include the International Building Code, the International Residential Code, and the State Energy Code. The State Building Code Council (SBCC) is the state agency that adopts and updates the State Building Code. The State Building Code is updated every three years.

Embodied Carbon.

Embodied carbon is the amount of greenhouse gas emissions associated with the production stages, including extraction, transport, and manufacturing, of a product's life.

Global Warming Potential.

Global warming potential is a measure of how much energy the emission of 1 ton of a gas will absorb over a given period of time, relative to the emission of 1 ton of carbon dioxide. The time period usually used for global warming potential is 100 years.

Environmental Product Declarations.

An environmental product declaration is a verified report of the environmental impacts of product manufacturing. They are developed by the producers of construction materials in accordance with the International Organization for Standardization.

Summary of Bill:

The SBCC must adopt and amend rules relating to embodied carbon emissions reduction standards. In developing the rules, the SBCC is required to consult with appropriate state agencies, including the Department of Enterprise Services, the Department of Commerce (Commerce), the Department of Ecology, the University of Washington, and other interested parties. The embodied carbon emissions reduction standards apply to all new construction, additions, and renovations of 50,000 square feet or larger. The SBCC must convene an embodied carbon emissions reductions technical advisory group to recommend modifications and limitations to the International Building Code regarding embodied carbon emissions reduction standards for residential and nonresidential buildings.

Building projects may comply with embodied carbon emissions reduction standards through one of three paths.

Path One—Existing Building Reuse.

Building projects that maintain at least 45 percent of an existing structure and envelope comply with the embodied carbon emissions reduction requirements. The SBCC is directed to adopt rules to determine how the 45 percent reuse will be calculated.

Path Two—Covered Products.

As an alternative to path one, all building projects subject to the embodied carbon emissions reduction standards must demonstrate that the embodied carbon emissions of covered products used for the project meets established reduction requirements. The reduction is measured in terms of global warming potential for at least 90 percent of covered projects and summed up at

the project level when compared to the project's summed industry average global warming potential. The SBCC is directed to adopt rules defining how covered products are calculated.

A building's design professional of record must update quantity and embodied carbon emissions calculations based on product and facility-specific environmental product declarations from procured products and attest that they are accurate and comply with project documents. Calculations must be verified as accurate within the industry standard of care with a letter stamped by a design professional of record. The SBCC is directed to create a template reporting form for consistent reporting on materials.

Path Three—Whole Building Life-Cycle Assessment.

As an alternative to paths one and two, a building project may demonstrate the embodied carbon emissions reductions using a whole building life-cycle assessment (WBLCA) as compared against a functionally equivalent reference building. A WBLCA is an assessment covering specified life-cycle stages of a product or system to evaluate the environmental impacts of a building, including global warming potential. The reference building must be of the same size, geographic location, function, type, and thermal performance. The SBCC is directed to adopt rules to require compliance with a quantification standard for building life-cycle greenhouse gas emissions. Alternatively, the SBCC may adopt rules to specify required building element metrics.

The design professional of record responsible for the embodied carbon calculations and reporting must be specified in construction documents. The SBCC must provide a worksheet to be completed by project teams for consistent reporting. The design professional of record must stamp an attestation that the designed building complies with WBLCA requirements. The attestation must be submitted with the project permit and documents showing compliance.

Standard Reporting Form.

All embodied carbon emissions reductions data must be entered by the design professional of record on a standard form and public database. Commerce is directed to establish the form and create and maintain the public database. The database must include basic information about the project, project area, which compliance pathway was selected, and how the project met the standards for the selected pathway. Commerce must also develop a public-facing website with educational resources to support implementation. Each year Commerce must conduct random audits on 3 percent of projects.

State Building Code Embodied Carbon Emissions Reduction.

Construction permitted under the 2030 State Building Code must achieve a 30 percent reduction in embodied carbon emissions from a project-wide static baseline, not including building projects reusing an existing building structure or envelope under path one. The SBCC must require product and facility-specific environmental product declarations and project reporting in the 2024 code cycle. The SBCC must adopt state building codes in the 2027 and 2030 code cycles that incrementally move toward achieving the 30 percent reduction in annual embodied carbon emissions. The SBCC must report its progress beginning December 31, 2028, and every

three years thereafter. Commerce must report major findings from the database of projects and audits on the same timeline.

Appropriation: None.

Fiscal Note: Requested on January 29, 2025.

Effective Date: The bill takes effect 90 days after adjournment of the session in which the bill is passed.