

HOUSE BILL REPORT

HB 1458

As Reported by House Committee On:

Local Government
Capital Budget

Title: An act relating to reducing embodied carbon emissions of buildings and building materials.

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 History:

Committee Activity:

Local Government: 2/5/25, 2/14/25 [DPS];

Capital Budget: 2/25/25, 2/26/25 [DP2S(w/o sub LG)].

Brief Summary of Second Substitute 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.

HOUSE COMMITTEE ON LOCAL GOVERNMENT

Majority Report: The substitute bill be substituted therefor and the substitute bill do pass.

This analysis was prepared by non-partisan legislative staff for the use of legislative members in their deliberations. This analysis is not part of the legislation nor does it constitute a statement of legislative intent.

Signed by 4 members: Representatives Duerr, Chair; Parshley, Vice Chair; Hunt and Zahn.

Minority Report: Do not pass. Signed by 3 members: Representatives Klicker, Ranking Minority Member; Stuebe, Assistant Ranking Minority Member; Griffey.

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 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 Substitute 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 existing technical advisory group with relevant expertise 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. A building project that complies under this pathway may not add more than 50 percent to the total area. 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 meet 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, the project area, which compliance pathway was selected, the approximate location, the primary structural system, the primary building use, 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 and must provide a list of software that may be used to comply with the embodied carbon emissions reduction requirements. 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 or whole building life-cycle assessment results and project reporting in the 2024 code cycle. If, before the 2027 code is implemented, a product- or facility-specific environmental product declaration is not available, the applicable industry-regional environmental product declaration must be required. 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.

Substitute Bill Compared to Original Bill:

The substitute bill provides that building projects that reuse at least 45 percent of an existing building structure and envelope may not add more than 50 percent to the total area to be in compliance with required embodied carbon emissions reductions. Embodied carbon emissions reductions for covered products must include life-cycle stage A1 through A3 data. Embodied carbon emissions reduction data must include the approximate location, primary structural system, and primary building use of a building project. Commerce must provide a list of software that may be used to support compliance with embodied carbon emissions reduction requirements. An existing technical advisory group with relevant experience may assist the SBCC in developing embodied carbon emissions reduction requirements, rather than a newly established technical advisory group. The SBCC must require whole building life-cycle assessment results for the 2024 Energy Code cycle. Industry-regional environmental product declaration must be used for the 2027 Energy Code cycle if a product- or facility-specific environmental product declaration is not available.

Appropriation: None.

Fiscal Note: Available.

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

Staff Summary of Public Testimony:

(In support) This bill continues the Buy Clean and Buy Fair Act's process. Stakeholders were interested in multiple pathways to achieve the goals of that act. Embodied carbon is the upfront carbon of materials used to build. It also includes emission from how the building is built. The bill offers three pathways to reduce embodied carbon. Builders are already often evaluating embodied carbon. The first pathway reduces embodied carbon emissions because it's reusing an existing building. The second path reduces embodied carbon emissions through specific products. The third is a holistic whole building life cycle assessment. Wood has lower embodied carbon because it captures embodied carbon. Steel can be reused. This can be done right now. Architects are already doing this. The technology is available and manufacturers are already providing the required documentation. This can be done with little to no additional cost. The environmental and health cost to delaying this policy is too high. This bill will drive economic activity. Washington can be a leader. There is an assumption that reducing embodied carbon will increase costs, which is false. The bill calls for a 30 percent reduction in large commercial buildings with a six-year period to get there. By 2050 over half of all emission from new buildings will be from embodied carbon. We need a plan now to achieve Washington's emissions reductions goals. The requirements of the bill allow for creativity and innovation in the design process. This is feasible, appropriate, and implementable by the SBCC.

(Opposed) The concrete industry is supportive but one concern lies in the scalability of the materials themselves. The other concern is that embodied carbon belongs outside of the State Building Code. The cost is another concern. There are already high standards from the State Building Code. Existing standards already achieve the policy.

(Other) This bill lays out clear guidance. The technical advisory group already looked at adding an appendix to the State Building Code. The SBCC believes an existing technical advisory group can adequately address the code requirements in the bill. There is a need for a date change from July 2026 to November 2026.

Persons Testifying: (In support) Representative Davina Duerr, prime sponsor; Mikhail Haramati, Natural Resources Defense Council; Chris Hellstern, American Institute of Architects, Washington Council; Roger Heeringa; Brandon Houskeeper, American Wood Council; Jessie Templeton; Amie Lewis, New Buildings Institute; and Jesse Walton.

(Opposed) Cory Shaw, Washington Aggregates and Concrete Association; and Bill

Stauffacher, Building Industry Association of Washington.

(Other) Kjell Anderson, Washington State Building Code Council; and Jordan Palmeri, University of Washington.

Persons Signed In To Testify But Not Testifying: None.

HOUSE COMMITTEE ON CAPITAL BUDGET

Majority Report: The second substitute bill be substituted therefor and the second substitute bill do pass and do not pass the substitute bill by Committee on Local Government. Signed by 10 members: Representatives Tharinger, Chair; Callan, Vice Chair; Davis, Fosse, Hill, Leavitt, Morgan, Salahuddin, Stearns and Zahn.

Minority Report: Do not pass. Signed by 9 members: Representatives Steele, Ranking Minority Member; Abbarno, Assistant Ranking Minority Member; McClintock, Assistant Ranking Minority Member; Barnard, Dye, Eslick, Rule, Walsh and Waters.

Staff: Ingrid Lewis (786-7293).

Summary of Recommendation of Committee On Capital Budget Compared to Recommendation of Committee On Local Government:

The Committee on Capital Budget recommended exempting school district construction from the embodied carbon emissions reductions. The size of the buildings needing to meet embodied carbon emissions reductions is increased from buildings that are 50,000 square feet or larger to buildings that are 100,000 square feet or larger. The reference to an existing technical advisory group within the Department of Commerce is replaced with an existing technical advisory group in the State Building Code Council. Multiple technical corrections are made.

Appropriation: None.

Fiscal Note: Available. New fiscal note was requested on February 19, 2025.

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

Staff Summary of Public Testimony:

(In support) Architects and contractors already do this on every project, so this policy does not add cost to projects. It does set out a time frame for market certainty, and for steel and concrete industries to set goals to lower embodied carbon and provide a market mechanism

to reward lower carbon products. Industries meet reductions of 15 to 30 percent for no cost today. Washington already has low carbon density and manufacturers have lower carbon products, which are incentivized in this bill.

The bill includes a multi-pathway policy compliance approach that allows project teams flexibility in choosing the work that's best for them and the goals for their project. This approach not only captures impacts from the manufacture of materials, but emissions associated with the transportation of materials to the site installation and maintenance and more.

The Buy Clean, Buy Fair work group is focused on identifying opportunities for barriers to the growth and use of production of low carbon materials and promoting high labor standards and manufacturing and preserving and expanding low carbon material manufacturing in Washington state. This is a complementary policy that will build on the expertise that comes out of that work group.

The assumption that reducing embodied carbon will increase construction costs is false. The requirements of this bill will drive a reduction of the embodied carbon and future structures, which is needed. A sustainability-focused approach to structural design can and should result in a reduction in construction costs. The bill is limited to large buildings, over 50,000 square feet per year, looking at past capital budgets that's three to five buildings owned by the state that are completed each year in that size range. It does not impact the enterprise services contract or manual staff training. The bill should cost much less to implement, and the fiscal note should reflect this.

(Opposed) The State Building Code Council needs additional guidance where these types of policies are better focused on a carbon metric that establishes goals for the whole building rather than focusing on specific materials. School buildings are already required to meet high energy performance standards and it is unclear how this policy will interact with those requirements. The State Building Code Council makes code related to the life and safety of the occupants of a building. Embodied carbon does not belong in that lane. With overregulation and policies such as this, it eliminates the ability for the industry to be creative and resourceful. There is a concern in the scalability of some of the materials and a belief that there's more time needed to do research in the innovative lane that's happening within industry.

(Other) A single focus look at embodied carbon could lead to improper product selection, limit the availability of certain insulation materials for the use of state projects, and negatively impact the operational carbon use of the building. This could also result in added cost to the state.

Persons Testifying: (In support) Representative Davina Duerr, prime sponsor; Kjell Anderson; Todd Beyreuther, Mercer Mass Timber; Amie Lewis, New Buildings Institute; Roger Heeringa; Kate White Tudor, Natural Resources Defense Council; and Brandon

Houskeeper, American Wood Council.

(Opposed) Katherine Mahoney, South Sound School Superintendents; and Cory Shaw, Washington Aggregates and Concrete Association.

(Other) Troy Nichols, American Chemistry Council.

Persons Signed In To Testify But Not Testifying: None.