

# SENATE BILL REPORT

## ESSB 5485

---

---

As Amended by House, April 7, 2011

**Title:** An act relating to maximizing the use of our state's natural resources.

**Brief Description:** Maximizing the use of our state's natural resources.

**Sponsors:** Senate Committee on Environment, Water & Energy (originally sponsored by Senators Hargrove and Ranker).

**Brief History:**

**Committee Activity:** Environment, Water & Energy: 2/08/11, 2/15/11 [DPS, w/oRec].

Passed Senate: 3/07/11, 44-5.

Passed House: 4/07/11, 91-1.

---

### SENATE COMMITTEE ON ENVIRONMENT, WATER & ENERGY

**Majority Report:** That Substitute Senate Bill No. 5485 be substituted therefor, and the substitute bill do pass.

Signed by Senators Rockefeller, Chair; Nelson, Vice Chair; Honeyford, Ranking Minority Member; Chase, Fraser, Morton and Ranker.

**Minority Report:** That it be referred without recommendation.

Signed by Senator Delvin.

**Staff:** Jan Odano (786-7486)

**Background:** It is the policy of the state to ensure that energy conservation practices and renewable energy systems are used in the design of major publicly owned or leased facilities. Whenever a public agency determines that a major facility should be constructed or renovated, the agency must conduct a life-cycle cost analysis that includes energy costs as well as all operating costs. In addition, all major public facility projects receiving capital funding must be designed, constructed, and certified to Leadership in Energy and Environmental Design (LEED) silver standard.

Life-cycle assessments review every impact associated with all stages of a process from extracting raw materials through manufacturing, distributing, using, repairing, maintaining, recycling, or disposing. Life-cycle assessment can provide a broader review on the environmental, social, and economic concerns related to a product.

---

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

Embodied energy is the amount of energy needed to extract, transport, manufacture, install, and recycle or dispose of a product or service. Methodologies to determine embodied energy vary as to the scale and scope of the use and type of embodied energy.

The State Building Code Council (SBCC) is authorized to adopt and amend uniform building and energy codes. It establishes the minimum building code to protect the health and safety of building occupants. The SBCC advises the Legislature and Governor on issues relating to the building codes.

**Summary of Engrossed Substitute Bill:** The University of Washington (UW), in conjunction with a nonprofit consortium involved in research on renewable industrial materials, and in consultation with the SBCC, must review other states' codes, international standards, and literature on life-cycle assessment and embodied energy and embodied carbon in building materials. The UW, in conjunction with a nonprofit consortium, must make recommendations to the Legislature for methodologies to assess and determine the amount of embodied energy in building materials or greenhouse gas emission avoided by using building materials with low embodied energy; and develop a comprehensive guideline for measuring embodied energy and carbon in building materials. General Administration must make recommendations for streamlining energy conservation, life-cycle cost analysis and high performance codes for public buildings.

**Appropriation:** None.

**Fiscal Note:** Available.

**Committee/Commission/Task Force Created:** No.

**Effective Date:** Ninety days after adjournment of session in which bill is passed.

**Staff Summary of Public Testimony on Original Bill:** PRO: We need to align the state building codes with our climate change policy and sustainability. Wood and wood products are very sustainable especially compared to other building materials and are part of the global solution. Wood sinks carbon, and trees replacing those cut for wood are carbon sinks. Gravel and steel do not sink carbon. The amount of energy used to make concrete and steel could require much more than the energy savings of a building built to LEED standards. We should address the inconsistent and inefficient processes that allow industries to take advantage of the current building code to sustain businesses that are not consistent with existing environmental policy. A lifecycle assessment of building materials needs to be part of the equation. The amount of energy it takes to produce wood products is far less than other materials. Using wood materials will reduce our carbon emissions and restart the mills across the state. Wood and forest products are a big part of the state's economy representing the second largest manufacturing sector. Using more wood is good for the environment and good for the economy. Stimulating the economy will help to bring more revenue and jobs to the state. California has adopted its own green code, which is something to look at.

CON: This adopts a new code without review by the SBCC. The SBCC has promised to review green codes and green plumbing codes. The IGCC impacts every aspect of building

including electrical, mechanical, plumbing codes and land use. The IGCC is not final and adoption now is premature. It is a false premise that wood is disadvantaged in the building code, many architects use it in their building designs. The idea of measuring embodied energy is worthy, but there is no common metric for embodied energy. The metric should be developed at the national level. Using the SBC to promote wood is inappropriate, the purpose of the SBC is to protect life and safety of the occupants of the building. Architects and builders should be the ones to determine the materials for a building based on safety and use of the building. Architects and building officials carry the liability for building codes. Wood products organizations or other groups should not determine building construction or materials. Embodied energy is about the life of the building. The best buildings are the ones that have the longest life. Lifecycle assessments are subjective.

OTHER: The SBCC is in the process of reviewing all green codes. The IGCC is very broad covering more than materials such as land use, grey-water, and plumbing code. Embodied energy is not an easy fit with a life-cycle assessment. Isolating fossil fuels will require a special effort to isolate in the life-cycle assessments.

**Persons Testifying:** PRO: Elaine Oneil, Consortium for Research on Renewable Industrial Materials; Dwight Yochim, Wood Products Council; Dave Nunes, Pope Resources; Debora Munguia, WA Forest Protection Assn.

CON: Tonia Neal, WA State Conference of Mason Construction; Pete Crow, International Assn. of Plumbing & Mechanical Office; Randy Scott, WA State Assn. of Plumbers and Pipefitters; Stan Bowman, Marc Jenessky, American Institute of Architects; Bruce Chatkin, WA Aggregates & Concrete.

OTHER: Tim Nogler, State Building Code Council; John Lynch, General Administration; Nancy Hirsch, NW Energy Coalition; Mo McBroom, WA Environmental Council.

#### **House Amendment(s):**

- Requires the Washington State University (WSU), College of Engineering and Architecture along with the University of Washington College of Built Environments to conduct a review of other states' existing building codes, international standards, peer-reviewed research and models of life-cycle assessment, embodied energy and embodied carbon in building materials and develop a report and recommendations;
- Removes the requirement for a nonprofit consortium to conduct the review in consultation with the State Building Code Council;
- Modifies the review and reporting requirements;
- Includes developing recommendations for ongoing monitoring, verification, and report of the actual performance of high performance public buildings;
- Removes the intent section; and
- Adds a null and void clause.