Washington State
House of Representatives
Office of Program Research

BILL ANALYSIS

Environment Committee

ESSB 5485

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 Summary of Engrossed Substitute Bill

- Requires the University of Washington (UW) to conduct a review of other states' codes, international standards, and literature on life-cycle assessment, embodied energy, and embodied carbon in building materials.
- Requires the UW to make recommendation to the Legislature for methodologies to: (1) conduct an assessment and determine the amount of embodied energy and carbon in building materials or greenhouse gas emissions avoided by using building materials with low-embodied energy or carbon; and (2) develop a comprehensive guideline using a common and consistent metric for the embodied energy and carbon in building materials.
- Requires the Department of General Administration to make recommendations for streamlining current statutory requirements for life-cycle cost analysis, energy conservation in design, and high performance of public buildings.

Hearing Date: 3/17/11

Staff: Courtney Barnes (786-7194).

Background:

Washington State Building Code Council.

The Washington State Building Code Council (SBCC) establishes the minimum building, mechanical, fire, plumbing, and energy code requirements necessary to promote the health, safety, and welfare of the state's residents, by reviewing, developing, and adopting the State Building Code (SBC). The SBC establishes the minimum construction requirements for

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Washington. The SBC is comprised of various building, residential, fire and other model codes adopted by the Legislature.

Under the State Energy Code, "embodied energy" means the total amount of fossil fuel energy consumed to extract raw materials and to manufacture, assemble, transport, and install the materials in a building and the life-cycle cost benefits including the recyclability and energy efficiencies with respect to building materials. The total sum of current values for the costs of investment, capital, installation, operating, maintenance, and replacement as estimated for the lifetime of the product or project is taken into account.

Life-cycle Cost Analysis of Public Facilities.

When a public agency determines that a major new facility should be built or renovated, a life-cycle cost analysis must be completed at the design phase of the project. A life-cycle cost analysis must conform to guidelines established by the Department of General Administration (GA). A "life-cycle cost" is the initial cost and cost of operation of a major facility over its economic life. "Economic life" means the projected or anticipated useful life of a major facility as expressed by a term of years. A life-cycle cost analysis includes, but is not limited to, the following:

- the coordination and positioning of a major facility on its physical site;
- the amount and type of fenestration employed in a major facility;
- the amount of insulation incorporated into the design of a major facility;
- the variable occupancy and operating conditions of a major facility; and
- an energy-consumption analysis of a major facility.

Summary of Bill:

The University of Washington (UW) is required conduct a review of other states' existing codes, international standards, and literature on life-cycle assessment, embodied energy, and embodied carbon in building materials. This review must be conducted in conjunction with a nonprofit consortium involved in research on renewable industrial materials and in consultation with the SBCC.

By July 2012, the UW, in conjunction with a nonprofit consortium involved in research on renewable industrial materials, is required to make recommendations to the Legislature for methodologies to:

- conduct an assessment and determine the amount of embodied energy and carbon in building materials or greenhouse gas emissions avoided by using building materials with low-embodied energy or carbon; and
- develop a comprehensive guideline using a common and consistent metric for the embodied energy and carbon in building materials.

In developing its recommendations, the UW and nonprofit consortium must seek input from building materials industries and other interested parties.

The GA is required to make recommendations for streamlining current statutory requirements for life-cycle cost analysis, energy conservation in design, and high performance of public buildings.

Appropriation: None.

Fiscal Note: Available.

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