

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

On January 8, 2018, members of the Washington (WA) State House of Representatives introduced House Bill (HB) 2412 – Creating the Buy Clean Washington Act¹ to the state legislature. Modeled after the Buy Clean California Act,² HB 2412 proposed regulation that would position WA State agencies and public entities awarding construction contracts to require facility-specific environmental product declaration (EPDs) for an eligible list of materials. Furthermore, HB 2412 proposed that the WA Department of Enterprise Services (DES) establish a maximum global warming potential (GWP) threshold for each eligible material category, which successful bidders would need to demonstrate meeting before installing products on state-funded construction projects.

The House Capital Budget Committee introduced a second version of the bill (Substitute House Bill 2412) in February 2018 that included a study period to pilot requirements proposed by the original HB 2412.³ The revised bill modified the eligibility list to consider materials that function as part of a structural system or assembly, for the following material categories: concrete, unit masonry, metal of any type, and wood of any type.

The original HB 2412 received a public hearing, and the subsequent substitute bill passed out of the House Capital Budget Committee, but did not advance for voting in the 2018 legislative session. However, a pilot project and study was included in the capital budget. Through the Washington State Engrossed Substitute Senate Bill (ESSB) 6095,⁴ Washington State allocated funding and defined the scope for a Buy Clean Washington assessment in two parts: (1) Sec. 1030 - Buy Clean Washington Pilot (91000447) for the Department of Enterprise Services, and (2) Sec. 5014 - Buy Clean Washington Study (91000022) for the University of Washington (UW) College of Built Environments.

Signed in March 2018, the ESSB 6095 outlined pilot requirements based on definitions from the previous substitute bill. Through Sec. 1030, the bill authorized DES to coordinate with five state-funded project teams and the UW College of Built Environments to develop and test methods for meeting proposed Buy Clean Washington requirements. Through Sec. 5014, the bill authorized the UW College of Built Environments to collaborate with the Central Washington University (CWU) Construction Management Program and the Washington State University (WSU) Architecture and Engineering School to “analyze existing embodied carbon policy and propose methods to categorize structural materials and report structural material quantities and origins.”

¹ Washington State Legislature, “HB 2412 - 2017-18 Creating the Buy Clean Washington Act,” 2018, <https://app.leg.wa.gov/bills/bills/BillNumber=2412&Year=2017>.

² California Legislative Information, “Buy Clean California Act [3500 - 3505],” 2017, https://leginfo.ca.gov/faces/codes_displayText.xhtml?division=2.&chapter=3.&part=1.&lawCode=PCC&article=5.

³ House Capital Budget, “Substitute House Bill 2412” (2018), <http://lawfilesexternal.wa.gov/biennium/2017-18/Pdf/Bills/HouseBills/2412-S.pdf>.

⁴ Washington State Legislature, “SB 6095 - 2017-18 Concerning the Capital Budget,” 2018, <http://apps2.leg.wa.gov/bills/bills/BillNumber=6095&Year=2017&BillNumber=6095>.

The full text of the bill is directly accessible through the WA state legislature (see pg. 52-53 for Sec. 1030, and pg. 121 for Sec. 5014).⁵

See **Appendix A** for copies of the relevant documentation:

- Appendix A.1: HB 2412
- Appendix A.2: ESSB 6095 Signed legislation page
- Appendix A.3: ESSB 6095 Sec. 1030: Buy Clean Washington Pilot (91000447)
- Appendix A.4: ESSB 6095 Sec. 5014: Buy Clean Washington Study (91000022)

1.2 REQUIREMENTS/ELIGIBILITY

This section presents the general requirements, eligible materials, and definitions relevant to this study.

A. GENERAL REQUIREMENTS

ESSB 6095 - Sec. 1030 established the following requirements for the Buy Clean Washington Pilot (pg. 52-53):

“(2) An awarding authority for the [pilot state-funded] projects listed...shall require the successful bidder for a contract to submit current third-party verified [facility-specific] EPDs for the eligible materials used if available and currently utilized.

(3) The awarding authority shall report to the department [Department of Enterprise Services] the [structural material] quantities and any environmental product declarations collected [during the pilot period]

(4) (a) The department shall provide a preliminary report to the fiscal committees of the legislature by June 30, 2019, of the [pilot] findings...and on any obstacles to the implementation of [pilot requirements], and the effectiveness of [pilot requirements] with respect to reducing carbon emissions. (b) The department shall report any positive or negative impacts to project costs... [and] (c)...any positive or negative economic impacts to Washington state based on where the eligible materials are purchased.”

B. ELIGIBLE MATERIALS

Sec. 1030 lists the following materials as subject to the Buy Clean Washington Pilot (see ESSB 6095 pg. 53). “Eligible materials” include any of the following that function as part of a structural system or structural assembly:

1. Concrete, including structural cast in place, shotcrete, and precast
2. Unit masonry
3. Metal of any type
4. Wood of any type including, but not limited to, wood composites and wood laminated products.

⁵ Washington State Legislature.

C. DEFINITIONS

Sec. 1030 provides the following language to define general requirements for the EPDs and eligible materials (see ESSB 6095 pg. 53):

“Environmental product declaration” means a facility-specific type III EPD, as defined by the International Organization Standardization (ISO) standard 14025 or similarly robust life cycle assessment methods that have uniform standards in data collection consistent with ISO standard 14025, industry acceptance and integrity for each eligible material proposed to be used.

“Structural” means a building material or component that has, but is not limited to having, the following properties: Supports gravity loads of either building floors or roofs, or both, and (or) is the primary lateral system resisting wind and earthquake loads, such as shear walls, braced frames, or moment frames, and includes foundations, below-grade walls, and floors.

Note, the project team provides further discussion and input on definitions and potential language related to pilot requirements in other chapters of this report (see Chapter 3 - Technical Review and Chapter 4 - Pilot Study).

1.3 BUY CLEAN WASHINGTON STUDY

Per Section 5014 of ESSB 6095, the UW College of Built Environments conducted a six-month study in collaboration with Central Washington University and the Washington State University to assess pilot requirements and propose options for future state-led policy development. The project team conducted the study with the following objectives:

- Assess and apply knowledge from an international review of embodied carbon policies established by governments at national, regional and local levels
- Evaluate supply chains of eligible material categories and identify opportunities to spur EPD development in Washington-based product markets
- Propose methods for collecting and reporting environmental impacts (i.e. EPDs and structural material quantity data)
- Formulate policy options, approaches and potential impacts, as well as recommend potential investments WA State could make to support policy implementation.

The study report comprises five chapters:

Chapter 1: Introduction provides background on state-led effort to introduce Buy Clean Washington regulation, summarizes the scope and objectives of the Buy Clean Washington evaluation (pilot phase and study).

Chapter 2: Policy Review summarizes and analyzes international policies, programs and initiatives with components related to embodied carbon

Chapter 3: Technical Review analyzes embodied carbon impacts of construction materials relevant under eligible material categories, and provides recommendations on how to advance EPD development in Washington-based product markets.

Chapter 4: Pilot Projects presents the pilot projects used for this study and proposes a method for collecting data to determine compliance with a Buy Clean Policy.

Chapter 5: Policy Evaluation provides options and recommended investments to support WA State develop and implement embodied carbon policy. This chapter includes analysis of Buy Clean policy components, describes several approaches to develop standards and discusses potential impacts of policy implementation, including cost impacts.

Supplemental documents attached to this report include a resource guide for policy makers (**Appendix C.1**) and other appendices.