



**Policy Context for Increased Utilization of Innovative
Wood Products by California State Agencies
Executive Summary
10/18/23 Draft**

Introduction

TSS Consultants (TSS) has been retained by the California Joint Institute for Wood Products Innovation to assess state purchasing protocols specifically related to deployment of innovative wood products (IWP).

One of the initial assessment tasks was crafted with the intention to obtain and review purchasing protocols of other states (and possibly Canadian provinces) to determine to what extent they recognize and promote the procurement of IWP by their respective governmental agencies. What we found was that rather than purchasing protocols, there are initiatives, programs and legislation that promote IWP, particularly biochar and mass timber.

After searching for purchasing protocols of California state agencies, we found essentially the same thing. California has adopted several key policies and instituted programs that could directly or indirectly support the use of IWP in agency-funded construction and maintenance activities. These include executive orders and legislation as well as mandates such as requirements for LEED certification of public buildings and meeting “sustainability guidelines.”

Consequently, this executive summary describes these policies in California and other entities because they are key directives that shape the actions of bureaucratic agencies. It also summarizes findings and observations from the purchasing protocol assessment. The full report is available upon request.

California Government Policy Findings

- There are four executive orders that could be interpreted to support the use of IWP, but none specifically refer to their use to reduce embodied carbon in buildings and greenhouse gas emissions. The same applies to policies such as the Green Building Action Plan and Buy Clean California.
- A fifth executive order, EO N-06-19, directs the Department of General Services to identify surplus state properties that could be developed with affordable housing. The first project completed pursuant to that direction, Sonrisa studio apartments in Sacramento, was constructed in part with cross laminated timber (CLT).
- AB 2446, which limits embodied carbon limits in residential and non-residential buildings requires life-cycle analysis of alternative building materials. Such analyses that have been conducted for IWP have demonstrated their superior carbon efficiency. Under



this law, the Air Resources Board is responsible for developing procedures for conducting comparative life cycle studies and “Environmental Product Declarations”.

- With input from the CALGreen Carbon Reduction Collaborative, changes to the 2022 California Green Building Code now require limits to embodied carbon in commercial and school buildings.
- Continuing education requirements for California licensed architects now include training in designing buildings that minimize greenhouse gas emissions.
- State agency “sustainability roadmaps” required by the Department of General Services include references to “Environmentally Preferable Purchasing” (EPP). EPP considers measures to reduce impacts on human health and the environment when purchasing materials that have equivalent functions. None of the agency sustainability roadmaps that were reviewed refer to IWP that may perform the same functions as materials that are more carbon intensive.

Support for Innovative Wood Products in Other States and Nations

- There is strong support for IWP in Europe. This is illustrated by the large number of mass building projects and significant biochar production capacity in several countries. The top five producers of CLT are in Europe.
- The Oregon Mass Timber Initiative is a consortium of academic institutions, state agencies and the private sector that is collaborating to create a system connecting timber supply from National Forest restoration projects to production of mass timber modular housing to meet Oregon’s housing needs and reduce homelessness. The Initiative is funded by the U.S. Economic Development Administration and the State legislature.
- Washington State has passed legislation requiring that state agencies consider using biochar versus alternative materials in their construction and maintenance projects. The State also has amended its building code to allow mass timber buildings up to 18 stories high. Washington also provides favorable tax treatment for manufacturers of mass timber products.
- The British Columbia “Wood First Initiative” emphasizes partnerships to promote innovation in the construction of tall mass timber and mass timber hybrid structures. Its “Wood First Strategy” includes providing funding to partnerships that promote innovation in manufacturing, building design and construction involving mass timber. Its “Wood Works” website provides resources including design software and construction manuals.



- The U.S. Natural Resources Conservation Service has modified its “Soil Carbon Amendment” practice for the Environmental Quality Improvement Program to allow funding for biochar and compost soil amendments. The U.S. Department of Agriculture “BioPreferred Program” requires mandatory purchasing of bio-based products, that could include IWP, by federal agencies.

Innovative Wood Product Examples

- There are many California examples of mass timber buildings, an initiative in Sonoma County promoting the use of biochar, a bridge construction using nanocrystal infused cement in Siskiyou County and many projects in California using wood fiber cement panels. Wood fiber insulation is now being produced in Maine and is making its way into the construction marketplace. Incorporation of biochar into cement and asphalt has potential for reducing the greenhouse gas emissions of conventional paving materials.

Innovative Wood Products Carbon Credit Certification

- There are currently three organizations that certify carbon credit offsets for innovative wood products, primarily biochar but also mass timber. These credits are sold on the voluntary market to organizations seeking to reduce their carbon footprint.