

La réduction du carbone intrinsèque dans les bâtiments : une priorité

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Photo: Stéphane Groleau



Impact of Current US Carbon Policy & Regulation on Wood Products Manufacturers

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Who We Are

AWC is the nationally recognized technical authority and advocate for the sustainable wood building products industry in the codes, standards, legislative, regulatory and climate arenas.

What We Do

AWC partners in the development of sound policies, codes, and regulations that allow for the appropriate and responsible manufacture and use of wood products in the built environment.

We represent an industry that provides more than 450,000 jobs to men and women across the U.S.

We are a leader in developing engineering data, technology and standards for wood products, and we are committed to educating on wood design, green building and resiliency.





01

Priority Hierarchy: Regulation →
Sustainability/Carbon

PM NAAQS – “Lemonade out of Lemons”

- EPA significantly lowered the air quality standard for fine particulates on March 6
 - AWC sought more gradual approach with workable implementation plan
- More areas will be designated non-attainment (expensive to operate) HOWEVER ...
- “Headroom” (difference between the NAAQS and background air quality) has shrunk, jeopardizing investments in new projects – permitting gridlock thwarts mill modernization

Fortunately, States can use their discretion to address some implementation challenges

- Better characterization of background concentrations improves “headroom”

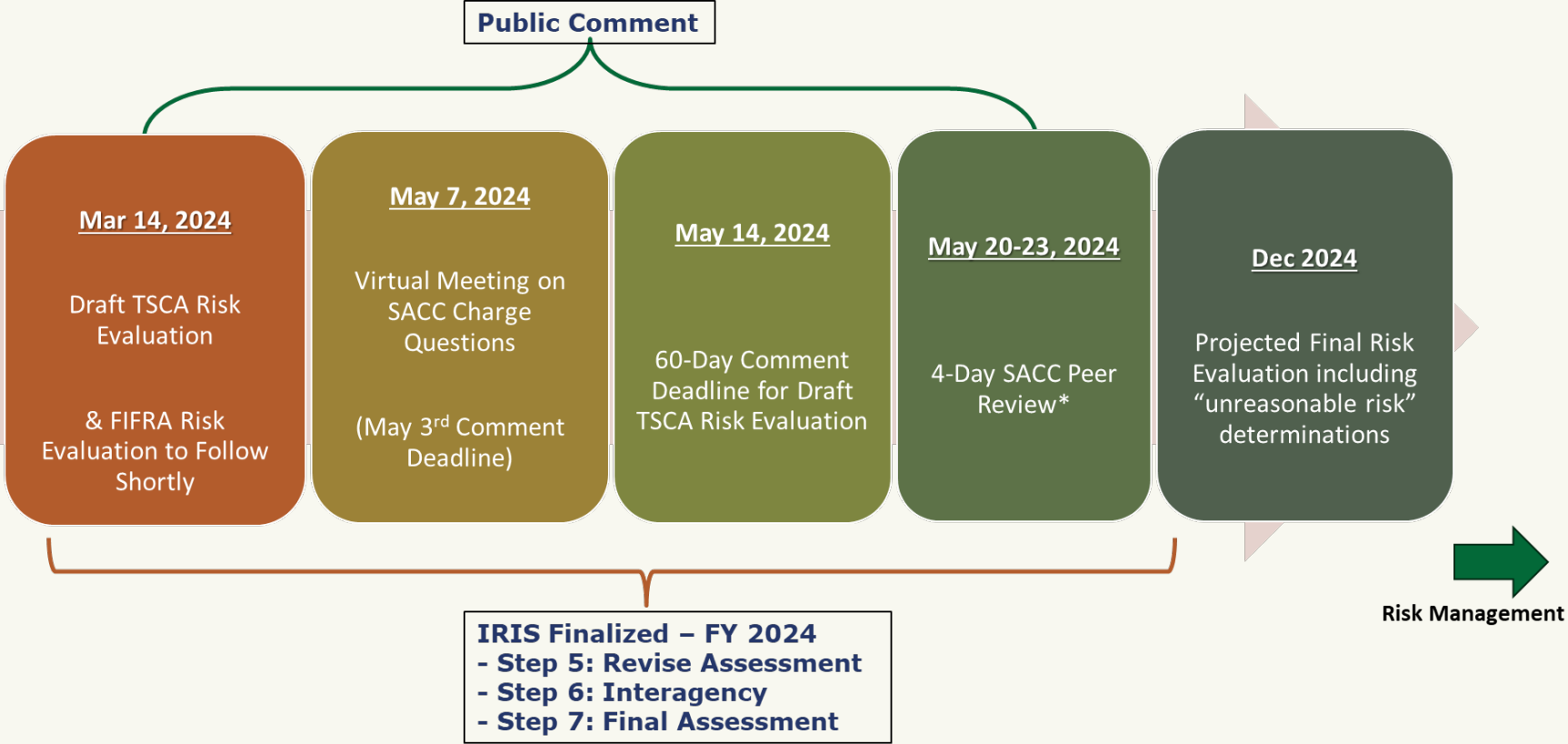
EPA also needs to modernize the permitting system to be more science-based

- Again, improved permitting tools increases “headroom”

- This set of changes could turn a permit denial into granting an air permit!



EPA TSCA Risk Evaluation of Formaldehyde



EPA TSCA Risk Evaluation of Formaldehyde

Key Positions:

- Biogenic emissions should be excluded, including naturally occurring formaldehyde in wood.
- EPA fails to comply with Congress's mandates for how TSCA risk evaluations must be performed, particularly as it relates to the proposed 11 ppb occupational exposure value (OEV).
- Wood products do not contribute to an unreasonable risk and therefore do not require risk management measures.

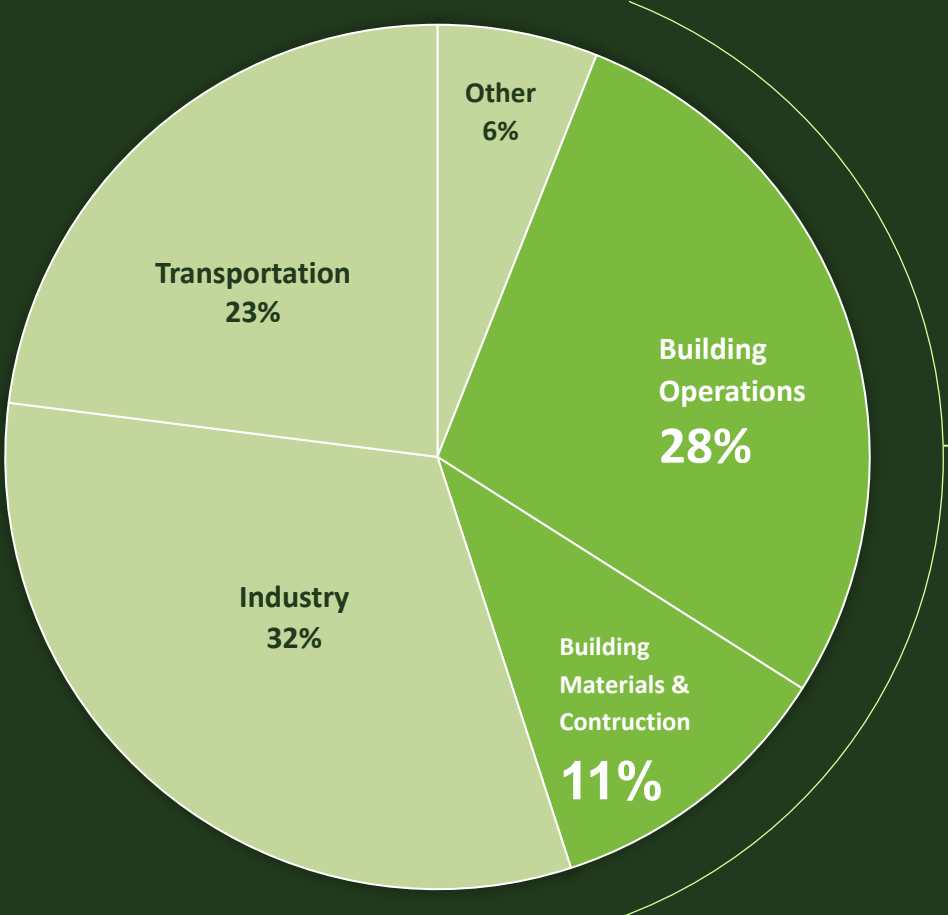




02

Decarbonizing the Built
Environment

The Imperative



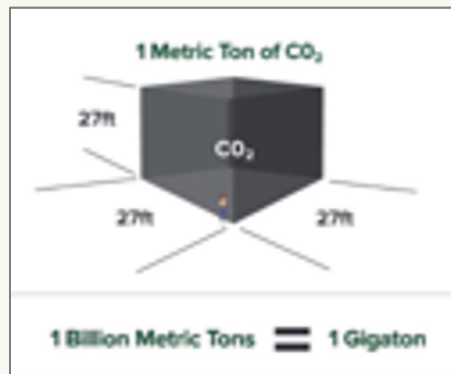
The built environment accounts for **40% of GHG emissions**. Our sector has a critical role to play.

Source: How to Calculate the Wood Carbon Footprint of a Building, P. 145; Architecture 2030; and Global Alliance for Buildings and Construction 2018 Global Status Report



The Imperative

Without decisive action, building materials used in construction in cities across the globe will generate **100 gigatons** of embodied carbon by 2050.

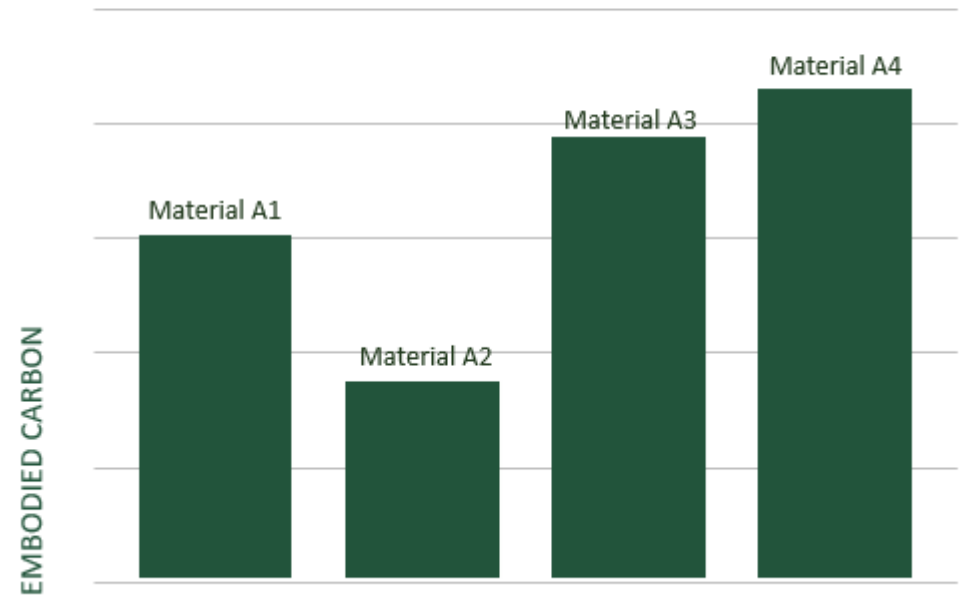


Priority Federal Action

“Buy Clean”: EO 14057



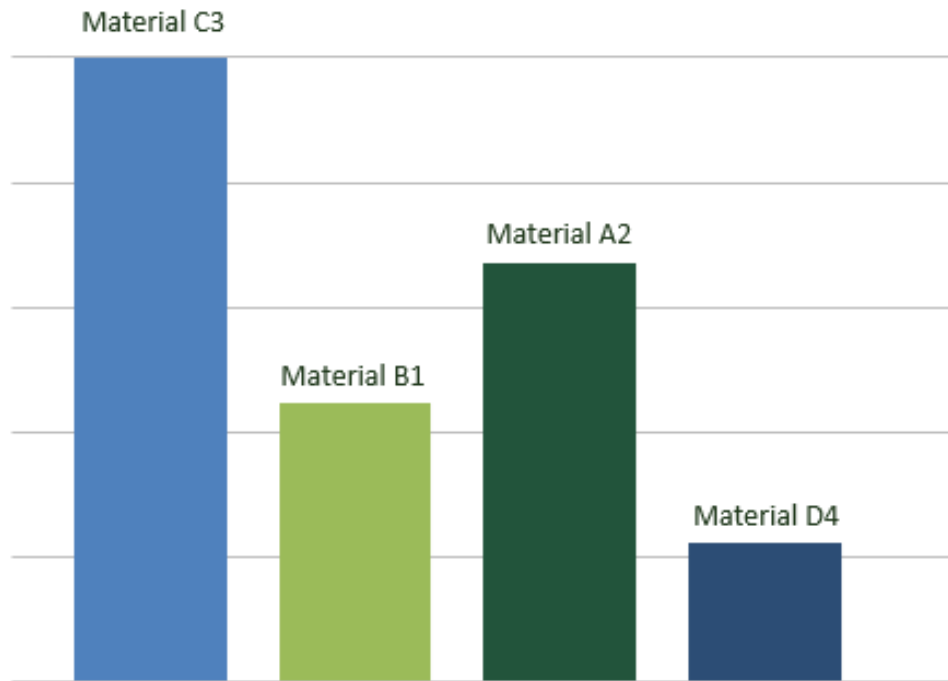
EPD Model
Best of Material A



Alternative Approach

Build Clean

Whole Building LCA Model
Best of Multiple Materials

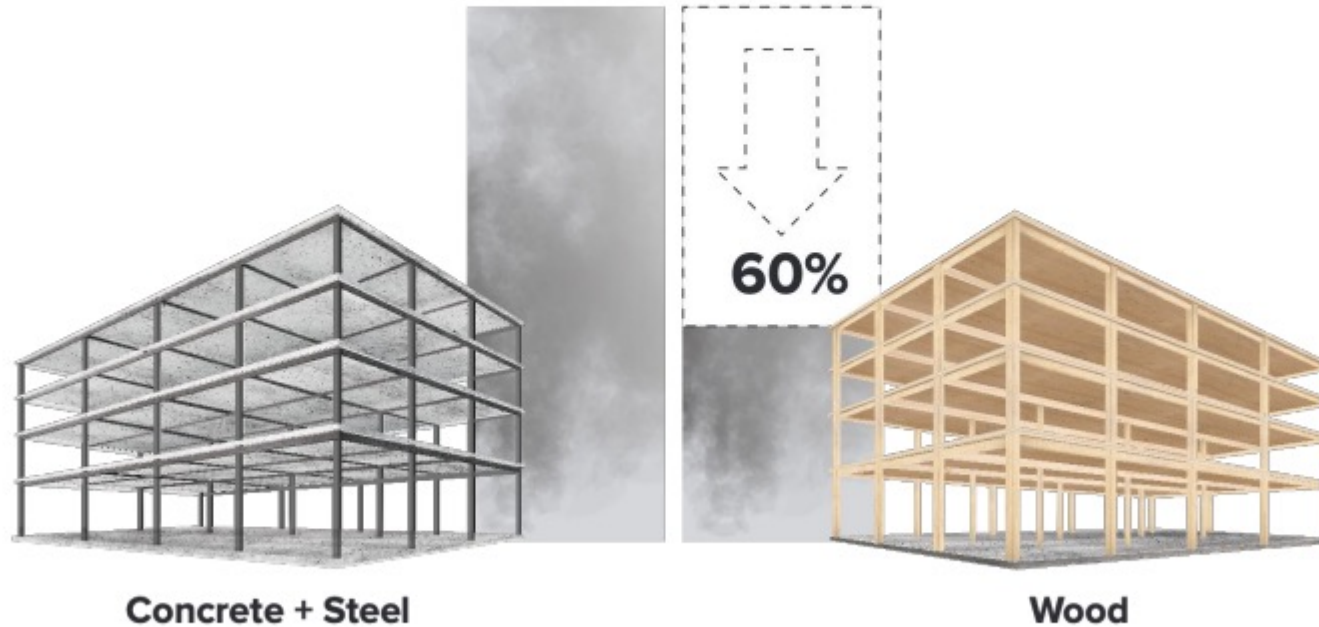




Buy Clean vs. Build Clean: Why does it matter?

Buy Clean vs. Build Clean

Using life cycle analysis, researchers found that substituting wood for concrete and steel in commercial buildings cut GHG emissions by an average of 60%.

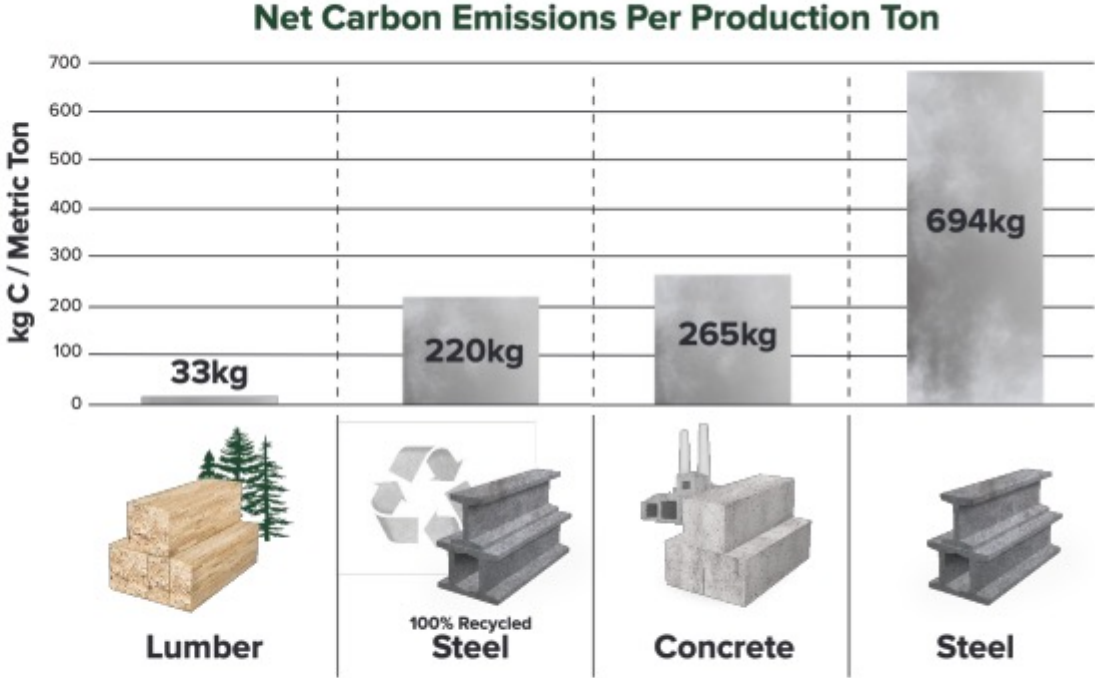


Source: [Use of structural wood in commercial buildings reduces greenhouse gas emissions](#), Oregon State University, 2017.



Buy Clean vs. Build Clean

Of the three primary structural materials used in construction, manufacturing lumber is the least energy intensive, followed by 100% recycled steel, concrete, and virgin steel. This accounts for wood's low embodied carbon.



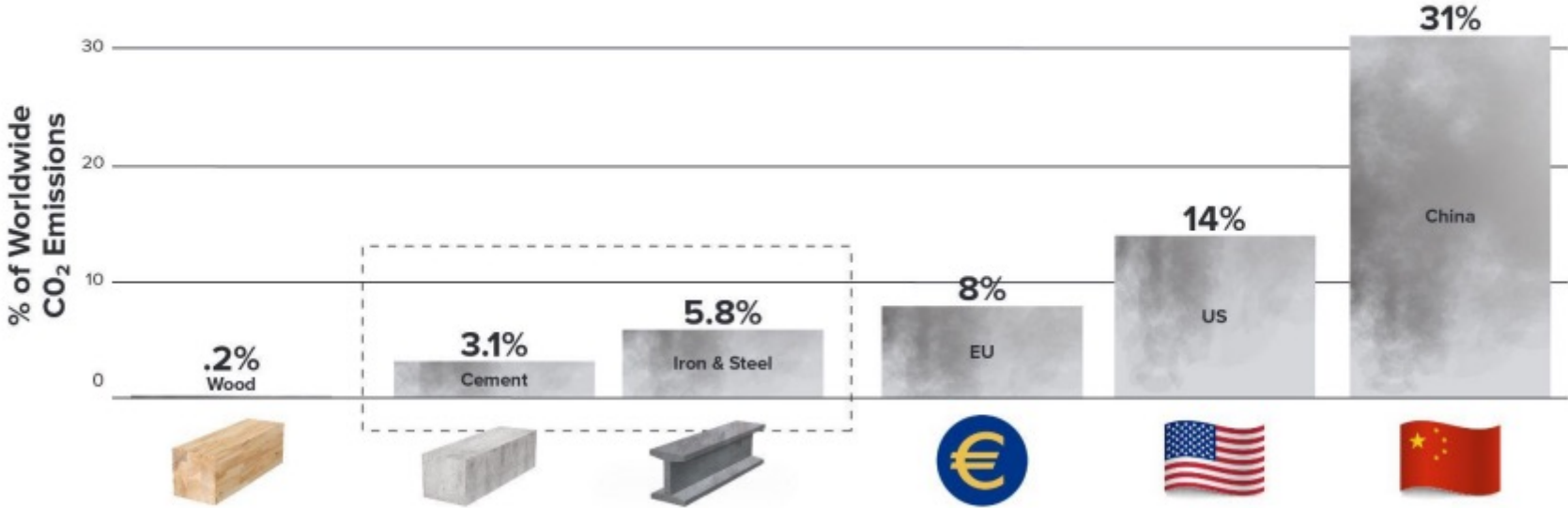
Source: Jim Bower, [Portland Cement as a Construction Material: How Does It Compare to Wood, Steel?](#), Dovetail, Inc., page 4.



Buy Clean vs. Build Clean

Today 70% of steel produced uses coal. Almost two tons of CO₂ are emitted for every ton of steel produced.

Cement is the most energy intensive of all industrial manufacturing processes. By 2050, 25% of global CO₂ emissions will be from cement production.

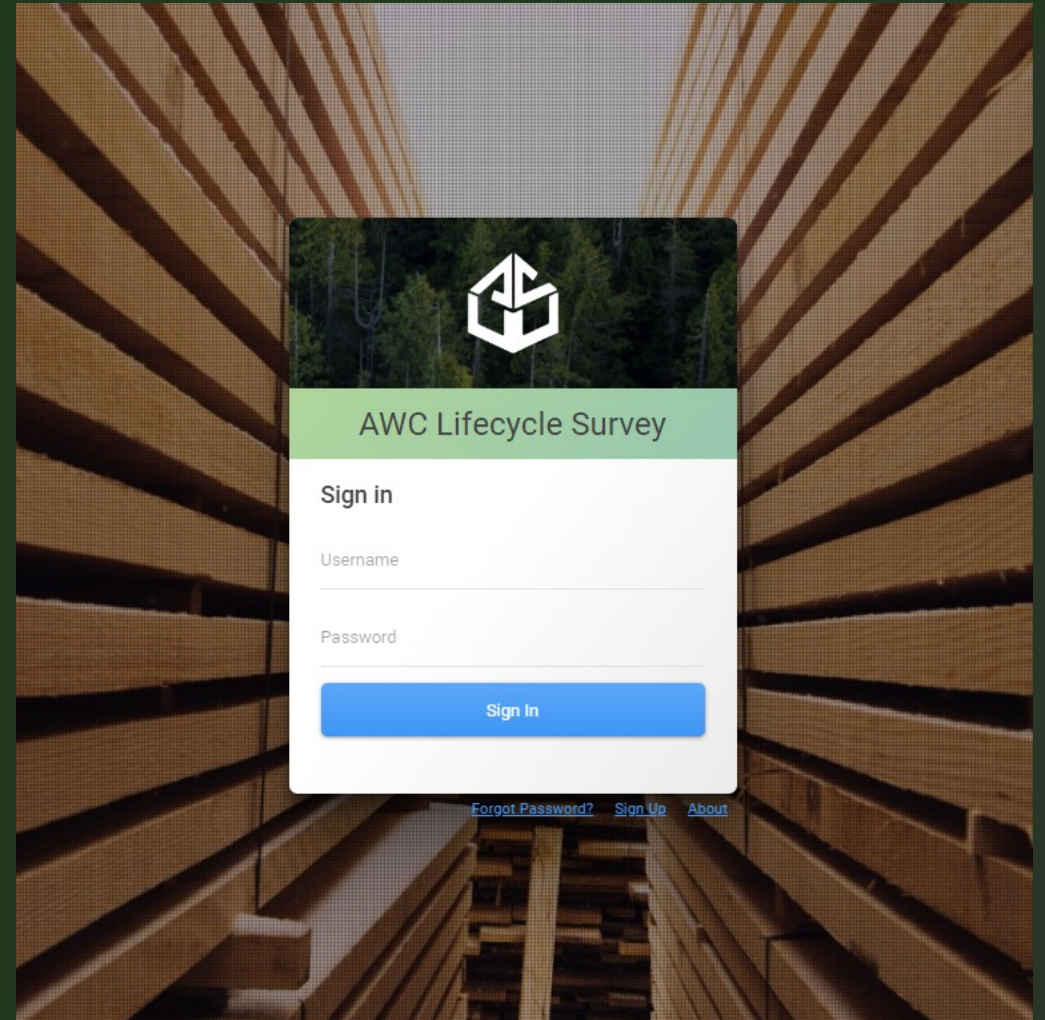


Sources: Steel - [World Coal Association](#), [World Steel Association](#). Cement - [US Energy Information Administration](#), [Public Radio International](#), July 2018. Country CO₂ emissions - [Global Carbon Project](#); Industry CO₂ emissions - WRI [World Greenhouse Gas Emissions in 2018](#)



AWC Life Cycle Survey

- Online data collection effort gathering mill-level manufacturing data for U.S. wood products
- Data used in LCAs and EPDs
- **Vision:** survey is a central data collection point for US wood products industry to increase efficiency, automate, allow for future on-demand EPDs





03

Buy Clean: Implementation Implications



Buy Clean Follow-Up Policies and Actions

- EPA's Low Embodied Carbon Labeling Program
 - Applies to Concrete, Steel, Asphalt & Glass
- EPA's PCR Guidelines
 - EPA creating a standard for "approving" PCR's pulling from ISO, ACLCA
- EPA Grant Program: Reducing Embodied GHG Emissions for Construction Materials & Products (\$100M)
- GSA tasked with developing standards for concrete and asphalt that demonstrate reductions in embodied carbon.





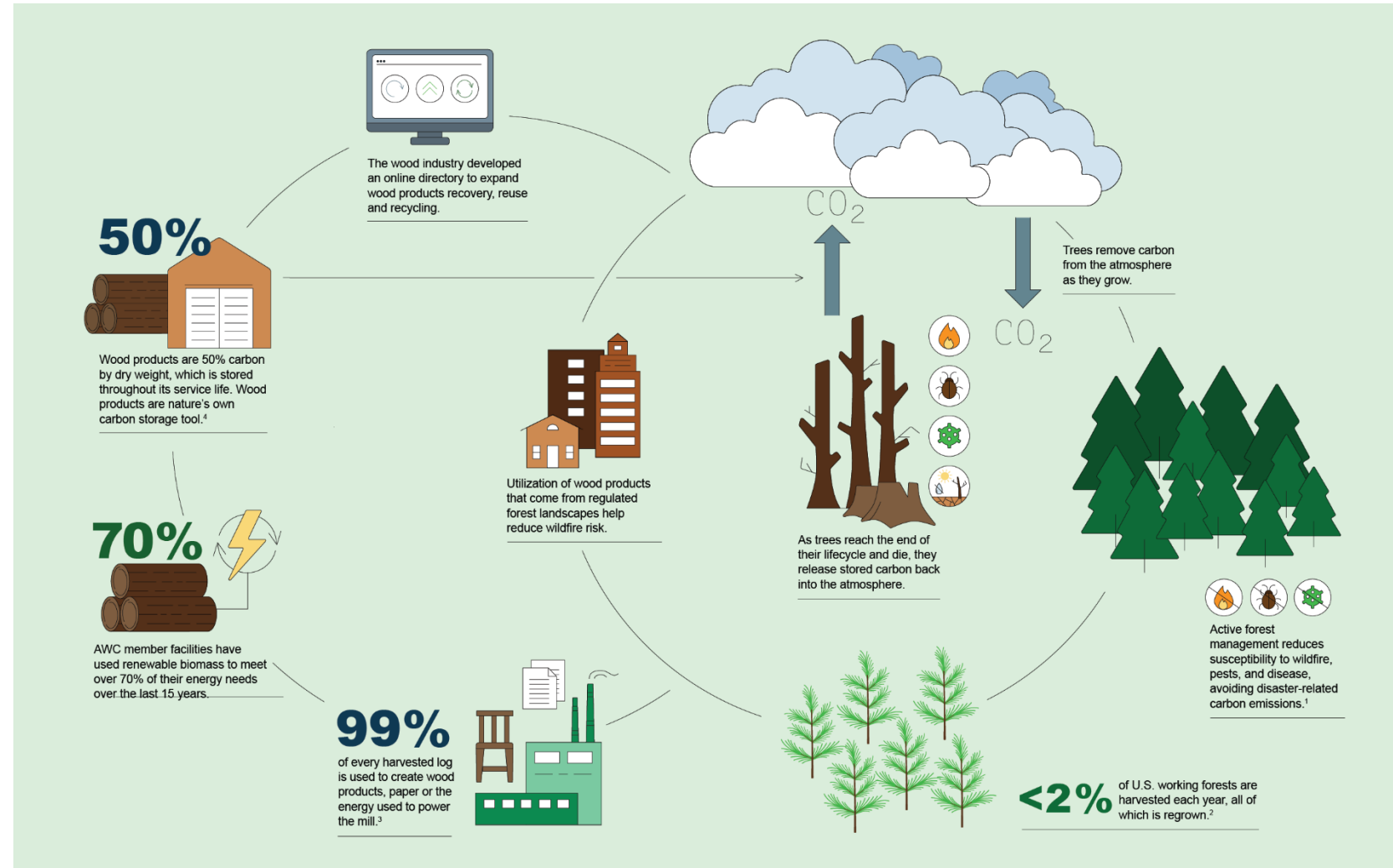
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Missed Opportunities

Radical Transparency: Wood Products' Story in Numbers

Working Forest Carbon Cycle Nature's Own Carbon

Regulated forests and the wood products harvested from them represent both a carbon sink and renewable resource.



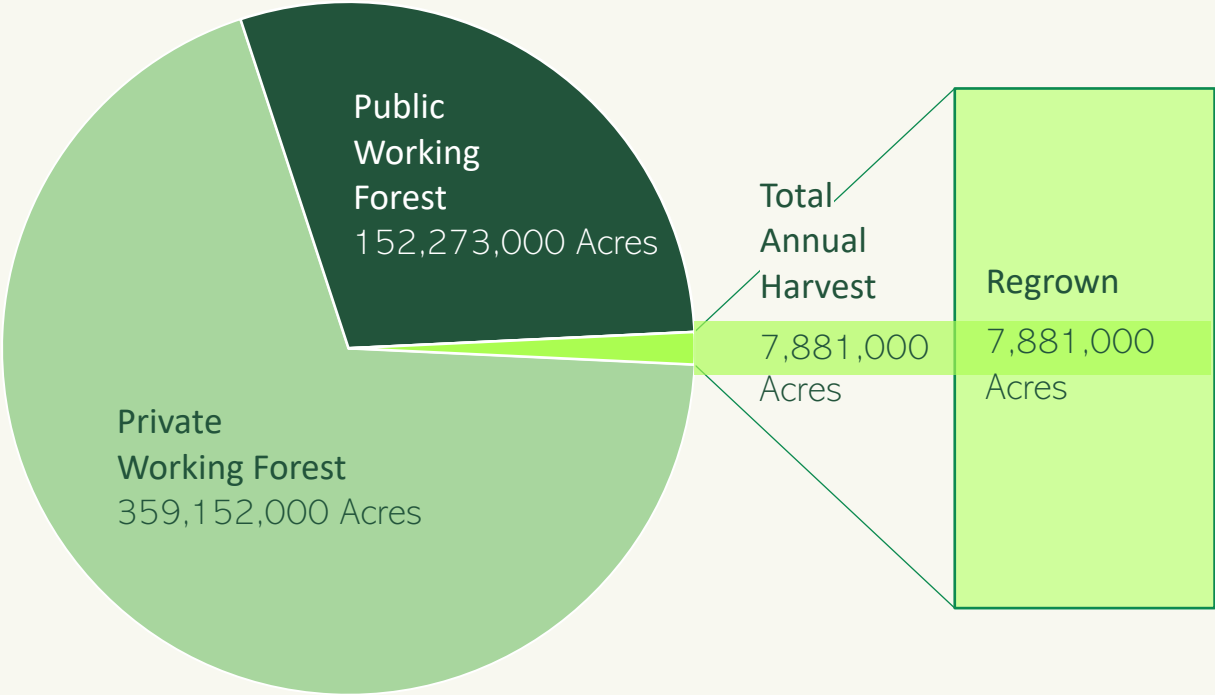
1 Vance, E.D. (2018) Conclusions and caveats from studies of managed forest carbon budgets. *Forest Ecology and Management* 427, 350-354;

2 Forestcarbodataviz.org;

3 Dovetail Partners Inc. (2012) Utilization of Harvested Wood by the North American Forest Products Industry, http://www.dovetailinc.org/report_p;

4 Richard Bergman; Maureen Puettmann; Adam Taylor; Kenneth E. Skog. The Carbon Impacts of Wood Products. *Forest Prod. J.* Volume 64.

The Forest: Are Harvest Levels Sustainable?



Total Working Forest
514,425,000 Acres

A Continuous Cycle

Between 1953 and 2017, a time of great population growth, the total volume of trees grown in the US **increased by 60%**.



The Opportunity Lost...

- Built environment can be a *climate solution*:
 - Buildings specify low embodied carbon materials and store carbon for decades to come.
 - Cities = carbon sinks.
- Material choices could support renewable resources and rural economies.
- Building can be designed for deconstruction and components can be reused.

Data should be front and center in policy development.





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