

# Mass Timber Policy Brief – AL Intel

## Introduction

Mass timber, encompassing engineered wood products such as cross-laminated timber (CLT), glue-laminated timber (glulam), nail-laminated timber (NLT), and dowel-laminated timber (DLT), has rapidly emerged as a transformative building technology in North America. Originally developed in Austria and Germany during the 1990s, mass timber has expanded across Europe and the Pacific Northwest and is now spreading across the broader United States. Its growth has been driven by technological advances, environmental policy, construction labor shortages, and the rising need for cost-effective, efficient building systems in residential and nonresidential construction.

For Alabama, mass timber presents a unique convergence of opportunity. The state contains the second-largest timberland base in the United States, a strong sawmill and wood products sector, and a favorable geographic position within the rapidly growing U.S. South construction market. Alabama has adopted the 2021 International Building Code (IBC) provisions for tall mass timber, enabling the construction of mass timber buildings up to 18 stories. The state is also home to leading research institutions, such as Auburn University’s Mass Timber Collaborative, and an existing CLT/glulam manufacturer in Dothan (SmartLam North America).

Despite these advantages, Alabama currently accounts for only a small share of mass timber projects nationally. Increasing adoption will require targeted state policy action consistent with what has driven mass timber growth in other states. The purpose of this paper is to: (1) assess the advantages of mass timber; (2) identify key hurdles limiting adoption in Alabama; (3) review state-level policy approaches nationwide; and (4) highlight policy approaches that could be successful in Alabama. The paper does not propose or recommend specific policy options, nor does it argue that mass timber should fully substitute for steel and concrete. Rather, it documents what has been done elsewhere, examines what could be done in Alabama, and treats mass timber as a complementary material that expands the suite of options available to architects, contractors, and building owners. The more options the better. Finally, this paper specifically studies state-level policies. A wholistic approach to increasing adoption obviously requires private sector involvement, community partners, the university systems, state involvement, and various public-private partnerships.

## Advantages of Mass Timber

Multiple empirical studies, including comparative case analyses in the World Conference on Timber Engineering, the University of Oregon’s TallWood Design Institute, and case studies from Norway, Canada, and the United States, document that CLT-based buildings can be erected

15 to 27 percent faster than comparable steel or concrete buildings. These schedule reductions stem from the prefabricated nature of mass timber, reduced sequencing complexity, less reliance on weather-sensitive processes, and the ability to fabricate panels offsite while foundation work proceeds onsite.

Beyond construction time savings, mass timber structures typically require 40 to 50 percent fewer onsite workers compared to steel or concrete buildings. This is due to reduced concrete work, simpler assembly processes, fewer specialized trades, and more streamlined logistics. For contractors facing labor constraints in major construction markets, mass timber offers meaningful labor savings without compromising output.

Studies consistently find mass timber to be cost-competitive with steel and concrete, even before considering time-value-of-money effects from faster occupancy. Research by Mallo and Espinoza (2016) shows CLT buildings can generate \$4–\$15 per square foot savings, depending on building type. Additional savings arise from lower foundation costs, reduced crane time, lower labor costs, and shorter construction timelines. Given that steel prices have risen roughly 60 percent and concrete prices 38 percent since 2020, while lumber increased only 17.5 percent, mass timber now occupies a favorable cost position, especially if mass timber manufacturing is able to grow and experience economies of scale. At present, much of the industry has not yet reached full cost savings potential.

Mass timber also offers substantial environmental advantages. Wood has much lower embodied carbon than steel or concrete, and mass timber panels actively store carbon over a building's life. Timber construction reduces onsite emissions, truck movements, and heavy machinery use. Wood is also a superior insulator, performing 400 times better than steel and 14 times better than concrete, according to the USDA Wood Handbook. These advantages align with incentives in the Inflation Reduction Act, including the 179D deduction for energy-efficient commercial buildings.

Finally, mass timber provides optionality and construction supply chain resilience. Approximately 25 percent of steel and 22 percent of concrete used in U.S. construction is imported. Timber, in contrast, can be entirely domestically sourced. Alabama, with its abundant and expanding timber resources and strong sawmill sector, benefits significantly from this supply chain resilience. As Canadian producers shift production toward the U.S. South, Alabama stands to gain further competitive advantage.

## Key Hurdles

Despite the numerous advantages of mass timber, its adoption is still in the early stages. Steel and concrete have been the dominant construction materials since the industrial revolution, while structural mass timber is still only about 30 years old. Thus, there are still several key adoption hurdles to overcome for mass timber to truly reach its potential as a complementary building material. Most architects, engineers, and contractors in Alabama, and the US broadly, have

limited or no experience with mass timber. CLT buildings require specialized expertise in fire resistance design, vibration and acoustic modeling, differential movement, moisture protection, and hybrid timber-steel-concrete systems. This lack of experience is widely regarded as the primary barrier to adoption.

Mass timber projects often require early-stage feasibility studies, including structural modeling, fire engineering, and cost analysis, that can cost \$50,000 to \$200,000. Even if mass timber ultimately reduces total project cost, these early costs create friction for developers evaluating whether to adopt the technology. Moreover, insurance costs represent an additional financial barrier. With a limited sample of mass timber buildings in existence, it is difficult for insurance companies to properly assess risk, and hence, price insurance for mass timber buildings. Whereas steel and concrete come with far fewer unknowns and much more certain risks that are easily priced by insurance firms.

Although Alabama hosts one major mass timber manufacturer (SmartLam North America), the Southeast overall has less CLT and glulam production capacity than growing demand will require. Additional manufacturers would reduce transportation costs, lead times, and supply risk. States such as Montana, Idaho, and Maine have demonstrated that targeted incentives can successfully attract engineered wood producers. Some of the capacity problem is simply a case of “which came first, the chicken or the egg?” Do firms build capacity and then demand increases? Or does demand increase and firms build capacity in response? The answer in economics is usually the latter, so increased adoption will lead to the capacity problem solving itself.

States with the fastest mass timber adoption, such as Oregon, Washington, and Idaho, implemented procurement preferences or mandates for state-funded building projects. Without a similar signal in Alabama, private-sector adoption remains slower and more uncertain. These policies are also parochial in nature, responding directly to the on-the-ground realities of states like Oregon, Washington, and Idaho. Thus, they are not necessarily a one-size-fits-all policy that one could plug in to Alabama. Alabama produces plenty of steel and concrete as well as wood products, so such policy signals need to be treated with caution so as not to directly disadvantage producers of other goods.

Mass timber installation requires specialized skills in prefabricated assembly, moisture control, crane coordination, and advanced fastening systems. Alabama currently lacks dedicated training pathways – beyond residential carpentry – through AIDT or the Alabama Community College System (ACCS), which limits contractor readiness. Workforce training programs can help along the entirety of the supply chain, from manufacturers to construction crews.

## Policy and Incentives Review

States across the United States have implemented a range of policies to promote mass timber adoption. These approaches fall into several major categories and seek to address the aforementioned adoption hurdles:

**Procurement Preferences and Mandates:** Oregon requires all state agencies to consider mass timber for new state-funded buildings under Executive Order 17-20. Washington's Low-Carbon Construction Pilot requires carbon reporting for state projects and identifies mass timber as a preferred low-carbon material. Idaho has embedded mass timber use within university and state building guidelines, creating an informal procurement preference that has accelerated adoption. As can be seen, there is a diversity in approach amongst these states, with Oregon simply mandating *consideration* of mass timber to Idaho creating *preference* for mass timber.

**State Grants and Technical Assistance:** Washington offers Mass Timber Demonstration Grants ranging from \$100,000 to \$250,000 for feasibility studies and engineering analyses. Oregon's TallWood Design Institute provides state-supported funding for fire tests, material research, and design support. New York State and New York City offer feasibility grants through NYSERDA and the NYC Mass Timber Accelerator. These various grants tackle many of the pre-construction financial hurdles that are unique to mass timber, especially during its infancy when design and engineering firms have more front work to both learn the technology and learn to design with it. Such provisions could be sunset as the market matures and design familiarity is more widespread.

**Manufacturing Incentives:** Montana used economic development tools to attract SmartLam, the first large-scale CLT manufacturer in North America. Maine has provided redevelopment funds to convert former paper mills into engineered wood production centers. Idaho provides investment tax credits and property tax exemptions targeting advanced wood manufacturers. Economic development incentives are nothing new; however, incentives in Maine and Idaho represent unique applications for mass timber specific projects.

**Building Code Modernization:** Many states, including Alabama, have adopted the 2021 IBC provisions for tall mass timber. Others, such as Utah, have enacted preemption to prevent local restrictions that exceed state code. Oregon and Washington have implemented fast-track permitting for mass timber pilot projects. Utah's case is more impactful than it might initially appear. International Building Code (IBC) provisions can be adopted at the state level, but localities might have additional building code restrictions that supersede IBC codes. State laws that establish uniform code precedent can help smooth out local restrictions that pose complexity for contractors and lead to uneven adoption across the state. There is a tradeoff between the rights of localities to define their own building codes and efficiency, so states should proceed with caution; however, the upside is obvious.

**Low-Carbon Materials Requirements:** California's Buy Clean California Act requires embodied-carbon reporting and favors low-carbon materials. Colorado's HB21-1303 implemented similar low-carbon procurement priorities. New York's Low Embodied Carbon

Concrete Leadership Act establishes a precedent for regulating embodied carbon in state procurement, even if not timber-specific. These policies may indirectly incentivize the use of mass timber, but their effectiveness and efficiency depend heavily on program design. In many cases, mass timber becomes an obvious “way out” of more stringent requirements applied to higher-carbon materials. Generally speaking, regulatory approaches that materially increase compliance costs are unlikely to be popular with industry or the public unless they are paired with clear benefits or complementary incentives.

**Workforce Development Programs:** Washington and Oregon have established mass timber installer apprenticeships and community college training programs. WoodWorks provides open-source installer curriculum that multiple states have adopted. Workforce constraints and labor market dynamics are at the forefront of economic development discussions today. With the reality of scarcity (more projects to build and businesses to open than there are workers), it is imperative that training services are readily available for workers to transition into new lines of work and broaden their skillsets to maximize the state’s potential. This is not unique to mass timber, but it must be noted that mass timber is no exception.

## Policy Options for Alabama

Drawing on national policy precedents and Alabama’s unique economic landscape, the following policy options are presented as illustrative options rather than recommendations:

**Amend the Alabama Jobs Act to Support “Made in Alabama” Building Materials:** Alabama could amend the Jobs Act to create a supplemental incentive for projects that incorporate Alabama-manufactured building materials. Such an incentive would stimulate demand for in-state materials, support existing manufacturers, and attract new producers to the state. The incentive could be material-neutral, meaning that it could apply to steel, concrete, traditional wood, mass timber, or other building materials produced in the state.

Such an incentive, like others in the Jobs Act, can be *voluntary* rather than *mandatory*. If it makes sense for a new economic development project to use in-state materials, then they could take advantage of this incentive. If not, then the regular Jobs Act incentives remain. It provides choice rather than restriction.

Moreover, it presents a unique approach to encouraging the use of in-state produced building materials in the spirit of Idaho, Montana, and Maine without specifically favoring one material over another.

**Establish a Mass Timber Procurement Encouragement for State-Funded Buildings:** Alabama could adopt an Executive Order or legislation requiring mass timber be considered for all new state-funded building projects above a certain size threshold. A procurement scoring bonus for made in Alabama building materials could apply here as well, just as in the Jobs Act

proposal. The goal is not to pick “winners” out of the building materials but merely require that all options are considered.

**Create an Alabama Mass Timber Acceleration Fund:** Alabama could establish a grant program, modeled on Oregon and Washington, providing \$50,000–\$250,000 grants for feasibility studies, engineering analyses, and life-cycle carbon assessments. This would remove the largest early-stage barrier to adoption.

**Launch an AIDT Mass Timber Installer Certificate:** AIDT and ACCS could partner with WoodWorks to offer training in prefabricated assembly, crane coordination, moisture protection, and connection systems. A dedicated training pipeline would reduce contractor hesitation and improve installation quality.

**Develop SEEDS-Certified Mass Timber Manufacturing Sites:** Alabama’s SEEDS program could pre-certify industrial sites ideal for mass timber manufacturing based on timber supply, logistics access, and utility readiness. This could strengthen Alabama’s position in attracting additional CLT and glulam manufacturers. SEEDS certification need not be limited by industry, as industry supply chains can be mapped and transportation cost minimizing locations can be identified by industry. A neutral approach would be to allow SEEDS site recipients to *choose* to identify their sites as pre-certified for certain industries to allow for better site marketing opportunities.

## Conclusion

Mass timber represents a major opportunity for Alabama’s construction, forestry, and manufacturing sectors. With abundant timber resources, an existing manufacturing base, and a central position within the growing Southeastern construction market, Alabama is well positioned to become a regional leader in mass timber production and adoption.

However, widespread adoption requires intentional policy action. Evidence from states such as Oregon, Washington, Idaho, Maine, and New York demonstrates that procurement mandates, feasibility funding, workforce training, and manufacturing incentives play critical roles in accelerating market development. Many of these peer states also employ public-private partnership organizations to bring industry leaders, academic institutions, and government entities together to support adoption. While such partnerships can be effective, they are beyond the scope of this paper and are currently being developed in Alabama through efforts such as the Auburn Mass Timber Partnership. By studying best practices from across the country, Alabama can implement smart policy to build a robust mass timber ecosystem that strengthens rural economies, supports advanced manufacturing, enhances construction efficiency, and improves environmental performance.

With strategic action, Alabama can establish itself as the Southeast’s center of excellence for mass timber, delivering economic, environmental, and industrial benefits across the state. By treating mass timber as a complementary material that expands rather than replaces existing

construction options, Alabama can capture these benefits while respecting the strengths of its existing steel, concrete, and traditional wood industries.

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