Mapping the Course
May 12, 2026

Steve Courtney & Roy Anderson

THE BECK GROUP

Stressors on the Wood Products Industry

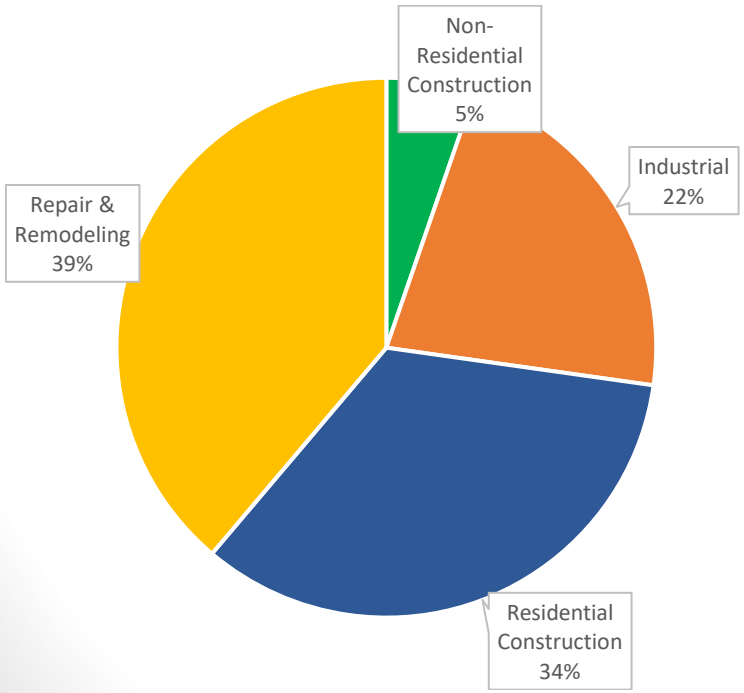
End Use Markets for Softwood Lumber in the United States

Lumber Usage 2020-2024

BBF

% of Market

Total Market Size = 51.4 BBF

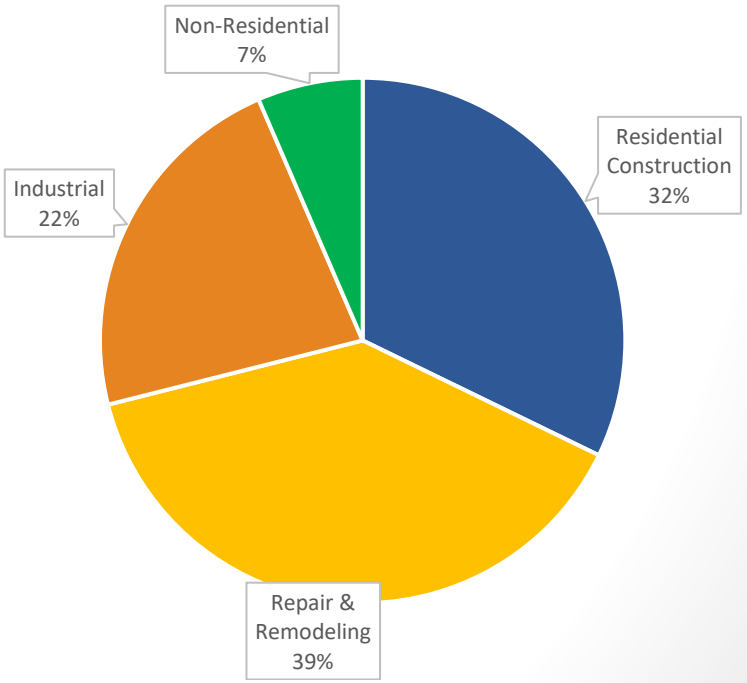


Lumber Usage 2025

BBF

% of Market

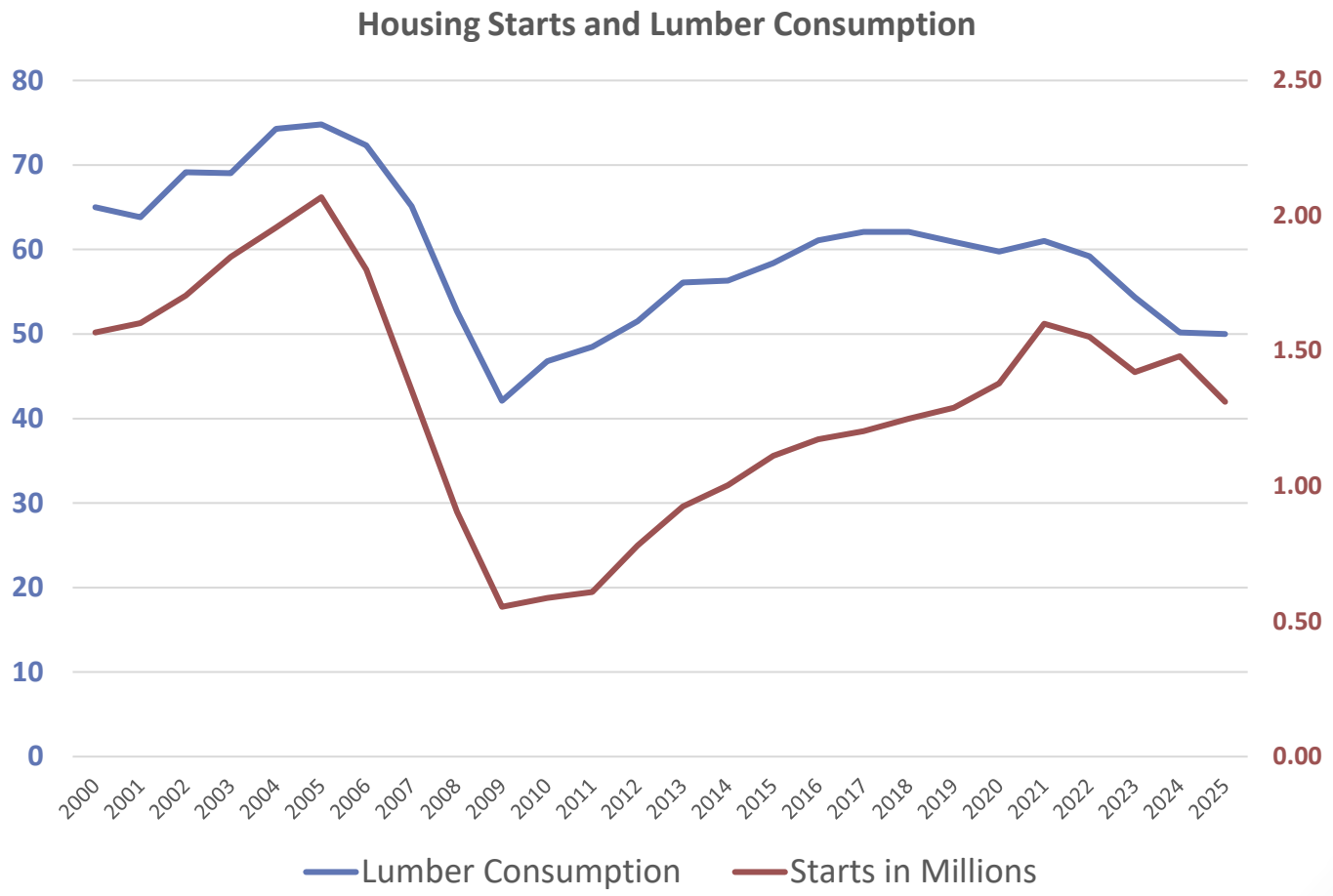
Total Market Size = 49.9 BBF



Source: FEA

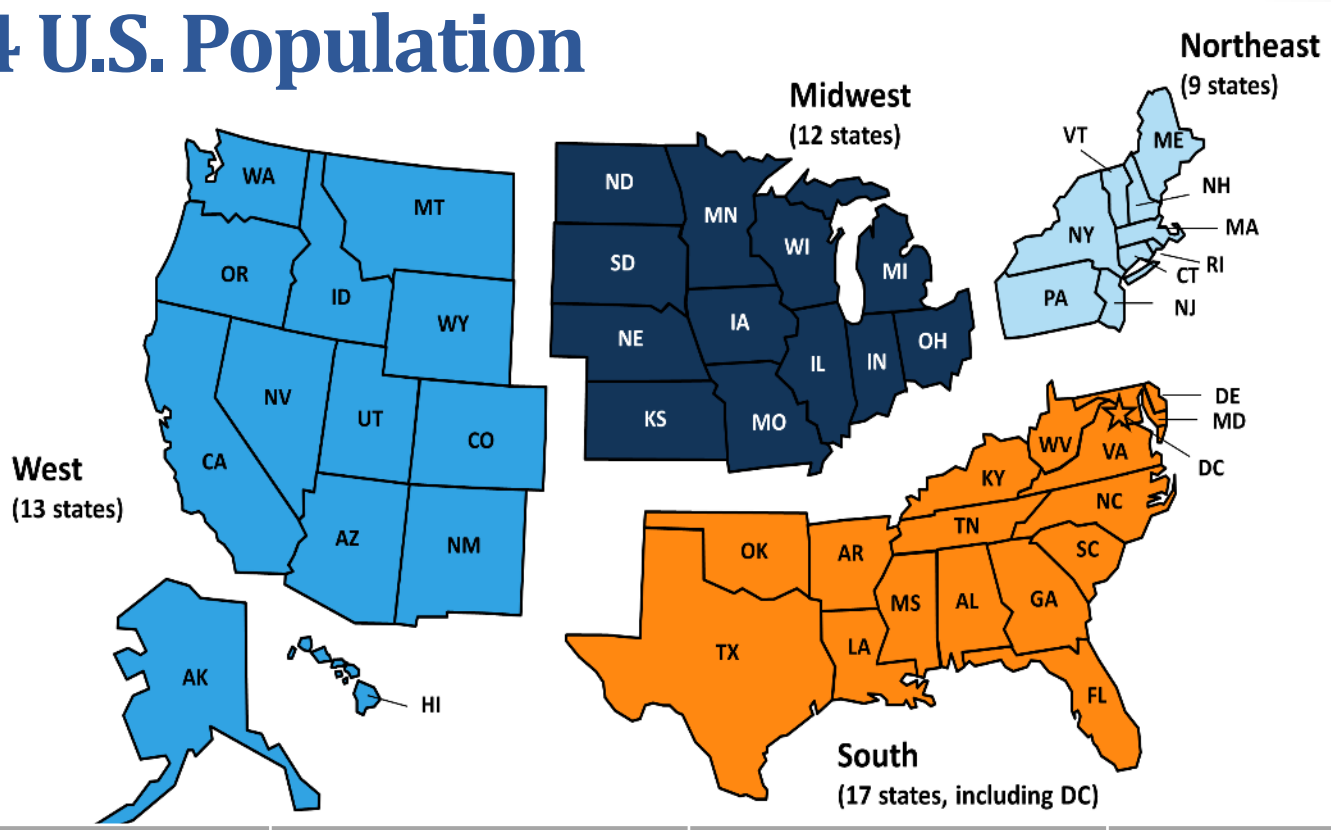
US Housing Starts are Highly Correlated to North American Lumber Demand

(Left Axis is board feet/year in billions, Right Axis is housing starts in millions)



THE BECK GROUP

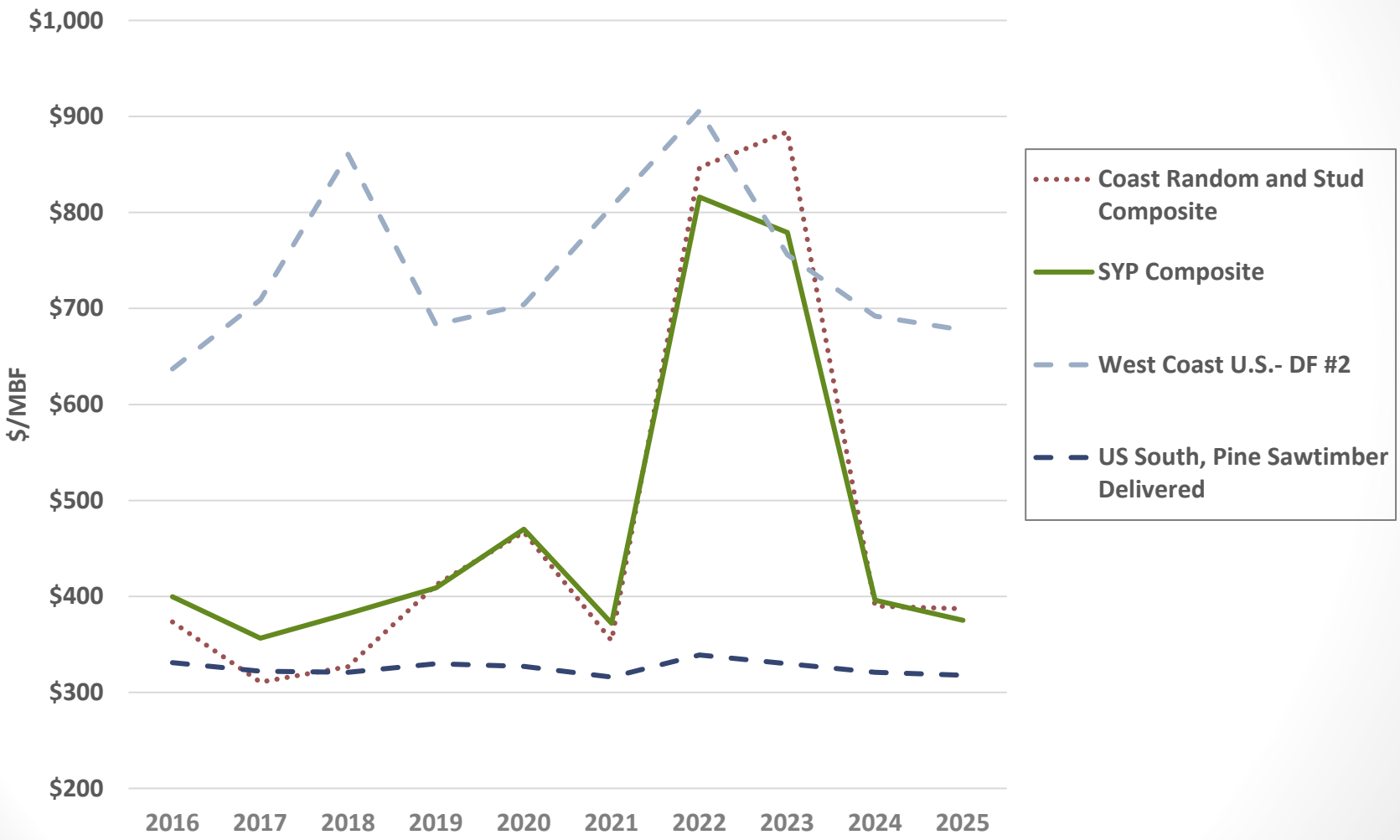
Drivers of Lumber Consumption by Region: 2024 U.S. Population



Region	2024 Population (millions)	% of Total Population	Average Annual Population Growth 2020 - 2024
Northeast	58	17	401,477
Midwest	70	20.5	612,326
South	133	39	6,189,144
West	80	23.5	1,330,321
U.S. Total	**341**	**100**	**8,533,268**

Source: U.S. Census Bureau

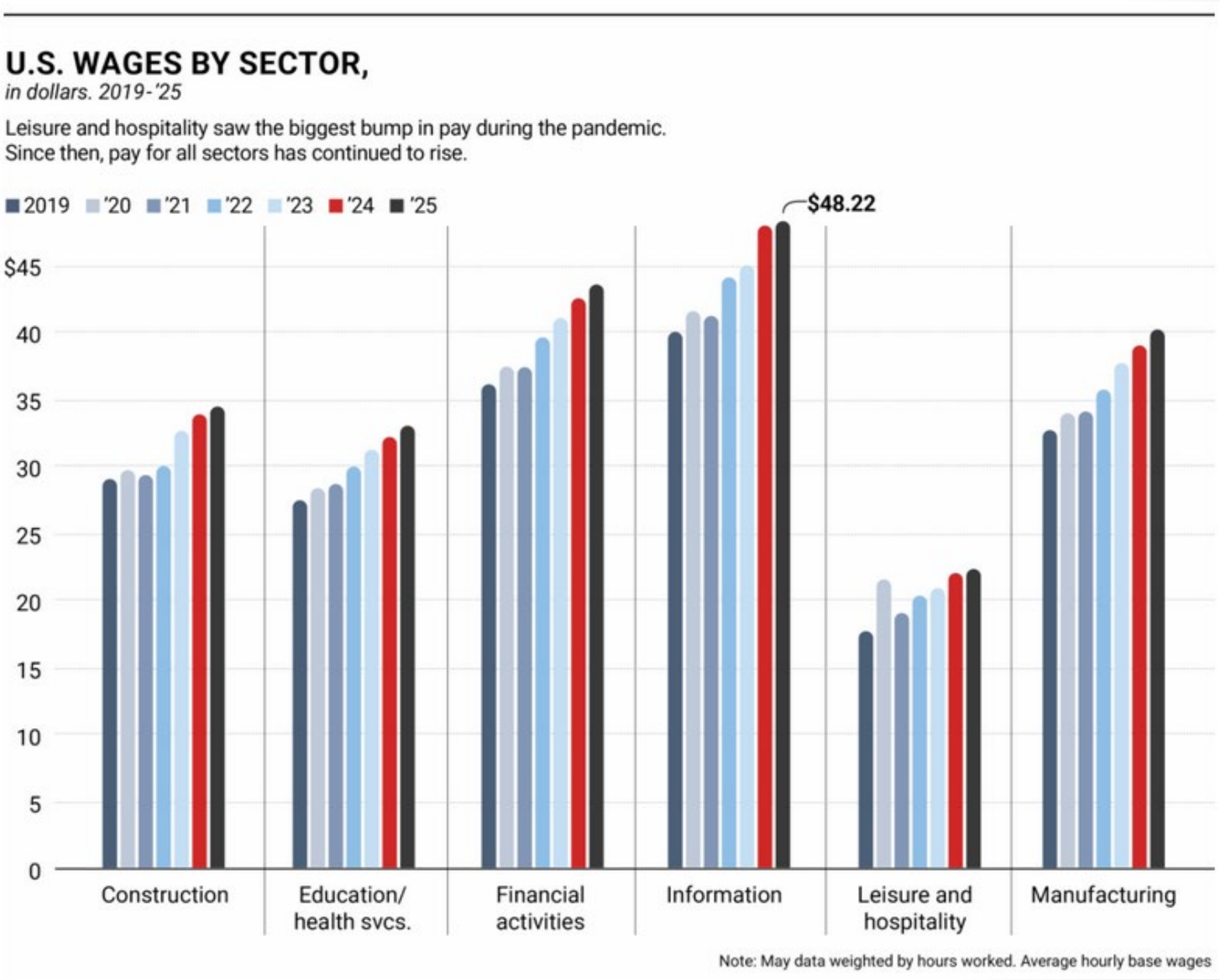
Log to Lumber Comparison



Source: Random Lengths

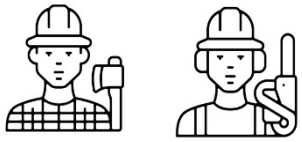
THE BECK GROUP

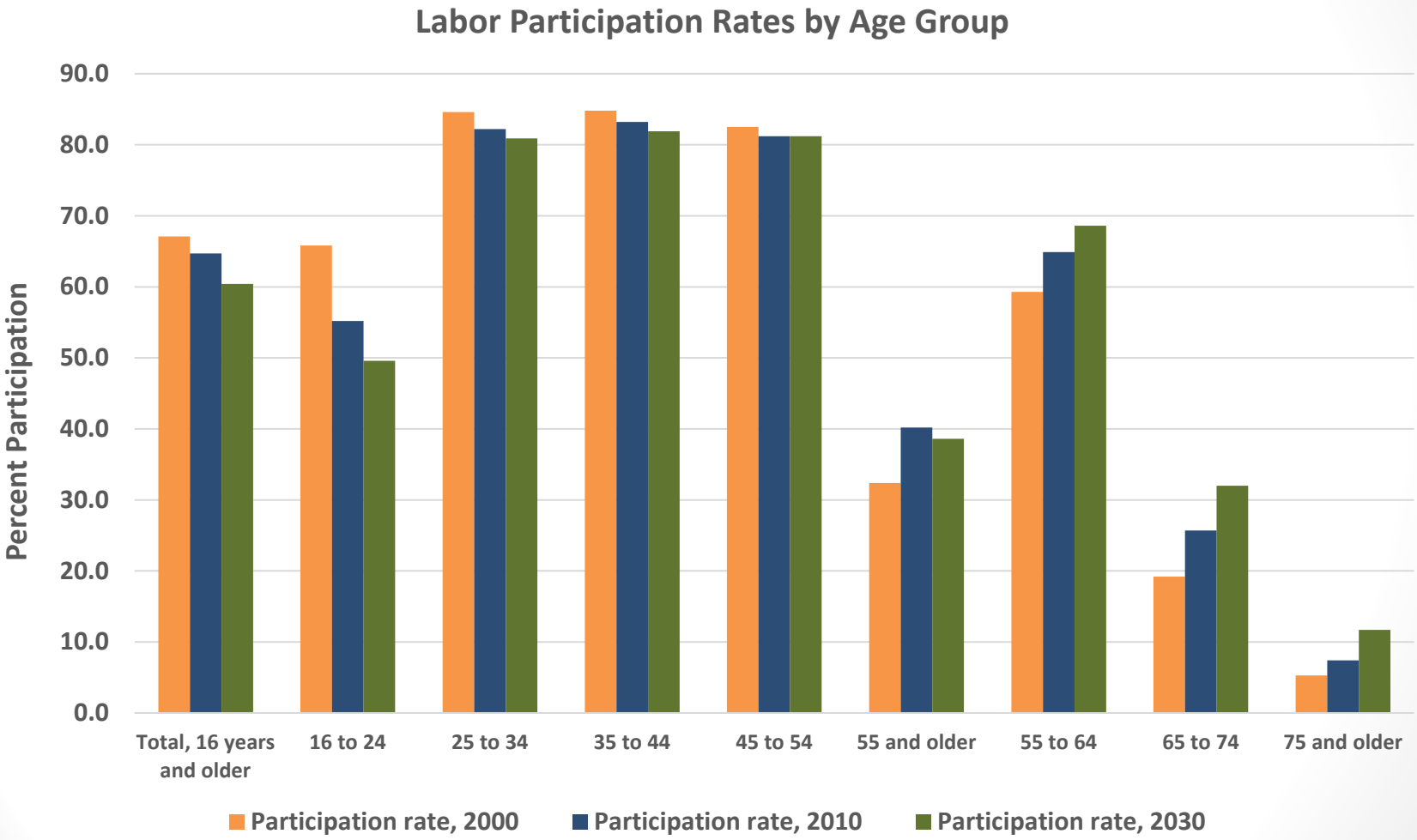
Wage Increases



THE BECK GROUP

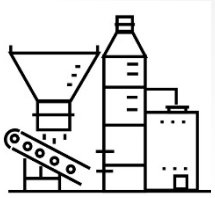
The Workforce



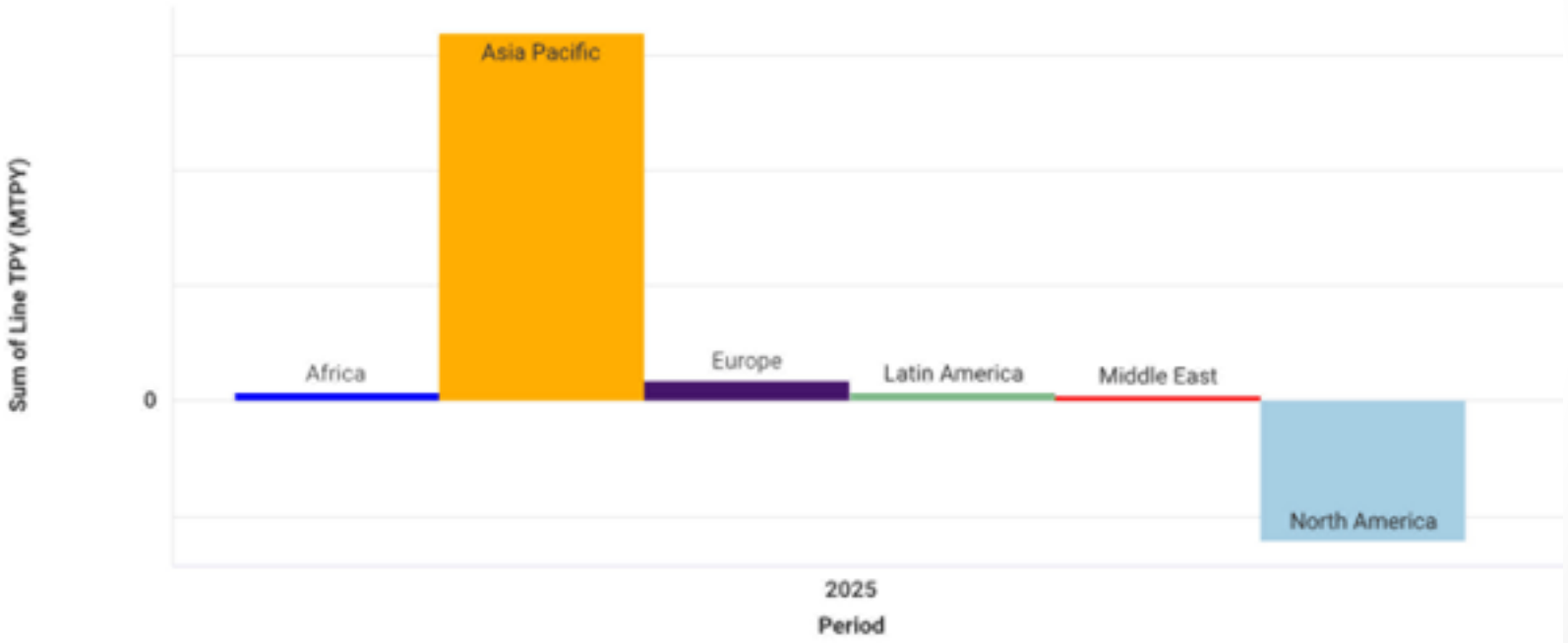


Source: Bureau of Labor Statistics

Pulp and Paper Manufacturing



2025 Pulp and Paper Capacity Change by Region



Source: Fisher *Solve*

Two Systems. One Goal:

Sustainable Forests. Strong Economies. Healthy Communities

THE FOREST SYSTEM

A natural system that grows, recycles, and provides essential ecosystem services.

THE RURAL ECONOMY SYSTEM

An economic system that transforms forest resources into products, energy, and value.

THREE KEY COMPONENTS

SYSTEM ANCHORS

Large, long-lived infrastructure that processes primary forest products.

Examples:
Sawmills, Pulp & Paper Mills, Wood Panel Plants

VOLUME ABSORBERS

Markets that absorb lower-value material and residuals—keeping the system in balance.

Examples:
Biomass Power, Pellets, Exports, Mulch, Hog Fuel

POLICY-DEPENDENT PATHWAYS

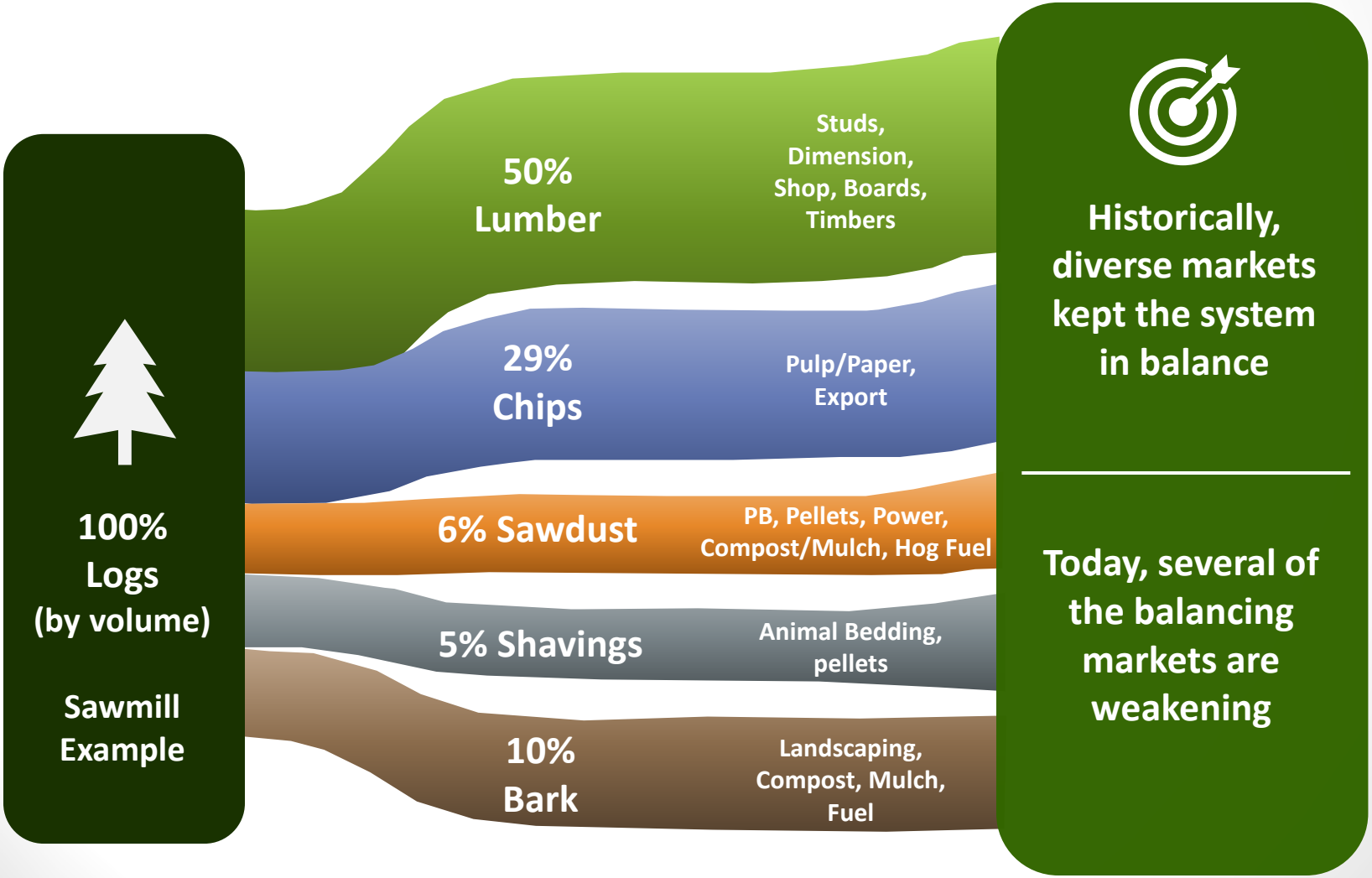
Markets and programs that depend on policy, incentives, or regulation to be viable.

Examples:
Carbon Markets, Grants, Subsidies, Compliance Programs

Long-term success depends on keeping these systems aligned

The Good Old Days:
The System Was Balanced

The industry has historically utilized nearly everything coming out of the forest—but several anchor markets are weakening at the same time



What Changed?

- **Paper demand declined**
  Printing and writing paper demand declined
- **Recycled fiber displaced virgin pulp demand**
  Higher recovery rates and substitution reduced the need for virgin wood
- **Global low-cost producers increased competition**
  Lower cost capacity, especially in South America
- **Pellet and panel markets weakened**
  Oversupply, price pressure, and demand softened for pellets and panels
- **Biomass plants idled or closed**
  Wind and solar emerged as lowest cost options for renewable power
- **Transportation and capital costs rose sharply**
  Freight, equipment, labor, and capital costs increased across the board

Key Insight

Several historic 'volume absorber' markets weakened simultaneously

This creates a structural imbalance between the fiber our forests produce and the markets that value it

US Fiber Supply & Demand Balance:
(BDT/Year)

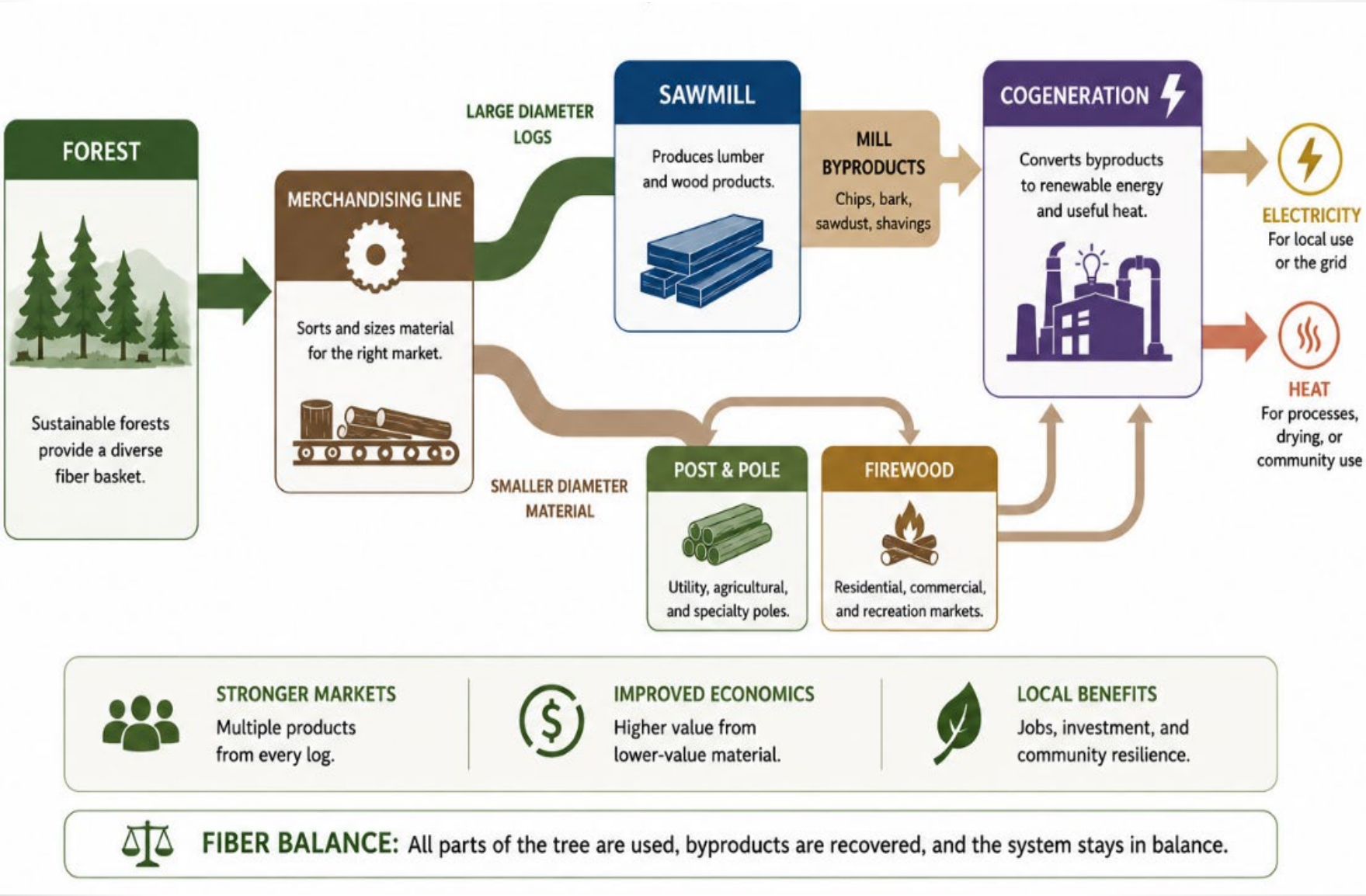
	Sawtimber	Pulpwood	Logging Slash	Mill Residuals	Total Supply
Total Annual Supply	103,220,000	96,631,000	21,611,000	48,056,000	269,517,000
Total Annual Demand	103,235,000	76,032,000	1,325,000	32,585,000	213,177,000
Total Annual Balance	(15,000)	20,625,500	20,286,000	15,471,500	56,341,000

- 56 million BDT/Year surplus of lower-value material
- Existing infrastructure could consume 295 million BDT/Year if fully utilized
- Forests can sustainability support another 200 million BDT/year above current harvests levels

!!! *This means that the central challenge is not how much wood the forest can produce, but how effectively markets, technologies, and institutions are aligned to use it.*

Fiber Balance Through Integrated Systems:

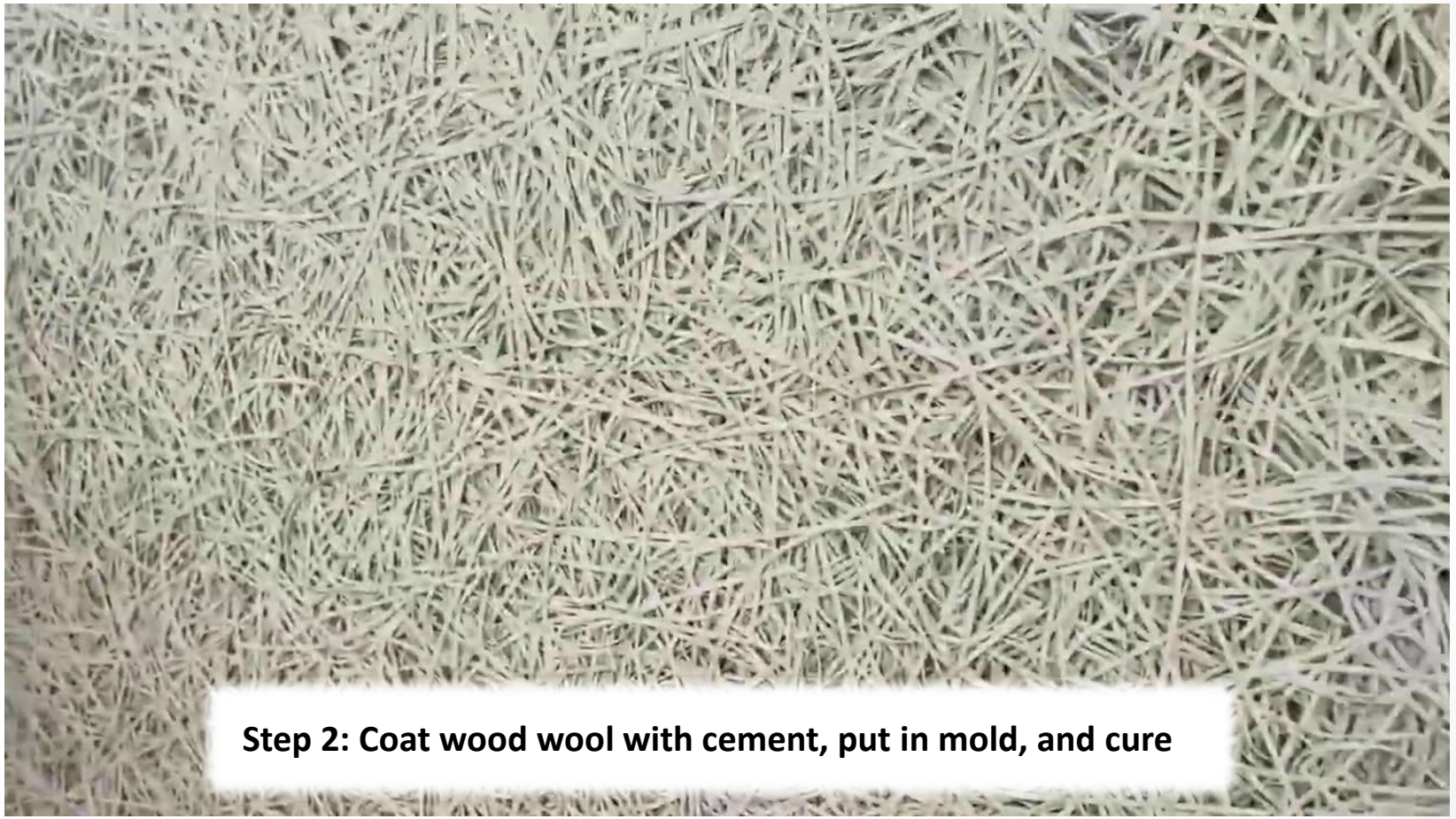
Biomass Campus



High-Value Pathways for Low-Value Fiber:
Wood Wool Cement Large Wall Elements

Step 1: Convert small diameter roundwood into wood wool

High-Value Pathways for Low-Value Fiber:
Wood Wool Cement Large Wall Elements



Step 2: Coat wood wool with cement, put in mold, and cure

High-Value Pathways for Low-Value Fiber:
Wood Wool Cement Large Wall Elements

Step 3: Construct building using WWC – LWE systems

THE BECK GROUP

High-Value Pathways for Low-Value Fiber:
Wood Wool Cement Large Wall Elements

End Use: Converting low-value fiber into high-value building systems

New Demand Driver for Renewable Energy:

AI Data Centers & Firm, Renewable Power

1. FOREST RESOURCE

Sustainably managed forests provide a mix of large and small diameter material.

2. BIOMASS SUPPLY

Mill by-products (chips, bark, sawdust) combined with forest residues and small diameter material supply the system.

3. BIOMASS COGENERATION

High-efficiency cogeneration produces electricity and useful thermal energy.

FIRM, RENEWABLE ELECTRICITY

24/7 power for critical infrastructure

USEFUL THERMAL ENERGY

For cooling (absorption chillers), buildings, or other local uses

4. AI DATA CENTER

Reliable, low-carbon power supports AI processing, data storage, and advanced computing.

WHY BIOMASS?

- Firm, dispatchable, and reliable
- Low-carbon and forest-positive
- Local jobs and economic value
- Strengthens energy security

AI infrastructure is increasing the demand for firm, renewable generation

Decarbonization & New Fiber Markets:

Weyerhaeuser + Aymium Reposition Low-Value Fiber for Global Metals Production

A STRATEGIC PARTNERSHIP TO SCALE BIOCARBON AND TRANSFORM INDUSTRY

1. FOREST & MILL RESIDUALS
Our Abundant Resource

Weyerhaeuser

- Pulpwood & small-diameter material
- Sawdust, bark & shavings
- Mill byproducts
- Low-value fiber with limited traditional outlets

2. BIOCARBON PRODUCTION
Aymium's Proprietary Technology

AYMIUM

- Combustion-free process converts biomass into high-performance biocarbon
- Consistent, metallurgical-grade biocarbon
- Scalable, capital-efficient industrial platform

3. INDUSTRIAL DECARBONIZATION
Drop-In Solution for Heavy Industry

STEEL PRODUCTION
Direct replacement for metallurgical coal in blast furnaces

FERRO-ALLOYS
Reduces emissions in high-temperature metallurgical processes

SILICON METALS
Lower-carbon production for essential industrial materials

DROP-IN REPLACEMENT
Works in existing equipment and supply chains—no major process redesign required

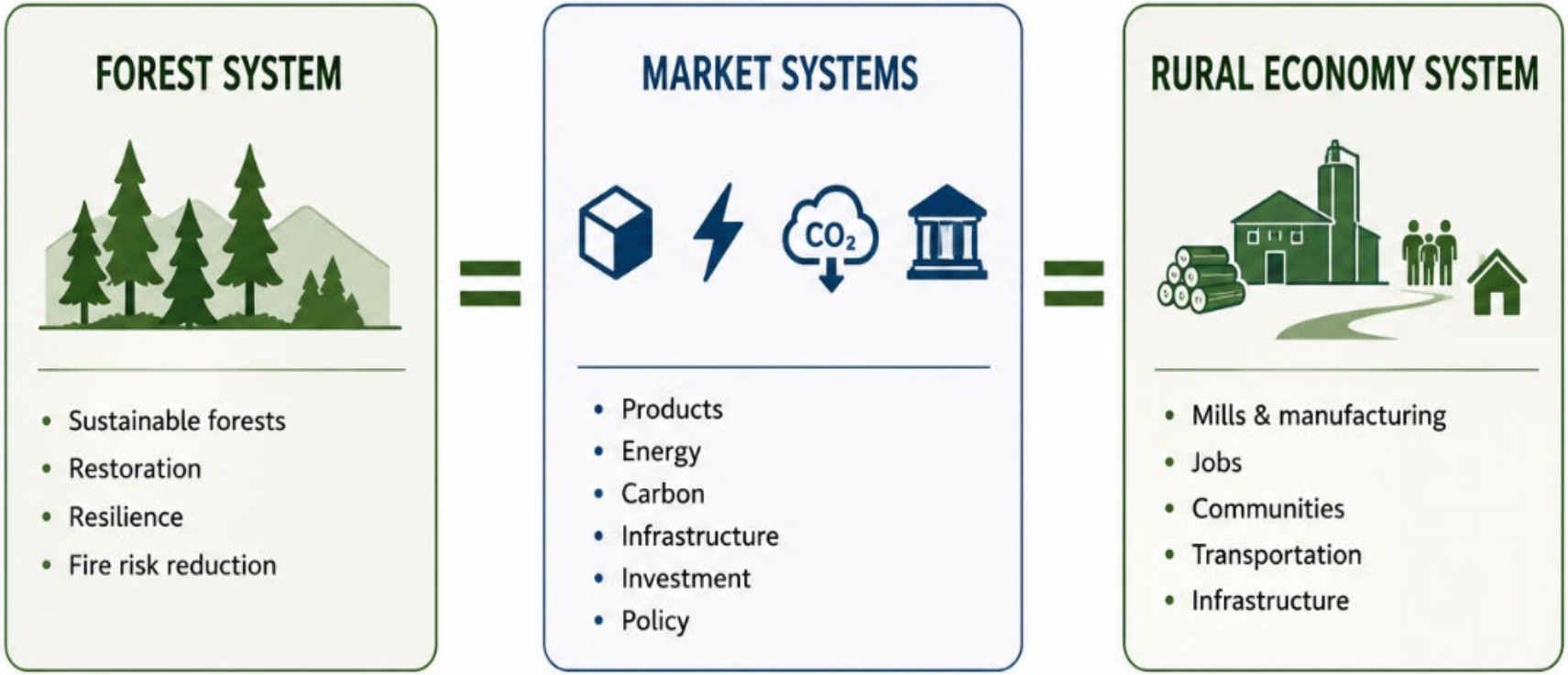
Serious players are not waiting around

POTENTIAL SCALE	1.5 MILLION TONS/YEAR BIOCARBON	7+ MILLION TONS/YEAR WOOD FIBER	MULTIPLE FACILITIES PLANNED	ADJACENT TO EXISTING MILL INFRASTRUCTURE

THE BECK GROUP

Rebuilding Balance:

More Integrated. More Distributed. More Aligned



Long-term forest health and strong rural economies depend on keeping all three systems aligned

Questions?

Steve Courtney
Vice President of Operations
The Beck Group
Forest Products Planning and Consulting Services
stevec@beckgroupconsulting.com
Cell: (541) 527-2040

Roy Anderson
Vice President of Business Development
The Beck Group
Forest Products Planning and Consulting Services
roya@beckgroupconsulting.com
Cell: (503) 840-2171