

Wood-based Bioeconomy in New York State

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The bioeconomy is part of the solution to many great challenges such as climate change, deterioration of the ecosystems, and declining employment in the forestry sector. In New York State, the 2050 goal of the Climate Leadership and Community Protection Act (CLCPA) is to achieve statewide net zero GHG emissions. Forests and wood-based products are a prominent part of the plan to reach these targets by capturing and storing carbon and providing renewable and low-carbon products for use in the state and beyond.

What is the Bioeconomy?

The bioeconomy describes the portion of an economy that produces renewable bio-based feedstocks (like agricultural crops and wood) to use in place of fossil fuels to produce bio-based products (e.g., chemicals, pharmaceuticals, biodegradable plastics), bioenergy and biofuels, materials, food, and feed.

The wood-based bioeconomy uses woody biomass from forests, fast growing woody crops like willow and poplar, and other woody material as feedstocks.

The wood-based bioeconomy will build on and expand NY's existing forestry sector, which has a gross annual output of \$12.6 billion and employs 35,410 people in the state. Using wood-based feedstocks creates local jobs and economic development while providing climate change benefits and other environmental services, such as clean water, wildlife habitat, and recreation opportunities.

Wood-based Bioeconomy Products

Renewable fuels: Fuels produced from woody biomass with a low or negative carbon footprint.

Bioplastics: A new generation of plastics that degrade to harmless compounds or can be more easily recycled or reused.

Mass Timber Products: A building system that uses wood bonded together in layers to create strong and sustainable planks, posts, beams, and other structural elements.

Biochar: A charcoal-like substance made from biomass in a controlled process called pyrolysis. It can enhance soil carbon and nutrient content while sequestering carbon.

Wood-based Textiles: Fabric manufactured from plant-based material, cellulose, that comes from trees and bamboo.

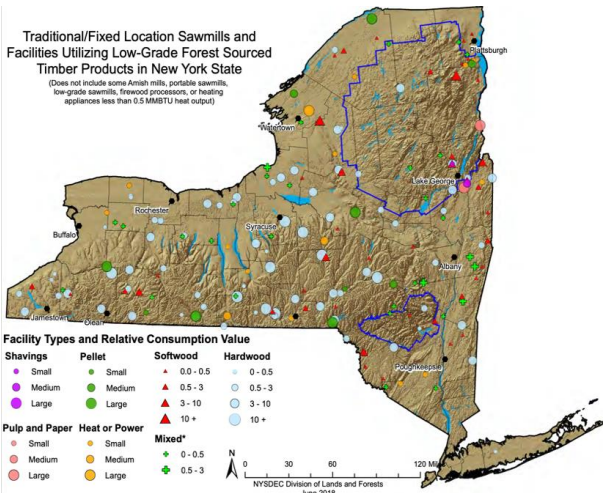
Nanocellulose: A material derived from wood that can be used in packaging, composites, concrete, and medical and cosmetic applications.

Benefits of Transitioning to a Bioeconomy

- From mass timber to biofuels to wood-based insulation products, New York State is poised to be a leader in innovative forest products including construction materials, biochemicals and biofuels, and biomaterials, in addition to updated applications in paper and packaging.
- The wood-based bioeconomy in New York State provides the opportunity to meet the significant consumer demand in the Northeast United States.
- The bioeconomy will build on and expand the existing agriculture and forestry industries in New York by displacing imported fossil fuel-intensive products with New York-grown and -produced biobased products.
- The bioeconomy can reduce GHG emissions and increase sequestration in New York.
- New industries and services to support the bioeconomy will diversify the forest sector and open up new opportunities for innovations, products, services, markets and jobs in the state.

Traditional/Fixed Location Sawmills and Facilities Utilizing Low-Grade Forest Sourced Timber Products in New York State

(Does not include some Amish mills, portable sawmills, low-grade sawmills, firewood processors, or heating appliances less than 0.5 MMBTU heat output)



Forest Industry in New York State

- The forest industry plays an important role in the New York State economy.
- 63% of the state's land area is classified as forested (18.6 million acres).
- Harvest-to-growth ratios show that New York's forests are producing 2.5 times more wood than is being harvested.
- New York State's forest industry generates around \$12.6 billion of economic output annually.
- The forest industry supported 35,410 direct jobs in 2020.
- The wood products industry and the pulp and paper industry generated the greatest valued added across the wood products sector statewide.

Actions Needed to Advance the Wood-based Bioeconomy

- Adopt the International Code Council 2021 International Building Code that will allow the use of wood to build tall wood buildings.
- Revise state procurement specifications that limit the eligibility of wood products to meet the technical performance standards. Set minimum standards for use of wood products in new State-funded construction and infrastructure projects, as feasible.
- Implement a state low-carbon procurement standard that incentivizes the use of wood products to decarbonize New York's fossil-based building sector.
- Establishing rigorous energy, GHG emissions, and environmental sustainability guidelines and metrics that clearly document the carbon benefits of biofuels, bioenergy, and bioproducts in comparison to fossil fuel-based products.
- Identify opportunities for bio-based energy and products that improve energy efficiency and reduce GHG emissions during their lifecycle (from harvest to conversion to end use).
- Track and report on the low-carbon wood products market to spot emerging trends, innovative applications, external market opportunities, and growth opportunities to guide the development.
- Support low interest loans or grants for existing New York State businesses to develop new low-carbon products by educating local banks on emerging biotechnologies and offering NY Green Bank loan guarantees.
- Develop and support workforce development and training programs for the forest sector, including incorporating forest carbon management into curriculums at the high school and college level, and support existing training apprenticeship programs for careers in forestry and the forest product supply chain.

Contact CAFRI experts for more information on the **Wood Based Bioeconomy**.

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