

Providing Renewable Energy

Did you know that low-value trees, limbs and tops can be used to provide a renewable, carbon-neutral source of energy?

Georgia's 22 million acres of private, working forests are sustainable and versatile. For generations, our state's tree farmers turned trees into turpentine, then lumber, poles, posts, panels, pulp, paper and thousands of products that impact our daily lives. Today, the forest industry has learned how to use all parts of the tree — including low-value, small-diameter trees, logging

residues, sawdust and other by-products of wood manufacturing facilities and land-clearing debris — to produce renewable bioenergy.

The carbon released from renewable biomass energy production is part of the natural forest carbon cycle, moving carbon out of the atmosphere as trees grow, returning some of the carbon to the atmosphere as they are harvested for use or die, and removing that carbon

again as they are replanted or regenerate naturally to start the process over again. According to the United Nations and more than 100 forest scientists, as long as overall forests are stable or increasing, the use of biomass energy will not increase carbon in the atmosphere. In Georgia, the volume of forests has remained stable for more than 50 years, and growth continually outpaces harvests by 44 percent annually.

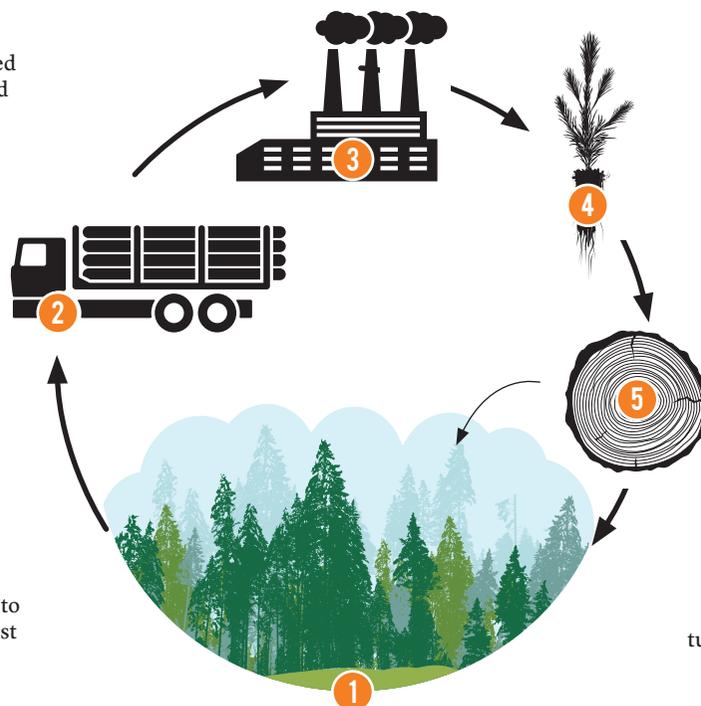
THE CONTINUOUS FOREST CARBON CYCLE EXPLAINED

1) TREES ABSORB CO₂

From the moment they are planted as a seedling, trees of all sizes and species absorb carbon dioxide through photosynthesis as they grow. Georgia boasts over 22 million acres of working forests, more than any other state, and the state grows 44% more than is harvested annually.

2) FOREST PRODUCES LOW-VALUE TREES

At a certain stage of growth, it is necessary to thin the forest. Markets for bioenergy and pulp and paper provide an opportunity for landowners to sell those small-diameter trees. Without a market for these trees, landowners may be forced to leave them in the forest to decompose, which increases forest wildfire and health risks.



3) CARBON IS RELEASED INTO THE ATMOSPHERE

When trees are converted to chips or wood pellets and burned, carbon dioxide is released into the atmosphere.

4) MARKETS ENCOURAGE SUSTAINABLE MANAGEMENT

Markets for low- and high-value trees provide the monetary resources necessary to encourage landowners to invest in reforestation — keeping their land in trees.

5) HIGH-VALUE TREES STORE CARBON

Older, higher-value trees absorb carbon as they grow, and store it in the wood fiber even after the tree is turned into a product such as lumber, posts, plywood or mass timber.

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