

Forest Biomass Worthy of Carbon Neutral Recognition

Paper and wood products mills use biomass residuals from their manufacturing operations to generate bioenergy. The energy is used to make products and it provides significant greenhouse gas reduction benefits to the environment. The final congressional appropriation laws in FY 17, FY 18, FY 19, and FY 20 directed the U.S. Environmental Protection Agency (EPA), the Department of Agriculture (USDA) and the Department of Energy (DOE) to establish clear and simple policies that reflect the carbon neutrality of forest-derived bioenergy.

Background

The carbon neutrality of biomass harvested from sustainably-managed forests has been recognized repeatedly by an abundance of studies, agencies, institutions, legislation and rules around the world, including the guidance of the Intergovernmental Panel on Climate Change and the reporting protocols of the United Nations Framework Convention on Climate Change.

Prior to 2010, the U.S. clearly recognized forest-based biomass energy as carbon neutral. In EPA's Greenhouse Gas (GHG) Tailoring Rule, for the first time, no such designation was made, subjecting biomass energy used in stationary sources to Clean Air Act permit program requirements. In 2011, EPA issued a rule deferring regulation of biogenic carbon dioxide emissions while its Science Advisory Board (SAB) studied the issue and pledged to complete an accounting framework for biogenic emissions from stationary sources by July of 2014, but failed to finish the work.

Numerous EPA documents and policy memos have found positive benefits from forest biomass use, including EPA's original draft accounting framework (September 2011) and revised draft framework (November 2014). Both documents recognize the GHG reduction benefits of bioenergy from forest product mill residuals and byproducts, including black liquor. In April 2018, EPA issued a policy statement to treat biogenic carbon dioxide emissions from the combustion of forest biomass at stationary sources as carbon neutral. As the next step, EPA should implement the policy and legislative directive by issuing final regulations by the end of 2020.

AF&PA encourages Congress to continue to include this important Congressional directive in the FY 21 appropriations process and AF&PA urges the administration to implement the legislative directive in final regulations by the end of 2020.

Industry's Responsible and Efficient Biomass Use

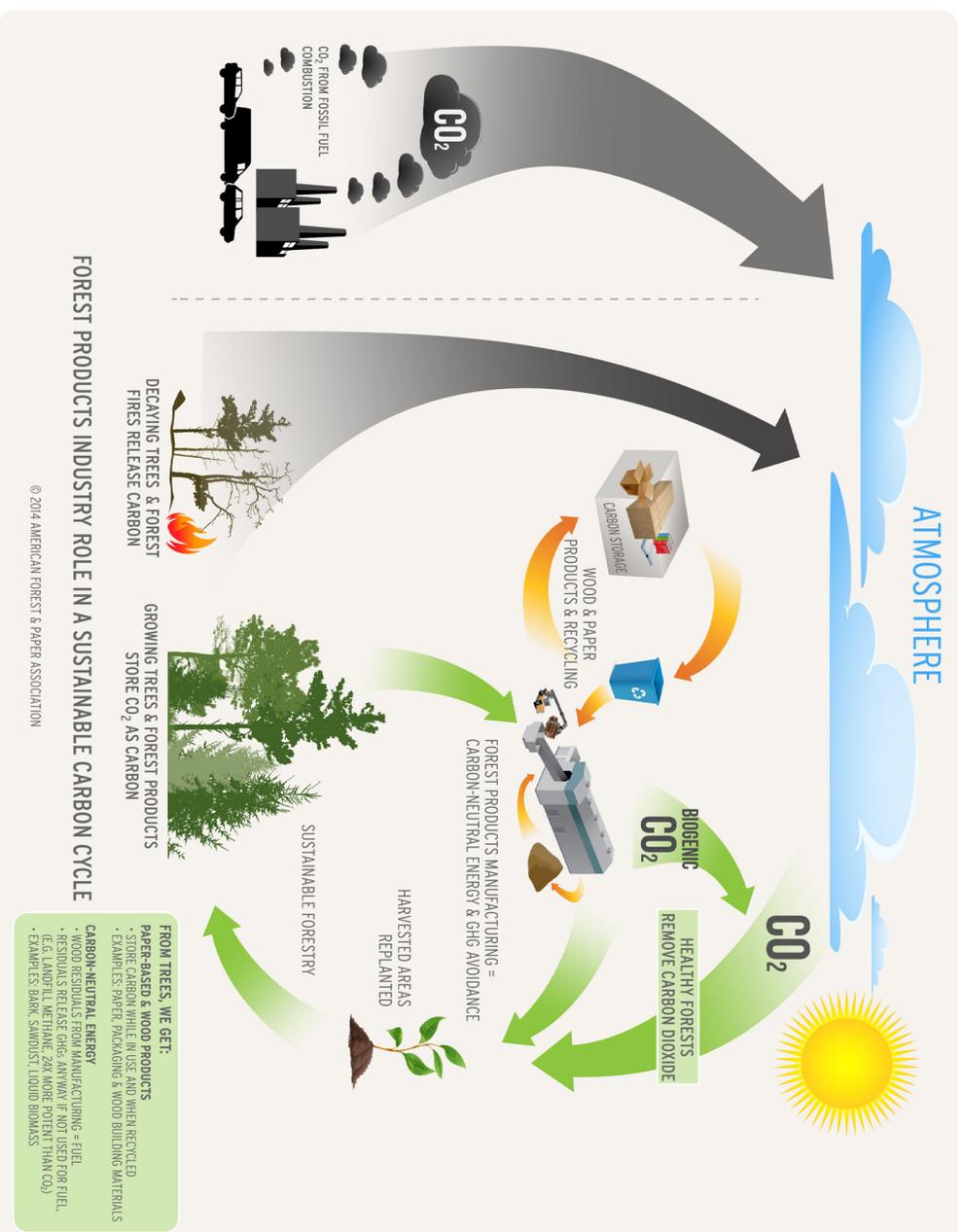
The forest products industry is the largest producer and user of bioenergy of any manufacturing sector and has long-standing operations in the U.S. The creation and use of biomass energy in forest products mills is integral and incidental to the manufacture of products such as pulp, paper, packaging, tissue and wood products. Pulp mills, integrated pulp and paper mills and wood products mills convert biomass residuals to energy while manufacturing biobased products that are useful to society. This sustainable use of forest products manufacturing residuals for energy production provides enormous greenhouse gas benefits by avoiding the emission of about 181 million metric tons of carbon dioxide equivalent a year, or the emissions of about 35 million cars. The forest products industry has created a highly efficient, market-based system of managed forest use with significant carbon benefits including:

- Providing biomass power by utilizing forest and mill residuals;
- Efficiently using biomass residuals through combined heat and power systems to assure forest biomass resources minimize total forest system GHG emissions;
- Reducing the industry's and our nation's reliance on fossil fuels and reducing GHG emissions while simultaneously meeting society's needs for forest products;
- Reducing potential GHG emissions that otherwise would result from residual disposal (e.g., methane from decomposition);
- Balancing forest supply and demand through market-based systems for biomass due to forest planting and re-growth, as evidenced by net increases in forest carbon stocks over most of the last 50 years; and
- Robustly recycling paper to reuse valuable biomass resources.

These carbon benefits can be perpetuated if forests continue to remain abundant and well managed with forest use and growth balancing supply and demand.

Policy Recommendations

- Deregulate biogenic carbon dioxide emissions. Scientific studies and EPA show that the use of forest products manufacturing residuals for energy not only has a de minimis impact on atmospheric concentrations of GHGs but also can reduce net atmospheric GHG concentrations. Accordingly, EPA should ensure that biogenic carbon dioxide is not subject to regulation in Clean Air Act permitting requirements for GHGs. We support a stand alone regulation clarifying that biomass energy is carbon neutral for Prevention of Significant Deterioration permits under the Clean Air Act.
- Congress should include language in the FY 2021 Interior appropriations bill directing EPA, USDA and DOE to work together to re-enact the policy that reflects the carbon neutrality of biomass energy.
- Energy from biomass residuals, including from manufacturing mills and harvests, as well as biowastes, should be explicitly acknowledged for avoiding and reducing GHG emissions and promoting the efficient use of domestic natural resources. If these wood residuals had been disposed of instead of being used as fuel, they would have released GHGs to the atmosphere anyway.
- Biomass used to generate energy should be treated as carbon neutral; U.S. forest carbon stocks are stable or rising as shown by U.S. Forest Service Forest Inventory Analysis data.
- Public policies should not construct artificial mandates or incentives that disrupt the nation's existing efficient forest biomass markets.
- Couple policies that increase demand for forest-based renewable energy with those to increase biomass supply.
- Recognize that sustainably-managed forests and forest products sequester and store carbon and reduce GHGs.



Science of the Natural Carbon Cycle

As forests grow, carbon dioxide is removed from the atmosphere via photosynthesis. This carbon dioxide is converted into organic carbon and stored in woody biomass. Trees release the stored carbon when they die, decay or are combusted. As the biomass releases carbon as carbon dioxide, the carbon cycle is completed. The carbon in biomass will return to the atmosphere regardless of whether it is burned for energy, allowed to biodegrade or lost in a forest fire.

The net impact of these processes is that carbon dioxide flows in and out of forests and through the forest products industry by both biomass combustion and sequestration in products.

Overall, the flow of forest carbon dioxide is carbon positive when forests are sustainably managed and the forest system remains a net sink of carbon dioxide from the atmosphere. Thus, the carbon neutrality of sustainably-managed forest biomass is a scientifically-supported fact.