IS BIOMASS GOOD FOR THE CLIMATE?

DOGWOOD ALLIANCE

Stand4Forests Report Series

Wood pellets are seen by some as a solution to the climate change crisis. However, wood pellets damage our forests, our climate, and the communities where they are produced and used.

Here's the truth of the matter:

- **Wood pellets release up to 50% more greenhouse gases into the atmosphere than coal.**
- **Logging, which includes logging for wood pellets, is the dominant cause of greenhouse gas emissions from American forests, more than insects, drought, fire, and wind combined.**
- **Logging for wood pellets has cleared 900,000 acres in the US South in the last decade.**
- **The growing biomass industry negatively impacts wildlife, which contributes to a worsening climate.**

In conclusion, we need new policies designed to reduce logging and leave more forests standing.

MYTH: Wood pellets are carbon neutral

TRUTH: Creating and using wood pellets releases a lot of greenhouse gases into the atmosphere.

An activity is "carbon neutral" when it doesn't have any greenhouse gas, or carbon dioxide, emissions. Industry professionals advertise wood pellets as carbon neutral, but wood pellets actually release a lot of carbon dioxide and other greenhouse gases. Greenhouse gases are produced throughout the creation of wood pellets. From logging, to transporting, to processing, and shipping -- all of these stages produce greenhouse gases.[1] But most of the greenhouse gases are released when wood pellets are used. When wood pellets are burned, around 50% more greenhouse gases are released than from an equivalent amount of coal.[2,3]

TRUTH: It takes nearly a century for forests to reabsorb the greenhouse gases released by producing wood pellets.

After a forest has been logged, there is a "carbon debt" on that bare ground until new trees grow to restore the lost carbon.[7,8] Scientists estimate that it takes an average of 90 years to repay the carbon debt. The carbon payback period is based on the type of logging (parts of trees or whole trees) and forest (natural or artificial).[8–10] 90 years of carbon payback is not a solution when we need action on climate change in the next decade.

Industry scientists exclude the carbon stored in former trees from their calculations.[4–6] This is unreasonable, because wood pellets release all of that carbon when they're burned. This is how industry scientists justify their claim that wood pellets are carbon neutral.

TRUTH: Regional accounting doesn't accurately account for impacts of wood pellet harvests.

The wood pellet industry says that if the entire region is storing more carbon than it's losing, then logging for wood pellets is fine. This is an unreasonable standard because the "region" is very different from site impacts. The fact is, logging for wood pellets reduces a forests' ability to store carbon. Even if there is some slight gain in regional carbon - there would be an even higher rate without a market for wood pellets.

In the South, over 95 million tons of carbon have already been removed from forests for wood pellet production. This carbon

has been, and will be burned for electricity, releasing it into the atmosphere. This carbon is above and beyond what was already being lost to regular logging operations before 2010, when the wood pellet industry took off.

More generally, logging is the primary cause of carbon loss, tree cover loss, and forested wetland loss in the US.[11–13] 85% of carbon emissions from US forests were attributed to logging, more than fire, insect, drought, and wind damage combined.[11] Another study found that around half of tree cover loss in North America was attributed to logging.[12]

MYTH: The impacts of wood pellet production are small

TRUTH: Greenhouse gases are released during logging, transport, production, and use of wood pellets.

There are carbon emissions associated with logging, production, and combustion of wood pellets. From 2011-2019, the US exported 40.2 million tons of wood pellets from the US South, mostly to countries in Europe.[14] These 40.2 million tons of exported wood pellets represent over 950 thousand acres used for wood pellets.[15] These acres of forest were previously providing flood protection, water filtration, and habitat for wildlife. When burned, that quantity of wood pellets has released over 95 million tons of CO_2e into the atmosphere. This is equivalent to 22 coal plants operated for one year, or 47 million tons of coal burned.[16]

TRUTH: Wood pellet production uses more wood than other types of logging.

High demand for wood pellets opens up more forests to logging. When logging for wood pellets, less "waste" is left behind to help forests regrow. Logging for wood pellets also impacts soil health and wildlife habitat. Although some tops and limbs of trees ("wood waste"), is used, most wood used by Enviva comes from whole trees.[1,17]

Using too much wood from forests in the US has impacts on wildlife, water quality, and protection from extreme events. Logging leaves lasting impacts on soils, permanently changing physical properties with chemicals and heavy machinery.[18]

TRUTH: Wood pellet production reduces biodiversity of harvested areas.

Making wood pellets uses a lot of land. This means that "fake forests" made up of planted pine will continue to increase. **Changes in land use due to logging is a major cause of wildlife loss.**[19] Even the IPCC, the world's climate change authority, says that we will lose wildlife by using more wood pellets and other biofuels.[20–22]

Since burning wood pellets releases greenhouse gases into the atmosphere, they make climate change worse. Recent studies say that climate change may cause many animals to be exposed to dangerous climate conditions.[23] In a region like the US South, with many threatened amphibian species, avoiding habitat loss and stopping climate change are key to saving those species.[24]

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CASE STUDY: ENVIVA

Enviva is the largest wood pellet export company in the United States. Enviva also has the lion's share of pellet production facilities in North Carolina. Four Enviva facilities in North Carolina will be responsible for exporting 2.5 million tons of wood pellets annually from 2020 onwards. From 2013 through the end of 2020, Enviva will have used wood from 300,000 acres. This has released 28 million tons of CO_2e during harvest, transport, production, and combustion. The greenhouse gas impact is equivalent to an additional 14 million tons of coal burned, or six and a half coal plants operated for a full year.[16]

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DOGWOOD ALLIANCE

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ABOUT DOGWOOD ALLIANCE • Dogwood Alliance mobilizes diverse voices to protect Southern forests and communities from destructive industrial logging. For over 20 years, Dogwood Alliance has worked with diverse communities, partner organizations and decision-makers to protect Southern forests across 14 states. They do this through community and grassroots organizing, holding corporations and governments accountable and working to conserve millions of acres of Southern forests.