



Assessing The Rachel Carson Council's New Anti-Bioenergy Report

Last week, the Rachel Carson Council released a report titled “Bad Business: The Economic Case Against Woody Biomass as Renewable Energy.” While its authors [describe](#) this as a “breakthrough report,” an analysis by Future Forests + Jobs finds that on key issues ranging from deforestation to carbon accounting, the Council’s findings are contradicted by research by some of the leading academic experts in the field.

It is important to note that the Rachel Carson Council has a history of opposing this sector. They begin the report by calling renewable wood bioenergy one of the “false solutions to the climate crisis,” despite the fact that it is [supported](#) by the United Nations IPCC as a key tool necessary to mitigate global climate change.

In our analysis, Future Forests + Jobs identifies five misleading claims from this report, and explains how and why the Rachel Carson Council gets so much of the science of renewable wood energy wrong.

[Misleading Claim #1: The Rachel Carson Council says that wood bioenergy is causing deforestation of "whole forests."](#)

In multiple sections of its report, the Rachel Carson Council argues that the production of wood pellets for renewable wood energy is causing deforestation in the US Southeast. They claim that “whole forests are being cut down” and that wood pellet production causes “enormous deforestation.”

Such pellets are supplied primarily by the Southeastern United States where whole forests are being cut down to meet ever-increasing demand. This process cumulatively produces massive carbon emissions, damages the environment, and threatens the livelihood of surrounding communities. (4)

One of the largest adverse effects of mass-producing wood pellets is enormous deforestation. While wood pellet companies claim to collect forest waste and engage in wildfire preventive logging to make their product, they also engage in extensive clear-cutting of forests. (14)

The Facts:

These claims are both unsupported and get the relation between forest size and wood pellet demand exactly backwards. In fact, **greater demand for renewable wood pellets actually helps grow forests rather than causing deforestation.**

The evidence in the US Southeast, where most wood pellet production occurs, shows that forests are growing – not shrinking – as wood pellet demand rises. By strengthening the market for wood products, wood bioenergy incentivizes landowners to plant more trees and disincentivizes them from converting their land to environmentally-

damaging uses, such as development or cattle ranching. The net result is more trees planted and a growing carbon sink.

Wood bioenergy is a small part, about 3%, of the total annual harvest in the U.S. Southeast, of a vast and highly sustainable forest products industry. Due to strong demand, privately-owned forests are growing some 40% more wood than they harvest, capturing more carbon than is released by all wood product uses, including bioenergy.

A number of studies from leading researchers have repeatedly demonstrated the sustainability and forest-protecting potential of wood bioenergy markets. For instance, [experts](#) at the University of Georgia and the US Forest Service have found that the market incentives created by the wood bioenergy industry actually protect forests. They found that the **absence** of demand for wood biomass would actually result in deforestation up to 15,000 square kilometers (5,791 square miles), roughly the [size](#) of the entire state of Connecticut. That is a massive potential loss in forest area due to increased urbanization. Conversely, they found that increased demand for wood pellets retains thousands more square kilometers in natural timberland area.

This research is supported by multiple additional studies of the forest products and wood bioenergy economies. A 2012 report from Landcare Research and Ohio State University [found](#) that when you account for market factors, increased demand for wood biomass energy “increases timber prices and harvests, but reduces net global carbon emissions because higher wood prices lead to new investments in forest stocks.” This confirms the findings of researchers from the Society of American Foresters, who [concluded](#) that an increase in wood biomass demand “will not reduce forest and forest carbon stocks, but rather will increase the forest and forest carbon.”

Misleading Claim #2: The Rachel Carson Council claims that biomass is causing the deforestation of 200 football fields a day.

Equally problematic, wood pellet production has heavy negative externalities which place a financial burden on communities forced to bear the brunt of the sourcing, production, transportation and burning of these pellets. The mass deforestation associated with wood pellet operations in the U.S. - conservatively about 220 acres, or 200 football fields a day⁵ - can be linked to increased drinking water costs, excessive heat, climate change, and consequent sea-level rise and forced migration. These externalities severely affect communities in the United States and globally. When properly accounted for, externalities drastically increase the true cost of the wood pellet industry. (4)*

The Facts:

This “conservative” estimate is based on a [citation](#) from the Dogwood Alliance – an Asheville, North Carolina based organization with a [record](#) of calling for an end to the entire forest products industry. While the Rachel Carson Council’s “football field” statistic does not appear in the original citation, it seems they utilized a back-of-the-envelope statistic from Dogwood that current demand for wood bioenergy is causing the

deforestation of 80,000 acres of forest per year (80,000 divided by 365 = roughly 220 acres per day).

This statistic belies both common sense and the facts on the ground. The wood bioenergy industry does not drive harvests. Rather, harvests go to several different buyers, such as sawtimber companies, paper companies, packaging companies, etc.

To attribute deforestation of entire football fields to bioenergy companies, which represent one of the smaller industries relying on forest harvests, is an unserious and unscientific examination of the forest products economy.

The Rachel Carson Council also ignores the fact that US forests in the Southeast are growing on net. They also fail to engage with the findings of researchers who have examined the sustainability potential of US forests for wood pellet production and concluded that sustainable wood pellet production is not only possible, but has room to grow.

A [report](#) released in December 2019 from a consortium in Europe associated with Wageningen University & Research in The Netherlands demonstrated that wood bioenergy from the US is sustainable. Wageningen University & Research examined the sustainability of wood bioenergy sourced from the US Southeast and found that “sustainable export of pellets is possible.” They note that even though the US pellet industry has grown rapidly, producing around 14 million tonnes per year, this is well-below what the industry can support while also maintaining its strong commitment to sustainability. Wageningen finds that “sustainable export potential from Southeastern US is around 35 million tonnes of pellets,” which is more than double current production.

Misleading Claim #3: The Rachel Carson Council claims that renewable wood bioenergy produces more carbon emissions than coal.

Eventually this flawed accounting was adapted into other climate deals, including the E.U. Renewable Energy Directives of 2005, which allowed biomass energy to be considered carbon neutral³. This accounting error allowed the United Kingdom to invest heavily in biomass energy in order to reach their renewable energy goals, even though it goes directly against a growing body of evidence, including a study by the Natural Resource Defense Council (NRDC), a respected environmental non-profit, which finds that per unit of energy burning wood pellets produces as many, or more, carbon emissions as coal.⁴ (4)

The Facts:

Multiple studies confirm what leading scientific authorities such as the [International Energy Agency](#) (IEA) Bioenergy program have found: that **renewable wood bioenergy produces fewer net carbon emissions than coal.**

According to a recent [report](#) from researchers at the University of Georgia and the US Forest Service, wood bioenergy has “considerably lower” carbon intensity than coal-based electricity. They estimate that wood bioenergy yields a “77% to 99% carbon savings for power generation compared to its fossil fuel alternative.” This results in “high carbon savings in the biopower sector compared to fossil fuel.”

Researchers from the University of Illinois agree. They [note](#) that wood bioenergy in the form of wood pellets is “more environmentally friendly than coal.” They conclude that the “greenhouse gas intensity of wood pellet-based electricity is between 74 to 85 percent lower than that of coal-based electricity.”

As Dr. Puneet Dwivedi, an Associate Professor of Forest Sustainability Sciences at the University of Georgia’s Warnell School of Forestry and Natural Resources [explained](#) in an op-ed published last week in *Real Clear Energy*, the environmental case for wood bioenergy is strong because growing forests absorb carbon dioxide, creating “an overall low-emission electricity generation system”:

I’ve studied and written on this issue for more than ten years, and the facts lead me to conclude that sustainably sourced woody biomass is an environmentally sound alternative to fossil fuels such as coal in the United States and beyond...

Yes, burning wood pellets releases carbon dioxide into the atmosphere. But these emissions are recovered within a year by the new growth on those forestlands which are supporting the continuous production of wood pellets. This creates an overall low-emission electricity generation system. An earlier study estimated that woody biomass from the U.S. Southeast reduces carbon intensity by at least 77% compared to coal if consumed within the country, and between 49% and 72% if the same is shipped abroad for use in countries like the Netherlands.

Misleading Claim #4: The Rachel Carson Council says that demand for U.S. wood pellets is forecasted to face “difficult times ahead.”

With the United Kingdom eliminating most of its biomass subsidies, with biomass power plants struggling in the United States despite billions in subsidies, and with the European Union’s use of biomass in question, the U.S. wood pellet industry likely faces difficult times ahead. (11)

The Facts:

This is simply not true. Demand for wood pellets is expected to remain strong as countries move to reduce their reliance on fossil fuels in line with international climate goals. In fact, an [analysis](#) from FutureMetrics estimates that **industrial wood pellet demand will grow year-on-year through 2025, led by increased demand from Japan and South Korea**, while demand

from existing markets in the European Union and the United Kingdom will remain robust.

For example, the United Kingdom is doubling down on low-carbon bioenergy. The United Kingdom's Committee on Climate Change recently released a report [reaffirming](#) the positive role wood bioenergy plays in combating climate change, protecting the environment, and reducing net carbon emissions.

The United Kingdom has been at the forefront in its embrace of low-carbon bioenergy. Last year, CNN [profiled](#) how Drax, once “the biggest polluter in western Europe,” has now “made a near-complete switch to renewable energy” by embracing wood biomass. In 2019 the UK also made [record gains](#) in renewable energy thanks in large part to wood bioenergy.

It is no surprise that countries like South Korea and Japan are looking to capitalize on the proven success of wood bioenergy in the United Kingdom and the European Union. Wood bioenergy is part of an all-in renewable strategy that, in conjunction with solar and wind energy, allows countries to rapidly phase out fossil fuels. As countries continue to face commitments to reduce carbon emissions, we expect all technologies that reduce carbon emissions – including wood bioenergy – to grow in scale.

Misleading Claim #5: The Rachel Carson Council says that wood bioenergy exacerbates refugee problems.

Burning wood pellets as fuel has two consequences that exacerbate the refugee problem. First, their combustion releases carbon emissions and, second, the clear-cutting involved in the production of wood pellets destroys a carbon sink that would have previously drawn carbon from the atmosphere. These processes warm the climate which leads to sea-level rise induced migration away from coastal communities. Critically, forests that are left standing mitigate such impacts and can lessen the displacement of climate-change refugees. (20)

The Facts:

A burgeoning refugee crisis caused by climate change is a major international concern, but it is absurd to claim that wood bioenergy – a renewable energy technology endorsed by leading climate science authorities like the UN IPCC as part of the solution to the climate crisis – is somehow responsible for climate refugees. The Rachel Carson Council links renewable wood energy to refugees by claiming that increased carbon emissions and deforestation lead to more refugees.

While climate change and deforestation can lead to refugee crises, as we outline above, wood bioenergy causes none of these negative impacts. In fact, wood bioenergy reduces carbon emissions compared to fossil fuels and expands forests through market incentives.

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