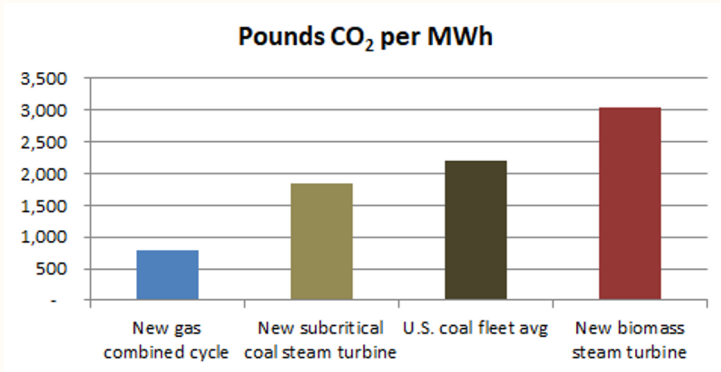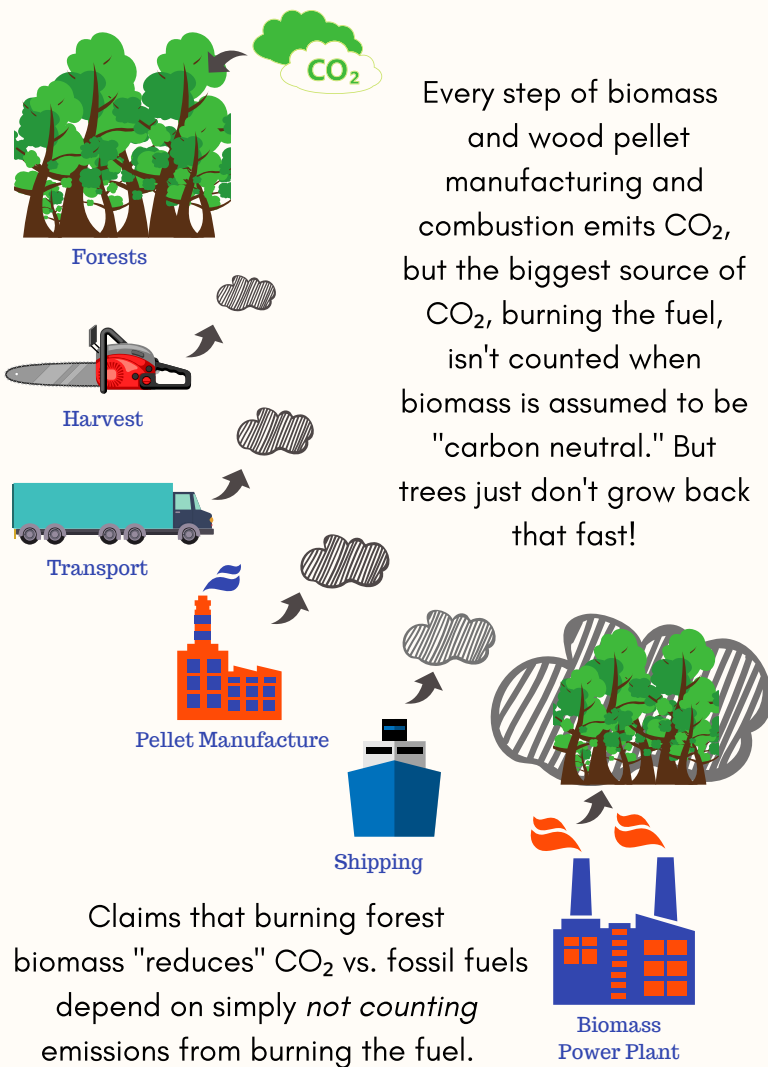# Biomass energy trashes forests, increases GHG emissions, and pollutes the air

Biomass plants emit as much CO_2 as coal plants per MWh, yet bioenergy is treated as "carbon neutral" or "zero emissions"

Pounds CO_2 per MWh

3,500	
3,000	
2,500	
2,000	
1,500	
1,000	
500	
-	

New gas combined cycle | New subcritical coal steam turbine | U.S. coal fleet avg | New biomass steam turbine

A 50MW plant burns the equivalent of two to four thousand hectares of forest in one year.

CO_2

Forests

Harvest

Transport

Pellet Manufacture

Shipping

Biomass Power Plant

Every step of biomass and wood pellet manufacturing and combustion emits CO_2, but the biggest source of CO_2, burning the fuel, isn't counted when biomass is assumed to be "carbon neutral." But trees just don't grow back that fast!

Claims that burning forest biomass "reduces" CO_2 vs. fossil fuels depend on simply *not counting* emissions from burning the fuel.

Industry claims: biomass "improves forest health", is "carbon neutral", and provides "clean energy".

Improves forest health?
The biomass industry claims to harvest only forest residues. Even if this were true (and the evidence shows it's not), harvesting residues strips soil nutrients and carbon and promotes erosion. "Sustainability" standards do nothing to protect forests or stop them from being clearcut for fuel.

Carbon neutral?
Biomass plants emit more CO_2 per MWh than coal or gas plants. Burning biomass emits CO_2 instantaneously, but forests only regrow after decades to centuries. The IPCC says we need to reduce emissions and increase carbon uptake immediately, and we are already losing forests globally. Forests cut for biomass can't regrow in a timeframe meaningful for addressing climate change.

Clean Energy?
Just like coal plants, biomass plants emit soot, smog precursors, and other toxic emissions. Some plants burn tires, demolition waste, and treated lumber, emitting heavy metals, dioxins, nitrogen oxides, carbon monoxide.

Profit from misleading claims
The biomass power industry gets billions per year in renewable energy subsidies to liquidate forests and pollute the air.

PFPI
driven by data

Stop subsidizing bioenergy and wood pellets. We need to protect and expand forests, not burn them for fuel.