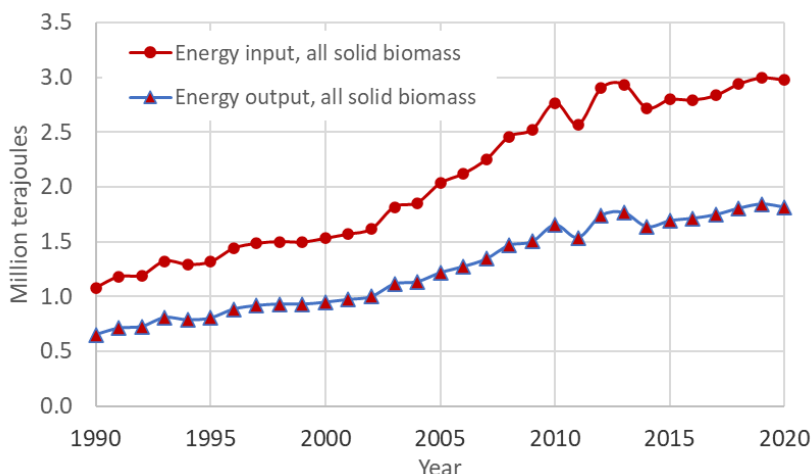


The EU must end subsidies for inefficient biomass power plants, but only removing forest biomass from the RED will save forests and the climate

Both the European Commission and the Energy Council have proposed to end subsidies for certain electricity-only biomass power plants burning forest biomass. The following graphs show that while the extreme inefficiency of electricity-only plants means it's urgent to end subsidies, the proportion of total biomass burned in electricity-only plants is fairly low.

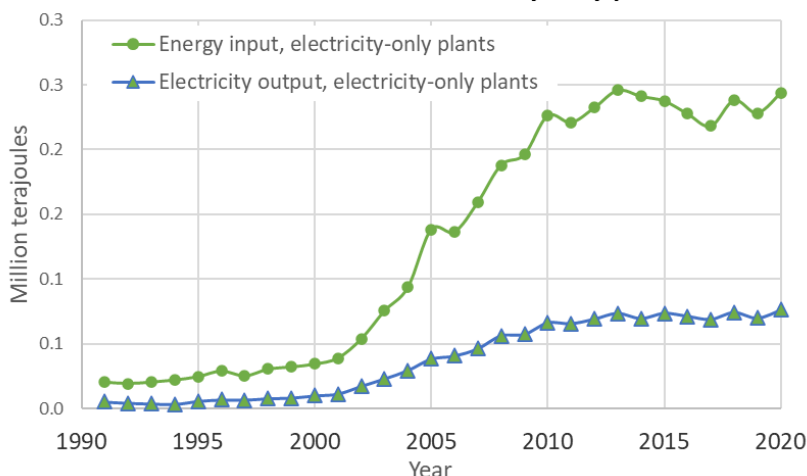
All solid biomass burned for heat and power



This graph shows energy input (energy contained in “solid biomass,” comprised largely of forest biomass, mill residues, and black liquor), and energy output: useful heat and electricity generated by combustion, taking into account power plant efficiency. It includes biomass burned in plants generating electricity, combined heat and power, heat only, and wood burned for residential heating, which is assumed to have an efficiency of 60%. Data are from Eurostat.

Take-home message: Overall, the low efficiency of biomass combustion means there's a big gap between how much biomass the EU burns, and how much useful energy is generated.

Solid biomass burned in electricity-only plants

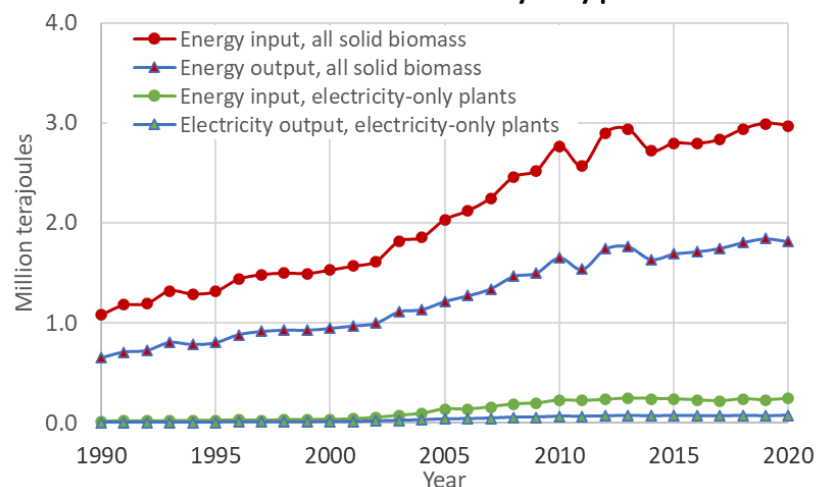


This graph shows energy input versus electricity output for electricity-only plants (thus no combined heat and power plants are included).

Take-home message: Burning biomass in electricity-only plants is extraordinarily inefficient (~30%). Wood-burning power plants emit more CO₂ than coal plants per megawatt-hour of electricity.* The EC and Energy Council proposal to remove subsidies from electricity-only plants burning forest biomass is certainly justified, though all of these should be excluded, not just those proposed by the Commission.

* Page 86 <https://forestdefenders.eu/wp-content/uploads/2021/01/JRC-biomass-report-markup.pdf>

All biomass versus electricity-only plants



This graph combines the two previous datasets.

Take-home message: While extremely inefficient, electricity-only plants currently consume a relatively small proportion of the hundreds of millions of tonnes of biomass burned each year in the EU for heat and power. **The EU must stop counting forest biomass toward renewable energy targets altogether, and end incentives to log and burn forests. We need to grow forests, not burn them for energy.**