

Committee: Finance

Testimony on: SB0903 Renewable Energy Portfolio Standard - Qualifying Biomass and Thermal Biomass Systems

Submitted by: Dave Arndt

Position: Unfavorable

Hearing Date: March 1, 2022

I am strongly opposed to Senate Bill 903 and requests an unfavorable report from the Finance Committee.

It had been assumed that young trees mop up more carbon than old ones because they are fast-growing, but recent studies have revealed that ancient woodland growing in temperate regions takes up more CO₂ than young plantations. This is because in some cases, growth accelerates with age and CO₂ absorption is approximately equivalent to biomass (Nature 507 90). Far from plateauing in terms of carbon sequestration at a relatively young age as was long believed, older forests (for example over 200 years of age without intervention) contain a variety of habitats, typically continue to sequester additional carbon for many decades or even centuries, and sequester significantly more carbon than younger and managed stands. - The journal *Frontiers in Forests and Global Change* (2 27).

But even if old trees are continuing to draw down CO₂, what happens when a tree dies? Current carbon accounting assumes that all the carbon from dead wood is released back into the atmosphere again. Removing forest thinnings and burning them to produce energy is therefore viewed as better than leaving them on the forest floor to rot. However, we need to consider the carbon stored in the soil too. Removing and burning 'waste' wood lowers the source of carbon for forest soils. This allows soils to become net sources of carbon to the atmosphere as bacterial and fungal respiration continue to release soil carbon into the atmosphere.

New studies have revealed that even if the pellets are made from forestry residues rather than whole trees, combustion produces a net increase of CO₂ emissions of 55–79% after 10 years over normal forest decomposition. (Environ. Res. Lett. 13 035001). Even after 40 years, models show that net emissions are still 25–50% greater than normal decomposition. Therefore it is concluded that biomass energy can't be considered carbon neutral in a timeframe that is meaningful for climate-change mitigation.

Also, new studies have revealed that combustion of wood product releases many pollutants into the air including fine particulates that cause asthma. Therefore, this technology is especially bad for Maryland residents and the Maryland environment.

If forest need to be thinned or there are waste wood products that need to be disposed of, there are better ways to do this in an eco-friendly way. Such as turning it into mulch, turning it into compost, or turning them into construction materials like press wood.

Finally, if companies still want to do the turn biomass into energy, that is still allowed, however we should not finance this dirty fuel as part of our RPS.

Thank you,

Dave Arndt