Drax, deforestation, climate accounting and biomass – news reports on controversy

https://inews.co.uk/news/environment/uk-drax-power-plant-burning-us-trees-wood-pellets-deforestation-303461 Oct 2020 (update from 2019 article)

- Reports from US National Research Defense Council (NRDC) Links Drax biomass to deforestation via Enviva – 'The demand for energy from biomass has led UK supplier Drax Power to import millions of tonnes of wood pellets from the fraught forests of the US Southeast, through US provider Enviva, which campaigners say is damaging the UK's carbon footprint.'
- Says producing 8 percent more CO2 than burning coal – 'Wood pellets taken from the older carbon-absorbing trees will emit that carbon back into the atmosphere when they are burned for energy, and will release more carbon dioxide into the atmosphere than coal.'
- 'fake accounting trick'
- 'The UK's dependence on biomass puts some of the world's most ecologically valuable forests at risk.'
- Article includes Enviva defence of their forestry practice – not esp convincing imo
- Claims and quotes in article are cited as research by US environmental organisations the National Research Defense Council and Dogwood Alliance

https://www.telegraph.co.uk/news/2020/06/15/emissions-renewable-biomass-should-taxed-report-says/ June 2020 (behind paywall)

- Telegraph investigation found Drax sources some of its wood pellets from forests in Russia that could take up 150 years to regrow. Quotes criticism from Greenpeace Russia
- UK/EU Classification that biomass is carbon neutral does not take into account manufacturing, storing and importing wood pellets, and that the wood burnt replaces other carbon-saving uses – Drax benefits in over £1billion in subsidies and tax breaks.
- Article quotes criticism from Dieter Helm, Professor of Energy Policy at the University of Oxford.
- Telegraph found on visit to US Drax plantation that older trees were being replaced by faster-growing pines

https://news.mongabay.com/2020/05/scientists-warn-congress-against-declaring-biomass-burning-carbon-neutral/ May 2020

- 200 US environmental scientists sign letter sent to congress critiquing the claim that biomass is carbon neutral
- 'biomass burning — using wood pellets to produce energy at converted coal-burning power plants — is not only destructive of native forests which store massive amounts of carbon, but also does not reduce carbon emissions'.
- Britain specifically mentioned as a main exporter

- ‘numerous studies conclude that carbon neutrality, if trees are replanted at all, takes 50 to 100 years — time that the world doesn’t have’.

https://www.theguardian.com/environment/2019/dec/16/converting-coal-plants-to-biomass-could-fuel-climate-crisis-scientists-warn Dec 2019

- biomass burning risks accelerating climate change, according to report by Think Tank Sandbag.
- Alex Mason, from WWF’s EU office, said burning forests was “literally the opposite of what we should be doing” to help tackle the climate crisis. “As 800 scientists pointed out last year, converting coal plants to biomass will increase emissions for decades, if not centuries
- Drax specifically mentioned in article in relation to deforestation and transport emissions
- Drax issues statement published in article defending the sustainability of their wood pellet sources – ‘forest undergrowth’, ‘sawdust’

UK Campaign group, supported by Friends of the Earth, NRDC, Dogwood, Patagonia and others, against Drax and Biofuel. Lots of detailed info about Drax’s deforestation practice and misleading carbon accounting.

https://www.biofuelwatch.org.uk/2018/biomass-basics-2/

https://www.biofuelwatch.org.uk/axedrax-campaign/

Big US environmental NGOs with campaigns against Drax

https://www.nrdc.org/experts/sasha-stashwick/new-campaign-urges-uk-end-biomass-subsidies

https://www.dogwoodalliance.org/2020/06/cut-carbon-not-forests-hard-hitting-campaign-urges-uk-policymakers-to-build-a-true-clean-energy-economy-and-end-dirty-biomass-subsidies/

Article by Fred Pearce (well known writer on global environmental issues and about to publish *A Trillion Trees)* on Drax and biofuels

https://chinadialogue.net/en/climate/bioenergy-from-forests-may-turn-natural-landscapes-into-monocultures/

- good balances piece that gives both sides
- discusses the main issue – the lag between chopping down trees, and burning biofuel and replanting. As well as the difference between newer planted, fast growing monocultural trees that are replacing old native trees (e.g. hardwoods):
- ‘Replacements for the cut and burned trees would take decades to regrow and absorb the CO2. “During this time the additional warming will cause changes such as melting glaciers and thawing permafrost,” says William Moomaw of the Tufts University in Massachusetts. And ecologists say that, under the drive to feed Drax’s boilers, old native hardwoods of the Deep South such as cherry bark oak are being systematically replaced by fast-growing pines.’

Biomass content in the story matrix:

- Scale diagram for biomass, showing how much biomass fuel Drax burns and how much power this generates. This should highlight biomass fuel as a transitional solution as it cannot be scaled up to meet all our energy needs.
- Rapid growing tree plantations can give us a less polluting fuel. Drax power station uses biomass from trees instead of fossil fuels. The carbon the trees have captured during their life is released in this process, so the power generated is carbon neutral

Possible biomass messages to cover

What is biomass and bioenergy?

- Biomass is a fuel derived from animal or plant matter like trees and grasses that is burnt for energy production, such as electricity or heat. This kind of energy is called 'bioenergy'.
- In contrast to fossil fuels, biomass could be considered a renewable energy source, as the plant matter it is derived from can regrow or be replanted.

How do different kinds of biomass compare?

- Wood is currently the most common source of biomass, due to there being a big supply.
- However, trees can take decades to reach maturity, making the scaling up of biomass production a sustainability challenge.
- The introduction of fast-growing crops with high energy potential, like Miscanthus grass, to new environments like the UK provides an alternative source of biomass.

Commented [redacted]: we can add specifics about tree species and growth cycles once objects / details about the Drax sample are known.

Is biomass carbon neutral?

- Biomass can be carbon neutral if the C02 emissions from the processing, transportation and burning of the biomass do not exceed the CO2 absorption from the biomass source, e.g. a planted woodland or crop of grass.
- Carbon accounting for biomass is complex and can be controversial.[1]
- Scientists have argued that wood-derived biomass is not sustainable and can only be carbon neutral over very long time scales, due to the slow rate of growth (and CO2 intake) of most

Commented [redacted]: I think it's really important to include the scientific uncertainty (even if just by hinting at) of the carbon neutrality of wood biomass, as there have been hundreds of scientists, including prominent figures in forestry, environmental, biochemistry and climate science research, who have petitioned and spoken out on this point – as well as multiple campaign groups and enviro orgs, of course.

[1] For example, the Drax carbon calculator is based on two main assumptions: 1) pellets sourced from wood 'waste' such as sawdust residue do not count towards CO2 emissions; and that pellets sourced from whole trees ('round wood') are offset by a combination of annual forest growth and 'sustainable' forest management practice (e.g. thinning and removal of 'forest residues'). These assumptions have been critiqued in the first scientific review of wood-pellet biomass literature https://www.chathamhouse.org/2017/02/woody-biomass-power-and-heat - main critiques: does not take into account the carbon sequestration loss of felled trees and disturbed soil, which even if new trees are planted can take decades before becoming a 'carbon sink' again; problems with forest regrowth models.

trees -- often in the decades – compared to the rapid CO2 emissions from burning the wood biomass.[2]

Building with biomass

- The use of timber in buildings is an effective way to store the CO2 captured by trees and provides an alternative construction material to steel and concrete, which are carbon-intensive to produce.
- Planted woodlands of fast-growing species (e.g. sitka spruce in UK) can help meet the rising demand of sustainably sourced timber.
- Future potential is big

[2] Good introductory article on this point https://www.scientificamerican.com/article/congress-says-biomass-is-carbon-neutral-but-scientists-disagree/ and more detailed one, which includes section on carbon accounting, here https://www.carbonbrief.org/biomass-subsidies-not-fit-for-purpose-chatham-house

Petition of 800 scientists against wood pellet biomass: https://www.dropbox.com/s/l8sx5bl0h02x395/Scientist%20Letter%20on%20EU%20Forest%20Biomass_ENGLISH.pdf?dl=0

Drax's own independent advisory board on sustainable biomass (est. Nov 2019) recommended Drax to 'consider a "Restatement of the Evidence" academic review process to better understand, and draw alignment on, where there is scientific evidence on the sustainability of biomass' https://www.drax.com/sustainability/findings-and-recommendations-from-the-first-meeting-of-draxs-independent-advisory-board-on-sustainable-biomass-iab/