

Briefing #10: Bioenergy with Carbon Capture and Storage

What is BECCS?

When people talk about BECCS in relation to the climate emergency they are referring to 'Bioenergy with Carbon Capture and Storage'. Carbon Capture and Storage (CCS) is a range of technologies that can be used to extract Carbon Dioxide from other gases. The separated carbon dioxide is then stored under the surface of the earth in geological formations that trap the gas long-term. So carbon that would otherwise be adding to the earth's atmosphere is locked away.

BECCS adds another stage to the CCS process. Fast growing woody plants, which take carbon from the atmosphere as they grow, are chopped down, the biomass is burnt in a power station to generate energy, and CCS is used to separate out and store the carbon. CCS and BECCS are often referred to as Negative Emissions Technology or NET.

Why is it important?

CCS and BECCS really matter because currently almost all the carbon reduction targets set by institutions and governments around the world assume that CCS and BECCS can be implemented at large scale. Typically targets talk about aiming for 'net zero' emissions. The net here is not to be confused with Negative Emissions Technology! The assumption is that carbon emissions will continue, but what's pushed out into the atmosphere will be exactly balanced by carbon that's sucked in through CCS and safely captured. It's this assumption that allows the Scottish Government to talk about a climate emergency and set targets to reduce emissions while at the same time supporting continuing production of North Sea Oil and Gas and welcoming the development of new oil and gas fields.

The arguments against BECCS

So why should we be worried? Surely a technology that allows us to reach net zero is to be welcomed? Isn't it a good thing that it's the core component of the climate strategies advocated by the IPCC, the

UK Committee on Climate Change and the Scottish Government? In fact there are a lot of reasons to think that BECCS is a dangerous diversion that cannot achieve the results that many of its advocates suggest and that would have knock on effects that would be disastrous.



Drax Biomass plant by Chris Allen CC BY SA 2.0

Maintaining the status quo?

The big energy companies are interested in BECCS because it allows them to continue business as usual; license to continue exploiting fossil fuels and to maintain their power and profitability. The Scottish Centre for Carbon Capture and Storage takes a different view, arguing that there is a role for CCS in some specialised areas where it is hard to replace hydrocarbon fuels by electricity, but admitting that the technology is very expensive and should be one subsidiary strand of a transition to a sustainable economy. Technologies for CCS exist in theory and have been trialled in laboratories but there are hardly any examples of it working in real life applications. The UK Committee on Climate Change argues that Scotland is particularly suitable for growing biomass crops and that 32% of UK production could take place in Scotland. But globally something like three times all the land currently in cultivation would need to be turned over to biomass. Clearly this can't happen, but even at much lower levels growing crops to be burned, as biomass would displace food crops and the prices of

Image CC0

System change

Even if the technology works and can be introduced rapidly and at scale it seems highly unlikely that it can mitigate emissions sufficiently to avoid going well beyond a 1.5 degree rise. However, for as long as CCS remains the main plank of mainstream strategies it diverts action and investment away from sustainable strategies that we know could work. And it acts as a barrier to the systemic change that is required to save the planet.

E3 is a group of rank and file trade unionists, activists and environmental campaigners. In 2107 we made a submission to the Scottish Government's Consultation on a Scottish Energy Strategy. Since then we have been busy producing and sharing leaflets and bulletins – find them all on the website..

Check out website for other briefings and links to further reading and an active blog that includes essays, news and film.

<https://scote3.wordpress.com/2019/09/10/carbon-capture-and-storage/>

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