Comments to the BSI on the standards for the quantification of greenhouse gas removals associated with BECCS on behalf of Biofuelwatch

These brief comments are made on behalf of Biofuelwatch, a micro-sized NGO campaigning on issues associated with Bioenergy. My name is Katy Brown and I am one of Biofuelwatch's UK bioenergy campaigners. Our comments are made in relation to the standards for the quantification of greenhouse gas removals associated with BECCS. These comments in the main don't relate to specific clauses but rather our general concerns around BECCS in relation to greenhouse gas removals. BSI Standards are important, trusted standards and we are keen to ensure the BSI has the full information, including that which indicates that some of the claims being made around these technologies are somewhat misleading, in order to help guide the organisation in its standards and help ensure it doesn't inadvertently mislead the public.

Loss of foregone sequestration and the carbon payback period.

The supposed aim of greenhouse gas removal technologies is to tackle climate change. However the decades-long carbon payback period associated with using woody biomass as a fuel for power generation is incompatible with the need to reduce emissions before 2030 to safeguard 1.5 degrees of global warming. There is a growing scientific consensus (1,2,3) that the burning of woody biomass in power stations is not 'climate neutral'(4) when factors like soil carbon loss, foregone sequestration and tree regrowth performance are taken into account.

This therefore calls into serious question the assertion that 'BECCS' can achieve negative emissions and therefore serious caution should be taken in providing standards which indicate that BECCS genuinely removes carbon from the atmosphere.

Underground Storage Concerns

There are also serious concerns about the viability of underground CO_2 storage. The Institute for Energy Economics and Financial Analysis has reported leaks from Norway's Sleipner and Snøhvit geological storage sites (5) — both frequently cited as leading examples of carbon capture and storage in action. In addition, the proposed infrastructure poses major safety risks. Transporting large volumes of CO_2 through pipelines across inhabited areas carries the real danger of rupture. In Sartartia, Mississippi, a carbon dioxide pipeline burst in 2020 led to the evacuation of 200 people and hospitalisation of 45 — a stark reminder of the potential hazards associated with such systems. (6) How can there be robust quantification of greenhouse gas removal when there is uncertainty around the permanent storage aspect of this new technology.

Methodology for accounting negative emissions has not been put forward

Last summer, the IPCC put out a call for nominations to an expert group for a "Scoping Meeting for Methodology Report on Carbon Dioxide Removal Technologies and Carbon Capture Utilization and Storage"(7). The IPCC aims to finalise methodologies for national greenhouse gas accounting which cover carbon dioxide removal technologies. BECCS is listed as one of those. Until such a methodology has been finalised, no country can account for 'negative emissions' from BECCS.
Clearly, there will be a BECCS methodology from 2027 onwards. However, what is far from clear is to which country 'negative emissions' will be attributed if CO2 is captured from the burning of imported biomass. Right now, UNFCCC accounting rules say that carbon emissions from logging forests for biomass energy are accounted for in the land use and forestry (LULUCF) sector of the country where the wood comes from. It was decided decades ago that CO2 emissions from burning wood would not be accounted for in the energy sector in order to avoid counting them twice. There is therefore a strong argument that the 'negative emissions' should also be attributed to the country where the wood comes from. We cannot second-guess what the IPCC Expert Group will decide, but neither can the UK Government. It seems premature to create standards when this has yet to be decided.

Leakage
We would like to make a comment on the specific clauses on leakage which our comments on woody biomass burning not being carbon neutral and the accounting methodology for negative emissions being reviewed both relate to.

"4.3 Leakage
Leakage is emissions that occur outside the project boundary due to market effects, resource shifts or ecological impacts caused by the project.
4.3.1 Sources, sinks and reservoirs outside of the BECCS project boundary
Project proponents shall identify changes in sources, sinks and/or reservoirs of GHGs occurring outside of the BECCS project boundary but reasonably attributable to the GGR project (i.e. emissions leakage)."

The emissions from woody biomass burning are not counted at the smokestack, as per the IPCC accounting rules which allow these not be recorded as emissions at the point of burning but as a memo item in the inventory of the country which burns the wood. It is assumed therefore that these emissions are recorded in the Land Use, Land-Use Change, and Forestry (LULUCF) of the source country. These are GHGs outwith the project boundary, the largest proportion of imported woody biomass burned in the UK is sourced from the US, where the emissions are not accounted.The project proponent

must identify the changes in GHGs attributable to its activities in relation to this and these must be included in any quantification of greenhouse gas removals.

The definition that BECCS removes carbon from the atmosphere is also not correct, if it does indeed manage to capture and store any carbon BECCS is truthfully moving carbon from a terrestrial store (trees) to another terrestrial store (underground storage).

End of comments. We are not sure how receptive the BSI will be to these concerns and therefore have made them briefly. However if you are concerned about the issues we raise and would like more information we would be very happy to provide this.

References:

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6. Failure Investigation Report - Denbury Gulf Coast Pipeline May 2022
7. Scoping Meeting for Methodology Report on Carbon Dioxide Removal Technologies and Carbon Capture Utilization and Storage June 2024, IPCC