

Two matters, A and B below.

A

I write this in order to state that I do not share common ground with two statements (pivotal to the scheme) which the applicant makes - for example in

<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010120/EN010120-000622-Drax%20BECCS%20-%20Proposed%20Change%20Notice%20PDF.pdf>.

1) [§] The penultimate sentence of the second paragraph in that document states “*The Scheme is designed to remove approximately 95% of the carbon dioxide from the flue gas from these two Units, resulting in overall negative emissions of greenhouse gases.*” This is clearly untrue. It is unlikely that, on average over each year, approximately 95% of that carbon dioxide will be captured, especially given probable outages (and related start-up and shut-down). Regardless of whether that target is achieved, the scheme self-evidently cannot result in negative emissions of greenhouse gases unless (i) the captured carbon dioxide is permanently stored and (ii) the amount of carbon dioxide emitted is immediately matched by an equal quantity sequestered (which is absurd - for example, see “[Does Wood Bioenergy Help or Harm the Climate?](#)”).

[§] The captured carbon dioxide should be regarded as a liability (of planetary significance given the climate emergency) until permanently stored. For that storage, the applicant will depend entirely on others (especially the fossil fuel industry, which has forfeited its social licence to operate) for downstream infrastructure which might not be feasible, affordable or assured. That assurance would necessarily have to be subject to an effective, globally recognised, system of Monitoring, Reporting and Verification – but one has not yet even been proposed.

2) The application refers to carbon capture and storage. As indicated in 1) above, this is entirely misleading - the application seeks to do no more than capture carbon. The application imprudently assumes that the requisite downstream technology and facilities will be feasible, socially acceptable, affordable and – in perpetuity - without leakage. It also assumes that those who control that downstream infrastructure will let the applicant discharge the captured carbon into it at a price which the applicant can afford (with or without public subsidy).

3) The energy required to operate the carbon capture process and downstream infrastructure will reduce the amount of electricity which can be despatched by the power station. The industry (when speaking impartially) suggests that the reduction in despatched electricity might exceed 30%. That loss would have to be recouped by generation elsewhere – presumably using similar fuel – leading to a corresponding *increase* in greenhouse gas emissions.

[§] This “energy penalty” (together with the far from negligible carbon emissions of the power station’s upstream biomass supply chain and contribution to lost sequestration) substantially reduces the amount of negative emissions the applicant could claim under a credible, necessarily global carbon accounting system. Such an accounting system would have to be designed to not only address the current advanced and accelerating state of climate collapse but also exclude greenwash.

[§] The carbon debt of generating electricity by burning wood from trees – even from “managed” or “working” “forests” (monoculture plantations largely devoid of biodiversity and increasingly subject to fire, pest/disease and land-use change) – tends to exceed, by decades, what remains of the global carbon budget.

[§] Based on data the applicant publishes, Drax power station is the UK’s leading point-source of carbon dioxide emissions. Nevertheless, the UK government considers the exact opposite - that those emissions do not occur (despite it being clear that no accounting entry is made for either those emissions or their sequestration in the countries from which the power station imports wood pellet fuel). Perhaps accordingly, the applicant insists that that

power station is the UK's largest decarbonisation project – and (reflecting market failure) pays nothing to ensure that its emissions are sequestered anywhere (with priority over natural emissions and others' anthropogenic emissions) and nothing to compensate its sources for lost sequestration.

4) The application makes no provision for storing the captured carbon either temporarily (and without any leakage) or before 1) and 2) above are in place. By referring to the scheme as a *carbon capture and storage project*, proponents demonstrate their credentials and willingness to forfeit any benefit of doubt which the Planning Inspectorate / Examining Authority might otherwise have felt inclined to give. The same can be said for their claims concerning negative emissions.

B

I write also both to highlight lack of common ground concerning the carbon capture technology proposed and to suggest why this proposal is being considered before the requisite downstream technology (leak- and rupture-free and linked to permanent storage) is proven at scale.

[§] Concerning measurement, the applicant does not seem to have provided evidence of how, where, when and by whom the emissions from the carbon capture facility will be monitored. Given the widely reported decline in environmental monitoring and policy implementation by government (including the Environment Agency) and the prospect of further cuts, it would be negligent to assume that government will perfectly monitor all emissions and oblige commensurate remedial action.

[§] In contrast, the [Relevant Representation](#) by the UK Health Security Agency and the Office for Health Improvement and Disparities conveys that the Planning Inspectorate / Examining Authority need not bother to concern itself about emissions from which ever necessarily novel technology is utilised.

[§] The pollutants currently emitted are expelled at great velocity and height. This would not be the case when emitted from a carbon capture facility. The application seems to ignore this. The application makes no mention of some species of post-combustion air pollutant currently emitted, notably Particulate Matter.

[§] Concerning technology, world-wide, only one (subsidised, loss-making) unit of one power station currently captures post-combustion carbon dioxide. [Reportedly](#), roughly half of that quantity subsequently discharges into the atmosphere. Other carbon capture projects in the power sector have been abandoned.

[§] Mitsubishi Heavy Industries ("MHI"), the company which the applicant has named as its partner in capturing carbon at Drax, is a market leader in efforts by the globally discredited fossil fuel industry to capture post-combustion carbon dioxide emissions. That captured carbon dioxide tends subsequently to be used in Enhanced Oil Recovery - forcing out yet more crude oil (which, when it or its derivatives are burned, will obviously accelerate the existential threat of climate collapse). Much of that carbon dioxide will necessarily also rise to the surface and into the atmosphere.

[§] The applicant may have recruited MHI merely on account of its market leadership (in a related sector) so as to give the impression of prudence and consequently imply, regardless of the evidence, that MHI has a proven technology ready for deployment by 2027 at a price which the applicant can afford.

[§] The applicant will not use the solvent which MHI employs in the fossil fuel sector. Reportedly, the performance of the alternative solvents which MHI has been assessing at Drax power station's incubator unit is poor and post-combustion technologies being tested by others at that unit are generating similarly discouraging rates of carbon capture. This implies that the application is premature.

[§] It also implies that the applicant's scheme (characterised by its spurious claim to result in negative emissions of greenhouse gases regardless of downstream technology) is to serve as a Trojan Horse. If approved, it will be more awkward to refuse subsequent applications for related downstream infrastructure (whether proven or speculative).

[§] The applicant has already revealed that it seeks public subsidy for being “carbon capture and storage ready” – implying recognition that the downstream technology is likely to be a combination of delayed, leaky, prone to failure and not commercially viable. The applicant’s business is heavily dependent on public subsidy. Most of that subsidy is to be withdrawn by 2027 – presumably shaping the timetable which the applicant proposes for the scheme.

[§] Crucially, the applicant’s scheme also serves to delay the steep decline in fossil fuel use which, being very clearly in the public interest, government should put into effect.

[§] The applicant asserts that BECCS is essential – without specifying precisely where in a given (UNFCCC or IPCC) document this is explicitly stated. However, scenarios to net zero (having minimal impact on Business As Usual) tend to assume that BECCS is proven, viable and will be utilised.