

Submission for Deadline 8

Items 1) and 2) below refer to “*Deadline 7 Submission – 8.10.8 Applicant’s Responses to Issues Raised at Deadline 6 – Rev1*”

Item 3) provides insights into funding for the proposed works.

1)

The response under Table 7.1 (page 114), highlights the importance of explicitly imposing a legal obligation on the applicant to ensure that the carbon capture rate achieved during routine operation of the proposed works is as proposed. The response implies that the applicant is willing to acceptance such an obligation. The proposal to achieve a capture rate of 95% would otherwise be primarily for promotional purposes, which would beg questions about what else might be misleading in the application and likewise behaving legal compliance to be made explicit in documentation such as the DCO and that which the Environment Agency produces – prior to and after consent (if granted).

As has been highlighted in oral and written submissions, achieving half that capture rate would be a global first – especially if (as the applicant’s promotional rhetoric seems to imply) the works are to operate intermittently to provide peaking power.

The applicant might blame the designer if the performance of the works is less than that specified in the tender documents. Financiers would likewise expose themselves to litigation for committing others’ savings to a scheme which has such a remote prospect of achieving the 95% proposed (failing to carry out due diligence on such a widely opposed proposal).

The Examining Authority and Secretary of State should not be surprised if the pilot project of MHI is now complete – or was either suspended or abandoned some time ago. The 300 kilograms per day which was the target for capture is roughly 70,000 smaller than the amount of CO₂ which the applicant currently proposes to bring on-line in 2030. Financiers and Secretaries of State presumably have a duty of care not to accept rhetoric conveying that completion of MHI’s pilot project provides sufficient assurance that the performance of the works at full scale will be as currently proposed.

2)

Under PPL2.2 of Table 8.1, the applicant quotes that “*Drax... met the minimum criteria for deliverability by 2027.*” The applicant no longer proposes to deliver capture facilities at either of its two designated generating units by 2027. The proposal was initially amended so that both units would come on-line three years later, in 2030. The proposal has recently been delayed by a further two years.¹

The applicant does not appear to have notified investors of that further delay. That delay might reflect that the government has already agreed to continue funding the current power station – regardless of whether approval has been given for the proposed works to proceed. Another possible explanation is that the applicant recognises that the proposed works need fundamental reappraisal.

The proposal would not deliver BECCS. It merely proposes to add a carbon capture and CO₂ compression facility - but only as and when doing so would coincide with downstream transport and storage infrastructure becoming available to dispose of that CO₂.

¹ Question R17QA.5 under EPA Rule 17: Tuesday 6 June 2023

It is most unlikely that the applicant's CO₂ would be injected into the saline aquifer (Endurance) at anything like eight million tonnes per year, until well into the 2030s even if the works proposed by the applicant were completed and actually capturing that amount of CO₂. This is because (like blowing up a balloon) the fluid in the aquifer would resist displacement by the (cold) CO₂, momentum would gather pace gradually as the frontier of resistance becomes larger – assuming that the pores in the rock are sufficiently linked and large. The rate of flow would not accelerate indefinitely.

Further, the applicant's response also quotes that the government requires five million tonnes per year of CO₂ to be stored by 2030. The UK government is considering whether to approve several other carbon capture and permanent storage proposals. If any of these succeed in storing CO₂ at scale by 2030, then this would weaken the need for even one of the applicant's two proposed generating units (if that unit captures anything like the proposed four million tonnes per year).

3)

The applicant is widely promoting its expertise in developing BECCS - (i) generating electricity by burning wood, (ii) capturing the related post-combustion CO₂ emissions, (iii) onwards transportation to a permanent store, and (iv) injecting that CO₂ into geological formations for storage. In the USA, the applicant is doing so partly on the back of its "success" in generating electricity by burning wood in UK which, being imported, is deemed (at national level) to have zero post-combustion CO₂ emissions. That magic would not be possible in the USA – because the proposed power stations would burn wood from USA.

The applicant proposes to establish at least two BE with CCS projects in USA, funding this partly through Carbon Dioxide Removal credits (which would have to be repaid if the quantity of CO₂ stored within a specified time was insufficient – a material risk).

Funding the current – controversial - proposal (at Drax) would be a challenge even without the (perhaps concurrent) need to finance those BE with CCS projects in the USA. This reinforces the view that the USA proposals are merely a ploy to induce the UK government to award funding sufficient to keep the applicant burning imported wood for as long as it likes – sustaining rather than deeply reducing global CO₂ emissions and undermining the aim of the subsidy instrument (Contracts for Difference) proposed. That aim is to establish new low carbon generating capacity.² Drax power station is neither new nor low carbon.

² The energy penalty of carbon capture, compression and onwards supply associated with the proposed works substantially reduces existing generation. It is unclear whether HM Treasury or the National Audit Office will be given a say about whether to, in effect, extend the large existing multi-billion subsidy (roughly UK£ two million every day since 2018).