

### **1) Should the application be delayed until the government has revised its biomass strategy?**

This application centres on the burning of imported woody biomass<sup>1</sup>. The UK government planned to deliver a revised Biomass Strategy during 2022 but failed to do so. The related consultation (in 2021) elicited strong critiques against the burning of woody biomass for electricity (and particularly BECCS). The process of approving this application would be more robust if it were coherent with the forthcoming Biomass Strategy (provided that the latter is consistent with reality.<sup>2</sup>

### **2) Is this application being considered under rules which sufficiently reflect the Climate Emergency?**

The current National Policy Statement was published while the UK was a member state of the EU and long before the Climate Emergency was declared. It has become abundantly clear since then that the UK's priority should be rapid reduction in greenhouse gas emissions (including from net imports and shipping), not hoping the discredited carbon-burning industries will both capture and – crucially – *permanently* store all their future (and much of their historic) CO2 emissions.

The High Court ruled in July 2022 that, by March 2023, the UK government should set out in detail how it expects to fully achieve its net zero climate strategy targets, including its legally binding Sixth Carbon Budget). It is widely acknowledged that the UK is unlikely to meet the Fourth and Fifth Carbon Budgets.

The UK government is being sued for its decision to approve the application to open a new coal mine in Whitehaven, Cumbria. As with other such cases judged in plaintiffs' favour, it is alleged that the approval process failed to sufficiently consider the impact of the proposal on (i) the climate and (ii) the harm which approval would cause to the UK's reputation.

### **3) Should the application be suspended until the Climate Change Committee is satisfied that assumptions and details to be provided by the government in March 2023 are sufficient?**

To be sufficient, consideration should be given to (i) the energy penalty of carbon capture technology and emissions from (and locking-in of) compensatory generation - likely to be particularly great if, as Drax' CEO implies<sup>3</sup>, the power station operates intermittently, (ii) the un-insurability of permanent storage, and (iii) flawed arguments that generating electricity from woody biomass can be assumed carbon neutral given the time available.

During 2021, a former Head of Sustainability and Policy of Drax was obliged to resign from the Climate Change Committee on the grounds of conflict of interest.

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<sup>1</sup> Biomass differs fundamentally from annual crops, particularly in its supply chain emissions and foregone sequestration.

<sup>2</sup> Importing woody biomass may cause harm in its source countries [Clause 4.1.3 of NPS EN-1]. Expressions such as "low value" or "waste" should never refer to trees for which there is no immediate commercial value [Clause 2.5.5. of NPS EN-3]. Certification is retrospective not future looking. The pellet industry may promote clear-felling (unsustainable unless from long-established plantations).

<sup>3</sup> Business, Energy and Industrial Strategy Committee. Oral evidence: Decarbonisation of the UK power sector, HC 283. [REDACTED] Question 144.

UK policy that burning woody biomass for electricity would (i) qualify for subsidy and (ii) count towards the UK's "20% by 2020" target under the EU Renewable Energy Directive originated long before the UK left the EU. At that time (2009) it suited the UK and some other EU member states that the carbon debt of burning woody biomass would be ignored – rather than being paramount – under that directive.

Given its carbon debt, Drax' woody biomass is more akin to fossil fuel than a source of carbon-free energy. This application should therefore not be considered against National Policy Statement EN-3. Drax has not yet provided assurance that burning its imported woody biomass would be carbon neutral – Drax has no contracts with landowners to ensure the impossible: that the latter's land sequesters Drax' CO2 preferentially over other CO2.

**4) Would there any point in proceeding with the application if the power station exceeds its design life before or shortly after the first carbon capture facility enters service?**

By 2016, three of the six generating units of Drax power station were beyond their originally intended design life<sup>4</sup>. The newest three came into service roughly 12 years after the first three and presumably have the same design life. Whether and when the carbon capture facility comes into service depends on the down stream works and assurances about the CO2 being stored in perpetuity.

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<sup>4</sup> Coal Generation in Great Britain. The pathway to a low-carbon future: consultation document. [REDACTED] Chapter 1, paragraph 4.

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d) The first phase of BECCS at Drax **will permanently** remove at least 8 million tonnes of CO<sub>2</sub> from the atmosphere each year, making Drax Power Station the world's largest single site carbon capture project.

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Section 7a Given the urgency of the need for **new** CCS in order to decarbonise the power sector in the UK to meet the legally binding target of net zero by 2050,

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5.4.6h The large and **consistent volume** of carbon dioxide available from the Drax Power Station Site provides a continuous supply into the Zero Carbon Humber network and consequently alleviates the operational impacts from **more fluctuating supplies from other carbon dioxide supply sites**.

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*d) The first phase of BECCS at Drax **will permanently** remove at least 8 million tonnes of CO<sub>2</sub> from the atmosphere each year, making Drax Power Station the world's largest single site carbon capture project.*

The statement in italics is misleading. The applicant cannot and will never do BECCS – it merely proposes BECC. The applicant merely hopes that others will ensure that its CO<sub>2</sub> will be permanently stored and/or carry all liability in perpetuity in case of failure. The statement ignores the additional CO<sub>2</sub> which will be emitted in order to make up for the amount of electricity which it will be unable to dispatch by virtue of the energy penalty of the carbon capture and compression facilities. It also ignores the CO<sub>2</sub> emissions of its supply chains upstream. It wrongly assumes that burning imported wood is carbon neutral and incurs negligible carbon debt. It assumes that both units will operate at near capacity throughout each year before the end of their design life (they came into service either in 1973 or 1986). Although a second phase is implied, information about this is conspicuous by apparent absence.

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Although there might be some carbon capture any storage of this at scale is more likely to be for enhanced oil recovery than permanent storage. Conflating the two is misleading.

Unsurprisingly, the National Policy Statement for Energy likewise emphasises the urgency of CCS – and does not question whether the technology works, is commercially viable and storage is permanent. Both ignore the imperative of ensuring a steep decrease in consumption.

The UK is no longer bothering to meet the legally binding fourth and fifth carbon budget under the Climate Change Act (2008). The High Court has rejected the government's proposals for the sixth carbon budget. At current net rates of greenhouse gas emissions, net zero needs to be achieved years before 2050. Citing a date misses the point – the global carbon budget must not be exceeded.

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The applicant has advised government that the power station serves to balance intermittent generation from wind and photovoltaic sources. The other Zero Carbon Humber sites are perhaps more likely than Drax to supply CO<sub>2</sub> in fluctuating volume.

#### **Draft National Policy Statement for Renewable Energy Infrastructure (EN-3)**

Clause 1.7.6 requires consideration of whether the wood raw material could be more cost effectively decarbonise other sectors – which it surely could in – for example - Canada and USA (which account for a large majority of the pellets which Drax burns and which are amongst the leading emitters of greenhouse gas), and would without the gross market distortion of UK subsidies.

#### **Clause 2.6.4**

*The Secretary of State should not grant consent to a proposed biomass or bioliquid-fuelled generating station unless it is satisfied that the operator will (so far as it can reasonably be expected to do so) ensure that the biomass or bioliquid fuel it burns meets applicable RO, CfD or any successor incentive regime sustainability criteria, whether or not support is being claimed.*

As an operator, Drax can do little other than assume that what its suppliers are being truthful in their assertions, especially in relation to raw material procured on an *ad hoc* basis or from unaudited sources – such from the hundreds of small holders who (in the USA) are free to do whatever they like with their woodland after it is clear felled. Neither Drax nor its suppliers has a long term contract or provides payment to ensure subsequent sustainability. Evidence of such a relationship is presumably a bare minimum for the Secretary of State in the context of clause 3.6.4. Clear felling in any event should not be regarded as sustainable other than in an existing wood farm (i.e. plantation).

Overarching National Policy Statement for Energy (EN-1)

Clause 1.4.5

*The generation of electricity from renewable sources other than wind, biomass or waste is not within the scope of this NPS.*

**Drax proposes to continue burning wood (a form of biomass). Under some circumstances wood may be renewable. However, Drax' energy source is more akin to fossil fuel than can justify being within the scope not only of this NPS but also EN-3.**

**The High Court has ordered the UK government (within eight months of its judgement) to update its climate strategy and quantify how its policies will actually achieve legally binding climate targets. This may have an impact on the National Planning Statement and how Drax' proposal should be viewed. Consideration of the application should therefore be suspended until the UK government has done so (especially in ways which the Climate Change Committee finds sufficient).**

At the time EN-1 was published, there was a general assumption that all biomass had the same climate-related characteristics. It is now widely understood – including across the UK government - that woody biomass (including imports thereof) is more like fossil fuel than annual agricultural crops. Inter alia, this is because the carbon debt of Drax wood fuel persists longer than the global carbon budget allows (in relation to the least ambitious target of the 2015 UNFCCC Paris Agreement – let alone 1.5°C). Crucially, Drax is unable to guarantee that its emissions (including post-combustion) will be sequestered – and pays nothing towards this. Further, although the industry's certification systems and rhetoric might imply otherwise, a large proportion of the pellets supplied to Drax probably does not derive from forest land which is being (and will continue to be) managed in ways which sustain species mix, biodiversity, etc.. Indeed, much (particularly its imports from Enviva) has not been audited and tends to be clear-felled.

During mid-2022, the High Court [REDACTED] that the UK government's net zero strategy will not reduce emissions sufficiently to meet its legally binding carbon budgets – and fails to provide sufficient detail to enable proper scrutiny of its plans. This tends to reinforce suspicion that what Drax proposes is inconsistent with the Climate Change Act (2008) and, implicitly therefore the NPS.

Clause 4.1.3 (second bullet point)

*In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the IPC should take into account:*

- *its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts*

**Should adverse impacts which take place outside the UK be considered?**

Adverse impacts of the proposal (specifically the woody biomass supply chain – in relation to biodiversity, foregone sequestration, etc.) are outsourced to countries other than the UK, especially those (Canada and the USA) which are amongst the world's leading emitters. Doing so maximises the commercial viability of the power station (woody biomass grown in the UK is not available in sufficient quantity, and agricultural crops from the UK would be less suitable even if available at the same low price) and (under current carbon accounting rules) enables the UK to ignore the power stations post-combustion emissions. These impacts are likely to persist only if the proposal is approved – the power station would otherwise probably close in 2027 once its ROC subsidies expire (- those subsidies exceeded the operating profit of Drax plc by a factor of more than four during FY2021).

Draft National Policy Statement for Renewable Energy Infrastructure (EN-3) September 2021

2.6.1 categories of biomass include:

*biomass derived from forest residues as co-products of conventional forestry management. This includes forest products generated during thinning, felling and coppicing of sustainably managed forests, parklands and trees from other green spaces. It also includes sawmill residues (often processed to produce wood pellets), other wood processing residues and parts of trees unsuitable for the timber industry* This implies everything which to which the timber industry assigns a value of nil or less, regardless of its value in terms of, for example: ecosystem services, biodiversity, soil protection and the regeneration of trees. Clearly copied direct from the industry or its agents.

2.11 The Secretary of State can allow for uncertainty over precise details of certain elements of a proposed development. However, a number of uncertainties in this proposal are fundamental – including how much CO<sub>2</sub> will be captured on average including during start up, shut down especially if operated intermittently (– to minimise subsidy), the additional CO<sub>2</sub> emitted in order to match the reduction in dispatchable electricity which the carbon capture facility will cause, the uninsurable permanence of storage. The proposal should be assessed against its carbon emissions from forest origin, through combustion to delivery to others after compression – not as if is carbon neutral. Woody biomass compares unfavourably not only against fossil fuel but also biomass from annual agricultural crops

During 2022, a former Secretary of State (for BEIS) was quoted as saying that the importing wood to burn at Drax “is not sustainable” and “doesn’t make any sense.