

Biofuelwatch made brief summary points in our original relevant representation, and would like to expand on these, adding detailed evidence to support our case.

Energy Penalty (effect of the proposed scheme on the output capacity of the power station):

Biofuelwatch wishes to expand upon the fact that the proposed development will lead to a reduction in net electricity generation capacity and production in the UK, contrary to following established and emerging Government policies, and contrary to the urgent need to maintain and improve UK energy security:

a) Overarching National Policy Statement on Energy (EN-1), 2011

b) Draft Overarching National Policy Statement for Energy (EN-3), 2021

Making up the shortfall in electricity yield from the biomass units at Drax following implementation would potentially lead to increased fossil fuel burning elsewhere in the UK with gas generation being the most likely source used to make up the shortfall.

National Policy Statements and Net Zero Strategy:

I will discuss concerns about using the Government's current Net Zero Strategy to assess the need for the Proposed Development following last year's High Court ruling that the Net Zero Strategy is unlawful and must be revised by March 2023.

Overall change in GHG emissions:

The design of the proposed development allows the operator to generate power from burning biomass even if the post carbon capture facility is not working. At such times, the development would be adding significantly to UK greenhouse gas emissions, contrary to government policy and jeopardising the UK's statutory commitment to achieve Net Zero and to fully decarbonise the UK's electricity system by 2035. There is a further issue of emissions from the long carbon payback period and the leakage of GHG in the production, treatment, and extended transport supply chains of woody biomass. This is a point I wish to expand upon during the oral hearing.

Effectiveness and reliability of technology:

I wish to expand upon initial submissions which demonstrate the technical issues of BECCS. BECCS has never been demonstrated to work at scale, and Drax has previously admitted in written consultation answers that their BECCS assumptions are not based on real-world trials. There are currently no examples of large-scale BECCS working at scale, suggesting this technology is far from ready for implementation.

Best Available Techniques:

I wish to expand upon issues of BAT, the proposed technology for the development is not efficient; in contrary to Government guidance on post-combustion carbon capture (Best Available Technique (BAT) Review for Post Combustion Carbon Capture, V1.0 published July 2021.

In addition there is no detail in the application of how Drax intends to deal with the issue of increased sulphur and other particles involved with BECCS (as opposed to CCS). Drax has permission to remove its Flue Gas Desulphurisation plant before work on the proposed scheme commences and we have been unable to find in Drax's application any mention of any of the technologies used in its place to reduce the sulphur.

Amines and health:

I wish to expand upon the issues of the health risks associated with the proposed use of amines as noted in Annex C. Whilst this is related to the efficiency and reliability of the proposed technology, this issue may be better suited to OFH1, and thus will be included in my submission there too.

The presence of increased sulphur and other particles mean a direct comparison with CCS cannot be made in terms of the release of harmful amine degradation products (nitrosamines, nitramines and others). Drax acknowledges in its application that existing toxicological data indicates that most nitrosamines are carcinogenic. Moreover, although there is commercially available modelling software, these results cannot be validated due to there being no real world examples on which to test it. In addition, there is a lack of transparency from Drax as to the particular solvents it intends to use with reasons of commercial confidentiality cited. The combination of these issues makes it very difficult to judge the accuracy of Drax's projections and therefore the likely public health impacts of the proposed scheme. There is a widely-accepted principle of using the reasonable worst-case scenario in models, yet it is difficult to have any confidence that Drax's figures represent such a scenario.

#### East Coast Cluster:

I wish to expand upon the issue that this application is being considered before the applications of other components of the Zero Carbon Humber scheme have been determined. Drax' application is wholly predicated on the approval of those applications: primarily the leak-and-rupture-free pipeline and supposedly permanent storage.