Report Reference Number: 2021/0076/CPO

To:	**Planning Committee**
Date:	**28 April 2021**
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Lead Officer:	**Ruth Hardingham, Planning Development Manager**

Drax Bioenergy with Carbon Capture and Storage Project (BECCS) – Nationally Significant Infrastructure Project

This matter has been brought before Planning Committee for information purposes. The reports also seeks approval from Members of the Planning Committee to support the proposals in principle and seeks the support from Members of the Planning Committee for the Executive to authorise delegation to the Director of Economic Regeneration and Place in consultation with the Executive Member for Place Shaping to agree the Local Impact Report, Statement of Common Ground, the content of the draft DCO, and all further necessary representations by the District Council, together with post decision monitoring of planning conditions and enforcement of the DCO.

Summary:

This report sets out the legislative background to Nationally Significant Infrastructure Projects (NSIPs) and how these are dealt with. Essentially applicants for infrastructure projects need to make an application to the Planning Inspectorate (PINS) for a Development Consent Order (DCO). The final decision is made by the Secretary of State on the recommendation of PINS, but Local Planning Authorities are statutory consultees in the process.

Drax Power Limited is proposing to submit an application for a DCO for the installation of post-combustion carbon capture technology at up to two of the existing 600-Megawatt electrical (MWe) biomass generating units (Unit 1 and 2) at Drax Power Station and this scheme is Nationally Significant Infrastructure Project (NSIP) to be determined by PINS. Two rounds of public consultation are taking place in 2021 – non-statutory consultation took place in Q1 2021; statutory consultation is anticipated to take place in Q3/Q4 2021. It is anticipated that Drax Power Limited will submit their DCO application to PINS during Q1 2022.

Once the DCO application has been submitted to PINS, they will have 28 days to decide whether or not the application meets the standards required to be accepted for examination. Following acceptance, an Examining Authority will be appointed, and all Interested Parties will be invited to attend a Preliminary Meeting, run and chaired by the Examining Authority. PINS then have up to six months to carry out the examination of the proposals through a series of structured and topic based hearings which officers may need to attend. After the examination a decision will be made by the Secretary of State, within 6 months of the close of the examination. Following this the Council will have the responsibility to discharge any planning conditions and enforce the terms of the DCO.

This report outlines and seeks support in principle for the project. A similar report will be taken to the Executive on 27 May 2021. Selby District Council (SDC) is a statutory consultee and authorisation will be sought from the Executive for the Director of Economic Regeneration and Place in consultation with the Executive Member for Place Shaping to agree the Local Impact Report, Statement of Common Ground, the content of the draft DCO, and all further necessary representations by the District Council, together with post decision monitoring of planning conditions and enforcement of the DCO.

Recommendations:

i. That the contents of this report are noted and that Members agree to support this NSIP application in principle, subject to agreement in relation to specific and localised matters of detail.

ii Support that authorisation is sought from the Executive to authorise the Director of Economic Regeneration and Place in consultation with the Executive Member for Place Shaping to agree the Local Impact Report, Statement of Common Ground, the content of the draft DCO, and all further necessary representations by the District Council, together with post decision monitoring of planning conditions and enforcement of the DCO.

Reasons for recommendation:

Timescales for commenting on the DCO application once it is submitted are embedded in statute and it is important that appropriate delegation arrangements are in place so that the Council is able to meet the deadlines which are set by PINS.

1. Introduction and Background

1.1 On 1 April 2012, under the Localism Act of 2011, PINS became the agency responsible for operating the planning process for NSIPs.

1.2 NSIPs are large scale developments such as new harbours, power generating stations (including wind farms), and electricity transmission lines which require a type of consent known as a DCO under procedures governed by the Planning Act 2008 (and amended by the Localism Act 2011). This is not a ‘planning application’ under the Town and Country Planning Act 1990 and the status of the development plan is different in that the principal guidance for their determination is contained within the suite of Energy National Policy

Statements (NSPs). The 2008 Act sets out thresholds above which certain types of infrastructure development are considered to be 'nationally significant' and require the granting of a consent order. NSIPs were introduced as a fast track method and alternative way of dealing with nationally important infrastructure after the much publicised delays in the consenting of Heathrow's last major expansion proposal for a fifth terminal.

1.3 In England, PINS examines applications for DCOs from the energy, transport, waste, waste water and water sectors. For such projects, PINS undertakes an examination of the application and makes a recommendation to the relevant Secretary of State, who makes the final decision on whether to grant or to refuse the DCO. Energy NSPs introduce a presumption in favour of granting DCOs.

2. The Project

2.1 Drax Power Limited is proposing to install post combustion carbon capture technology at up to two of the existing 600 MWe biomass power generating units at the Drax Power Station in Selby, North Yorkshire. This will remove up to 95% of the carbon dioxide from the flue gas, resulting in overall negative emissions of greenhouse gases.

2.2 Biomass will be sourced from sustainably managed forests to generate electricity. As the forests used to create biomass absorb carbon dioxide while growing, the carbon dioxide released when it is used as fuel is already accounted for, making the whole process carbon neutral. By then capturing and storing any carbon dioxide emitted in safe underground deposits, the process of electricity generation becomes carbon negative, as more carbon has been removed from the atmosphere than has been added.

2.3 The proposed scheme includes the following:

- Carbon capture infrastructure at the Drax Power Station;
- Compression and treatment of carbon dioxide at the Drax Power Station to allow connection to a National Grid carbon dioxide transport system;
- Potential Upgraded Drax Jetty and Road Improvements to facilitate the transport of abnormal indivisible loads; and
- Potential Environmental Mitigation Area to the north of the Drax Power Station.

2.4 The carbon dioxide captured will be transported via the proposed National Grid Ventures pipeline for compression at Easington and storage under the southern North Sea. Transport and storage infrastructure will be consented through separate applications.

<u>Carbon capture infrastructure at the Drax Power Station</u>

2.5 It is intended that core items of the existing infrastructure are re-used by installing and integrating the Carbon Capture technology onto the current power generating units, cooling water systems, and Main Stack.

2.6 The Carbon Capture technology is made up of the following:

- A flue gas pre-treatment section, which will look to extract and utilise waste heat from the flue gases, alongside a quench and contaminant removal step (point 1 and 2 on Figure 1);
- An Absorber Column (or absorption tower on Figure 1) for the removal of carbon dioxide from flue gases using an amine solvent. This section will also include a washing section, split into stages to maintain the absorber's water balance, recover chemical vapor and mist, and control chemical emissions to strict levels (point 3 on Figure 1);
- An enhanced regeneration column (or re-boiler on Figure 1) to reverse the carbon dioxide reaction from the amine solvent via the application of process heat, and recover the amine solvent, enabling its reuse (point 4 on Figure 1);
- A filtration and reclamation system that will continuously remove any carry over of contaminants from the flue gas into the amine solvent to maximise usage and minimise degradation;
- Solvent storage and system make-up;
- Compression, dehydration, and oxygen removal of the carbon dioxide to provide the agreed conditions for transport and permanent storage; and
- A new Carbon Capture Wastewater Treatment Plant (WWTP) to treat condensate recovered from the overall Carbon Capture system and enable its re-use.

2.7 Figure 1 below shows a generic form of Carbon Capture. For the Proposed Scheme, the emissions will be routed through the Main Stack.

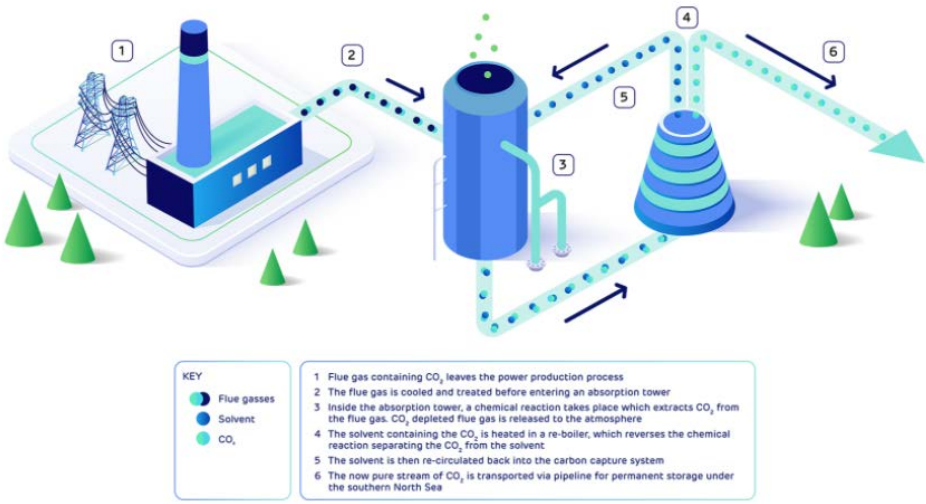

Figure 1: How carbon is captured from an emissions source

2.8 Steam is required for the Carbon Capture process. It is used in the enhanced regeneration column to indirectly heat the carbon dioxide-rich solvent. This reverses the forward reaction of carbon dioxide capture, producing a stream of nearly pure carbon dioxide, at the same time as enabling the recovery and re-use of the amine solvent. Two options are currently being considered for the supply of process steam.

2.9 Following the separation of the amine solvent and the carbon dioxide in the enhanced regeneration column, the solvent needs to be cooled before it can be reused. This is achieved via heat integration, whereby the hot regenerator outlet (regenerated amine) exchanges its heat with the cool regenerator inlet (carbon dioxide-rich amine). This heat integration within the process reduces external cooling demands, while also reducing the amount of steam required to heat the regenerator. Two options are currently being considered for the cooling requirements of the Carbon Capture technology.

2.10 Additional chemical storage and distribution handling facilities will be required to process the amine solvent required for the Carbon Capture technology. This is expected to include new cylindrical storage tanks and warehousing for materials including amine solvent, caustic soda, anti-foam, sulphuric acid and amine solvent waste. Some hazardous waste storage is likely to be required.

Compression and treatment of carbon dioxide at the Drax Power Station to allow connection to a National Grid carbon dioxide transport system

2.11 The proposed scheme will adhere to the National Grid's pipeline specification, which outlines the required carbon dioxide quality, temperature and pressure. The carbon dioxide exiting the Carbon Capture Plant must be compressed and dried, and have contaminants removed before entering the transport system.

2.12 Multiple compression and drying options are currently being reviewed to establish their efficiency, technical and safety merits.

2.13 It is expected that low pressure compression will be located towards the south of the Drax Power Station. High pressure compression will be located in the former woodways towards the north of the Drax Power Station, alongside dehydration, oxygen removal, chilling, and metering to the battery limit location agreed with National Grid. New pipework would connect compression locations. The majority would use existing pipe racks that are no longer required for flue gas desulphurisation, but some new pipe racks would also be required.

2.14 There may be a requirement for unplanned venting of carbon dioxide for safety reasons prior to the gas entering the National Grid transport system. No routine venting of carbon dioxide would take place.

2.15 The National Grid transport and storage infrastructure will be subject to separate consents and licences and does not constitute part of this application.

Potential Upgraded Drax Jetty and Road Improvements to facilitate the transport of abnormal indivisible loads

2.16 An upgraded facility at the location of the Existing Drax Jetty may be constructed and used to facilitate transportation of abnormal indivisible loads (AILs). If implemented, there may also be the potential to bring in other construction materials using this route. An upgraded facility would include security lighting, fencing, storage, welfare facilities and laydown areas. Capital dredging in the River

Ouse would also be required. If the upgraded Drax Jetty is used for AILs only, maintenance dredging would not be required.

2.17 Modifications to Redhouse Lane, Carr Lane and New Road between the existing Drax Jetty and the Drax Power Station may be required to facilitate road transport for large plant between the two locations. This may include temporary use of agricultural land adjacent to the road.

2.18 Drax Power Limited is considering whether these works will form part of the proposed scheme. They may instead seek planning permission for these works under the Town and Country Planning Act 1990 (and consent under other associated Acts, as required in terms of street works). Alternatively, AILs may be delivered to the Port of Goole and transferred via the Goole Bypass, across the M62 and then the A645 to Drax. In this case, temporary removal of street furniture and overnight road closures would be required.

Potential Environmental Mitigation Area to the north of the Drax Power Station

2.19 Land has been identified to the north of the Drax Power Station for possible environmental mitigation. No new infrastructure is proposed on this land outside the Drax Power Station.

Construction Programme

2.20 Construction is expected to start in early 2024 with an estimated 39-month construction programme. Unit 2 is expected to be operational in 2027 and Unit 1 in 2028.

3. The Process

3.1 The Planning Act 2008 process was introduced to streamline the decision-making process for major infrastructure projects, making it fairer and faster for communities and applicants alike. The six stages in the process are: pre-application; acceptance; pre-examination; examination; recommendation and decision; and post decision.

3.2 The Drax Bioenergy with Carbon Capture and Storage Project is presently at the pre-application stage with PINS. The applicants have a statutory duty to carry out consultation on their proposals before submitting an application. Two rounds of public consultation are taking place in 2021 – non-statutory consultation took place in Q1 2021; statutory consultation is anticipated to take place in Q3/Q4 2021.

3.3 The applicants submitted a Scoping Report to PINS on 18 January 2021. SDC and NYCC provided comments to PINS on the Scoping Report on 16 February 2021. PINS, on behalf of the Secretary of State, issued a Scoping Opinion on 26 February 2021. This sets out the required extent and content of the Environmental Statement to be submitted with the application for a DCO. Those areas that may be examined in detail come under the headings:

- Climate Resilience
- Population Health and Socio-Economics
- Transport
- Air Quality
- Noise and Vibration
- Ecology
- Landscape and Visual Impact
- Heritage
- Ground Conditions
- Water Environment
- Minerals and Waste
- Greenhouse Gases
- Major Accidents and Disasters
- Cumulative Effects

3.4 Drax Power Limited have notified PINS under Regulation 8(1)(b) of the EIA Regulations that they propose to provide an Environmental Statement (ES) in respect of the proposed development. Therefore, in accordance with Regulation 6(2)(a) of the EIA Regulations, the proposed development is EIA development.

3.5 It is anticipated that Drax Power Limited will submit their DCO application to PINS during Q1 2022.

3.6 Once the DCO application has been submitted to PINS, they will have 28 days to decide whether or not the application meets the standards required to be accepted for examination. Following acceptance, an Examining Authority will be appointed, and all Interested Parties will be invited to attend a Preliminary Meeting, run and chaired by the Examining Authority. PINS then have up to six months to carry out the examination of the proposals through a series of structured and topic-based hearings which officers may need to attend. After the examination a decision will be made by the Secretary of State, within 6 months of the close of the examination. Following this the Council will have the responsibility to discharge any planning conditions and enforce the terms of the DCO.

3.7 The Council is working in association with the County Council as part of Better Together to, where possible make co-ordinated responses. This approach is favourable to the applicant and probably to the Examining Authority. It is how the two councils have worked together on other NSIPs. Together the two Authorities have the necessary technical specialists to respond to the application fully.

3.8 To date council staff have attended the briefings together and have already submitted the local authorities' response to the applicants Scoping Report.

3.9 NYCC and SDC have set up monthly meetings to manage the application, which will be attended by key planning officers and technical officers. Senior management will be invited if required.

3.10 Submission of the Local Impact Report, Statement of Common Ground, input into the Draft DCO and any written representations will be required in accordance with

deadlines set by PINS, and once the examination commences, these deadlines are likely to be tight. Therefore, authorisation is sought from the Executive to authorise the Director of Economic Regeneration and Place in consultation with the Executive Member for Place Shaping to agree the Local Impact Report, Statement(s) of Common Ground, the content of the Draft DCO and all further necessary representations by the District Council, together with post decision monitoring of planning conditions and enforcement of the DCO.

4. Implications

4.1 Legal Implications

4.1.1 The District Council is an interested party and support for the scheme is subject to agreeing the requirements in the DCO.

4.1.2 The District Council will have further involvement following submission of the application and during the examination period, including attendance at issue specific, and DCO public hearings. It is also possible that appropriate planning obligations, in conjunction with the County Council may be required to address any impacts and if considered necessary in planning terms. Both of these may require some input from the Council's legal team.

4.2 Financial Implications

4.2.1 The District Council, jointly with the County Council, intend to enter into a Planning Performance Agreement (PPA) with *Drax Power Limited.* The PPA will establish a project framework and will give greater clarity to all parties as to their roles and responsibilities. The PPA will also establish a fund set aside against which both this Council and the County Council can claim for work carried out by its service areas which is in excess of their normal working practices.

5. Conclusion

5.1 Members are asked to note the contents of this report and agree to support this NSIP application in principle, subject to agreement in relation to specific and localised matters of detail.

5.2 Authorisation is to be sought from the Executive to permit the Director of Economic Regeneration and Place in consultation with the Executive Member for Place Shaping to agree the Local Impact Report, Statement of Common Ground, the content of the draft DCO, and all further necessary representations by the District Council, together with post decision monitoring of planning conditions and enforcement of the DCO.

6. Background Documents

The National Infrastructure Planning website of the Planning Inspectorate is at the link:

https://infrastructure.planninginspectorate.gov.uk/projects/yorkshire-and-the-humber/drax-bioenergy-with-carbon-capture-and-storage-project/?ipcsection=overview

7. Appendices

None.

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