

DRAX GROUP PROCEDURE

# Environment, Social and Governance (ESG) Databook

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# Appendices

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## Appendix 1 – Basis of Reporting

### Greenhouse Gas Emissions

*Relevant assured data: Group GHG emissions aligned to the Greenhouse Gas Protocol (Scope 1 and 2); Group GHG emissions aligned to the Greenhouse Gas Protocol (Scope 3); Percentage of emissions in UK; Group generation emissions intensity; Group emissions intensity*

Drax reports greenhouse gas emissions against a criterion of operational control. This means that for leased sites we will include emissions from all sites that are wholly operated by Drax and Drax have control of the emission pathway through the opportunity to select and manage its own suppliers.

Greenhouse gas emissions are reported in units of carbon dioxide equivalence (CO<sub>2</sub>e), with conversions of included non-CO<sub>2</sub> GHGs (CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub>, PFCs, HFCs, NF<sub>3</sub>) being made using the AR4 published IPCC global warming potentials for a 100-year period without climate carbon feedbacks, as most external emissions factors rely on external emissions factors based on AR4 over which we have no control. We use the Greenhouse Gas Protocol's Corporate Accounting and Reporting Standard.

Drax will operate a rolling base year model and will recalculate the base year should there be significant changes to the Group's emissions profile. Examples of significant changes could be structural changes; divestment and investment; outsourcing or insourcing of significant emissions; changes in methodology; or discovery of significant errors. Given the commercial fluctuations of Drax activity (i.e. outages, operational failures, fuel conversion, market pricing) causing significant changes to emissions profiles (i.e. 2015 to 2016, 53% reduction) with no criteria for baseline recalculation being met, setting a nominal quantifiable value would be unhelpful and in most years lost as noise. This will not have a material impact on external targets as Drax's target of carbon negative by 2030 is a fixed point and does not require reference to a base year.

The decision on whether to recalculate a base year will be made by the Group Director of Sustainability based on the significance of any structural or methodological changes or discovery of errors. A materiality exercise could be completed with stakeholders if deemed appropriate.

Where externally published emissions factors are used, the first preference will be factors issued by the Department of Environment, Food and Rural Affairs (DEFRA) in the UK and the United States Environmental Protection Agency (EPA) in the USA. Where suitable emissions factors do not exist, trade body, supplier/customer literature and, if required, other reputable external sources will be used.

### Scope 1 and 2

A scope 2 location-based emissions figure will be reported in the Annual Report and Accounts, based on reliable local grid emissions factors. An additional scope 2 market-based emissions figure will be reported on the Group website. The market-based emissions will consider renewable electricity generation as zero emissions provided suitable contractual instruments are applied.

Any information discovered at a later date will be published as a restatement if the error means the data are  $> +/-5\%$  of the total.

For uncertainty, it is noted that the emissions subject to an Emissions Trading Scheme (ETS) are required to demonstrate quantitative uncertainty within a tight error band (major fuels to  $+/-1.5\%$ ). As this covers more than 80% of the Group's scope 1 and 2 emissions (based on 2019), it is considered sufficient to meet the uncertainty requirements of the GHG Protocol. For the remainder of the emissions, Drax aims to reduce uncertainty as far as possible by using raw data and reducing estimations and data gap methods where practical.

Emissions are calculated using NCV, this may require a conversion from GCV in some instances.

[Engineering toolbox](#) is used to estimate the difference between NCV and GCV. It is assumed all fuel purchased is consumed within the reporting year that the monitoring takes place.

### Scope 3

Drax reports against scope 3 emissions as defined by the GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard and uses the same standard against which to report. Drax reports all categories excluding category 13 Downstream leased assets. Drax's downstream leased assets includes a wide variety of activities including farming, woodland plantation, offices, social/sports clubs and more, making calculation infeasible.

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No materiality threshold will be applied to scope 3 reporting when considering emission values. A small number of thresholds are applied within certain calculations. Where relevant, these are stated in the method statements for each category.

Any information discovered at a later date will be published as a restatement if the error means the data are > +/-15% of the overall scope 3 total.

Sources of Scope 3 emissions	Emissions calculation methodology
Purchased goods and services	<p>Emissions calculated based on Group reported operational Opex. Opex is then broken down by each area of Generation, Pellet Production (Drax Biomass), Pellet Production (Pinnacle), and Customers, for which corresponding emissions factors are used which have been calculated, based on Drax data by external consultancy Route2.</p> <p>The upstream emissions for sold coal and gas are calculated using the DEFRA WTT. Since Drax is acting as a trader, that value includes a portion of the transport of the “downstream transportation and distribution”.</p> <p>Processing and transport emissions from all pellets sold to third parties are estimated using the Biomass Carbon Calculator. In the absence of emissions data, the average of Canadian biomass producer’s GHG profile will be used.</p>
Capital goods	<p>Emissions calculated based on Group reported operational Capex. Capex is then broken down by each area of Generation, Pellet Production (Drax Biomass), Pellet Production (Pinnacle), and Customers, for which corresponding emissions factors are used which have been calculated, based on Drax data by external consultancy Route2</p>

<p>Fuel-and-energy-related activities (not included in Scope 1 or 2)</p>	<p>Quantity of fuels and electricity consumed are measured or calculated. Data are then converted to CO2e using the DEFRA Greenhouse gas reporting: conversion factors. For fuels where DEFRA do not publish accurate factors other reliable sources are used, e.g. limestone supply from the National Stone Council (USA).</p> <p>GHG emissions from the biomass supply chain are calculated using an in-house method aligned to Ofgem reporting requirements and assigned as required for scope 3.</p> <p>Upstream emissions from SF<sub>6</sub> in the Group’s consumed electricity are based on emissions intensities provided by external consultancy Route2.</p> <p>This category includes power sales.</p> <p>Given difficulties in accounting for Drax generation within the GB National grid, it is assumed that the sales from customers businesses are of Drax generated energy first. If Drax does not generate sufficient energy to cover the sold quantities then we account for the production in scope 3, based on emissions intensities and boundaries published in electric insights (<a href="http://www.electricinsights.co.uk">www.electricinsights.co.uk</a>). The fuel mixtures used are based on the most recent verified fuel mix disclosures for each of Haven and Opus. The same principle of Customers sold electricity being assumed to be Drax generated electricity is also applied to the downstream SF<sub>6</sub> emissions.</p> <p>Electricity from Cruachan’s pumped water electricity is currently assuming the emissions from pumping as the same grid intensity as the grid. However, this very conservative as pumped hydro facilities mainly utilise excess energy from the grid (ie: surplus of wind energy).</p> <p>Pinnacle vessels fuel usage is included in the Scope 1 emissions and included in the operational boundary. Therefore, the WTT emissions from the marine fuel oil is included in this group. All journeys are included based on the bill of lading date (start of journey).</p> <p>WTT emissions from electricity supply are included based on the DEFRA Factors for 2021.</p>
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<p>Upstream transportation and distribution</p>	<p>Upstream transportation from Pellet Production business, covering emissions from operations prior to Drax operated pellet plants and emissions associated with operations between the Drax operated pellet plants and Drax Power Station. Calculated using in-house method aligned to Ofgem reporting requirements and assigned as required for scope 3.</p> <p>Data for the upstream supply of sludge to Daldowie pellet plant were provided directly from the supplier, Scottish Water, based on 2019. This value will be assumed still relevant until a significant operational change occurs.</p> <p>Additional emissions from this category from goods and services reported under categories 1 and 2 are calculated based on emissions intensities provided by external consultancy Route2, based on Drax data.</p>
<p>Waste generated in operations</p>	<p>For UK sites, data are broken down by European Waste Code. Once waste is identified, the nearest emissions factor and closest route (based on R/D code) from the waste disposal tab on the DEFRA Greenhouse gas reporting: conversion factors are used.</p> <p>For sites where data are unknown, a figure is calculated based on an average from similar operations (eg: tonnes of pellets produced, headcount, size of land, or data from previous years) and an emissions factor based on sites for which data are known. Any waste stream weighing less than two tonnes is deemed immaterial and excluded.</p> <p>All downstream emissions associated with waste will be assumed to take place in the year the waste is quantified as leaving Drax Group’s responsibility.</p>
<p>Business travel</p>	<p>Data are provided from records kept by the business' contracted travel suppliers and internal HR and facilities teams for business travel by rail and air, as well as for hotel stays and taxis. These numbers are then multiplied by the relevant emissions factor using the DEFRA Greenhouse gas reporting: conversion factors.</p> <p>Internal expense claims systems are used for the collation of mileage travelled by employees in their own cars on business, the emissions factor for an average car from DEFRA Greenhouse gas reporting: conversion factors is used to calculate emissions from the mileage. Where business units are unable to measure this, a pro rata</p>

	<p>approach is applied based on known Group mileage and head counts.</p> <p>Data on hire cars mileage are multiplied by the relevant emissions factor using the DEFRA Greenhouse gas reporting: conversion factors. For hire car contracts where the same data are not available a calculated miles per day are applied to other records.</p> <p>Additional spend via Group credit cards in this respect are calculated based on emissions intensities provided by external consultancy Route2, based on Drax data.</p>
Employee commuting	<p>Emissions from commuting are calculated based on the number of employees on each site on 31<sup>st</sup> December. Despite the impact of COVID-19 on remote working policies, these were not included in the GHG calculation. Emissions intensities for each site are provided by external consultancy Route2, based on Drax data and external information on commuting habits. New business areas (Pinnacle) which was not included during the original Route2 data will use the weighted average as its own.</p>
Upstream leased assets	<p>Gas and electricity supply in leased offices, this is supply which is outside of the reporting boundary for scope 1 and 2 emissions. Data are taken from landlord invoices, supplier reports and/or meter readings and converted to emissions using DEFRA factors.</p> <p>Where office data are not available, an appropriate methodology will be estimated based on the available data. This may be, but not limited to, office headcount, floorspace or using data from known Drax Group offices.</p>
Downstream transportation and distribution	<p>Emissions from transport of Daldowie pellets; transport of ash; and SF<sub>6</sub> emissions within the National Grid are based on emissions intensities for each site provided by external consultancy Route2, which are based on Drax data.</p>

<p>Processing of sold products</p>	<p>Emissions are based on emissions intensities from Mineral Products Association</p> <ul style="list-style-type: none"> <li>• Sustainable Development</li> <li>• Report 2020, with quantities measured by Drax for sold ash.</li> </ul> <p>For gypsum, an emissions factor for the 15mm Gyproc SoundBloc is taken. However, this factor, provided by British Gypsum, includes material supply and transport, this is therefore conservative. Furthermore, as this includes transport, to avoid double accounting no downstream transportation or distribution emissions are assigned in that category for gypsum.</p> <p>All processing is assumed to take place in the year the ash is measured for sale.</p>
<p>Use of sold products</p>	<p>There are four distinct areas for consideration of emissions from use of sold products: Daldowie pellets (CH<sub>4</sub> and N<sub>2</sub>O); natural gas purchased and sold to end users, coal stocks purchased and sold; use of pellets sold by to third parties.</p> <p>The CH<sub>4</sub> and N<sub>2</sub>O emissions from Daldowie pellets are calculated using DEFRA emissions factors based on recommendation provided by external consultancy Route2.</p> <p>The CH<sub>4</sub> and N<sub>2</sub>O emissions from all pellets (excluding Daldowie above) are accounted for using the Drax Biomass Carbon Calculator which uses the <a href="#">EU directive</a>.</p> <p>The combustion emissions from gas and coal sold to end users are accounted using the DEFRA emission factors.</p>
<p>End of life treatment of sold products</p>	<p>This category is not applicable to Drax.</p>
<p>Downstream leased assets</p>	<p>Drax excludes this category from reporting as it is unfeasible due to the nature of the leases.</p>
<p>Franchises</p>	<p>Drax Group does not operate any franchises.</p>
<p>Investments</p>	<p>Drax Group does not have any assets under management.</p>
<p>Other (upstream)</p>	
<p>Other (downstream)</p>	



### Carbon Negative

In 2019 Drax launched an ambition to become carbon negative by 2030. This ambition is based on more GHGs being sequestered into carbon sinks than being emitted from the Group. The boundaries for this include all scope 1 and 2 emissions and direct removals

The ambition is to be calculated based on scope 2 location-based emissions.

### Energy

*Relevant assured data: Group energy consumption*

As required by the Streamlined Energy and Carbon Reporting (SECR) requirements covered in The Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018, Drax reports all group energy consumption in kWh.

Energy consumption is reported based on a net calorific value (NCV). In the instance where NCV is not available, another source may be used, or a conversion may be necessary. For example, a conversion from GCV to NCV for USA fuels is estimated based on [Engineering Toolbox](#).

There is no materiality threshold applied to the energy reporting, and in the result of a later discovery of errors or omissions a restatement will be made should that error be > +/- 5%.

### Water

*Relevant assured data: water abstraction and discharge*

Drax reports its UK water abstraction and return as defined by local regulators (e.g. Environment Agency and Scottish Environmental Protection Agency). The data disclosed will therefore align to compliance definitions. There is no materiality threshold applied to the water reporting, and in the result of a later discovery of errors or omissions a restatement will be made should that error be > +/- 5%.

### Headcount

*Relevant assured data: Employment data on headcount as per contracts, country, business unit and gender*

Employee headcount data is based on the number of full and part time permanent employees employed by the Group on 31 December of the reporting year. These data do not include contractors.

### Restatements

Unless otherwise stated, if at a later date an error is discovered on data reported through the ESG databook system that is > +/- 5% of an overall Group total, then, where necessary, a restatement will be made.