



'BECCS Done Well': Final response and commitments from Drax

April 2024

drax

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Introduction from Will Gardiner, Drax CEO

I am pleased that today we publish our commitments and final response to the 'BECCS Done Well' report published in late 2022. The report and its 30 conditions (relating to Bioenergy with Carbon Capture and Storage) have played a vital role in discussions across our Executive Committee and leadership team over the last 18 months, contributing to our transformational journey as a business.

Over the last two decades, we, as Drax, have transformed our business from being a coal-fired power station, to using biomass from sustainably managed forests. Through the investment in CCS, we are converting Drax Power Station (DPS) into a BECCS plant. In addition, we have ambitions to expand our BECCS operations in North America led by Laurie Fitzmaurice, President of the new global BECCS business.

Since the publication of the original 'BECCS Done Well' report in November 2022, my Executive Committee has spent significant time and energy discussing the conditions presented in the report. This process has been incredibly valuable to us and has enabled us to rethink and revalue our approach and has informed how we may adapt our business model. The report has forced tough conversations and generated a lot of strategic thinking on how we can align with the conditions. Whilst of course we do not agree with every word of the conditions, there is very little we fundamentally disagree with – as we explain in this, our final response.

When done sustainably BECCS can have profoundly positive impacts to our climate and facilitate the world's journey to Net Zero. That is why I am excited for how we, as Drax, can scale BECCS and play our role in tackling climate change. We will continue to remain up to date with the science underpinning our operations to realise the high-quality and trusted removals that the world needs.

I am very grateful to Jonathon Porritt and the High Level Panel, as well as the Expert Witnesses involved in their report, for their thoughts and direction. Lastly, I hope this final report from us demonstrates our commitments and determination to deploy BECCS in a way that drives positive outcomes for people, nature and climate.

Will Gardiner
Chief Executive Officer



Foreword by Laurie Fitzmaurice, President Global BECCS

I've joined Drax at a particularly pivotal time for this industry – a moment which reflects the state of our climate and energy systems. The recent “global stocktake” at COP28 warned of the need to move faster to tackle the climate emergency.

This is an immense task and there's no silver bullet, but we can be confident that BECCS has an important role to play. We are now seeing broad consensus among the global scientific community that reducing emissions is necessary but not sufficient – the planet needs to go further and faster, by removing carbon already in the atmosphere and balancing hard to abate emissions, while increasing the amount of renewable energy. BECCS is the only technology proven capable of doing both - permanently removing carbon dioxide while producing renewable 24/7 power.

Drax is ready to answer this call. BECCS by Drax will generate millions of tons a year of high integrity, permanent carbon removals as early as 2030. The scale of this ambition reflects what I see as a once-in-a-lifetime opportunity to be a founding player in a market which will play a critical role in tackling climate change.

But none of this bold ambition will be possible if we don't do it the right way. To deliver BECCS we will need close collaboration and partnership with multiple stakeholders to develop the policies, frameworks and governance to deploy these technologies at scale. That's why the work reflected in this final 'BECCS Done Well' response and the work that is ongoing to embed these policies into our approach and operations is so critical. I'm immensely grateful for the work that has gone into getting us to this point and welcome the opportunity to help shepherd it forward. I'm particularly impressed and grateful to Jonathon Porritt and the High Level Panel for their work and the challenges they laid at our feet with the BECCS Done Well report released almost 18 months ago.

I think a large part of what defines a business is not the size of the challenges it faces but how it approaches them. This report reflects an immense challenge but also how the teams at Drax have come together to answer it. I'm proud to be a part of that mission and confident that this work puts us in sight of becoming a global leader in the delivery of sustainable and responsible carbon removals.

We know what the stakes are. This is our opportunity – let's capture it together.

Laurie Fitzmaurice
President Global BECCS

Introduction

BECCS as a concept, combining several technologies and supply chains in Biomass, Energy, and Carbon Capture and Storage (CCS), has been around since the late 1990s, but it has only recently started to become a commercial proposition. The sale of negative emission credits (Carbon Dioxide Removals or “CDRs”) generated by BECCS provides companies and regions with the ability to meet their net-zero ambitions. The credits sold can be used to help those who choose to buy them to deliver the “net” in their net zero commitments.

More importantly, the need for carbon removals as a contribution to achieving the global ambition of slowing down the rate of climate change is well-established. For example, nearly all scenarios considered by the Intergovernmental Panel on Climate Change (IPCC) that limit warming below 2°C rely on some proportion of CDRs. This is because CDRs can help to offset emissions from hard to abate sectors and accelerate the pace of emissions reductions. They can also provide the option for net negative CO₂ emissions in case of global temperature “overshoot”. For BECCS to succeed, the technology needs to work, the biomass needs to be harvested from sustainable sources, and stakeholders need to believe in the processes and metrics.

So, what are stakeholders looking for to feel confident and positive about BECCS? In early 2022, Drax commissioned a study from Jonathon Porritt, environmental campaigner and co-founder of Forum for the Future, to answer that question.



'BECCS Done Well' process

In November 2022, the High-Level Panel Jonathon Porritt convened published a report reflecting stakeholder views from their independent inquiry into how BECCS can be done well. The aim of the inquiry was to identify the necessary conditions which, if met, would ensure that BECCS can deliver positive outcomes for climate, nature and people.

The Panel called upon expert witnesses from the fields of CCS, forestry, energy and climate change, who presented their evidence and reviewed numerous pieces of published literature. The investigation resulted in 30 conditions under which BECCS could indeed be "done well".

Since the publication of our preliminary response to the 'BECCS Done Well' report in July 2023, we have taken stock of the commitments we made then. This, our last formal update on the 'BECCS Done Well' 30 conditions, is where we outline our progress to date. It also shows how we will see through the actions and outcomes by embedding them into our day-to-day operations.

Drax developments

Since we commissioned this report in 2022, our BECCS plans have evolved. At the time, our ambition was to convert the originally coal-fired and now biomass-fired Drax Power Station (DPS) in Selby to become a BECCS plant. This is still the case and, subject to ongoing discussions with the UK government, we aim to have our first BECCS unit at DPS operational by 2030. Our ambition for the plant is to capture and store 8Mt of CO₂ a year.

Since 2022, we have also been progressing several options for new-build BECCS, with a focus on North America. We are developing plans for new-build BECCS power facilities that are each capable of producing substantial baseload renewable power whilst capturing and permanently storing millions of tonnes of carbon each year.

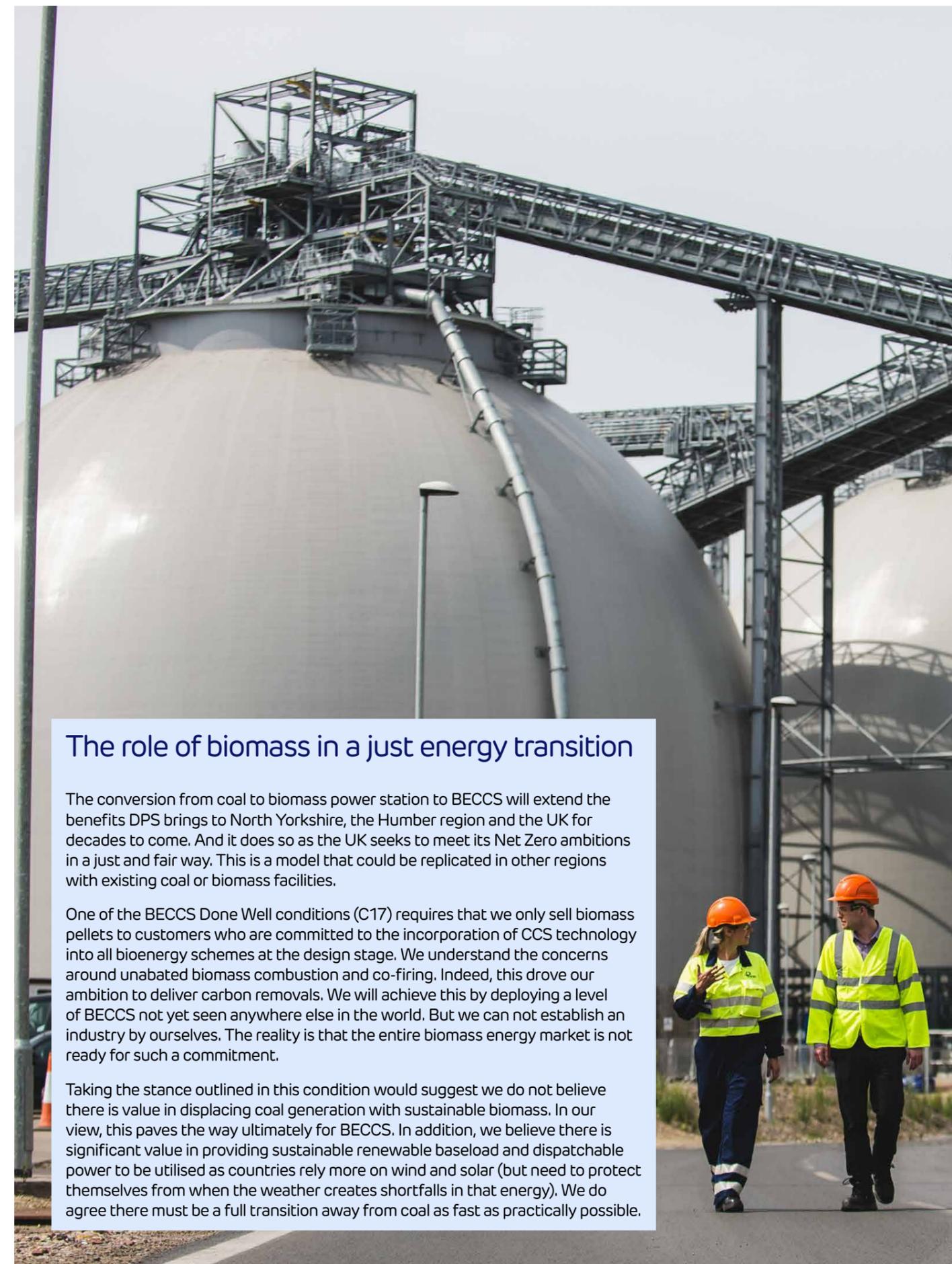
We have a first site selected and are progressing through pre-FEED (front-end engineering design). Although the details remain commercially sensitive, we chose the US South because of its access to a sustainable fibre basket, and to both CO₂ transport and storage infrastructure. Adherence to 'BECCS Done Well' conditions such as local biomass (C19)* and biomass certification (C1) were integral to this decision making. The Group will also assess options for enabling BECCS on existing non-Drax assets and will continue to screen other regions, including Europe and Asia.

The need for carbon removals

It is worth reflecting on the scale of the Drax ambition in a global climate context. Currently, engineered methods such as Direct Air Capture are removing approximately 2Mt/yr of CO₂ from the atmosphere worldwide. The largest plant either existing or planned to date is ~1Mt/yr. Therefore, our planned developments will easily be amongst the world's largest CDR facilities.

However, the climatic need for CDRs is measured not in millions of tonnes, but in thousands of millions (billions) of tonnes. According to IPCC estimates, the amount needed could be as much as 17,500 Mt/yr by 2050. Seen in this light, the necessity for the scale of the Drax ambition is clear – as is the need for it to be replicated by a greater number of players. This would establish a whole new CDR industry to deliver the billions of tonnes of carbon removals required.

To give a sense of this new industry's scale, and the infrastructure and number of people needed, the global oil industry currently extracts around 4,000Mt of oil a year. And, arguably as important as the scale of removals deployment, is the quality of those removals. It is our desire to set a precedent for best practice that the new BECCS industry follows. Hence, 'BECCS Done Well'.



The role of biomass in a just energy transition

The conversion from coal to biomass power station to BECCS will extend the benefits DPS brings to North Yorkshire, the Humber region and the UK for decades to come. And it does so as the UK seeks to meet its Net Zero ambitions in a just and fair way. This is a model that could be replicated in other regions with existing coal or biomass facilities.

One of the BECCS Done Well conditions (C17) requires that we only sell biomass pellets to customers who are committed to the incorporation of CCS technology into all bioenergy schemes at the design stage. We understand the concerns around unabated biomass combustion and co-firing. Indeed, this drove our ambition to deliver carbon removals. We will achieve this by deploying a level of BECCS not yet seen anywhere else in the world. But we can not establish an industry by ourselves. The reality is that the entire biomass energy market is not ready for such a commitment.

Taking the stance outlined in this condition would suggest we do not believe there is value in displacing coal generation with sustainable biomass. In our view, this paves the way ultimately for BECCS. In addition, we believe there is significant value in providing sustainable renewable baseload and dispatchable power to be utilised as countries rely more on wind and solar (but need to protect themselves from when the weather creates shortfalls in that energy). We do agree there must be a full transition away from coal as fast as practically possible.

*All references of this kind relate to the 30 numbered conditions in the 'BECCS Done Well' report.



BECCS: retrofit and new-build options

BECCS can be developed as a new-build or be retrofitted to an existing generation plant. There are different opportunities and challenges between types of BECCS retrofits, depending primarily on whether the starting point is coal or biomass combustion, or some mix of the two. At DPS, we have been on the journey from entirely coal-firing to co-firing biomass, to entirely firing biomass – with the plan to have BECCS operating soon.

If the aim of a BECCS retrofit is to remove carbon from the atmosphere, then the starting point will impact the efforts required to ensure it is done well. Let's take biomass sourcing for a coal retrofit as an example. Inevitably, this is constrained by the facility's location, which was originally determined by factors such as where the coal lay underground, or what infrastructure was required to extract it. Biomass may need to be transported significant distances to reach the coal retrofit.

Conversely, the location of a biomass retrofit or new-build BECCS facility will factor in the site's proximity to that biomass, aiming to reduce the need for long distance transport. New-build BECCS facilities will also need to consider the proximity to the transport and storage systems used to permanently store the CO₂ captured as part of the BECCS process. However, overall they are less likely to require long-distance transport of biomass than a coal retrofit.

If transporting biomass over a long distance, the denser the biomass is in energy terms, the more cost- and carbon-efficient the transportation will be. This often means the requirement for pelletisation. Another factor in whether you might need pellets is the design of the boiler in the bioenergy plant. Coal retrofits will often require pellets, but with new-builds the facility can be designed to accommodate a wider choice of biomass materials, including non-pelletised material such as woodchips. Thus the value chain emissions can be lower for new-build BECCS.

Whilst there may be emissions advantages associated with new-build BECCS, legacy coal asset retrofits could play a large role in a just energy transition. Our experience with DPS is a case in point. What was once one of the largest coal-fired power plants in Europe became a flagship decarbonisation project through the biomass conversion process. We initiated this process in 2003 and completed it in 2018. By keeping this asset running, we were able to minimise job losses relative to a plant closure. We also helped to sustain the local community and "keep the lights on" for the country, while continuing the contribution to the economy that DPS makes locally and nationally.

Clearly, new-build and retrofit projects have different challenges and benefits – but both must conform to the high standards outlined in the report. This will require different levels of effort depending on the specifics of each project.

For example, value chain decarbonisation for a project with international biomass imports will require a focus on pellet mill and shipping operations. This focus will be different for a project that uses biomass sourced locally. Conversely, mitigating impacts from greenfield site development requires more attention than a legacy brownfield site conversion, but creates the potential for co-location with other industries and shared infrastructure.

We have endeavoured to keep our standards high and have not differentiated between project typologies when translating the 'BECCS Done Well' conditions to drafting policies and business unit implementation plans. However, we do recognise that the requirements for meeting these conditions will be project specific.

CDR customer expectations

The 'BECCS Done Well' process has not been the only stakeholder input shaping how we build BECCS and sell CDRs. In late 2023, we collaborated with EcoEngineers and Stockholm Exergi to publish a draft CDR Methodology which sets out a robust framework for quantifying net carbon removals from BECCS, as well as setting stringent standards for biomass sustainability.

In creating the methodology, we considered the concerns of Voluntary Carbon Market (VCM) stakeholders from the outset by sharing drafts with key players and holding informal bilateral conversations. We also ensured we had a formal process for validation that included stakeholder workshops and third-party audit, currently in the process of being finalised.

The 'BECCS Done Well' commitments informed many of these conversations, allowing us to test the conditions within the VCM community and helping to influence our thinking on the CDR Methodology. In particular, we considered 'BECCS Done Well' commitments on Enhanced Oil Recovery (EOR) (C25), supply chain emissions (C24), High Conservation Value (HCV) and Old Growth forests (C4), stable carbon stocks (C3, C18), life cycle assessment (C12) and the precautionary principle (C26).

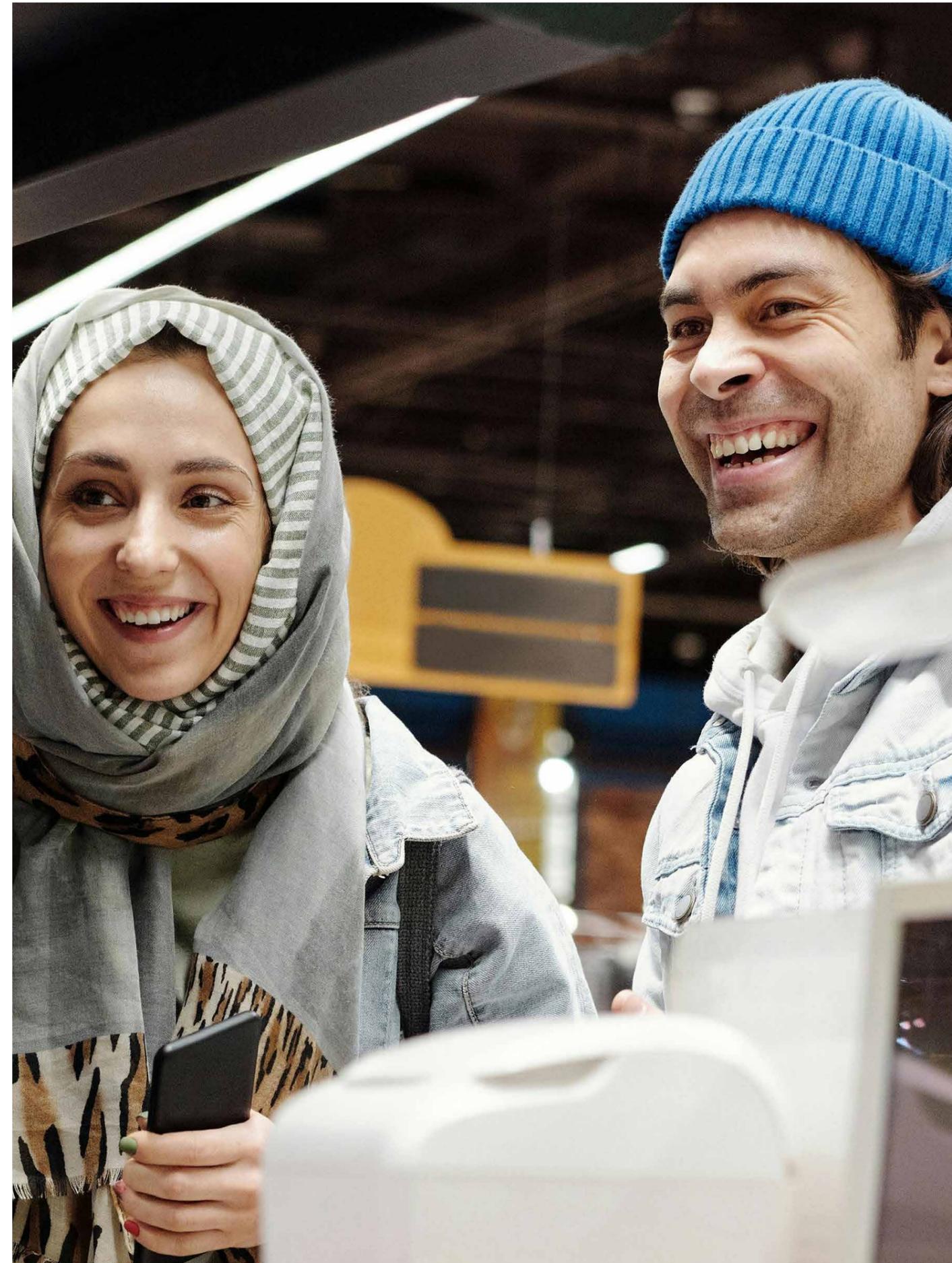
We created the methodology to align with the Core Carbon Principles of the Integrity Council for the Voluntary Carbon Markets (ICVCM). These principles include robust quantification, transparency and independent third-party validation and verification. Shortly after, Carbon Direct in conjunction with Microsoft published a report outlining best practices for buyers seeking to purchase CDRs based on biomass. Both reports are important: while 'BECCS Done Well' reflected what stakeholders from the academic and NGO communities sought, the newer work considers the expectations of CDR customers.

Summary

'BECCS Done Well' has prompted lengthy and detailed discussions within our business about how to best embed sustainability in project design and raw material supply. It has also helped us to prioritise the needs for our ongoing consideration and development.

In this final response to 'BECCS Done Well', we have grouped the 30 conditions into 6 themes that align with our existing sustainability framework. We give updates on our progress and commitments on each of the 30 conditions within these 6 themes. Also, we include an appendix with a table listing all 30 conditions, our commitments to them, and where our approach may differ to the original intent of the condition.

We hope this document shows we are listening to our stakeholders and their interests, including CDR customers. We are mindful that some of the issues presented by the 'BECCS Done Well' process will not be solved quickly or by Drax alone. However, in this final response, we demonstrate how we, as a business, will approach these issues and play our part in the wider global challenge of mitigating climate change.





From 30 conditions to 6 themes

Since the publication of our initial response to 'BECCS Done Well' in July 2023, we have continued our work. We have developed policies and built the systems and processes needed to enable our BECCS projects to deliver the aims and outcomes set out by the 30 conditions.

Now, we have grouped the conditions into 6 'BECCS Done Well' themes that describe how we deliver our sustainability goals as well as climate, nature, and people positive outcomes:



Drax response to 'BECCS done well: conditions for success for bioenergy with carbon capture and storage'

July 2023

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1. Biomass

We have policies and processes to ensure we source all our biomass to verified standards for sustainability. These standards are designed to verify that our sourcing follows the principles of sustainable forestry, that carbon stocks are known and not adversely affected by our sourcing and that our sourcing does not drive harmful direct land use change.

2. Climate Positive Outcomes

We maximise the 'net negativity' of BECCS by maximising our CO₂ capture rates and decarbonising the BECCS operation and value chain. We will account for emissions across the full value chain and decarbonise following SBTi-validated targets. We only use geological storage where the potential permanence for storage has been licensed in well-regulated jurisdictions. And there is sufficient monitoring and verification in place to check for that permanence.

3. Nature Positive Outcomes

We recognise the growing need for companies to contribute towards creating what many now refer to as a "nature positive" future. This means we need to know our impact on nature across our operations and supply chains. To achieve this, we will monitor the ecosystem health of our source regions and the impacts of our direct operations on nature. And we will strive to both minimise our own impacts, through working to agreed standards in our value chain, and to support broader restoration efforts.

4. People Positive Outcomes

We will identify our impacts on communities, neighbours, and our workforce, and proactively work with local communities to realise positive impacts and reduce negative impacts. We seek to become an exemplary operator in addressing issues of environmental justice and in contributing to a just energy transition.

5. Transparency and Governance

We will engage in proactive and transparent monitoring, reporting and disclosure, utilising frameworks such as TCFD and TNFD, as well as all applicable regulatory requirements.

6. Science

We are informed by science and will listen to stakeholder feedback by routinely engaging with academics, NGOs, and industry bodies to assess the breadth and robustness of scientific evidence. We promote further research where gaps exist.



Delivering our themes

Theme 1 – Biomass

We have policies and processes to ensure we source all our biomass to verified standards for sustainability. These standards are designed to verify that our sourcing follows the principles of sustainable forestry, that carbon stocks are known and not adversely affected by our sourcing and that our sourcing does not drive harmful direct land use change.

We have been defining and refining our standards and processes on how we source biomass since we started the conversion of DPS. Many factors inform our standards for sustainable biomass. They include the stakeholder views, such as those articulated in 'BECCS Done Well', as well as third-party certification systems like the Sustainable Biomass Program (SBP) and the Sustainable Forestry Initiative® (SFI) (SFI-01578). We comply with all local and international regulations.

Our biomass sourcing policy outlines which sources we will use (and not use) to produce our biomass. We insist that fibre sourcing does not negatively impact forest carbon stocks or the overall health of the ecosystem at the landscape level (C3, C18). This means source areas retain forest cover, avoid deforestation, or that sourcing in these regions makes a positive contribution to restoring the forest system following disturbances such as wildfire or pest outbreaks.

The policy sets out practices to avoid damaging or destroying forests with high biodiversity or high carbon stores in our sourcing (C4). It also outlines our forest biomass sustainability commitments: we recognise our duty to keep forests thriving and to respect the many benefits they bring, including carbon storage, protection of soil and water quality, supporting biodiversity and provision of habitat. We plan to publish an updated version of this policy in 2024. Along with our new nature policy, it will identify the importance of biodiversity and critical or High Conservation Value habitats for all sourcing areas and outline our considerations. We are developing our nature policy (C5), which will set out our additional requirements around protecting sensitive ecological features and biodiversity and mitigating our impacts on forest ecosystems.

Early CDR customers have requested that material from primary forests not be used in the generation of CDRs. This is reflected in the requirements set out in the CDR Methodology we developed with Stockholm Exergi and EcoEngineers. It specifically excludes the use of biomass sourced from primary forest, old growth forest and areas of high biodiversity or sensitive ecosystems (C4). It also requires biomass to be sourced from areas where carbon stocks are stable or growing (C3, C18).

More details on how we operate in British Columbia (BC), specifically in relation to OG/HCV forests, is provided in the box opposite.

Definitions of Primary/OG/HCV/OGDA

The definitions used for old growth, primary forest and High Conservation Value forest vary between regulations used in different regions. In addition, there are overlaps and some forests may fit into multiple categories. Below, we give an overview of the definitions of each, citing various external sources. We focus more heavily on western Canada, and specifically British Columbia, given Drax operations and sourcing from this area (in 2023 around 25% of our Group-wide fibre sourcing, i.e., biomass produced by the Group and used at Drax Power Station, including pellets bought from third-parties, came from Canada). We are mindful that each sourcing area and forest is different and needs to be addressed in its local context.

Old Growth: According to The National Council for Air and Stream Improvement (NCASI), "There are two main approaches to defining old growth. One is to include all stands that are older than some age limit such as 100 or 150 years. The other is to define old growth in terms of physical characteristics and ecological functions. While some proposals have been made to consider a universal definition of old-growth forest, at this time no universal definition has gained widespread acceptance. Instead, most managers and government regulators use definitions they have developed for the forest region in which they work."

According to the BC Government, old growth definitions in BC pertain to trees that are typically 250 years for the wet coastal and interior wet belt regions, and usually 140 years for dry interior forests (where there are more frequent disturbances, e.g. wildfires and insect infestations). However, it is important to also note that new definitions for old growth that consider stand structure attributes and ecological processes, rather than solely age, are being considered.

Primary Forest: The definition commonly used derives from the UN FAO – the same definition is used in UK regulations including the Contracts for Difference and Renewables Obligation: [i8661en.pdf \(fao.org\)](#). This states that primary forests are woodlands of native species, where there is no clearly visible indication of human activity and ecological processes are not significantly disturbed.

High Conservation Value (HCV) Forests: HCV forest is a forest management designation used to describe forests meeting the criteria [defined by the Forest Stewardship Council® \(FSC®\)](#) (FSC-C123692). These forests are deemed to hold biological, ecological, social or cultural values of outstanding significance.

Old Growth Deferral Areas (OGDAs): In 2021, the Government of British Columbia introduced OGDAs as an interim measure before a new forest management approach was agreed with First Nations, and implementation began in 2022. The BC Government states that OGDAs were implemented "to defer logging activity within 2.6 million hectares of BC's most at-risk old growth forests. Approved short-term deferrals are helping protect and support these ecosystems while First Nations, the Province, and other partners develop a new approach for old growth forest management."

High carbon forests (as referred to in our [Responsible Sourcing Policy](#)): High carbon forests include primary forest, virgin forest, old growth forest, designated high biodiversity forests. High carbon soils may include wetlands and peatlands.

What is our sourcing policy?

Our Responsible Sourcing Policy requires that we do not damage or cause deforestation in high carbon forests. It was published in 2019 and applies to pellets sourced for Drax Power Station. Our policy aims to be as transparent as possible and we intend to routinely review and update it to keep pace with the changing scientific understanding. Our processes are also heavily built on verifying and evidencing compliance with sustainability requirements of the UK renewables support schemes. In 2023, we made specific commitments to avoid sourcing from OGDAs in Canada.



We use Catchment Area Analyses (CAAs), plus additional assessments and reporting, to understand the historical trends in the forests we source from. These resources also help to identify potential threats to ecosystem resilience or forest carbon stocks from collective harvesting activities.

We have developed the criteria for the CAAs in conjunction with academic consultants and our Independent Advisory Board (IAB). Completing our CAAs is part of a rolling programme, and to date we have covered 55% of our sourcing based on Group sourcing in 2023 (C3).

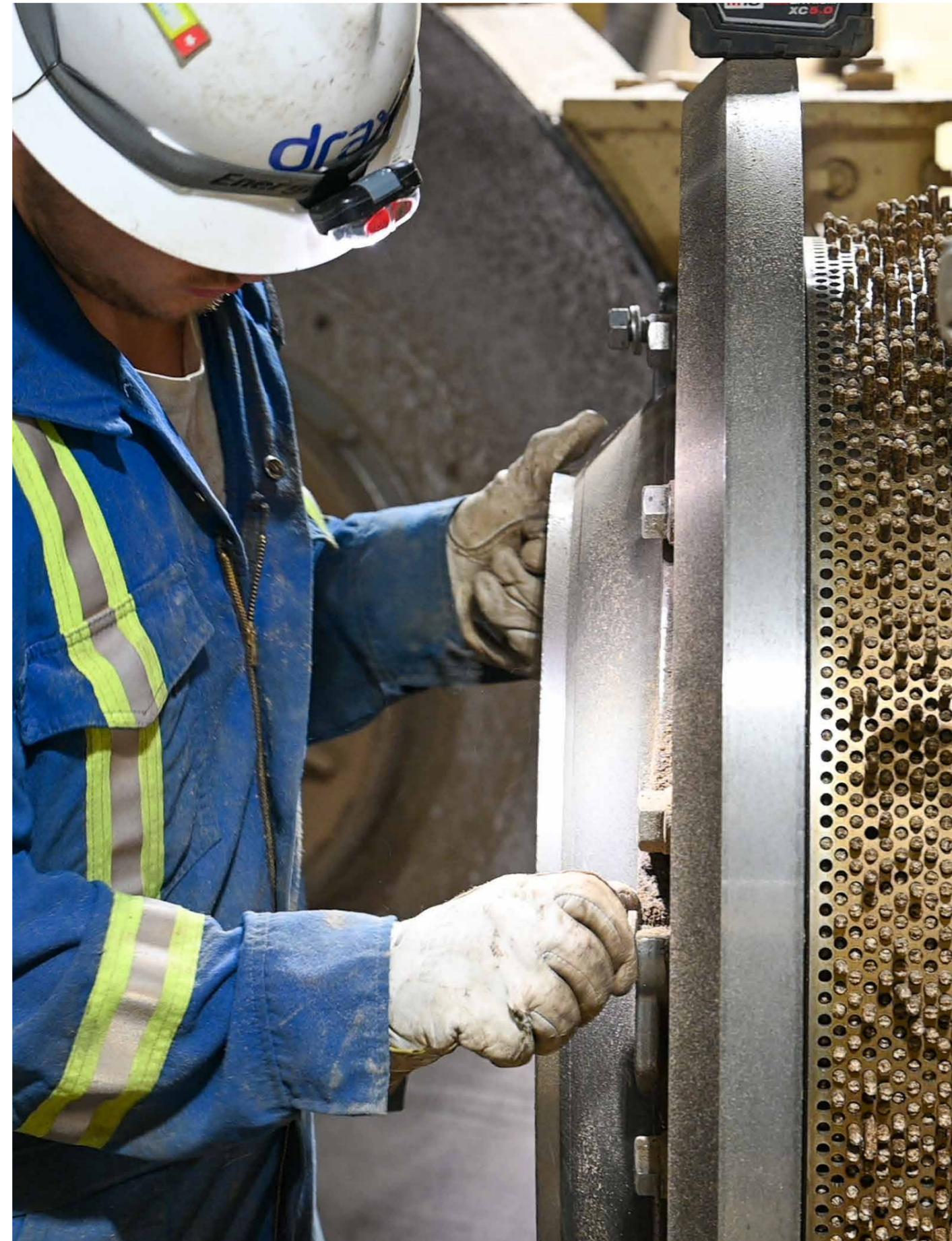
We will continue to assess and expand the CAA programme for our pellet plants. During 2023, we commissioned four CAA studies covering eight pellet plants in the US and Canada, of which seven are for self-supply to Drax Power Station. We also assess all potential new sites to understand the current forest carbon stocks and the potential impacts of different harvesting scenarios and exclude any areas where we are not confident that overall harvesting activities have a neutral or positive impact on carbon stocks (C18).

We recognise that addressing questions around carbon debt and carbon payback times (C18) associated with unabated bioenergy go beyond the carbon balance of individual sourcing regions. To demonstrate that our activity leads to positive climate outcomes, we employ colleagues with expertise in forest carbon Life Cycle Assessments (LCA). In addition, we have a programme of activity to better understand the carbon impacts of bioenergy and BECCS (relative to other plausible uses of land and woody biomass). We will release outputs from this work as it becomes available.

As part of the biomass sourcing policy, we insist that biomass is certified to appropriate standards, such as SBP or that it meets the required standards through alternative checks and audits (C2). At DPS, 97% of the woody biomass in use (in 2023) is compliant with the SBP standard, with the remainder assessed through our own internal audits (C1). For sourcing for US BECCS, we intend to leverage our existing certification framework, which includes SFI®, FSC®, PEFC (PEFC/29-31-286) Chain-of-custody as well as SFI Fiber Sourcing, FSC® Controlled Wood, and SBP certification.

We are also working towards 100% SBP certification for the pellets we produce (C1). In addition, we are investing in the data management systems required to deliver accurate information on sourcing and compliance in real time. We recognise that improving our reporting capabilities is critical to demonstrating our alignment with the conditions in 'BECCS Done Well' and other stakeholder requirements. As these systems come online, we will seek to report on feedstock type (C6), alignment with SBP and regulations, and other relevant metrics. And we will do so at a cadence appropriate to deliver transparency while allowing us to avoid releasing commercially sensitive information.

Finally, we continue to assess the relationship between land availability (C16), land use, and the growth of the biomass sector, with the aim of avoiding negative land use change (C26). We will continue to engage with the literature, our own modelling, and external academics on the question of land use change, whether for woody biomass or dedicated energy crops.



Theme 2 – Climate Positive Outcomes

We maximise the net negativity of BECCS by maximising our CO₂ capture rates and decarbonising the BECCS operation and value chain. We account for emissions across the full value chain and decarbonise following SBTi-validated targets. We only use geological storage where the potential permanence for storage has been licensed in well-regulated jurisdictions. And there is sufficient monitoring and verification in place to check for that permanence.

Maximising the net negativity of our BECCS operations is vital for credibility and efficiency.

The 'BECCS Done Well' report made clear recommendations about ensuring that all CDRs sold in the voluntary carbon market are net of value chain emissions. This requirement is embodied in the CDR Methodology that we co-developed with Stockholm Exergi. It sets out a thorough approach to quantifying the net negative emissions from BECCS. This approach considers the emissions associated with the supply chain, the capture and storage process, and any leakage impacts outside the project boundary (C20, C24).

The methodology requires third-party auditing of Life Cycle Assessments (C12). We have intentionally developed this approach to be both robust and conservative, so that BECCS CDRs verified under the methodology will be accepted as a truly net-negative product. We aim to register our credits with one of the major registries, which will ensure that our credits are independently verified. This step will confirm our credits meet all the requirements set out in the standard, and that there is robust governance in place to, for example, ensure they cannot be double counted (C24).

While our plans to operate BECCS projects are still some years down the line, we are already designing and

developing our systems and processes. To guide this work, we are developing a CCS Policy which we expect to publish in 2024. This will embed into Drax operating procedures a number of relevant directives and regulations, plus the requirements put forth in 'BECCS Done Well'.

The CCS Policy complements the CDR Methodology and includes the need to ensure that CDRs are net of emissions. It also puts forward requirements for maximising capture rates, defined as the percentage of CO₂ emissions captured, from the emissions stream when the plant is operating at full load. The capture rate will be set per plant as part of the permitting process, with a target of 95% (C22). We will track and report total CO₂ captured and capture rates at least annually (C23, C27).

The pumping of CO₂ into oil and gas reservoirs is an established process and has been used to enhance oil recovery for many years. From day one, we have been clear that the CO₂ we capture from BECCS will not be used in such a process, and we reflect this standpoint in our CDR Methodology and external CDR standards (C25). We will codify our commitment to no Enhanced Oil Recovery in our CCS Policy. It is also apparent in the CDR Methodology: "CO₂ captured through BECCS facilities cannot be used for purposes other than permanent storage, including enhanced hydrocarbon recovery (EHR)". To note, EHR is an umbrella term which includes both Enhanced Oil Recovery (as discussed elsewhere in 'BECCS Done Well') and Enhanced Gas Recovery.

We also address the case of shared infrastructure in the CCS Policy and the CDR Methodology: "In the case that a BECCS project uses shared infrastructure where a part of the overall CO₂ is going to EHR, the project developer shall demonstrate that contractually their CO₂ is only intended for applicable non-EHR storage sites. Furthermore, the developer shall provide mass balance evidence from the infrastructure provider that the amount of CO₂ the developer is entitled to was injected

in an applicable non-EHR storage site." We are actively engaging with operators where shared infrastructure may be used to detail the metering and processes that would be required to conform to this commitment (C25).

For DPS, we will meet the air pollution control standards set under the definition of Emerging Technology (formerly Best Available Technology, BAT) by the Environment Agency in the UK. In the US, our BECCS sites will meet the pollution standards defined as Best Available Control Technology (BACT) set out by the EPA in the USA (C7). We will meet the standards set out in any other jurisdictions as required.

We are working to decarbonise our existing supply chain (C14) and operations (C13), according to our corporate level SBTi-validated targets:

- 75% reduction in Scope 1 and 2 emissions from electricity generation by 2030;
- 42% reduction in non-generation Scope 1 and 2 emissions by 2030;
- 42% reduction in Scope 3 emissions by 2030.

We have built the above into our Climate Policy and chosen 2030 because it aligns to the dates we are planning for BECCS commissioning. The targets and dates apply to the existing pellet assets and DPS. To further highlight the importance of delivering on these current carbon targets, the Drax Remuneration Committee routinely allocates a proportion of the Group performance scorecard to decarbonisation initiatives.

We are developing additional targets under the SBTi process to allow us to achieve corporate net zero by 2040. As mentioned, it is worth noting that new-build BECCS are unlikely to require pellets or rely on extensive long-haul transport. So, the challenges of decarbonising shipping and pellet making are less likely to exist for new-build BECCS. Instead, we plan to employ local fibre transportation (road, rail or barge), and use chips, thereby

removing pellet processing from the supply chain.

The 'BECCS Done Well' report challenged us to maximise heat recovery in BECCS operations. This is something Drax considers to be 'business as usual' and will continue to shape how we design and operate our facilities. As an example, during detailed design studies for each of our new BECCS plants, we conduct heat integration studies to identify the options available. In doing so, we are looking to minimise or utilise waste heat, improve net efficiency of the overall plant, and thus minimise our cooling water demand. We will also assess the local heat demands around our BECCS plants and repurpose waste heat where demand exists (C15).

Beyond the conditions outlined in 'BECCS Done Well' are the requirements for permanent removals. These requirements are reflected in the demands of the CDR community to both provide permanent removals and to have the Monitoring, Reporting and Verification systems in place as proof.

While Drax does not currently operate transportation and storage (T&S) systems, our CCS Policy outlines our requirements of T&S providers. We will only work with operators that have obtained permits from the regulatory authorities to inject CO₂ where the permitting process requires, at minimum: site characterisation to guarantee storage capacity and injectivity and minimise leakage risks; monitoring, reporting and verification plans to ensure integrity, leakage detection and no adverse impacts from storage operations so far as is reasonably practicable; post closure proof of plume stabilisation.

This ensures we have confidence in the T&S elements of the BECCS chain. It also means we can provide guarantees to our CDR customers that the CO₂ Drax captures is permanently and safely stored in geological formations. Similarly, the CDR Methodology is only applicable in jurisdictions where sufficient regulatory control exists to prove permanent storage.

Theme 3 – Nature Positive Outcomes

We recognise the growing need for companies to contribute towards creating what many now refer to as a “nature positive” future. This means we need to know our impact on nature across our operations and supply chains. To achieve this, we will monitor the ecosystem health of our source regions and the impacts of our direct operations on nature. And we will strive to minimise our own impacts, through working to agreed standards in our value chain, and to support broader restoration efforts.

Throughout 2024, we will be engaging with stakeholders on the development of our Nature Policy, which will aim to outline the Drax approach to nature positive. It will also describe the actions we will take to support ‘nature positive’ outcomes in owned and managed operations and in our value chain. The Nature Expert Hub, comprising environmental subject matter experts who work across Drax, will govern the effective implementation of the policy.

The Nature Policy complements the Drax Environment Policy and our Biomass Sourcing Policy. These policies articulate Drax commitments and expectations around the protection of the environment, and guide how we make decisions in our own operations. They also make clear the steps we take to ensure our biomass purchasing practices support sustainable biomass.

Nature and biodiversity conservation are firmly embedded in the third-party certification standards that Drax uses to provide responsible sourcing assurance. These include the Sustainable Biomass Programme (SBP), Sustainable Forestry Initiative (SFI) and the Programme for the Endorsement of Forest Certification (PEFC) (C5).

In 2021, Drax joined the Taskforce for Nature Related Financial Disclosures (TNFD) and subsequently participated in the energy sector pilot that the World Business Council for Sustainable Development hosted.

The TNFD’s four disclosure pillars – governance; strategy; risk and impact management; and metrics and targets – provide us with an internationally recognised framework to progress our nature positive ambitions.

We reported on several of the TNFD core global metrics in the Drax 2023 Annual Report, as defined in the TNFD Recommendations published in September 2023. Identifying, measuring and reporting against these metrics supports our commitment to identifying nature-related risks and opportunities, and supporting global goals to direct finance toward restoring and conserving nature. Our efforts to expand nature-related disclosures will also allow us to present year-on-year performance data, which we have codified in our decision to become TNFD early adopters.

We have a strong baseline knowledge of the environmental and ecological conditions in the areas where we operate and source from. This underpins our ability to identify and act upon nature-related risks and opportunities, which is important for our existing operations and biomass sourcing. It is also vital for new-build BECCS activities, where we need continuous assessment of potential social and environmental impacts (C26).

The baseline approach is also engrained in the TNFD guidance through its “locate, evaluate, assess and prepare” (LEAP) approach. In 2022 and 2023, Drax undertook a comprehensive LEAP-based assessment of the nature-related risks on our UK assets. In 2024, we will roll out this work to international operations and biomass supply chains, building on existing knowledge and commissioning additional research or studies where required.

As articulated in Theme 6, our approach to nature positive includes a commitment to furthering scientific research and ensuring that science informs actions on nature. Drax is currently sponsoring a Practitioner Doctorate in Sustainability at the University of Surrey, focused on the impacts of forest management on ecosystem health.



Theme 4 – People Positive Outcomes

We identify our impacts on communities, neighbours, and our workforce, and proactively work with local communities to realise positive impacts and reduce negative impacts. We seek to become an exemplary operator in addressing issues of environmental justice and in contributing to a just energy transition.

We aim to create a positive social impact within the communities where we operate. Doing so requires us to enhance the positive impacts of our operations for instance by delivering economic growth, job and skills creation, local procurement, and through our charitable giving, while mitigating any potentially negative impacts to the surrounding community.

We have developed a global Community Strategy, which encompasses charitable giving and community engagement programmes, as well as opportunities for employee engagement. We are continuing the development of community engagement plans for each of the locations in which we operate worldwide (C8). In the US, we already have a US BECCS Community Manager overseeing the relationships with local communities where we are developing BECCS plans. We have created a high-level community engagement plan for BECCS pre-site selection, as well as a more detailed community plan for BECCS post-site selection (C8).

In 2024, we are launching Community Advisory Panels in our BECCS locations. The local panels will be involved in decisions relating to community funding and will act as a sounding board for grievances from the community (C29). We are also working with third party experts to produce a Community Benefit Plan for each US BECCS site. We will not be pursuing the establishment of an ombudsman (C10), but are working towards having resolution mechanisms for our operational sites in place this year, informed by work we commissioned from Forum for the Future.

We also recognise the importance of providing opportunities to small forest holders (C9) and continue our collaboration with smaller forest owners through partnerships with organisations that offer landowner outreach and support.

Related to this, we are also developing an Environmental Justice Policy. This will establish our commitments in the regions we source from and outline the significance we attach to environmental justice in our locations. Allied to this, we have committed to conducting environmental justice exposure risk assessments for all existing and new sites.

We recognise that the management of point source emissions to air is key to the control, operation and environmental footprint of the BECCS value chain. We also acknowledge that the identification of Best Available Technology (BAT) – or Best Available Control Technologies (BACT) in the USA – controls and monitoring equipment (C7) is key to the credibility, reliability and acceptance of the technologies Drax relies on. We have committed to meeting the standards associated with BAT/BACT at our BECCS facilities, but it is harder to retroactively apply BAT to all pellet plants where this would make our operations uneconomic. We will continue to strive to meet regulatory compliance at these plants, and will pursue upgrades where necessary to meet those requirements.

Our Environment Policy keeps us aligned with managing, monitoring and reducing the environmental impacts we cause through continual improvement of our operations. In addition, we always keep the safety, health and wellbeing of our employees as a top priority, and use our Safety, Health and Wellbeing Policy to deliver on our One Safe Drax vision.

Our Nature Policy will build on these existing policies to set out our intention to support nature-positive outcomes for the communities in which we operate.



Theme 5 – Transparency and Governance

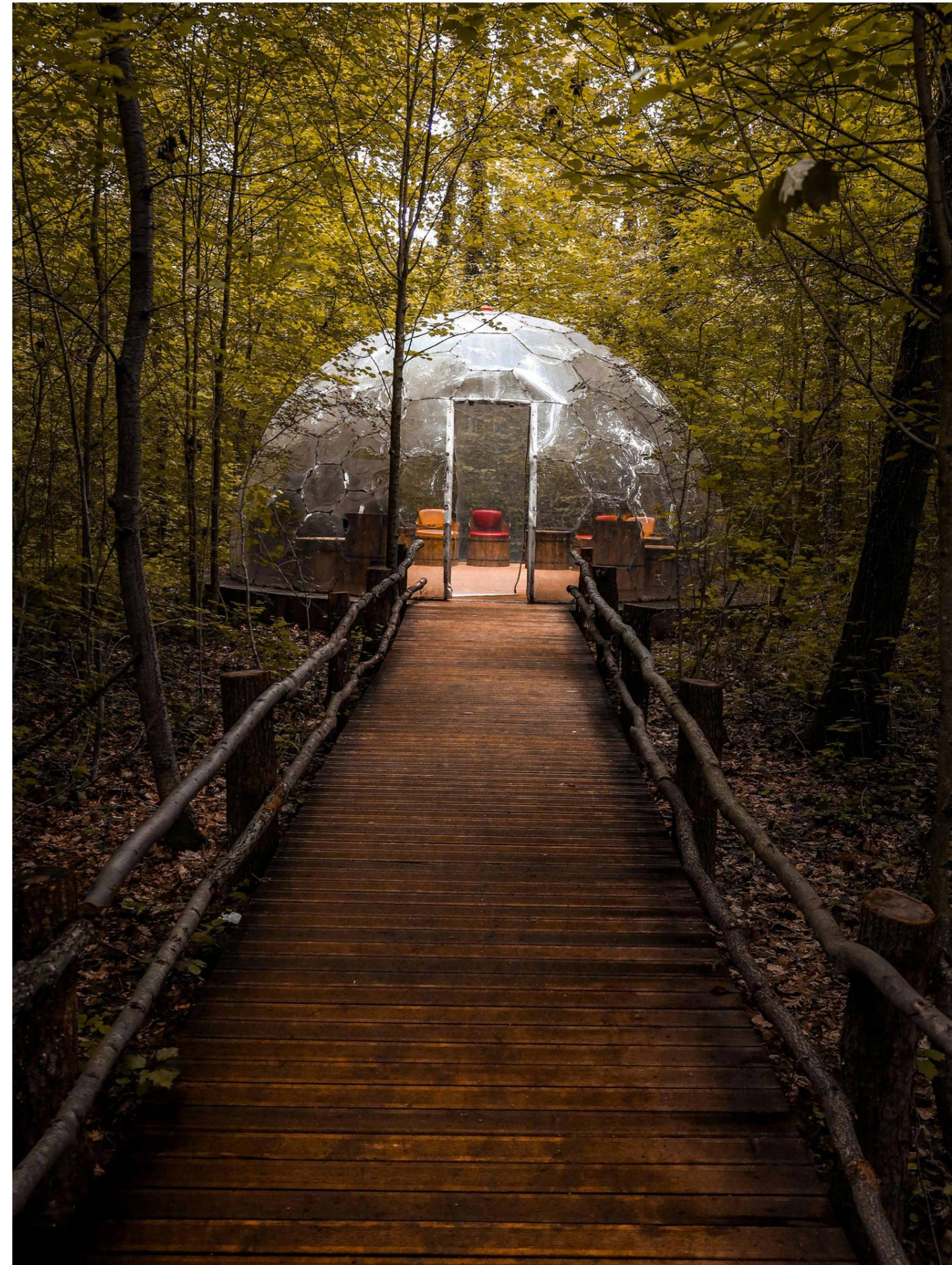
We engage in proactive and transparent monitoring, reporting and disclosure, utilising frameworks such as TCFD and TNFD, as well as all applicable regulatory requirements.

We are committed to transparent reporting and regular disclosures of, for example, our certification of pellets, feedstocks, and progress on decarbonisation. We include these disclosures in our Annual Report and ESG data supplement and make them available through other means as required. Transparent reporting is essential to show that we are meeting our stated aims around biomass, climate, nature, and people. As a minimum, we will strive to follow all requirements for reporting set out in our permits and in the local and national regulations for the areas where we operate. We also go beyond reporting requirements by publishing findings from our Catchment Area Analyses (C3), looking at carbon impacts in our sourcing areas.

For biomass, we are making substantial investments in developing data governance and infrastructure to deliver timely reporting against core sustainability attributes. These include certification status, feedstock classification, and source region. We will use these enhanced data capabilities to report externally following the most useful and meaningful mechanism and cadence (C27, C28) for each data type.

This data infrastructure and governance will also support our reporting of emissions data from Drax Power Station (C23) and our pellet mills (C7). Currently, we report this data in our Annual Report and ESG data supplement. We are also striving to find the best metrics to identify our direct impacts on nature through our adoption of the TNFD Framework. Following our 2023 pilot of the TNFD Framework for our hydro assets, we have begun rolling out TNFD assessment and disclosure for our BECCS-related assets, beginning with DPS in late 2023. We have signed on to become early adopters of TNFD, which was announced on 16 January 2024.

Our Annual Report currently lists over 50 environmental and social metrics, and when BECCS is operational, we will have additional BECCS-specific metrics to disclose. For example, our CDR Methodology includes requirements to disclose carbon capture rates (C22) and the total amount of carbon captured (C23) and stored. This CDR Methodology is currently being verified externally and our aim is for a carbon market registry to adopt it. These disclosures will be verified following the required verification standards for data published in an Annual Report.



Theme 6 – Science

We are informed by science and will listen to stakeholder feedback by routinely engaging with academics, NGOs, and industry bodies to assess the breadth and robustness of scientific evidence. We promote further research where gaps exist.

Delivering positive outcomes for people, nature, and climate through our operations is dependent on us understanding both what drives such outcomes and how to avoid negative impacts. To ensure we have this knowledge, we seek to improve our own understanding of the existing science. We also promote research to fill any gaps in scientific understanding in topics relevant to BECCS. And we engage with experts from academia, NGOs, and other industries as appropriate to address key topics and issues. We intend to update our policies and procedures on all aspects of BECCS sustainability if and when scientific understanding advances.

We are presently engaged in external working groups looking at core topics within the BECCS value chain. For instance, we are part of working groups led by IEA Bioenergy and WBCSD/WRI concerning biogenic carbon accounting (C20). We have also developed partnerships with universities and university consortia, particularly centres for doctoral training in the UK (C21), and several universities in the US. We will be seeking similar relationships with universities in Canada in the coming years.

Through these means of engagement, we are developing information and guidance on best practice for reporting and understanding the lifecycle impacts of biogenic carbon (C12). We are also supporting research into biomass sustainability and availability (C16) and working to better understand the risks of direct and indirect land use change (C26).

We seek advice and evidence from our Independent Advisory Board (IAB), which focuses on the science underpinning biomass sustainability. The IAB also provides comment and review on our Evidence Hub for BECCS, which offers an objective view of the existing science and evidence around all aspects of the BECCS value chain. The Evidence Hub will be a live and evolving source of knowledge, and we will start publishing it in stages during 2024 (C21).

We also seek to share knowledge and promote best practice within industry groups, such as the Glasgow Declaration on Sustainable Bioenergy (C30). Through this and other bodies including trade organisations, we seek to drive discussion of, and commitment to, best practice in biomass sourcing and other aspects of the BECCS value chain. We also strive to promote best practice within the voluntary carbon market. Our partnership with Stockholm Exergi on the CDR Methodology shows our commitment to working with existing and prospective BECCS operators globally (C21).



'BECCS Done Well' conditions and the Drax commitments

N° Condition	Our commitment	Where our approach differs
<p>1 Certification Schemes</p> <p>Ensure 100% of feedstocks are certified under internationally-recognised sustainable certification schemes that deliver positive social and environmental outcomes to the highest possible standard.</p>	<ul style="list-style-type: none"> We ensure that all the biomass used in Drax Power Station is demonstrated to be sustainable. Materially all (97% in 2023) is compliant with the standard designed for biomass, the Sustainable Biomass Program (SBP). The remaining woody biomass (and the non-woody biomass we use) is assessed to be compliant with the required standards through our own programme of checks and audits. Our sourcing policy sets out high standards for sourcing, including requirements for forest management and the sources of the fibre used. We have published details about our fibre sourcing in the ESG data supplement to our Annual Report in 2022 and 2023 including the proportion of fibre sourced for Drax Power Station that is SBP-compliant. For US BECCS, we intend to leverage our existing certification framework, which includes SFI, FSC®, PEFC Chain-of-custody as well as SFI Fiber Sourcing, FSC® Controlled Wood, and SBP certification. 	
<p>2 Responsible Sourcing Policy</p> <p>Exercise a policy of 'zero tolerance' with suppliers revealed to be in breach of these certification requirements, over and above compliance with all relevant national and local legislation.</p>	<ul style="list-style-type: none"> It is our intention that all the biomass we buy meets our standards. We will investigate and respond to any breaches in our supplier conduct to see if they are resolvable and reasonable. We will respond to any material breaches in line with our supplier code of conduct. 	<ul style="list-style-type: none"> We will treat minor discrepancies on a case-by-case basis. We will tolerate some discrepancies when we are assured they are atypical and there is a plan in place to avoid future occurrences. We may on rare occasions engage with suppliers when we believe we can provide an incentive for them to reach higher standards. Through this approach, we will work with potential suppliers to drive improvements in practice by supplying guidance, targets and strong governance. We will only use this approach when it is clear that we are not compromising the regulatory standards and requirements in the countries of biomass supply and use.
<p>3 Catchment Area Analyses</p> <p>Ensure 100% of the supply chain is assessed under Drax's Catchment Area Analyses (CAAs), to ensure that Drax is sourcing only from areas with stable or growing carbon stocks and subject these CAAs to independent peer review. The company must apply this high standard to all forest types in the USA, British Columbia and other sourcing countries.</p>	<ul style="list-style-type: none"> Completion of our CAAs is part of a rolling programme, and to date we have covered 55% of our sourcing, based on Group sourcing in 2023. All source areas for new BECCS will also be covered by a CAA. Our Annual Report will continue to include the progress of each fibre basket and reveal when a study was last completed. As we look for new fibre baskets, we assess each new area to understand existing carbon stocks and how they would be affected by future harvests. We avoid areas that fall below an acceptable result for the ecosystem, unless we can show that we will make a positive contribution to forest carbon in the longer term. 	<ul style="list-style-type: none"> We have committed to sourcing only from catchments where our activity, alongside others in the area, collectively has a neutral or positive effect on carbon stocks at a timescale appropriate to the ecosystem and its current condition. For instance, this may mean sourcing from salvage operations designed to accelerate forest carbon stock recovery from pest infestation or other natural disturbance events.
<p>4 Old Growth/HCV forests</p> <p>Strengthen the company's current position on Old Growth / High Conservation Value forests, including an unequivocal commitment not to be involved in forestry operations (or purchase of products from operations) that damage or destroy Old Growth / HCV forests (as defined in each of its principal sourcing areas).</p>	<ul style="list-style-type: none"> We plan to publish an updated version of our biomass sourcing policy in 2024 which, along with our new nature policy, will identify the importance of biodiversity and critical or High Conservation Value habitats for all sourcing areas, and outline our management actions. In 2023, we made specific commitments to avoid sourcing from Old Growth Deferral Areas in Canada, which are outlined in Theme 1 (Biomass) of this document. Our CDR Methodology does not allow carbon removal credits from biomass to be derived from primary forests: "Biomass shall not be sourced from lands with high biodiversity value, namely primary forest, old growth forest, highly biodiverse forest, or forests recently established on highly biodiverse grassland". 	

N° Condition	Our commitment	Where our approach differs
<p>5 Biodiversity/Nature Positive</p> <p>Commit to substantive forest restoration and biodiversity enhancements, together with local operators, with a view to turning the idea of being 'Nature Positive' into measurable, durable on-the-ground benefits for nature and local communities</p>	<ul style="list-style-type: none"> Nature Positive is a fundamental part of our strategy, and our approach encompasses Drax's own operations and value chain, and how we can contribute to meaningful nature positive outcomes across our activities. Our approach to nature positive means going beyond avoiding or minimising our impacts, and finding ways to restore and enhance ecosystems. Supporting this ambition in our supply chains requires partnership with actors across the supply chain, and our Responsible Sourcing Policy for Biomass reflects this commitment. Drax does not own forest estate, so while we do not directly control forest management or restoration, we promote requirements for nature and biodiversity protection and enhancements through third-party certification schemes. We also engage in and continuously seek to build partnerships with landowners, managers, and conservation bodies to deliver forest ecosystem protection and enhancement in our sourcing and potential BECCS facility operating areas. We are also contributing to efforts to develop meaningful metrics to demonstrate protection and enhancement in the forest products sector through university and industry partnerships, and participation in industry sustainability working groups. We have committed to becoming early adopters of disclosing our nature impacts and dependencies through the TNFD Framework, and will use this framework to further develop our work on metrics. We are engaging in work to identify the direct actions we can take to improve nature and biodiversity within the boundaries of our operational sites. 	
<p>6 Feedstock Assurance</p> <p>Refine the existing Responsible Sourcing Policy for Biomass to tighten feedstock classification, ensuring complete alignment with classification under the Sustainable Biomass Program. Provide monthly reports on the composition of different feedstocks for each individual pellet mill, for example: sawmill residues (sawdust, bark etc); tree branches and tops; low-grade, diseased roundwood; thinnings; agricultural residues; pulpwood.</p>	<ul style="list-style-type: none"> We report our feedstock use against SBP classification, and other classification schemes as required by regulators. Feedstocks for DPS are reported monthly as required by Ofgem. 	<ul style="list-style-type: none"> To protect commercially sensitive processes, we will publicly report feedstocks for pellet mills, and for new-build BECCS plants when operating, over longer timescales and for consolidated geographic regions, reporting no less frequently than annually.
<p>7 Best Available Technology</p> <p>Install Best Available Technology for pollution prevention (covering air, water and soil) on all pellet plants, going beyond local regulatory requirements where necessary.</p>	<ul style="list-style-type: none"> We recognise that the management of point source emissions to air, soil, and water is key to the control, operation and environmental footprint of the BECCS value chain. We will seek to minimise impacts from pellet mills to surrounding communities. In some cases, this may be through technological upgrades, and in others, we may use nature-based solutions such as planted barriers. At a minimum, we will seek to ensure 100% compliance with our permits. Above and beyond pellet plants, we intend to meet the standards of BAT/BACT for air pollution on our BECCS facilities. 	<ul style="list-style-type: none"> We acknowledge that the identification of BAT, controls and monitoring equipment is key to the credibility, reliability and acceptance of the technologies Drax relies on. However, we cannot agree to retroactively apply BAT to all pellet plants where this would make our operations uneconomic. We will continue to seek to meet regulatory compliance at these plants, and pursue upgrades where necessary to meet those requirements.

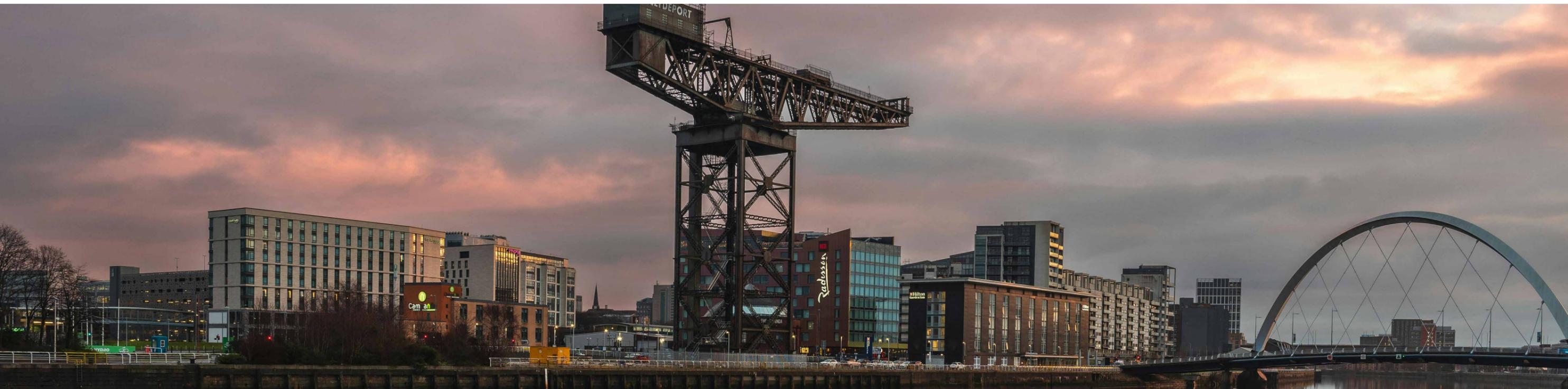
N° Condition	Our commitment	Where our approach differs
<p>8 Community Engagement</p> <p>Set up equitable and inclusive Community Engagement Programmes that reflect the regional context and specific areas of concern to stakeholders. Formalise the importance of these programmes through the operation of Regional Advisory Councils (see Condition 29).</p>	<ul style="list-style-type: none"> • Drax continues to develop community engagement plans for each of the locations in which we operate globally and we have created and filled dedicated positions for both pellet and BECCS operations. • We commit to researching the best ways of engaging with all stakeholders and incorporate best practices into transparent resolution policies for our sites and jurisdictions where relevant mechanisms do not already exist. • We are introducing Community Engagement Plans for the localities where we operate, including community liaison processes. • We expect the wider community to continue to hold Drax and other BECCS developers accountable. 	
<p>9 Smaller Forest Owners</p> <p>Investigate the possibility of working with smaller forest owners in southeast USA to help cover the costs of multiple certifications.</p>	<ul style="list-style-type: none"> • We continue progressing our partnerships with organisations, such as the Federation of Southern Cooperatives, and with First Nations in Canada. • We are committed to bearing the costs of fibre sourcing certifications aimed at assuring fibre coming from smaller owners is sustainable and supporting landowners interested in obtaining cost share and/or management assistance. 	<ul style="list-style-type: none"> • Not all smaller forest owners will engage with certification for a combination of practical and political reasons; in these cases, we will use alternative assessments to show compliance with standards for forest management. We will also seek to build partnerships and working relationships to promote good forest management.
<p>10 Ombudsman</p> <p>Together with the Drax Independent Advisory Board, investigate the feasibility of establishing an independent Ombudsman covering all Drax operations globally, reassuring stakeholders that Drax is prepared to be held to account in an appropriately transparent and rigorous way.</p>	<ul style="list-style-type: none"> • We will have resolution mechanisms for our operational sites in place from this year. 	<ul style="list-style-type: none"> • We understand an Ombudsman to be a public official with power to investigate and compel an organisation to address complaints made by the public. We do not feel it is possible to establish such a function for our global operations. Instead, we will seek to establish resolution mechanisms for our operational sites outside of an Ombudsman function. • We note that our Independent Advisory Board was established to advise us on aspects of biomass and sustainable forestry and does not have a governance or dispute-resolving function.
<p>11 A New Narrative</p> <p>Develop a 'new narrative' regarding the company's positioning in the wider forestry industry, ensuring the kind of consistent and totally transparent communications on which trust in its business model depends.</p>	<ul style="list-style-type: none"> • Biomass and forest resources are integral to BECCS. With our use of forest products, we seek to partner with other actors in the forestry value chain to promote responsible forestry and positive social and environmental impacts. • Our narrative on forestry will continue to evolve to reflect how and where we operate, biomass materials sourcing, and our ability to positively influence operations in this sector. • Our work implementing the TNFD also prompts us to explore our risks, impacts, dependencies, and opportunities related to nature and ecosystem services, of which forest resources form part. We will be including information on this in future iterations of our Annual Report. • We have sought to reflect the importance of sustainable forestry in our draft CDR Methodology (version October 2023) which includes our sustainability criteria for forest biomass. This includes our approach to forest sourcing regions, carbon stocks, protection of sensitive ecological habitats and biodiversity, long-life wood products, traceability and transparency, and certification, monitoring, reporting and verification. We also identify a series of safeguards which apply to all stages of the BECCS value chain, including biomass sourcing. • The commitments within our CDR Methodology sit alongside our positions across the Drax Group for a climate, people and nature positive future. • We are investing in data management systems to be better able to share and report data in a timely manner. 	

N° Condition	Our commitment	Where our approach differs
<p>12 Third party LCA</p> <p>Work with NGOs and with independent third-party Life Cycle Assessment auditors to agree and validate input assumptions and data along each step of the BECCS value chain. Regularly update the resulting information at least annually for public consumption</p>	<ul style="list-style-type: none"> Scientific practice and the evidence base around Life Cycle Assessment (LCA) is improving, particularly with regards to the forest carbon cycle. Drax proactively seeks to improve scientific understanding by working with scientists and other stakeholders. We are exploring how to further drive the development of the science in this area through active engagement with scientists and practitioners. <p>For instance:</p> <ul style="list-style-type: none"> We are working with Argonne National Labs to perform BECCS LCA using their third-party approach and have employed a BECCS LCA specialist; The BECCS CDR Methodology defines in detail the processes and framework for accounting for carbon in BECCS projects including the use of third-party auditing of LCAs; Drax has been involved with piloting the development of sourcing-region-specific LCAs within the GHG Protocol. 	<ul style="list-style-type: none"> We will not publish updates annually but do intend to make the parameters used as the basis for our LCAs available and to update them when revisions become available.
<p>13 Value chain decarbonization</p> <p>Aggressively reduce emissions both from direct operations and the wider value chain, prioritising investment in renewable power for all pellet-making plants, while scoping out the feasibility of further decarbonisation measures on any new BECCS plants.</p>	<ul style="list-style-type: none"> We are committed to decarbonising the BECCS value chain. Our current SBTi validated decarbonisation targets are: <ul style="list-style-type: none"> 75% reduction in Scope 1 and 2 emissions from electricity generation by 2030; 42% reduction in non-generation Scope 1 and 2 emissions by 2030; 42% reduction in Scope 3 emissions by 2030. We have also developed our carbon accounting and reporting capabilities, culminating in the roll-out of a suite of carbon tracking dashboards. These provide a detailed overview of emissions from our direct operations, as well as from our wider value chain, and transportation emissions. In 2022, Drax established a new internal Carbon Reduction Task Force to mobilise existing and new decarbonisation projects, including exploring decarbonisation measures for existing and future pellet and BECCS plants. This has allowed us to prioritise and target actions for decarbonisation across the value chain. We are working with SBTi to develop targets for achieving corporate net zero in 2040. Finally, the Drax Remuneration Committee chose to allocate a proportion of the 2023 Group performance scorecard to decarbonisation initiatives, ensuring that decarbonisation remains a strategic target against which we judge the performance of the Group as a whole. We are repeating this scorecard allocation in 2024. 	<ul style="list-style-type: none"> In all markets where we operate, Drax advocates for greater renewables penetration and incentives for renewables deployment (e.g. carbon pricing) to support the decarbonisation of the energy sector. We will always investigate options for renewable power for pellet mills but will only prioritise it where our analysis indicates it is the most effective way to decarbonise across our value chain, relative to other options. For example, other value chain emissions reductions may be more effective, e.g. reducing emissions associated with shipping.
<p>14 Working with suppliers</p> <p>Investigate options for working with suppliers to invest in low-carbon logging equipment, machinery and transportation</p>	<ul style="list-style-type: none"> Our Scope 3 reduction target (42% by 2030) requires that we work with our suppliers to achieve this. Our largest Scope 3 emissions come from third party pellet supply and transportation. In 2023, we commissioned and concluded a dedicated review of potential supplier engagement strategies. We will start engaging with suppliers in 2024. 	<ul style="list-style-type: none"> We will prioritise options for decarbonisation with our suppliers based on the magnitude of the emissions footprint, with a current emphasis on shipping and freight. Logging equipment is a comparatively small emitter, so is a lower priority for now.
<p>15 Heat Recovery</p> <p>Revisit and solve the challenge of maximising heat recovery to be able to produce both low carbon power and heat at the Selby plant, and work with regulators to ensure that all new BECCS plants will be designed to produce both power and heat.</p>	<ul style="list-style-type: none"> During detailed design studies for each of our new BECCS plants, we conduct heat integration studies to identify the options available. We also assess the local heat demands around our new-build BECCS plants and potential use of waste heat where demand exists. 	<ul style="list-style-type: none"> As a result of this condition, we did revisit the options for DPS. However, the lack of a local demand for heat does not make this feasible. DPS was designed to maximise and optimise the efficiency of steam recovery for the capture process, and there is no local demand for heat, nor likely to be in the foreseeable future.

N° Condition	Our commitment	Where our approach differs
<p>16 Land availability constraints</p> <p>Review the existing analyses of potential availability of land for bioenergy production, at a global, national and regional level, and publish Drax's own assessment of potential constraints.</p>	<ul style="list-style-type: none"> We understand the concerns around balancing how much land might be needed to deliver the volumes of carbon removals by BECCS against the need to promote the restoration of nature and to provide food for a growing population. Our recently established Science and Evidence team, within Sustainability, has prioritised engagement with academia and sector-wide partnerships designed to study land availability and competing land use needs. We have also engaged in research with external partners to understand biomass availability and interdependencies and the sustainable limits to carbon removals via BECCS. We will make that research available once it has undergone appropriate review. 	
<p>17 Pellet end use</p> <p>In terms of further expansion of pellet sales to global customers, restrict the sale of pellets to end-users that meet the Conditions outlined in this Report, including the potential incorporation of CCS technology into all bioenergy schemes at the design stage</p>	<ul style="list-style-type: none"> As a company, we are committed to carbon removals through the deployment of large-scale BECCS. However, we cannot agree to this condition. 	<ul style="list-style-type: none"> The market for pellet supply to BECCS does not currently exist. However, as we begin to demonstrate that we can deploy BECCS at scale, on both new-builds and retrofits, we expect more players to enter the market in the next decade. In the meantime, we will continue to sell biomass pellets to customers regardless of plans to introduce CCS. We believe displacing coal generation by supplying biomass pellets plays a crucial role in helping a fair and just transition away from fossil fuels.
<p>18 Forest carbon stock/carbon debt</p> <p>Restrict the sourcing of biomass feedstocks to extended forest landscapes, within well-regulated jurisdictions, that can demonstrate clear evidence of a constant or (preferably) an increasing carbon stock, through remote sensing and satellite technology, and seek to help grow carbon stocks in all principal sourcing areas</p>	<ul style="list-style-type: none"> Our CAAs and initial assessment studies demonstrate that we are operating in catchment areas with stable or increasing carbon stocks, or sourcing from operations designed to restore forest health. We are engaging with academics to understand how remote sensing can allow us to monitor carbon stocks in between CAAs. Our Data Science team is working to build products – informed by external expertise – to develop our ability to model and understand forest carbon stocks in potential sourcing regions. Our BECCS CDR Methodology requires that biomass feedstock is only sourced from forest areas where the carbon stock is stable or increasing, or where biomass sourcing helps to reverse declines in forest carbon stock (e.g. to mitigate risk of natural disturbance). By assessing carbon stock changes at a jurisdictional or sourcing area level, the assessment captures both direct and indirect forest carbon stock changes associated with the project. 	<ul style="list-style-type: none"> We will also source from areas where harvesting is part of a regional management strategy designed to reverse or prevent a future decline of forest carbon stocks due to disturbances such as disease or wildfire. We understand that this condition is related to well-regulated forest practices in terms of forest carbon, with which we agree. We also consider that “well-regulated” must include further aspects such as biodiversity and human rights. In this regard, we remain open to sourcing from areas where we feel our activities provide motivation and incentive for the development of stronger regulatory practice. We are working to develop our own policy to achieve these aims, and will share it when appropriate.
<p>19 Domestic feedstocks</p> <p>Optimise the use of domestic biomass feedstocks here in the UK, subject to detailed consideration of land use constraints and sustainable sourcing conditions.</p> <p>Prioritise local sourcing for all new BECCS plants in other countries to minimise transport-related emissions</p>	<ul style="list-style-type: none"> We will locate new-build BECCS plants in areas with substantial fibre baskets, to ensure that feedstocks are predominantly locally sourced. Coal conversion projects such as Drax Power Station may have limited local feedstocks and will therefore be more reliant on imported biomass. We nevertheless seek opportunities to explore options for more domestic sourcing. 	<ul style="list-style-type: none"> While our new-build BECCS projects are designed to use locally available sources, we need to maintain the option of sourcing from further afield to ensure consistent access to the volumes of fibre required. Coal conversion projects may have a greater reliance on external sourcing.
<p>20 Carbon accounting and reporting</p> <p>Engage proactively with key NGOs and academics to explore complexities and controversies in current carbon accounting and reporting methodologies, reaching out to Government departments to help facilitate the dialogue</p>	<ul style="list-style-type: none"> We took part in the pilot of the GHG Protocol for land sector emissions and have continued to engage through the technical working group and the review group. In the development of our CDR Methodology, we worked with external partners (EcoEngineers and Stockholm Exergi) to define a framework for carbon accounting at BECCS facilities. This is published in draft form here. The methodology was created to align with the ICVCM's Core Carbon Principles, which include robust quantification, transparency and independent third-party validation and verification. We will continue to work with NGOs, academics, governments and other stakeholders. 	

N° Condition	Our commitment	Where our approach differs
<p>21 Knowledge transfer centres</p> <p>Establish open knowledge-sharing platforms with all existing and prospective BECCS operators globally.</p>	<ul style="list-style-type: none"> We contribute to commissioning research and partnering with universities. We frequently join events and conferences, often presenting our work. We engage in collaborative work with other organisations, such as Stockholm Exergi on the CDR Methodology (see C20) and the Glasgow Declaration (see C30). We engage with external stakeholders for comment on different pieces of work (e.g. policies). 	<ul style="list-style-type: none"> We are open to facilitating the systematic transfer of knowledge along our value chain. This allows experts within each stage of the BECCS process to share their expertise and experiences with others involved in the same or subsequent stages. This is always subject to compliance with applicable laws and regulations and the need to protect commercially sensitive information and intellectual property.
<p>22 Carbon capture rates</p> <p>Given this is a huge ‘first of a kind’ engineering challenge, Drax and its capture technology partner, Mitsubishi Heavy Industries, may reasonably anticipate relatively low average capture rates in the first year of operation (to make on-site engineering adjustments and adaptations), but must then operate at a 95% capture rate from the start of Year Two.</p>	<ul style="list-style-type: none"> We hold ourselves to this commitment – to strive for a minimum of 95% subject to attaining supplier performance guarantees – for our power BECCS projects and will codify this in the CCS Policy (expected 2024). 	<ul style="list-style-type: none"> For non-power BECCS projects, our current discussions with solvent suppliers indicate that 95% performance guarantees may not be possible. In these cases, we will commit to 90% capture rates while striving to attain as high a capture rate as economically possible. Bespoke CCS projects may require flexibility in capture rates.
<p>23 Transparent reporting</p> <p>Agree, as a condition of future Government support for Drax’s carbon removals, to publicly disclose stack emissions (including SOX, NOX, uncaptured CO2 and capture-solvent derivatives), as well as captured tonnages of CO2 on a weekly basis. Agree that all such support from taxpayers should be paid retrospectively on the basis of tonnes of CO2 successfully captured and stored.</p>	<ul style="list-style-type: none"> We are committed to monitoring and reporting in compliance with regulation and permit requirements. The listed metrics, except for those related to capture solvent, are already published. They are either shown on the public register, in our 2023 Annual Report, and/or on our web resources. This will also be true of carbon capture once a plant is online. 	<ul style="list-style-type: none"> We will disclose data at the most frequent verifiable cadence and, at a minimum, in line with regulatory requirements, to ensure high data integrity. We agree with the retrospective payment model based on captured tonnage where relevant. However, we note that responsibility for this decision lies with the host governments rather than with Drax itself. We further note that current indications suggest that for the UK, payments will be based on tonnage captured, with storage monitored elsewhere in the infrastructure chain.
<p>24 Negative emissions credits</p> <p>If the company moves to commercialise the negative emissions credits from its Carbon Dioxide Removals, it must be prepared to surrender enough removal credits to ensure its own value chain is strictly Net Zero, and must avoid any double counting once the new standards for negative emissions credits have been agreed.</p>	<ul style="list-style-type: none"> We will only sell carbon removals that are net of emissions in our BECCS value chain. We developed our CDR Methodology to deliver on this commitment. We also agree that credits must avoid double counting. We intend to adhere to the removals standards as agreed by the wider community to ensure that credits are not counted more than once. 	
<p>25 EOR</p> <p>Continue to prohibit the use of any captured CO2 for Enhanced Oil Recovery here in the UK, and commit to the same constraint for all future BECCS plants, operated or supplied by Drax, in the USA, Canada and globally.</p>	<ul style="list-style-type: none"> Our commitment to no Enhanced Oil Recovery will be codified in our CCS Policy (expected 2024) and is also clear in the BECCS CDR Methodology (see C20): “CO2 captured through BECCS facilities cannot be used for purposes other than permanent storage, including enhanced hydrocarbon recovery (EHR)”. In 2023, we started a project on mass balance methodology, and are actively engaging with operators where shared infrastructure may be used to detail the metering and processes required to conform to this commitment. 	
<p>26 Precautionary principle</p> <p>Consistently apply the Precautionary Principle when making decisions regarding sourcing biomass feedstock and siting new BECCS facilities, particularly as regards the risk of deforestation through Indirect Land Use Change and the need for totally robust certification and governance standards which may exceed local standards.</p>	<ul style="list-style-type: none"> Our biomass sourcing policy avoids promoting negative direct land use change. We continue to engage with stakeholders and sector partnerships to understand how to avoid activities that could indirectly lead to deforestation. 	<ul style="list-style-type: none"> Indirect land use change is a far more complex topic than direct land use change. We held a workshop on this matter, and discussed it with our IAB in 2023. Both sessions concluded that this is difficult to track at the individual company level. Instead, we will work to assess our own impacts on negative direct land use change while engaging with the wider forestry community on this issue.

N° Condition	Our commitment	Where our approach differs
<p>27 Transparency and disclosure</p> <p>For purposes of full transparency across the entire value chain, the company should publish: – its biomass supply chain GHG emissions, externally assured (as in Condition 12), as it already does today; – the current emissions from the burning of the biomass in its plant at Selby, prior to the reabsorption of those emissions in new forest growth (as in Condition 22), as it is already required to do; – and, when the two CCS units are fully operational at the Selby plant, emissions associated with the capture, compression, transport and injection of the CO2 for storage in saline aquifers or depleted oil and gas reservoirs.</p>	<ul style="list-style-type: none"> • We have disclosed the requested data in both our 2022 and 2023 Annual Reports and ESG data supplements. We will continue to disclose this data in our annual reporting. • We intend to report all emissions in our CO₂ transport and storage supply chains once operational. Our CDR Methodology further sets out the need to monitor such emissions and exclude them from the net removal figure. 	
<p>28 Transparency dashboard</p> <p>Consult with policymakers and NGOs on setting up a comprehensive Transparency Dashboard, establishing a set of indicators with ambitious targets to generate positive nature, climate and people outcomes, as laid out in earlier Conditions. Put the resulting Dashboard into operation as soon as possible.</p>	<ul style="list-style-type: none"> • Many of these data points were reported in our most recent Annual Reports, and we will expand this reporting as additional metrics are developed. • We are happy to commit to collaborating with academics, policymakers, and NGOs to understand how to present these metrics most effectively. 	<ul style="list-style-type: none"> • With the complexity represented by the targets and resultant KPIs required to demonstrate climate, nature and people positive outcomes, we need to assess whether this can be clearly presented in a single dashboard or may require a different approach.
<p>29 Regional Advisory Councils</p> <p>Establish multi-stakeholder Regional Advisory Councils in all principal sourcing regions to reflect a diversity of views and interests, coordinated in conjunction with Drax's existing Independent Advisory Board. Ensure all Community Engagement Programs are properly represented on these Councils.</p>	<ul style="list-style-type: none"> • We are developing Community Advisory Panels in some areas local to our North American operations. • For First Nation groups in our Canadian sourcing areas, we are looking to establish advisory councils. 	<ul style="list-style-type: none"> • Our Independent Advisory Board (IAB) is not a community engagement proxy, but a group to advise us on science around the sustainability of biomass.
<p>30 Glasgow Declaration</p> <p>Work with all signatories to the Glasgow Declaration on Sustainable Bioenergy to minimise risks associated with a possible 'boom in new BECCS', particularly in those parts of the world where regulation and enforcement are weak. 'BECCS Done Well' must become the watchword for any emerging global industry, and Drax must take the lead here.</p>	<ul style="list-style-type: none"> • Drax works closely with the secretariat of the Glasgow Declaration (World Bioenergy Association). We have provided support at large biomass events, where the Glasgow Declaration has held various fringe meetings and discussions. • Drax is working with WBA to take the ideas and commitments in the Glasgow Declaration forward with the original signatories and other sector players. 	



Appendix 1: Definitions

Sustainable Biomass Program (SBP)	SBP is a certification scheme designed for woody biomass used in industrial energy production. Originally created by biomass end-users, SBP has evolved and has had a multi-stakeholder governance structure since 2019.
Forest Stewardship Council (FSC®)	Founded in 1993, this international non-governmental organisation promotes responsible management of the world's forests. Its certification system covers more than 200 million hectares of forest.
Programme for the Endorsement of Forest Certification (PEFC)	Founded in 1999, this global alliance of national forest certification schemes is an independent, non-profit, non-governmental organisation that promotes sustainable forest management through independent third-party certification.
Sustainable Forestry Initiative (SFI®)	SFI is a US-focused, voluntary, third-party forest certification that began in the 1990s in response to market concerns about forest management. Today, SFI is a fully independent, charitable organization responsible for maintaining, overseeing and improving a sustainable forestry certification program that is internationally recognized and among the largest in the world. SFI marks are registered marks owned by the Sustainable Forestry Initiative Inc.
Taskforce on Nature-related Financial Disclosures (TNFD)	The TNFD recently developed a framework guiding companies in assessing and disclosing dependencies and impacts on nature. The framework and guidance was released in 2023. The TNFD is funded by governments, the UN, and philanthropic giving.
Science Based Targets initiative (SBTi)	SBTi is a corporate climate action organization that enables companies and financial institutions worldwide to play their part in combating the climate crisis.
Greenhouse Gas (GHG) Protocol	The GHG Protocol is a joint initiative between the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) that develops comprehensive frameworks to standardise reporting of greenhouse gas emissions and management.
Catchment Area Analyses (CAA)	Drax commissions independent Catchment Area Analyses (CAAs) in the regions from which we source. CAAs test the forest carbon impact of Drax's biomass sourcing, and Drax are committed to continuously improve the methodology of these studies as the science develops. The CAAs are published on Drax's website, with details of the independent body completing the work, the methodology used and their findings.
Independent Advisory Board (IAB)	The IAB was established in 2019 and comprises scientists, academics, and forestry experts. Their primary role is to provide independent challenge, insight and advice on key aspects of the development and implementation of Drax's sustainability strategy; provide scrutiny of Drax's impacts on nature and climate; review and assess Drax's sustainability-linked policies; and make recommendations on how Drax can improve their practices.



Forward looking statements

This document may contain certain statements, expectations, statistics, projections and other information that are, or may be, forward-looking. The accuracy and completeness of all such statements, including, without limitation, statements regarding the future financial position, strategy, projected costs, plans, beliefs, and objectives for the management of future operations of Drax Group plc ("Drax") and its subsidiaries (the "Group"), are not warranted or guaranteed. By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that may occur in the future. Although Drax believes that the statements, expectations, statistics and projections and other information reflected in such statements are reasonable, they reflect the Company's current view and no assurance can be given that they will prove to be correct. Such events and statements involve risks and uncertainties. Actual results and outcomes may differ materially from those expressed or implied by those forward-looking statements. There are a number of factors, many of which are beyond the control of the Group, which could cause actual results and developments to differ materially from those expressed or implied by such forwardlooking statements. These include, but are not limited to, factors such as: future revenues being lower than expected; increasing competitive pressures in the industry; uncertainty as to future investment and support achieved in enabling the realisation of strategic aims and objectives; and/or general economic conditions or conditions affecting the relevant industry, both domestically and internationally, being less favourable than expected, including the impact of prevailing economic and political uncertainty. We do not intend to publicly update or revise these projections or other forwardlooking statements to reflect events or circumstances after the date hereof, and we do not assume any responsibility for doing so.

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