



Department for
Energy Security
& Net Zero

Greenhouse Gas Removals

Greenhouse Gas Removals (GGR) Business
Model summary



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Any enquiries regarding this publication should be sent to us at: GGR.BusinessModels@energysecurity.gov.uk

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Introduction

Engineered Greenhouse Gas Removal (GGR) technologies have the potential to play a key role in the UK's Clean Energy Superpower Mission – delivering clean power by 2030 and accelerating to net zero across the economy by 2050. To achieve net zero, technologies such as Direct Air Carbon Capture and Storage (DACCS) and Bioenergy with Carbon Capture and Storage (BECCS) will be needed at scale to permanently remove carbon from the atmosphere and balance unavoidable emissions from hard-to-abate sectors of the economy.

As well as helping to tackle climate change, commercialising innovative GGR technologies can also make a valuable contribution to the UK's Growth Mission by creating investment opportunities and jobs in Britain's industrial heartlands, and advancing our ambition to build a resilient UK supply chain through cooperation between the public sector and the private sector. The Clean Energy Industries Sector Plan identifies Carbon Capture Usage and Storage (CCUS) and GGRs as one of the frontier clean energy industries where we see the greatest domestic growth opportunities, as part of the government's Modern Industrial Strategy.¹

The deployment of engineered GGRs will complement ambitious measures to reduce emissions across the economy, as well as nature-based greenhouse gas removal solutions such as woodland creation and peatland restoration. This document relates specifically to engineered GGRs rather than nature-based solutions.

Our vision is to develop a sustainable market in which engineered GGRs are funded by polluting industries to compensate for their residual emissions. The UK ETS Authority has committed to integrating engineered GGRs into the UK Emissions Trading Scheme (UK ETS) to provide a long-term market for removals. It will aim to legislate to integrate removals in the UK ETS by the end of 2028, aiming for integration to be operational by the end of 2029 subject to consideration of appropriate legislative powers, regulatory assessments and further consultation.²

In the near-term, revenue support may be necessary to address existing barriers to investment and catalyse large-scale deployment of novel technologies while the market is still in its early stages of development. The proposed GGR Business Model is a central pillar of our approach to unlock private investment in GGRs by providing revenue stability and appropriate risk-sharing under a private law contract.

Building on approaches that have been successful in other low-carbon industries, the GGR Business Model aims to provide efficient allocation of risk between government and industry whilst harnessing the opportunities of carbon markets to mobilise significant levels of private finance, including the international voluntary carbon market. This will support our ambition to accelerate market growth, achieve value-for-money for the taxpayer, and bring technologies down the cost curve, all of which will be essential to a cost-effective net zero transition.

¹ [The Clean Energy Industries Sector Plan](#) (June 2025)

² [UK ETS Authority consultation response: Integrating greenhouse gas removals in the UK Emissions Trading Scheme](#) (July 2025)

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Maximising the economic growth and supply chain opportunities of the GGR industry in the UK is a priority for the government. Projects supported by the GGR Business Model will be expected to build robust plans to support this ambition to unlock supply chain growth and job creation, including reporting and delivering on their plans throughout the life of the contract. This is critical to ensure that the UK's industry and communities experience the benefits of investment in GGRs and the broader net zero transition.

The Clean Energy Industries Sector Plan welcomed the industry-led voluntary ambition of 50% UK local content for CCUS and GGRs across the value chain from 2030. Building on this, the government is actively exploring options to strengthen the domestic economic and supply chain benefits of project deployment for future versions of the business model and CCUS cluster allocation processes, in order to fully realise the potential of these technologies to boost the government's Growth Mission while remaining in compliance with the UK's international obligations.

Robust standards will be critical to build confidence in the market for carbon removals by ensuring that environmental benefits claimed by GGR projects are measurable and verifiable. To achieve this, the GGR Business Model will require GGR credits issued to be in compliance with the government's GGR Standard, underpinned by methodologies that are currently in development by the British Standards Institution (BSI). As well as ensuring the quality and integrity of GGR Credits sold in the voluntary carbon market, compliance with the GGR Standard is also expected to be mandatory for the issuance of engineered GGR credits into the UK ETS in future. Adherence to the GGR Standard will therefore facilitate and simplify participation in both voluntary and compliance markets.

The allocation process for GGR Business Model contracts is through the government's carbon capture, usage and storage (CCUS) cluster sequencing programme. GGR projects were eligible to apply for GGR Business Model support as part of the HyNet Track-1 expansion (T1x) process which launched in December 2023. As announced in August 2025, two prospective GGR Business Model projects will be taken forward into negotiations as part of the HyNet T1x process.³

The GGR Business Model is to be delivered using powers in the Energy Act 2023. In April 2025, the government published a consultation on technical amendments to, and the application of, the Carbon Capture Revenue Support (Directions, Eligibility and Counterparty) Regulations 2024, that will enable the implementation of the scheme.⁴ The government is currently analysing responses and will publish its response in due course. This publication does not prejudice the outcome of the consultation.

The government has appointed Dr Alan Whitehead CBE to chair an independent review to consider how GGRs can assist the UK in meeting its net zero targets. As set out in the terms of reference published in March 2025, the review will consider matters such as the role and opportunities of GGRs in supporting the government's Growth and Clean Energy Superpower

³ [HyNet expansion: project negotiation list](#) (August 2025)

⁴ [Consultation: Proposals for greenhouse gas removal and power bioenergy with carbon capture and storage regulations](#) (April 2025)

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Missions, barriers to deployment at scale, the economic cost of deploying GGRs in the UK, and approaches to transitioning away from public investment and attracting private investment, including through carbon markets.⁵ The review's recommendations will be submitted in October 2025 and the government will publish its findings. The review will not seek to replicate the government's existing policy programme to support immediate cost-effective deployment of GGRs. The government will continue to develop and deliver policy relevant to GGRs, including through the development of the GGR Business Model and negotiations with projects as part of the HyNet Track-1 expansion process.

The Spending Review 2025 supports the government's commitment to accelerate to net zero while driving growth, including by allocating £9.4 billion to CCUS over the Spending Review period. This will maximise CCUS deployment to fill the storage capacity of the HyNet and East Coast clusters as well as providing development funding to advance delivery of the Acorn and Viking clusters. A final investment decision will be taken later this Parliament, subject to project readiness and affordability. Decisions relating to future GGR deployment beyond the HyNet Track-1 expansion process will be taken in due course.

Purpose of this document

This document summarises the key design aspects of the proposed GGR Business Model for projects in the HyNet Track-1 expansion Project Negotiation List. It is being published alongside the draft GGR Contract which contains the terms and conditions that will be available to HyNet GGR projects, subject to refinement and negotiations. The draft GGR Contract incorporates the positions set out in this document and should be read in conjunction by interested parties.

The provisions in the GGR Business Model and GGR Contract have been developed following the initial consultation on business models for GGRs held in July 2022, the government response to the consultation published in June 2023⁶, and the business model development update and indicative heads of terms released in December 2023.⁷ Throughout the development of the business model, the government has continued to engage extensively with industry, investors, delivery partners, technical experts, and other stakeholders to develop and refine our proposals. This engagement has been essential to the development of the policy and we are grateful for the constructive views and input we have received.

Work to finalise certain provisions and details in the draft GGR Contract is ongoing, therefore we envision that changes will be made to the draft contract to reflect the latest positions as they are developed. We may seek to evolve the GGR Business Model in the future for any further allocation rounds.

Definitions for terminology used throughout this publication can be found in the draft GGR Contract published alongside this update, unless otherwise defined in this document.

⁵ For further details, see '[Independent Review of Greenhouse Gas Removals: terms of reference](#)'

⁶ [GGR Business Model consultation and government response](#) (June 2023)

⁷ [GGR Business Model update and indicative Heads of Terms](#) (December 2023)

Any enquiries or views on the proposals outlined in this document should be sent to:

GGR.BusinessModels@energysecurity.gov.uk.

Disclaimer

This document sets out details of the government's current proposals on the GGR Business Model. The proposals, as set out in the document and the draft GGR Contract published alongside this document, in whatever form they are expressed, are indicative only and do not constitute an offer by government and do not create a basis for any form of expectation or reliance.

The proposals published within this document, and the accompanying draft GGR Contract, are not final and are subject to further development by the government, and approval by Ministers, in consultation with relevant regulators and the devolved administrations, as well as the development and Parliamentary approval of any necessary legislation, and completion of necessary contractual documentation. We reserve the right to review and amend all provisions within the documents for any reason and in particular to ensure that proposals provide value for money and are consistent with subsidy control principles.

This document takes into account engagement that has taken place since 2022, including since the publication of the last GGR Business Model update and indicative heads of terms in December 2023. This includes engagement with the GGR Industry Group, project developers, and other interested parties. The Department for Energy Security and Net Zero will continue such engagement as it works to refine its proposals, including engagement with the devolved administrations, to ensure that the proposed policies take account of devolved responsibilities and policies across the UK.

The draft GGR Contract does not constitute definitive drafting. The Department reserves the right to review all provisions set out in the draft GGR Contract, and a number of the provisions and terms which require particular consideration and development have been square bracketed (with footnotes) in the draft GGR Contract.

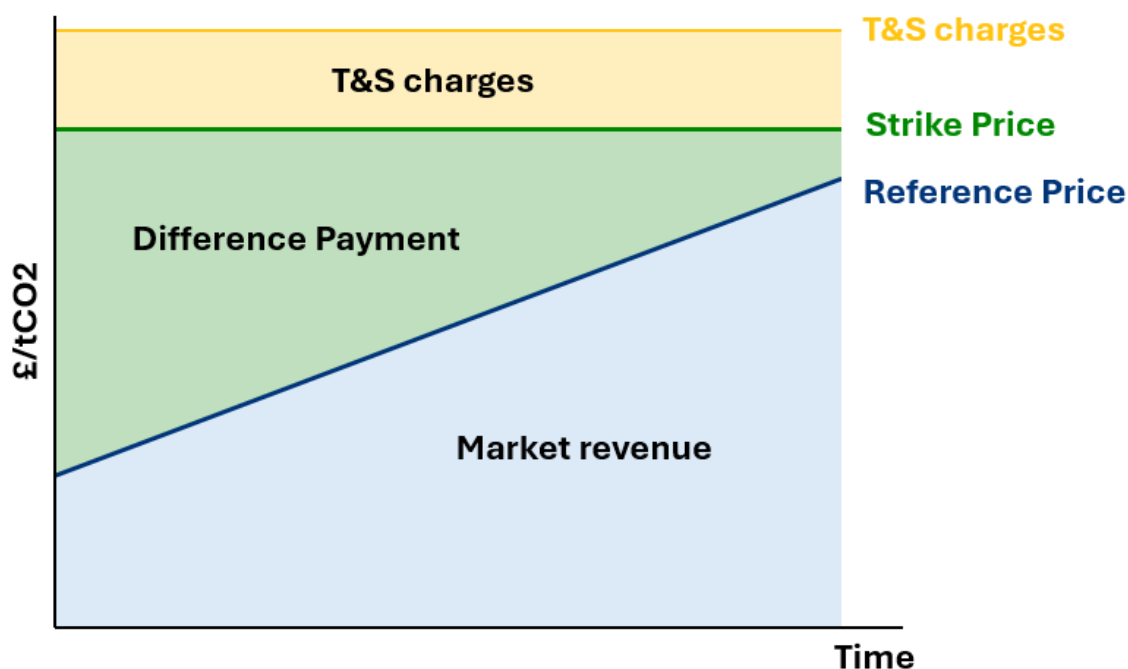
The draft GGR Contract does not indicate any willingness or agreement on the part of the Department to enter into, or arrange entry into, a GGR Contract. The draft GGR Contract does not constitute an offer and is not capable of acceptance.

Overview of the GGR Business Model

The GGR Business Model is designed to incentivise private investment in GGR technologies by offering price stability in a developing market where it is cost-effective to do so. It provides revenue support to bridge the gap between market revenues and technology costs, based on the successful 'Contracts for Difference' (CfD) scheme for renewable electricity that has recently been adapted to support investment in CCUS and hydrogen production technologies.

The GGR Business Model will be delivered through a 15-year private law contract (the GGR Contract) between a government counterparty and a GGR Developer. It is expected that the Low Carbon Contracts Company Ltd (LCCC) will be the GGR Contract Counterparty for the GGR Contracts, subject to successful completion of any administrative and legislative requirements.

Figure 1: Illustrative representation of the GGR Business Model⁸



Projects will receive a price guarantee for Qualifying GGR Credits in the form of a 'Strike Price', which reflects the cost of removing 1 tonne (1,000kg) of CO₂ (i.e. the levelised cost of carbon removal). The Strike Price will be bilaterally negotiated with projects and covers eligible operational expenses and repayment of capital expenditure plus a rate of return on capital investment.

The project will be paid a subsidy for Qualifying GGR Credits sold on the voluntary carbon market or permitted compliance markets, based on the difference between the Strike Price and the 'Reference Price' reflecting the market value of GGR Credits. In the absence of a mature market for carbon removal or a reliable price benchmark, the Reference Price will be based on

⁸ Figure 1 is for illustrative purposes only to represent the core components of the GGR Business Model. Reference Price values are illustrative only and do not reflect real-world data or expectations. The figure does not include the Price Discovery Incentive for simplicity.

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the 'Achieved Sales Price' for GGR Credits for initial projects. A 'Price Discovery Incentive' will be provided to incentivise higher sales prices and projects will also be required to evidence that a 'Fair Market Value' for GGR Credits has been obtained.

The GGR Business Model will operate on the basis of 'two-way' or 'symmetric' difference payments, meaning that (i) if the Strike Price exceeds the Reference Price, the GGR Developer is paid the difference by the government counterparty, and (ii) if the Reference Price exceeds the Strike Price, the government counterparty is paid the difference by the GGR Developer. The Price Discovery Incentive shall apply in both scenarios.

The GGR Business Model will fund CO₂ transport and storage (T&S) charges as an amount separate to the Strike Price, so that this payment can be passed through to the relevant T&S Network Operator. It will also offer protection from cross-chain risks linked to the relevant T&S Network by providing proportionate relief for T&S commissioning delay events, T&S outages and capacity constraints, and T&S prolonged unavailability events. This aligns with risk allocation principles established in other CCUS business models. The GGR Business Model offers protection from additional risks outside of the project's control, including unforeseeable changes in law and force majeure.

Guiding principles of the GGR Business Model

- Instil confidence among investors to unlock private finance and enable deployment of cost-effective GGR projects that **create value to the UK economy**, contributing to the Growth Mission and Clean Energy Superpower Mission.
- Leverage trade in high-integrity carbon markets to keep government subsidy to a minimum and **build a sustainable GGR market for the future**, with government intervention reducing over time.
- Provide a risk-adjusted fair return to investors in a way that ensures any financial support is proportionate to need, **delivers value-for-money for taxpayers**, and is consistent with subsidy control rules.
- Build the UK's status as a **global leader in GGRs** to increase private sector confidence in the UK as an attractive destination for investment and maximise long-term supply chain and export opportunities.

Strike Price

In the GGR Business Model, the Strike Price represents the cost at which a GGR project removes one tonne of CO₂ from the atmosphere, which enables the generation of one carbon removal credit known as a 'GGR Credit'.

The Strike Price shall include eligible capex and opex associated with the construction and operation of the GGR Facility, and an allowed return on investment. To be eligible, the capex and opex must relate to the generation of GGRs.

Capex and opex components

Given the diversity in GGR technologies and project configurations, the government does not consider it appropriate to provide a definitive list of eligible and ineligible costs at this time. However, we have set out eligibility principles below to provide guidelines for bilateral contract negotiations. All costs and cost descriptions will be subject to due diligence during negotiations and verification, ensuring value-for-money for government.

- **Capex:** in most cases, we only consider it appropriate to support capex which is incurred Inside Battery Limits (ISBL)⁹ of the GGR Facility, and which directly relates to GGR services. Some exceptions to this may be considered in the case of key Outside Battery Limits (OSBL)¹⁰ GGR-related infrastructure, such as necessary monitoring, reporting and verification (MRV) equipment.
- **Opex:** each GGR project is expected to have a unique fixed and variable opex profile, meaning that it would be difficult to provide a prescriptive list of eligible opex items, especially for initial projects. Therefore, eligible opex items which relate to GGR services will be evaluated on a case-by-case basis during negotiations.

Devex eligibility

Development expenditure (devex) refers to costs incurred to gain evidence of the technical and commercial likelihood of project success and expected project costs. Devex sometimes includes, but is not limited to, engineering studies (pre-FEED, FEED, etc), environmental studies, consents, surveys, early-stage commercial activities, land leasing or purchasing, fundamental R&D, and/or some initial necessary procurement activities.

The government recognises the role of devex in risk-mitigated project development, particularly for early-stage cost assurance. We also recognise the importance of engaging in these

⁹ Inside Battery Limits (ISBL) is defined as the physical or geographical boundary of the Facility in which the primary processes, equipment, activities and infrastructure are found.

¹⁰ Outside Battery Limits (OSBL) is defined as the physical or geographical area associated with the Facility which falls outside of the ISBL boundary and in which the secondary process equipment, activities and supporting infrastructure are found.

activities pre-final investment decision (pre-FID), as they are essential for developing a complete evidence base on project cost and deliverability profile for FID.

Therefore, the government is minded to allow some forms of pre-FID devex to be recoverable under the Strike Price for GGR projects in the HyNet Track-1 expansion Project Negotiation List. We intend for recoverable devex categories to include engineering studies, environmental surveys and land lease agreements, and that any recoverable devex will be limited to devex which is incurred from the outcome of the Deliverability Assessment¹¹. Any recoverable devex will be subject to negotiations, assurance, cost eligibility and value for money considerations. In return, we expect that any rate of return agreed during negotiations will take account of this derisking of project spend and ensure value-for-money for taxpayers.

The government's policy to allow recovery of certain devex costs remains subject to change, in particular if it is found to be incompatible with applicable subsidy control requirements and/or government affordability envelopes. Therefore, any devex costs incurred prior to FID remain at a project's own commercial risk. If a project does not achieve FID then these costs will not be reimbursed through the GGR Business Model.

This position is currently anticipated to apply to GGR projects in the HyNet Track-1 expansion Project Negotiation List, subject to subsidy control considerations, with the government reserving the right to reconsider this approach for future allocation rounds of the GGR Business Model.

Capital Grant

The GGR Business Model includes the opportunity for an award of a capital grant, with the purpose of supporting the construction phase of projects. In addition to the GGR Contract, eligible projects may enter into an agreement with government for grant funding, known as the GGR Grant Funding Agreement (GFA). The following key design pillars will provide the foundation for the GFA:

- Up to (but not including) 50% of project capex can be supported through the grant, with the same minimum capex eligibility requirements as the GGR Business Model; however, further eligibility requirements and stipulations on GFA-funded capex may be applied.
- The GFA Offer Letter and Terms and Conditions (T&Cs) are based on the precedent provided by the CCUS Infrastructure Fund (CIF) capital grant developed for Track 1 of the CCUS Clusters Sequencing process, amended for GGR projects.
- We are minded to deliver the grant through a government body. This is expected to be DESNZ Central Grants and Loans (CGL), which will manage the grant, including GFA arrangements with projects, reviewing invoices, bank statements and dispensing payments.
- The GFA has a retrospective payment system based on eligible expenditure that has been incurred and defrayed (i.e. invoiced and payment completed). GFA payment

¹¹ A full description is provided in the [CCUS Track-1 expansion: HyNet application guidance](#) (December 2023)

schedule and associated conditions are subject to final GFA design and agreement in the GFA Offer Letter and T&Cs.

In the first instance, the government is minded to make this grant tool available to GGR Projects in the HyNet Track-1 expansion Project Negotiation List. Certain characterisations of the grant, such as the grant intensity and/or any further criteria on capex, will be subject to negotiations. No decisions have been made on the availability of grant funding or grant funding agreement terms and conditions for any future allocation rounds.

Transport and Storage Charges

CO₂ Transport and Storage (T&S) Charges for each GGR project will be paid monthly by the GGR Contract Counterparty to the GGR Developer, so that such charges can be passed through to the relevant T&S Network Operator. They will be calculated using the rates set out in an annual charging statement and project-specific information. There are three T&S Charges:

- Flow Charge: a charge based on actual usage of the network, which is calculated using the mass quantity of the CO₂ Rich Stream which is injected into the network
- Capacity Charge: a charge based on the GGR Developer's Registered Capacity (as defined in the CCS Network Code)
- Network Charge: a charge based on the GGR Developer's T&S Delivery Point Size

T&S Charges will be funded via the GGR Business Model for the duration of the GGR Contract. They will not be included in the Strike Price and will instead be calculated as a separate amount for the relevant billing period. This approach ensures that the support provided reflects the actual T&S Charges that Developers incur, improving investability and value-for-money by removing the potential risk that recovery of such costs in the Strike Price would undercompensate or overcompensate for T&S Charges. This is consistent with precedent in other CCUS business models.

Sales Cap

The GGR Contract shall include a sales cap which places an overall limit on the subsidy available to the GGR Developer. The GGR Contract Sales Cap will be based on the Initial GGR Contract Sales Cap, which will represent the GGR Facility's forecast total GGR Credits during the operational period of the GGR Contract. The Initial GGR Contract Sales Cap shall be agreed on a project-by-project basis and specified in the Front End Agreement¹². It will then be adjusted in specific circumstances, including following confirmation of the Final Net Removal Capacity.

¹² The Front End Agreement will include project-specific information and will precede the standard terms and conditions in the GGR Contract.

Quantities of GGR Credits which accrue towards the GGR Contract Sales Cap will be tracked on an ongoing basis during the Term. When the aggregate of all such quantities equals (or exceeds) the GGR Contract Sales Cap, the Developer shall be deemed to have achieved its return on investment, such that no further subsidy shall be paid and the GGR Contract shall automatically expire. This shall limit government exposure and prevent overcompensation.

Additionally, there will be an annual limit on the subsidy available to the GGR Developer. The Permitted Annual Sales Cap will be calculated pro rata from the GGR Contract Sales Cap and will include a 10% buffer to allow for annual fluctuations in sales. The inclusion of the Permitted Annual Sales Cap will improve forecasting, levelise payments, and ensure that annual subsidy remains within acceptable limits. Any sales of GGR Credits which exceed the Permitted Annual Sales Cap will not be eligible for subsidy. In addition, 50% of any sales of GGR Credits which exceed the Permitted Annual Sales Cap will accrue towards the GGR Contract Sales Cap.

The full details of the GGR Contract Sales Cap remain subject to further consideration, including suitable gainshare mechanisms to ensure that government and taxpayers stand to benefit if government-supported projects perform better than expected (e.g. if the actual amount of GGR Credits generated and sold exceeds and is faster than the forecast generation capacity).

Reference Price and market integration

Route to Market

The GGR Business Model will support sales into the voluntary carbon market and permitted compliance markets. The primary route to market under the GGR Business Model is expected to be the voluntary carbon market, which will be critical for ensuring affordability to government.

The voluntary carbon market is playing a pivotal role in scaling up the engineered removals sector globally. Available market evidence suggests that engineered GGR technologies command premium prices on the voluntary carbon market, reflecting the cost, climate benefit and innovation associated with these technologies. A growing number of large corporations have made early commitments to engineered GGRs which reflect these benefits, and the government anticipates that such demand will continue to grow as more companies include the purchase of high-integrity GGR Credits as part of their net zero goals.

Our priority in the near-term is therefore to harness the potential of the voluntary carbon market to bring pathfinder GGR projects to market and achieve the UK's deployment ambitions at the lowest cost. The government encourages more companies to engage with the purchasing of high-integrity GGR Credits in ways that align with its Voluntary Carbon and Nature Market Integrity Principles, as set out in the consultation on raising integrity in voluntary carbon and nature markets published in April 2025.¹³

¹³ [Voluntary carbon and nature markets: raising integrity](#) (April 2025)

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The UK Emissions Trading Scheme (UK ETS), the UK's key compliance market mechanism, will be central to achieving net zero and our ambitions for the scale-up of the GGR sector in the long-term. The UK ETS Authority has committed to integrating engineered GGRs in the UK ETS. The UK ETS Authority will aim to legislate to integrate removals in the UK ETS by the end of 2028, aiming for integration to be operational by the end of 2029 subject to consideration of appropriate legislative powers, regulatory assessments and further consultation.¹⁴ This will provide long-term demand for GGRs from emitters that need them to balance residual emissions and meet their compliance obligations in the UK ETS, delivering a market mechanism that can help to achieve net zero at the lowest cost.

The technical elements of GGR integration into the UK ETS are in development and will be subject to further consultation. Given the importance of the UK ETS to the UK's long-term GGR strategy and its role as a source of compliance demand, the GGR Contract includes provisions to facilitate the sale of subsidised GGR Credits in the UK ETS once removals are integrated into the market. This shall be subject to a review mechanism (the Compliance Scheme Alignment Review), the purpose of which is to ensure that the integration of the business model into the UK ETS is managed effectively and does not lead to unintended outcomes.

Following the Agreement Date, the GGR Developer may submit a request for the GGR Contract Counterparty to undertake the Compliance Scheme Alignment Review once the competent authority (the UK ETS Authority) has published all material information regarding the sale of GGR Credits in the compliance scheme. As part of the review, the GGR Contract Counterparty will consider matters including whether: the GGR Developer meets eligibility criteria for participation in the scheme; the GGR Standard is approved as an eligible carbon standard in the compliance scheme; the compliance scheme offers competitive GGR Credit prices such that the provision of subsidy is justified on value-for-money grounds; and subsidy to be provided in respect of GGR Credits sold in the compliance scheme is consistent with the functioning and integrity of the compliance scheme and shall not result in market distortions.

The full details of the Compliance Scheme Alignment Review are subject to further consideration, with due regard to ongoing policy development on GGR integration in the UK ETS. The government is considering any amendments that may be required to the terms of the GGR Contract to accommodate sales into permitted compliance schemes, including but not limited to the application of the Fair Market Value Principles (see further details below).

Reference Price

The Reference Price in the initial GGR Contract shall be the volume-weighted average Achieved Sales Price for Qualifying GGR Credits during the relevant billing period. Qualifying GGR Credits must comply with the GGR Standard and be sold to a Confirmed Offtaker in the voluntary carbon market or to an offtaker in a permitted compliance market (pursuant to the Compliance Scheme Alignment Review).

¹⁴ [UK ETS Authority consultation response: Integrating greenhouse gas removals in the UK Emissions Trading Scheme](#) (July 2025)

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The 'Achieved Sales Price' is the preferred option for setting the Reference Price in order to provide a stable basis for investment and enable initial GGR projects to access the lowest cost of capital by mitigating exposure to unpredictable market trends. As well as creating a viable investment framework, this in turn will improve value-for-money for government by reducing deployment costs and ensuring that any subsidy is proportionate to the requirements of each project. This reflects the position on the Reference Price set out in the business model development update and indicative heads of terms published in December 2023.

In the emerging market for engineered removals, transactions are typically conducted through bilateral 'offtake agreements': a contractual commitment for a buyer to acquire GGR Credits at a predetermined price upon its delivery in the future. These agreements provide important certainty for projects and government on future offtake quantities and prices in advance of commercial operations and are expected to remain the primary method of sale for the foreseeable future.

In respect of offtake agreements which are Confirmed Offtake Agreements, the 'Achieved Sales Price' will be the price obtained by the project for Qualifying GGR Credits upon delivery. This will be used to calculate the Reference Price, which will be the volume weighted average of the Achieved Sales Price for each Confirmed Offtaker in the relevant billing period. The Achieved Sales Price for each Confirmed Offtaker will be calculated using invoiced revenues once Qualifying GGR Credits have been issued and sold to the Confirmed Offtaker. The subsidy will not be payable prior to the issuance and sale of the Qualifying GGR Credit.

In future, it is the government's intention to evolve this position to a Reference Price that is linked to a market benchmark price, as opposed to the sales price obtained by individual projects. This is not considered to be feasible for the initial GGR Contract given the early stage of market maturity, the range of projects and credit prices in the voluntary carbon market, and the absence of a price benchmark that is sufficiently reliable and market-reflective to underpin a 15-year revenue support contract. However, the government will continue to assess developments in the sector with a view to incorporating a market price benchmark into the Reference Price for any future GGR Contracts when market conditions allow.

The GGR Contract will not provide volume support (i.e. payments in respect of GGR Credits generated but not sold). This is in recognition of the expansion of demand for engineered removals in the voluntary carbon market, the planned integration of engineered GGRs in the UK Emissions Trading Scheme (UK ETS), and the government's commitment to market-driven deployment of GGRs.

Price Discovery Incentive

The GGR Contract will include a Price Discovery Incentive (PDI) to encourage projects to achieve higher sales prices for Qualifying GGR Credits.

The purpose of the PDI is to strengthen the commercial incentive for GGR Developers to maximise sales prices on the market while the Reference Price is linked to the Achieved Sales Price, given that a higher sales price would lead to a corresponding reduction in the Difference Amount paid to the GGR Developer under the 'contract for difference' payment structure. It

achieves this by providing an additional revenue stream linked to the GGR Developer's success in achieving higher prices, thereby rewarding Developer effort and helping to ensure that GGR Developers behave in the market as they would have done in the absence of price support. We expect that this will promote sustainable market growth, improve value-for-money, and reduce competitive distortions in the market by preventing overreliance on revenue support.

The level of the PDI will be set at 5% of the Reference Price in the relevant billing period. The government considers that setting the PDI at 5% offers a proportionate incentive for GGR Developers to seek higher sales prices whilst ensuring efficient use of subsidy, minimising the risk of overcompensation or excessive rewards for Developers.

The PDI will not be capped at the Strike Price, which should encourage projects to become self-sufficient in the market and avoid creating an artificial ceiling for market prices.

We may seek to evolve the Price Discovery Incentive in the future for any further allocation rounds.

Fair Market Value Principles

The Developer shall be required to achieve a fair market value for GGR Credits. Since the carbon removal market is in a nascent phase and there is no specific benchmark against which to assess the Achieved Sales Price, the GGR Developer shall be required to evidence compliance with the Fair Market Value Principles in respect of each Offtake Agreement.

The Fair Market Value Principles are, in respect of any sale, trade or transfer of GGR Credits, that the Developer has:

- acted in accordance with the Reasonable and Prudent Standard to ensure that a fair market value is achieved for its GGR Credits; and
- only entered into such sale, trade or transfer of GGR Credits on reasonable arm's length commercial terms.

The Developer shall be required to provide the following information (referred to as the 'FMVP Review Information') to evidence compliance with the Fair Market Value Principles:

- Confirmation of whether the Developer considers it has complied with each Fair Market Value Principle in respect of the relevant Offtake Agreement.
- A detailed explanation, in form and content satisfactory to the GGR Contract Counterparty (acting reasonably), of why the pricing and volume commitments relating to the GGR Credits contained in the relevant Offtake Agreement were accepted by the Developer.
- A detailed explanation, in form and content satisfactory to the GGR Contract Counterparty (acting reasonably), of how inflation has been accounted for in the GGR Credit price contained in the relevant Offtake Agreement.
- A detailed summary, in form and content satisfactory to the GGR Contract Counterparty (acting reasonably), of the Developer's market engagement activities with prospective

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offtakers, including but not limited to initial proposals, pitches, meetings with prospective offtakers, webinars, invitations to bid, public notices, bid documents, negotiations, offer letters and other relevant correspondence and documentation.

- Relevant Supporting Information and a Director's Certificate.

The Fair Market Value Principles are intended to ensure that Developers act in good faith to achieve the highest market value for GGR Credits, as they would reasonably be expected to do in the absence of government support. This shall prevent transactions in which sellers or buyers of GGR Credits seek to take undue advantage of the difference payment under the GGR Contract. In doing so, the requirement to comply with the Fair Market Value Principles will uphold integrity and reduce competitive distortions in the market, reduce subsidy by encouraging higher sales prices, and improve value-for-money for government.

If the Developer enters into an Offtake Agreement, or amends an existing Offtake Agreement in a way which could affect the Developer's compliance with the Fair Market Value Principles, this will trigger the Offtake Review Procedure.

The Offtake Review Procedure is intended to assess, at the same time, both: (i) the Developer's compliance with the Fair Market Value Principles; and (ii) that the Offtake Agreement includes the Offtake Compliance Provisions (see further detail below). If the GGR Contract Counterparty considers that both conditions are satisfied, such Offtake Agreement will be a 'Confirmed Offtake Agreement'.

The Developer will only be eligible to receive subsidy for GGR Credits which are sold pursuant to Confirmed Offtake Agreements.

The Offtake Review Procedure includes the following steps:

- The Developer will be required to notify the GGR Contract Counterparty and provide Offtake Information (which includes the FMVP Review Information, Offtake Forecast Data, and a copy of the Offtake Agreement) within 30 Business Days of the trigger event.
- The GGR Contract Counterparty shall, within 20 Business Days of receiving the Offtake Information, either: (i) confirm whether or not the relevant Offtake Agreement is compliant with the relevant requirements of the GGR Contract and is therefore a Confirmed Offtake Agreement; or (ii) request additional Supporting Information in order for it to be able to make its confirmation in respect of the relevant Offtake Agreement.
- The GGR Contract Counterparty will, within 20 Business Days of receipt of the Supporting Information, confirm whether or not the relevant Offtake Agreement is compliant with the relevant requirements of the GGR Contract.

If the Developer fails to comply with the Offtake Review Procedure and continues to do so following a non-compliance notice issued by the GGR Contract Counterparty, the GGR Contract Counterparty may elect to suspend payments, elect to confirm that the relevant Offtake Agreement is not a Confirmed Offtake Agreement and therefore that sales under such Offtake Agreement are not eligible for subsidy, and/or terminate the GGR Contract.

The GGR Contract Counterparty will also have a right to request an independent audit to be procured by the Developer (at the Developer's cost, unless no non-compliance is identified, in which case any reasonable costs will be met by the GGR Contract Counterparty) if it suspects

a breach or any non-compliance with the Offtake Review Procedure, the Fair Market Value Principles and/or the Offtake Compliance Provisions.

Compliance with the Fair Market Value Principles will be assessed with reference to the information and evidence available to the Developer at the time of entering into the Offtake Agreement. Compliance shall not be reassessed in hindsight with reference to market trends or evidence that becomes available after the time of entering into the Offtake Agreement, subject to an exception to allow action if evidence emerges indicating fraudulent or deliberately misleading behaviour, which may also trigger the audit right described above.

The government is considering any amendments that may be required to the application of the Fair Market Value Principles, including the FMVP Review Information and Offtake Review Procedure, to ensure they are appropriate for sales into compliance markets.

Affiliate Offtakers

In the Offtake Review Procedure, the Developer shall be required to submit additional information if the Offtaker is an Affiliate Offtaker¹⁵. This shall include a detailed explanation, in form and content satisfactory to the GGR Contract Counterparty (acting reasonably), of: (i) the nature of the relationship between the Developer and the Affiliate Offtaker, including the details of the ownership structure; (ii) the purpose of the intended sale, trade or transfer to the Affiliate Offtaker, and (iii) the intended use of the GGR Credits by the Affiliate Offtaker.

The purpose of the requirement is to ensure that there are appropriate checks on commercial arrangements that present a higher potential risk of value leakage and poor value-for-money; for example, deals that are not entered into on an arm's-length basis or that provide unduly favourable terms to the offtaker. The GGR Contract Counterparty shall retain full discretion not to confirm an Offtake Agreement with an Affiliate Offtaker as a Confirmed Offtake Agreement, in which case such GGR Credits shall not be Qualifying GGR Credits for the purposes of the GGR Contract (and therefore shall not be eligible for subsidy), or to confirm an Offtake Agreement with an Affiliate Offtaker as a Confirmed Offtake Agreement if it is satisfied that any potential risks or concerns related to value leakage are addressed. This provides flexibility for the GGR Contract Counterparty to evaluate the justification provided by the Developer for any sale of GGR Credits to an Affiliate Offtaker on a case-by-case basis.

Offtake Compliance Provisions

The Developer shall ensure that each Offtake Agreement for GGR Credits includes the Offtake Compliance Provisions set out in the GGR Contract. The purpose of this requirement is to provide assurance that the Developer's relevant Offtake Agreements align with the principles, objectives and operational requirements of the GGR Business Model and do not contain provisions that are incompatible with government policy. The Offtake Compliance Provisions

¹⁵ As set out in the draft GGR Contract, 'Affiliate Offtaker' means the Developer's subsidiaries, subsidiary undertakings, associated undertakings and any holding company of the Developer and all other subsidiaries, subsidiary undertakings, associated undertakings and holding companies of any such holding company from time to time; and any Lender or any agents or trustees thereof.

are designed to avoid undue interference in the Developer's Offtake Agreements whilst advancing government priorities and protecting value-for-money.

The Offtake Compliance Provisions include the following requirements:

- All GGR Credits generated and sold under the Offtake Agreement shall be issued and verified in accordance with the UK Government's GGR Standard and methodologies
- All GGR Credits generated and sold under the Offtake Agreement shall be issued into an approved registry to ensure traceability and transparency
- All GGR Credits generated and sold under the Offtake Agreement shall contribute to the achievement of the United Kingdom's national climate goals, including its Carbon Budgets and Nationally Determined Contributions, and that the Offtaker shall use reasonable endeavours to refer to such contribution in its announcements and public statements
- The Offtaker shall use reasonable endeavours to mitigate any costs and losses that it is entitled to recover from the Developer following termination of the relevant Offtake Agreement as a result of the termination of the GGR Contract

Entering into, replacing or transferring an Offtake Agreement or amending an existing Offtake Agreement in a way which could affect the Offtake Compliance Provisions, will trigger the Offtake Review Procedure, described in further detail above.

The government is considering the applicability of the Offtake Compliance Provisions to sales into approved compliance markets.

Billing and Payment

GGR Developers shall be required to submit a Payment Information Notice (PIN) to the GGR Contract Counterparty within 5 Business Days of the end of the relevant Billing Period. The PIN will provide information which is needed by the GGR Contract Counterparty to carry out the payment calculations, such as the price the Developer has charged for the sale of Qualifying GGR Credits. Each PIN will be accompanied by a Directors' Certificate in relation to the information it contains.

The GGR Contract Counterparty will then produce and deliver, within 10 Business Days of the end of the relevant Billing Period, a billing statement which will set out the Difference Amount, the Price Discovery Incentive Amount and the GGR Net Payable Amount for the relevant Billing Period. The GGR Contract Counterparty will also produce and deliver, by the same deadline, a billing statement which will set out the Monthly T&S Charges Amount and the T&S Net Payable Amount for the relevant Billing Period. The billing period for the GGR Contract is expected to be monthly.

If the sum of the GGR Net Payable Amount and the T&S Net Payable Amount is a positive number, the GGR Contract Counterparty will pay such amount to the Developer no later than 10 Business Days after the delivery of the relevant billing statements. If the sum of the GGR

Net Payable Amount and the T&S Net Payable Amount is a negative number, the Developer will pay such amount to the GGR Contract Counterparty no later than 8 Business Days after the delivery of the relevant billing statements.

GGR Standard and Methodologies

The UK Government's GGR Standard

All GGR Credits sold by projects supported under the GGR Business Model shall be issued and verified in accordance with the UK Government's GGR Standard, which is currently in development.

The GGR Standard shall define the crediting framework, carbon accounting methodologies and verification procedures that will underpin the issuance of GGR Credits sponsored by the UK Government. This is intended to build confidence in the integrity of GGR projects by ensuring that the environmental benefits are real, measurable and verifiable, which is key to unlocking the demand and investment necessary to scale high-integrity markets for GGRs. The GGR Standard will ensure that projects are meeting the government's wider sustainability and environmental standards, while at the same time adhering to international best practice in carbon crediting.

As well as providing rigorous standards for carbon removal in the voluntary carbon market, we envisage that compliance with the GGR Standard will also be required for the sale of engineered GGR Credits ('GGR Allowances') in the UK ETS, once integration of GGRs into the UK ETS is enabled. Adherence to the GGR Standard will therefore facilitate and simplify Developer participation in both voluntary and compliance markets, subject to the Compliance Scheme Alignment Review provisions described above.

Methodologies

As a central pillar of the GGR Standard, the government has commissioned the British Standards Institution (BSI) to develop technology-specific methodologies for engineered GGRs. These methodologies will define requirements and procedures for the quantification, monitoring, reporting and verification of net greenhouse gas removals (i.e. the amount of CO₂ removed from the atmosphere and permanently stored when both direct and indirect project-related emissions are taken into account).

The BSI methodologies will be delivered via a series of Publicly Available Specifications (PAS), using a modular approach. Each module will cover a subset of the GGR value chain such as biomass supply or carbon capture, transport and storage. The methodologies will cover Direct Air Carbon Capture and Storage (DACCS) and Bioenergy with Carbon Capture and Storage (BECCS), including BECCS in the energy-from-waste sector.¹⁶ Other processes and products with carbon capture and storage may be considered as well, such as biomethane with CCS or

¹⁶ The government's contract with BSI includes an optional extension to cover additional non-carbon capture and storage enabled GGR technologies in line with the government's technology neutral approach. The need for these methodologies is subject to further approval and the policy needs of the government.

sustainable aviation fuel with CCS. The PAS development process will prioritise consensus building and include multiple opportunities for stakeholder consultation and feedback to ensure that the methodologies reflect high integrity best practice across the marketplace.

BSI has developed and published two methodological 'Minimum Quality Thresholds' for BECCS and DACCS as an interim step, which is intended to support initial projects seeking business model support in the HyNet Track-1 expansion process.¹⁷ These specify what projects must cover as part of their removal quantification, and address matters including counterfactuals, carbon leakage, lifecycle assessment boundaries, and baseline.

As set out above, the government intends that the GGR Standard will meet the needs of both the compliance and voluntary carbon markets. The scope of the Minimum Quality Thresholds aligns well with the requirements of the voluntary carbon market. As the technology-specific methodologies are developed, further work will be undertaken to ensure consistency and compatibility with compliance market requirements. This could include addressing issues such as double counting of ETS emissions in the calculation of net removals and using the ETS to cover liability for CO₂ in the transport and storage network.

The Minimum Quality Thresholds will provide a benchmark to assist projects in aligning their GGR production pathways and methodologies to expected detailed methodologies of the GGR Standard. This in turn will support negotiations with the Government on the GGR Contract (noting that quantification of removals will be necessary to determine the Initial Net Removal Capacity Estimate, the Strike Price and the GGR Contract Sales Cap) as well as engagement with potential offtakers.

The Minimum Quality Thresholds will subsequently be used to support the development of detailed BSI methodologies. This iterative approach will ensure that the technology-specific methodologies are robust and allow for the development and innovation associated with first-of-a-kind deployment. It should be noted that the Minimum Quality Thresholds are an interim step only and will not be used for the purposes of carbon crediting. We expect that GGR Credits will be verified and issued according to the GGR Standard, which includes the BSI's technology-specific methodologies, once published.

Biomass sustainability

BECCS projects shall be required to comply with rigorous biomass sustainability criteria to ensure that they contribute to net zero while maintaining environmental integrity. The government plans to consult on the development of a common biomass sustainability framework to enable greater consistency between sectors and strengthen criteria in line with latest evidence. The Minimum Quality Thresholds refer to existing UK and international biomass sustainability criteria and outline the intention to align the full GGR Standard with the common biomass sustainability framework, once developed.

¹⁷ [BSI's Minimum Quality Thresholds for BECCS – “BSI Flex 2006”](#) (2025)
[BSI's Minimum Quality Thresholds for DACCS – “BSI Flex 2007”](#) (2025)

Updates to the GGR Standard

The GGR Contract includes a requirement to use and demonstrate compliance with the GGR Standard. It is essential that the methodologies underpinning the Standard are based on the best available scientific data to ensure the highest level of environmental integrity in the GGR market. Therefore, the GGR Standard will be 'evergreen', i.e. projects will be required to update their practices within set time intervals to comply with the most recent version of the technology-specific methodologies throughout the course of their contract. This mechanism ensures that projects remain aligned with fast-evolving GGR science and market best practices, to generate high-integrity GGR Credits.

Compliance with updates to the GGR Standard will be managed via Crediting Periods. This is a model commonly used in the voluntary carbon market to manage uncertainty around updates to carbon removal methodologies. Projects will be required to generate credits which are fully compliant with the most recent version of the GGR Standard for the length of the crediting period, regardless of any subsequent updates to the GGR Standard. When the crediting period renews, projects will be required to update their reporting to the most recent version of the GGR Standard. The Crediting Period shall be 5 years and can be renewed without limitation.

Verification and registry

Independent third-party verification will be required to validate compliance with the GGR Standard and confirm that projects have followed the requirements of the technology-specific methodologies. Following verification, GGR Credits will be issued into the approved registry (or registries) to ensure traceability and transparency. The registry shall uniquely identify, record and track each carbon credit from its issuance through to its retirement or cancellation, in line with the Core Carbon Principles of the Integrity Council for the Voluntary Carbon Market (ICVCM).

In due course, the Government will specify details of the crediting mechanisms to be used under the GGR Standard, including the approved registry (or registries), independent third-party verification process and approved validation and verification bodies.

CO₂ Losses from the T&S Network

The Minimum Quality Thresholds requires GGR projects to account for CO₂ losses from the CO₂ Transport and Storage Network within the temporal boundary of the project (i.e. until GGR project decommissioning is completed). It recommends that GGR projects consider implementing measures to manage this risk such as a buffer reserve, whereby a pool of GGR Credits is set aside and may be used to compensate for CO₂ losses from the T&S Network. The government is considering the implications of implementing a buffer pool, including impacts on the business model, interactions with UK ETS regulations and the Network Code, and whether T&S liability for non-fossil CO₂ losses can be held by T&S operators in the relevant UK ETS and CCUS regulatory frameworks.

Subsidy and Revenue Cumulation

Co-products and revenue cumulation

The purpose of the GGR Business Model is to support the generation and sale of GGR Credits. In the event that a GGR project produces and sells additional goods and services, such as bioenergy or biofuels in the case of BECCS, it is typically assumed that such activities are outside of the scope of, and not subsidised under, the GGR Contract.

In negotiations with projects, the government will assess the likelihood that assets subsidised under the GGR Contract may be used to support the production and sale of co-products. If it is deemed to be relevant, the government reserves the right to incorporate a co-product revenue adjustment mechanism in the GGR Contract to ensure that subsidy payments under the GGR Contracts are proportionately adjusted to account for any co-product revenues received by the Developer, where such co-products are partially subsidised under the GGR Business Model. This will minimise the risk of overcompensation and ensure that revenue support is necessary, proportionate, and compliant with the UK's subsidy control regime.

Where additional goods and services are produced by assets that are not subsidised under the GGR Contract, the Developer shall be entitled to retain all revenues from the sale of such goods and services.

Subsidy cumulation

The GGR Contract will include a prohibition on subsidy cumulation in respect of the costs of the project, subject to certain exemptions. Provided that the Developer does not receive subsidy support in respect of the same project costs (beyond the subsidy under the GGR Contract), such exemptions may include the Grant Funding Agreement and/or any Approved Scheme of Funding (the details of which will be negotiated and agreed on a project-by-project basis).

If the Developer is in receipt of any subsidy in breach of the subsidy cumulation prohibition, the Developer will be required to repay the subsidy unless it is able to evidence that the grantor of the relevant subsidy refuses or is unable to accept repayment. In such circumstances, the relevant amount (inclusive of interest) will be set off against any amounts payable to the Developer under the GGR Contract.

Milestones and Commissioning

Initial Conditions Precedent

The Initial Conditions Precedent (ICPs) set out in the GGR Contract will require the Developer to meet certain legal and regulatory requirements and conditions relating to the GGR Contract as soon as reasonably practicable and in any event no later than 20 business days after the Agreement Date (other than for any Initial Conditions Precedent that may be waived by the

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GGR Counterparty, in its absolute discretion). The ICPs must be evidenced in a form and content satisfactory to the GGR Counterparty.

The Initial Conditions Precedent include delivery to the GGR Counterparty of:

- A legal opinion confirming that the Developer is duly formed and has the power to enter into and fulfil its obligations under the GGR Contract
- Evidence of compliance with 'know your customer' procedures and checks
- A description of the Facility, including an aerial view of the geographical location and a process flow diagram of the Capture Plant
- Copies of Key Project Documents such as a T&S Connection Agreement, Applicable Planning Consents, Applicable Connection Documents, and relevant technology-specific agreements (e.g. Feedstock Supply Agreements for BECCS, and Solvent/Sorbent Supplier agreements and Low Carbon PPAs for DACCS)
- Evidence that the project will comply with the Minimum Quality Thresholds
- Evidence that any Offtake Agreements that have been entered into prior to the Agreement Dates include the Offtake Compliance Provisions and that the Developer has complied with the Fair Market Value Principles in relation to any such Offtake Agreements
- Relevant corporate documentation, including a subsidy control declaration and a resolution of the Developer's board of directors approving the terms of the GGR Contract and resolving that it executes, delivers and performs the GGR Contract and, if applicable, the Grant Funding Agreement

Milestone Requirement

Once the GGR Contract has been entered into, the Developer will have 18 months (i.e. until the Milestone Delivery Date) to fulfil either one of two Milestone Requirements set out in the GGR Contract.

These requirements are either:

- That the Developer and its direct shareholders have spent 10% or more of the Total Pre-Commissioning Project Costs
- Evidence that the project has fulfilled specific project commitments which are essential to the development of that project

The purpose of the Milestone Requirement is to deter speculative or underdeveloped projects from entering into a GGR Contract and to ensure that budget remains committed only to projects that demonstrate sufficient progress towards developing the relevant project. The GGR Counterparty will be responsible for determining the robustness of the evidence submitted by the Developer.

Operational Conditions Precedent

For the Start Date to occur and for GGR Contract payments to commence, the Developer must fulfil the Operational Conditions Precedent (OCPs) set out in the GGR Contract (unless waived by the GGR Counterparty, in its absolute discretion). The OCPs must be evidenced in a form and content satisfactory to the GGR Counterparty.

The Operational Conditions Precedent include delivery to the GGR Counterparty of:

- Written confirmation from the GGR Contract Settlement Services Provider that it has received the required information and that the Developer has the necessary systems and processes in place for the continued provision of the required information
- Evidence of compliance with 'know your customer' procedures and checks
- Evidence of full-facility commissioning, meeting required conditions as defined in the contract. This includes:
 - Evidence that a minimum Net Removal Capacity has been commissioned
 - For BECCS Facilities, evidence that the Required CO₂ Storage Rate has been commissioned. (Note: The government is considering the most appropriate efficiency measures and threshold for DACCS facilities as part of OCPs.)
 - Evidence that the OCP Required T&S Flow Rate has been commissioned
 - T&S Network Connection Confirmation
 - Evidence that the Facility can generate GGR Credits in compliance with the GGR Standard
- Evidence that the Developer is complying in full with the relevant Metering Obligations (which remain subject to further development)
- A signed and current schematic diagram of the Facility
- A Subsidy Control Declaration
- For BECCS facilities only, delivery of interim operational notification issued by the Electricity Transmission System Operator or confirmation from the licensed distributor that the Electricity Distribution Code compliance process has been complied with

Performance Testing

Following OCP stage, ongoing efficiency and performance testing will be required for both BECCS and DACCS projects to ensure that facilities meet certain performance requirements and provide value-for-money for government.

For BECCS technologies, projects will be required to demonstrate continued achievement of Minimum CO₂ Storage Rates. Failure to comply with Minimum CO₂ Storage Rate obligations may result in payment suspension or termination of the GGR Contract. The efficiency measures and thresholds for DACCS projects are subject to further consideration and development by the government to ensure appropriate demonstrative testing is applied.

To ensure that projects remain compliant with the GGR eligibility criteria set out in the HyNet Track-1 expansion guidance, published in December 2023, BECCS projects will be required to continually demonstrate that their feedstock is at least 90% biogenic. Specific details on required methods are still in development but will likely follow common approaches involving C14 testing.

Commissioning

The Initial Target Commissioning Window (TCW) will be defined as the 12-month period within which the project's Target Commissioning Date falls. The TCW will be set out in the Front-End Agreement and determined in the due diligence and negotiation phase prior to the Agreement Date, and with due regard to the wider cluster delivery plan. Each Developer has the flexibility to commission its project at any time within the TCW.

Payments under the GGR Contract can only commence on the Start Date (once all the OCPs are fulfilled/waived). The Start Date cannot be before the first day of the TCW.

A Longstop Date will be defined as the last day of the 12-month Longstop Period following the last day of the TCW. The Developer can satisfy OCPs at any time during the Longstop Period and enter the operational phase of the Contract, where the payment term will be eroded commensurate to the day-for-day delay beyond the TCW. Failure to fulfil the relevant OCPs by the Longstop Date will give the GGR Contract Counterparty the right, but not obligation, to terminate the GGR Contract.

The Milestone Delivery Date, TCW and Longstop Period may be extended day-for-day for any delays that occur due to Force Majeure, T&S Commissioning Delay Events, and/or a failure of utility operators (electricity, gas or water) to carry out the relevant connection works related to the Facility.

Pre-Start Date Termination

The GGR Contract includes the right for the GGR Contract Counterparty to terminate the GGR Contract where:

- The Developer fails to fulfil the Initial Conditions Precedent (ICPs) within 20 business days of the Agreement Date
- The Developer fails to satisfy the Operational Conditions Precedent (OCPs) by the Longstop Date
- The Developer fails to fulfil the Milestone Requirement(s) or deliver a Milestone Requirement Notice by the Milestone Delivery Date
- At any time prior to the Start Date, any Director's Certificate that accompanies a Milestone Requirement Notice is not true, complete, or accurate in any material respect or is misleading
- At any time prior to the Start Date, a Termination Event has occurred and is continuing

Pre-Start Date termination will be on a no liability basis and therefore no compensation will be payable to the Developer or to the GGR Contract Counterparty.

T&S Network Unavailability Risk

GGR projects will be dependent on access to the T&S Network in order to generate and sell GGR credits. The GGR Business Model will include provisions to manage cross-chain risks linked to unavailability of the T&S Network, including limited relief for the GGR Developer where appropriate. This aligns with established precedent in the CCUS programme and reflects the principle that cross-chain risks should be allocated to the party best able to manage them.

T&S Commissioning Delay

A 'T&S Commissioning Delay Event' refers to an event or circumstances which occurs prior to the GGR project's Start Date (excluding a T&S Outage Event or a T&S Planned Outage) that prevents or delays the development, construction, completion, commissioning and/or operation of the relevant T&S Network and results in the Capture Plant being prevented or delayed from exporting CO₂ to the network. This includes a failure of the relevant T&S Operator to carry out any relevant connection works in a timely manner.

If a T&S Commissioning Delay Event occurs, the GGR Developer may be eligible for time relief and/or compensation, such compensation being provided in the form of T&S Connection Delay Compensation and/or a Monthly T&S Connection Delay Event (TCDE) Relief Amount.

Time relief will allow for one or more of the Milestone Delivery Date (MDD), the Target Commissioning Window (TCW) and Longstop Date (LSD) of the GGR Contract to be extended to match the T&S Network's revised commissioning schedule. Extension of these dates is subject to the GGR Developer using reasonable endeavours to mitigate the effects of the T&S Commissioning Delay Event (including consequential delay to the project).

Developers shall be entitled to receive T&S Connection Delay Compensation to cover irrecoverable and unavoidable out-of-pocket costs that are incurred or will be incurred as a result of a T&S Commissioning Delay Event. In order to be eligible for compensation: (i) all OCPs except the T&S Connection Confirmation CP must have been fulfilled by the GGR Developer, such that the Developer would otherwise be ready to connect to the T&S Network and commence operations if the T&S Network were available, or waived by the GGR Contract Counterparty; and (ii) the Developer must have fully completed the Developer T&S Connection Works. The T&S Connection Delay Compensation is not available before the first day of the TCW, and shall expressly exclude:

- all costs incurred by the Developer under its Offtake Agreements;
- all costs associated with the Developer's financing arrangements in respect of the project;

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- all additional capital costs incurred by the GGR Developer, other than capital costs that are required to preserve, maintain and recommission the project; and/or
- any loss, damage, cost or other expense that does not arise naturally from the T&S Commissioning Delay Event and cannot reasonably be attributed to the T&S Commissioning Delay Event.

In addition to T&S Connection Delay Compensation for irrecoverable and unavoidable out-of-pocket costs, Developers may be entitled to receive a Monthly TCDE Relief Amount. The purpose of the Monthly TCDE Relief Amount is to compensate the GGR Developer if there is a delay to the generation and sale of GGR Credits which would - if such delay had not occurred - have enabled the project to recover its capex and the capital return component of the Strike Price. Availability of the Monthly TCDE Relief Amount is expected to improve bankability for industry and value-for-money for government by reducing the risk premium.

The Monthly TCDE Relief Amount will be based on the project's Capex Strike Price (which represents the capex and return components of the Strike Price) and the number of GGR Credits that would otherwise have been generated and sold during the T&S Commissioning Delay Event (based on the Deemed Daily CO₂ Removal Rate), which are the Pre-Start Date Relief Reference Quantities. All costs incurred by the GGR Developer for which it receives a Monthly TCDE Relief Amount shall be excluded from the T&S Connection Delay Compensation. Furthermore, any Pre-Start Date Relief Reference Quantities for which projects receive Monthly TCDE Relief Amounts shall be included in the calculation of the Total Accrued Quantity for the purpose of confirming whether the GGR Contract Sales Cap has been reached. This shall ensure that relief payments are accounted for over the duration of the contract in order to prevent overpayment of capex.

If a T&S Commissioning Delay Event lasts for a continuous period of at least 6 months, the T&S Prolonged Unavailability Event provisions shall apply (see section below). If a T&S Cessation Event (as defined in the section below) occurs before the Start Date, this shall be considered a T&S Commissioning Delay Event and relief will be provided accordingly (subject to the Developer fulfilling its contractual obligations).

Capture Outage Relief Events

Following the Start Date, if a T&S Outage Event occurs which lasts at least 24 hours and is not caused by any fault of the GGR Developer, then it will constitute a Capture Outage Relief Event (CORE). A CORE may arise from a Full T&S Outage Event, meaning that no CO₂ Rich Stream can be injected to the T&S Network, or a T&S Outage which is not a Full T&S Outage Event, meaning that less CO₂ Rich Stream than expected can be injected into the T&S Network, which in either case lasts at least one day. A CORE may arise from a T&S Planned Outage. Projects will be required to take steps to mitigate the effects of the CORE, including making reasonable efforts to turn down the Capture Plant operations to match the (reduced) T&S capacity and minimise costs.

If a Capture Outage Relief Event is deemed to have occurred in accordance with the conditions set out in the GGR Contract, then the GGR Developer will be granted relief. The relief will be calculated using the deemed quantity of Qualifying GGR Credits that would

otherwise have been generated and sold during the CORE period, which is the Deemed Qualifying GGR Credits Quantity. The Deemed Qualifying GGR Credits Quantity will be calculated using the Deemed Daily CO₂ Removal Rate which, for these purposes, will be based on previous performance data. An adjustment to the Strike Price will be made for the purpose of the relief calculation to reflect the operating costs that a Developer could mitigate through reduced energy consumption by turning down the throughput to the Capture Plant from a full load to a part-load during a CORE. Any Deemed Qualifying GGR Credits Quantities will accrue towards the Permitted Annual Sales Cap and the total GGR Contract Sales Cap. The full details of the CORE regime remain subject to further consideration and development.

T&S Prolonged Unavailability

A T&S Prolonged Unavailability Event arises in the following circumstances:

- A T&S Commissioning Delay Event which lasts for a continuous period of at least 6 months;
- A Full T&S Outage Event which is not the fault of the Developer and which lasts for a continuous period of at least 6 months; or
- A T&S Cessation Event, which means the occurrence of one of the following:
 - A notice of discontinuation is issued by the Secretary of State to the T&S Operator pursuant to a discontinuation agreement entered into between the T&S Operator and the Secretary of State; or
 - The licence of the T&S Operator is revoked and is not transferred to a substitute T&S Operator, such that the T&S Network ceases to operate or the project is no longer able to connect to the T&S Network.

If a T&S Prolonged Unavailability Event (TPUE) has occurred, the GGR Contract Counterparty shall have the right to issue a T&S Prolonged Unavailability Event Notice (TPUE Notice) to the Developer which shall specify the date from which the GGR Contract Counterparty has a right, but not an obligation, to terminate the GGR Contract. The GGR Contract Counterparty shall be required to give a TPUE Notice if the TPUE has been ongoing for 12 months.

Subject to the conditions and procedures set out in the draft GGR Contract, the GGR Contract Counterparty shall retain the discretion to terminate the GGR Contract if the TPUE is continuing after the T&S Prolonged Unavailability Remediation Deadline and the Developer has been unable to provide a feasible Alternative T&S Network Solution Plan.

If the GGR Contract is terminated as a result of a TPUE, the Developer shall be entitled to compensation via the T&S Termination Payment. The T&S Termination Payment is calculated in accordance with the formula set out in the GGR Contract (which accounts for T&S Termination Costs incurred by the Developer, T&S Termination Savings realised by the Developer and the Net Recoverable Value of the Capture Plant). T&S Termination Costs will (to the extent that these costs arise) include costs which are wholly attributable to the construction, testing, completion, commissioning or decommissioning of the capture plant; development and pre-development costs (to the extent that such costs are included in the Strike Price); and break costs associated with the Developer's contractual arrangements

(provided such contracts have been entered into on arm's-length, reasonable terms). The T&S Termination Costs will be capped at 100% of the Total Capex Payment, with the exception of financing break costs which will be excluded from the T&S Termination Cost cap in order to enable projects to access the lowest total cost of capital.

T&S Termination Costs will exclude the capital return component of the Strike Price and all financing costs, except for financing and contractual break costs. It will exclude any costs in respect of which the Developer has received compensation arising from a T&S Commissioning Delay Event. The compensation will also be reduced to reflect any savings made by the project, which may include avoided out-of-pocket costs and any net recoverable value from the capture plant (e.g. potential revenue from the sale of capture plant assets).

Change in Law

Qualifying Changes in Law (QCIL)

The QCIL provisions in the GGR Contract set out the circumstances in which the Developer or the GGR Contract Counterparty may be entitled to compensation for the occurrence of a QCIL. A QCIL is a Change in Law which is not Foreseeable and falls under one of the following 3 categories:

(a) **Discriminatory Change in Law:** This is a Change in Law which specifically applies to the particular: (i) Project; (ii) Facility; or (iii) Developer.

(b) **Specific Change in Law:** This is a Change in Law that specifically applies to:

(i) greenhouse gas removal facilities (or the holding companies of entities who operate such facilities) deploying the same GGR technology as the Developer and not to any other greenhouse gas removal facilities;

(ii) greenhouse gas removal facilities (or the holding companies of entities who operate such facilities) which are subject to a GGR Contract, and not to other greenhouse gas removal facilities; or

(iii) facilities (or the holding companies of entities who operate such facilities) deploying the same GGR technology as the Developer and which are subject to a GGR Contract, and not to other greenhouse gas removal facilities.

(c) **Other Change in Law:** This is a Change in Law which, whilst not specifically applying to the Developer or its Facility, has an undue and discriminatory effect on the out-of-pocket costs incurred or saved by the Developer when compared with the out-of-pocket costs incurred or saved by one of the following UK comparator groups:

(i) all other greenhouse gas removal facilities which operate the same GGR Technology as the Developer;

(ii) all other greenhouse gas removal facilities deploying a different GGR technology to the Developer;

- (iii) (if applicable) all other Developers which operate the same underlying installation, but do not deploy GGR technology
- (iv) all other Developers which operate a GGR technology not subject to a GGR Contract
- (v) all other Developers which operate a Facility deploying one or more Material GGR Technologies

Updates to the GGR Standard shall not constitute a Qualifying Change in Law.

Compensation for QCiL

The QCiL compensation provisions have effect both ways so that the Developer will be entitled to compensation if a QCiL results in net costs for the Developer, and the GGR Contract Counterparty will be entitled to compensation if a QCiL results in net savings for the Developer. The main categories of compensation that will be payable to/from a Developer relate to a QCiL that:

- permanently prevents commissioning of the Capture Plant by virtue of the necessary construction, testing, completion of commissioning becoming illegal (QCiL Construction Event Payment);
- affects a Developer's capex (QCiL Capex Payment);
- affects a Developer's opex (QCiL Opex Payment);
- affects a Developer's ability to generate GGR Credits and hence the market revenue and subsidy that the Developer receives for such GGR Credits (QCiL Adjusted Revenue Payment);
- permanently prevents a Facility from operating by virtue of such operation becoming illegal (a QCiL Operations Cessation Event Payment).

Compensation for all such events could take the form of either lump sums and/or stage payments, except for the QCiL Opex Payment which could either be paid through an adjustment to the Strike Price or staged payments.

QCiL Termination

If a QCiL Construction Event or QCiL Operations Cessation Event occurs, the GGR Contract Counterparty must give notice to the Developer terminating the GGR Contract.

If a QCiL occurs but is neither a QCiL Construction Event nor a QCiL Operations Cessation Event, and the amount of QCiL Compensation that would be payable is greater than the amount of the QCiL Construction or Operations Cessation Event Payment (had the QCiL constituted either of these events), then the GGR Contract Counterparty has the right, but not the obligation, to give notice to the Developer terminating the GGR Contract.

Termination due to a QCiL permanently preventing either construction or operations, by virtue of it becoming illegal, will result in compensation being payable by the GGR Contract Counterparty to the Developer. Details of the relevant information around compensation costs are outlined below.

	QCiL Construction Event	QCiL Operations Cessations Event
Costs which may be included for compensation:	<ul style="list-style-type: none"> development and pre-development costs incurred following the Devex Recovery Date in respect of the Capture Plant; costs which are wholly attributable to the construction, testing, completion, commissioning and decommissioning of the Capture Plant; break costs associated with the Developer's contractual or financing arrangements in respect of the project; and T&S Charges payable by the Developer in the period commencing on the Discontinuance Date 	<p>All irrecoverable and unavoidable out-of-pocket costs which have been, will be or are reasonably likely to be incurred by the Developer in respect of the project arising directly from the relevant QCiL Operations Cessation Event, including:</p> <ul style="list-style-type: none"> QCiL Tax Liabilities, break costs associated with the Developer's contractual or financing arrangements; and T&S Charges payable by the Developer in the period commencing on the Discontinuance Date,
Costs which will be excluded:	<ul style="list-style-type: none"> all other costs which are reasonably likely to be payable by the Developer in connection with the QCiL Construction Event and all costs associated with the Developer's financing arrangements in respect of the project (except for financing break costs which may be recovered) 	<ul style="list-style-type: none"> all other costs which are reasonably likely to be payable by the Developer in connection with the QCiL Operations Cessation Event all costs associated with the Developer's financing arrangements in respect of the project (except for financing break costs which may be recovered)
The amount of compensation available will be reduced by any savings made by the Developer, which may include:	<ul style="list-style-type: none"> avoided out-of-pocket costs tax relief or reductions insurance proceeds and other compensation (including the net recoverable value of the Capture Plant) and development and pre-development costs incurred on or before the Devex Recovery Date in respect of the Capture Plant 	<ul style="list-style-type: none"> avoided out-of-pocket costs tax relief or reductions insurance proceeds and other compensation (including the net recoverable value of the Capture Plant)

Payment suspensions and other termination events

Payment Suspensions

The GGR Contract Counterparty may suspend payments under the GGR Contract in defined circumstances, including but not limited to where:

- the Developer fails to provide an Offtake Review Notice, supporting information relating to an Offtake Review Notice or an Offtake Compliance Audit;
- the Developer fails to permit the GGR Contract Counterparty from exercising its GGR Contract Counterparty Audit Right;
- the Developer fails to provide an Annual Compliance Report;
- the Developer fails to comply with the process requirements for T&S Prolonged Unavailability Events (e.g. fails to provide a T&S Prolonged Unavailability Response Notice within 6 months after the T&S Prolonged Unavailability Event Notice)
- the Developer fails to comply with the Minimum CO₂ Storage Rate obligation (where applicable);
- the Developer is found to be in breach of the Start Date representation that no subsidy, state aid and/or union funding has been received in relation to costs of the project (other than the Grant Funding Agreement, or as otherwise waived by the GGR Contract Counterparty);
- the Developer fails to comply with the undertaking that no subsidy, state aid and/or union funding is received in relation to costs of the project (other than the Grant Funding Agreement) or fails to provide supporting information relating to such undertaking as requested by the GGR Contract Counterparty;
- the Developer fails to provide information to the GGR Contract Counterparty relating to 'know your customer'; or
- the Developer fails to comply with the undertaking that at all times the Facility will deploy the same GGR Technology (i.e. BECCS or DACCS) as at the Agreement Date.

Prolonged Force Majeure

The GGR Contract Counterparty will have the right to terminate the GGR Contract where the Developer is delayed in developing, constructing, completing, testing and/or commissioning the Capture Plant for a continuous period of 18 months due to a continuing, unresolved event of Force Majeure that first occurs between the Agreement Date and Milestone Satisfaction Date. Prolonged Force Majeure termination will be on a no liability basis and therefore no compensation will be payable to the Developer or to the GGR Contract Counterparty.

Default Termination

The GGR Contract Counterparty has the right but not the obligation to terminate the GGR Contract (for default) including in, but not limited to, one of the following events which is continuing on or after the Start Date:

- The Developer is insolvent (or similar);
- The Developer defaults on credit support;
- There has been a non-payment by the Developer which is not remedied within a cure period;
- The Developer has breached key obligations;
- The Developer fails to comply with its obligation to permit the GGR Contract Counterparty to exercise its GGR Contract Counterparty Audit Right;
- The Developer ceases to be a user of the T&S Network due to user default (as defined in the CCS Network Code);
- The Developer is in breach of the Minimum CO₂ Storage Rate Obligation (for BECCS) or equivalent performance efficiency test (for DACCS);
- The GFA and/or the T&S Connection Agreement is terminated due to the Developer's breach or default;
- The Developer has knowingly or recklessly provided misleading declarations in respect of an Offtake Review Notice, Offtake Supporting Information, Offtake Compliance Audit or PIN;
- The Developer has failed to provide an Offtake Review Notice or Offtake Compliance Audit and has continued to do so following notification of such non-compliance by the GGR Contract Counterparty;
- The Developer has failed to provide an Annual Compliance Report and has continued to do so following notification of such non-compliance by the GGR Contract Counterparty;
- The Developer has failed to provide a PIN within 6 months of the end of the relevant Billing Period.

Next Steps

The draft GGR Contract published alongside this document shall form the basis of negotiations with GGR projects in the HyNet Track-1 expansion process. The government will continue to engage with project developers and other interested parties to develop provisions which remain subject to further consideration. We may seek to evolve the GGR Business Model in the future for any further allocation rounds.

Any enquiries or views on the proposals outlined in this document should be sent to:
GGR.BusinessModels@energysecurity.gov.uk.

This publication is available from: [Greenhouse gas removals \(GGR\): business model - GOV.UK](#)

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