Department for Energy Security & Net Zero

Carbon Capture, Usage and Storage

Industrial Carbon Capture Business Models Update

October 2023

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Contents

1 Introduction

Carbon capture, usage and storage (CCUS) has a key role in the UK's Net Zero Strategy[1] and helping meet our legally binding commitment to achieving net zero by 2050.

In April 2022, the British Energy Security Strategy[2] re-stated the government's ambition to deliver CCUS in four industrial clusters and capture and store 20-30 megatonnes of carbon dioxide ($MtCO_2$) by 2030, where industrial emissions make up 6 $MtCO_2$ by 2030 and increase to 9 $MtCO_2$ by 2035. The Powering Up Britain publications (Net Zero Growth Plan and Energy Security Plan) published in March 2023 provided an update on how we are delivering against these ambitions.

The introduction of business models for industrial carbon capture to unlock private investment and scale up deployment will play a key role in delivering the government's ambitions. This document outlines updates and further detail on key design aspects of the Industrial Carbon Capture (ICC) and Waste ICC business models. This business model update is being published alongside an updated version of the ICC Contract and the Waste ICC Contract.

These business models have been developed following consultations on business model design held in July 2019[3] and April 2022[4], with business model development updates released between December 2020 and December 2022, following engagement with CCUS expert groups, industry and relevant regulators.

The proposed business models summarised in this document incorporate several additional positions developed subsequent to the April, July and December 2022 policy updates and April 2022 consultation. This document should be read in conjunction with the ICC and Waste ICC business model updates and ICC Grant Funding Agreement (GFA) and offer letter published in December 2022[5,6]. A number of the proposed ICC contractual provisions have been outlined in the previous business model updates and, where relevant, references to those publications have been noted within this document.

[1] https://www.gov.uk/government/publications/net-zero-strategy
[2] https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy
[3] https://www.gov.uk/government/consultations/carbon-capture-usage-and-storage-ccus-business-models
[4] https://www.gov.uk/government/consultations/carbon-capture-usage-and-storage-ccus-industrial-carbon-capture-business-model
[5] https://www.gov.uk/government/publications/carbon-capture-usage-and-storage-ccus-business-models
[6] https://www.gov.uk/government/publications/design-of-the-carbon-capture-and-storage-ccs-infrastructure-fund

2 Disclaimer

This document sets out further details on the government's current proposals on the potential business models for industrial facilities (including waste management facilities) with carbon capture usage and storage (CCUS). The proposals, as set out in the document and accompanying updates 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 updates published within this document, and accompanying contracts, 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 document and accompanying updates published alongside this document, for any reason and in particular to ensure that proposals provide value for money (VfM) and are consistent with subsidy control principles.

This document takes into account engagement that has taken place since 2020. This includes engagement with the ICC Expert Group, Waste CCS Expert Group, project developers, and other interested parties.

The Department for Energy Security and Net Zero ("the Department") 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 ICC Contract and Waste ICC Contract do not constitute definitive drafting of the ICC and Waste ICC Contract terms. The Department reserves the right to review all provisions set out in the ICC and Waste ICC Contracts, and a number of the provisions and terms which require particular consideration and development have been square bracketed (with footnotes) in the Contract documents.

The ICC Contract and Waste ICC Contract do not indicate any willingness or agreement on the part of the Department to enter into, or arrange entry into, the ICC or Waste ICC Contract. The ICC and Waste ICC Contracts do not constitute an offer and are not capable of acceptance.

3 Business Model Summary

3.1 What is the ICC business model?

The ICC business models have been designed to incentivise the deployment of carbon capture technology by industrial users who often have no viable alternative to achieve deep decarbonisation. The ICC business models comprise a capital grant (for initial projects), which will be funded by the £1 billion CCUS Infrastructure Fund (CIF), and/or ongoing revenue support, which will be funded by the Industrial Decarbonisation and Hydrogen Revenue Support (IDHRS) scheme. There are two variants of the revenue support contracts; the 'generic' "ICC Contract" for successful CCS projects from all eligible industrial sectors apart from successful waste management CCS projects, which would be offered the "Waste ICC Contract".

3.2 Phase-2 Allocation process

The ICC business model has been developed as part of the wider CCUS Cluster Sequencing process, and projects intending to connect to Track-1 clusters were able to make submissions for business model support in Phase-2 of this process[7]. The application window for Phase-2 closed on 21 January 2022. Projects were initially reviewed to ensure they met the eligibility criteria outlined in the Phase-2 guidance; results of this review were announced in March 2022[8].

Projects were then reviewed against the assessment criteria outlined in the Phase-2 guidance. Shortlisted projects were announced in August 2022[9]. In March, the Department then selected 8 projects to proceed to negotiations for the relevant business model support[10], subject to final government compliance checks and matters such as those set out in section 7.9 of the Phase-2 guidance.

During the period of negotiation and due diligence, projects on the negotiation list will engage with the Department on a variety of technical and commercial issues. We anticipate that the project-specific terms included in the ICC and Waste ICC Contracts and the CIF GFA will be subject to discussion in this phase.

[7] Guidance on the cluster sequencing process: https://www.gov.uk/government/publications/cluster-sequencing-for-carbon-capture-usage-and-storage-ccus-deployment-phase-2
[8] https://www.gov.uk/government/publications/cluster-sequencing-phase-2-eligible-projects-power-ccus-hydrogen-and-icc/cluster-sequencing-phase-2-eligible-projects-power-ccus-hydrogen-and-icc
[9] https://www.gov.uk/government/publications/cluster-sequencing-phase-2-eligible-projects-power-ccus-hydrogen-and-icc/cluster-sequencing-phase-2-shortlisted-projects-power-ccus-hydrogen-and-icc-august-2022
[10] https://www.gov.uk/government/publications/cluster-sequencing-phase-2-eligible-projects-power-ccus-hydrogen-and-icc/cluster-sequencing-phase-2-track-1-project-negotiation-list-march-2023

3.3 Purpose

This document outlines updates and further detail on key design aspects of the Industrial Carbon Capture (ICC) and Waste ICC business models. The proposed business models summarised in this document incorporate a number of additional positions developed subsequent to the April, July and December 2022 policy updates and April 2022 consultation. This business model update is being published alongside an updated version of the ICC Contract and the Waste ICC Contract. These updated contracts will form the basis for negotiations with projects on the Track-1 project negotiation list.

This publication package is the latest suite of updates for the Business Models and represents the basis for negotiations with Track-1 projects.

3.4 Definitions

Definitions for terminology used throughout this publication can be found in the ICC and Waste ICC Contracts, published alongside this update, unless otherwise defined in this document.

4 Free Allowance Treatment

During the Initial Term, ICC Contract holders[11] will forfeit a number of Free Allowances (FAs). FAs are received annually under the UK Emission Trading Scheme (UK ETS). The number of FAs which are required to be forfeited will be calculated in line with the Capture Factor. This section sets out the details of FA treatment under the ICC Contract.

4.1 FA Equation Symbols

Table 1: FA Equation Symbols

Symbol	Term	Description
$F_{FA,f}$	Forfeiture FAs for calendar year (f)	The number of FAs to be forfeited in the relevant calendar year.
$T_{FA,f}$	Total Annual FA Allocation for calendar year (f)	The total number of FAs allocated to the UK ETS permit holder in respect of the 'installation'[12] for the relevant calendar year, as set out in the most recently published FA Allocation Table as at 1 February in the relevant calendar year. The installation described in the UK ETS permit will be referred to as the 'UK ETS Installation' in the ICC Contract.
CF_f	Capture Factor that applies for calendar year (f)	Capture Factor which is used to determine Forfeiture/Forfeited FAs, Protected FAs and FA payments in the relevant calendar year.
$S_{FA,f}$	Annual Settlement FAs for calendar year (f)	The number of FAs that the Emitter will receive payments for in the relevant calendar year.

[11] The Free Allowance provisions are not applicable to Waste ICC Contracts.

[12] This means the 'installation' as defined in The Greenhouse Gas Emissions Trading Scheme Order 2020.

Symbol	Term	Description
H_{FA}	Theoretical FAs	These are based on the number of FAs allocated in respect of the UK ETS Installation for scheme year 2025 as set out in the most recently published UK ETS FA allocation table (see section 4.4.1 for further detail). See section 4.7.3 for detail on how this definition will be applied to New Entrants.
$Y_{FA,f}$	FA Trajectory for calendar year (f)	Trajectory is 100% in the Start Date Calendar Year and reduces linearly each year to 50% in Calendar Year 10 (see section 4.4.2 for further detail). • 50% reduction applied over 9 years (i.e. for the Start Date Calendar Year there is no reduction) 50 / 9 = 6% annual reduction See section 4.7.3 for detail on how this definition will be applied to New Entrants.

4.2 FA Forfeiture

Free Allowances (FAs) must be forfeited by the Emitter to the ICC Contract Counterparty once a year in line with the Capture Factor and the Emitter will receive compensation for the Forfeited FAs on a monthly basis (see section 4.3 below) at the value of that year's Fixed Trajectory Reference Price. Emitters will remain subject to UK ETS surrender obligations in respect of residual 'uncaptured' CO_2 emissions (i.e. CO_2 emissions which are not captured and stored).

"Forfeiture FAs" are the number of FAs allocated to the Emitter which need to be forfeited (i.e. transferred to the ICC Contract Counterparty) in a calendar year. Forfeiture FAs will become "Forfeited FAs" once they have been transferred by the Emitter from its Operator Holding Account and received by the ICC Contract Counterparty in its trading account.

The number of Forfeiture/Forfeited FAs will be calculated in accordance with Equation 1.

Equation 1: Forfeiture/Forfeited FAs for calendar year (f)

$$F_{FA,f} = T_{FA,f} \times CF_f$$

4.3 Price Assurance

The Emitter will receive price assurance for the Forfeited FAs; the Emitter will be compensated at the value of the Fixed Trajectory Reference Price[13] for the relevant calendar year. Payments will be made on a monthly basis.

4.4 Volume Assurance

The Emitter will also receive assurance that a minimum number of 'protected' FAs will be eligible for compensation. The minimum number of 'protected' FAs for which assurance is given will decrease on a linear trajectory from 100% in the calendar year in which the Contract Payment Term Commencement Date occurs to 50% in the calendar year in which the ninth anniversary of the Contract Payment Term Commencement Date occurs (Calendar Year 10). The number of Protected FAs for a calendar year is calculated by applying this trajectory to an Emitter's Theoretical FAs (section 4.4.1) multiplied by the prevailing Capture Factor (section 4.5).

Theoretical FAs are intended to broadly represent the number of FAs the UK ETS permit holder would have been allocated in respect of the UK ETS Installation if the UK ETS laws which are in force and the policies to which the government is committed relating to FAs at a date to be set during negotiations are applied. The number of Theoretical FAs does not impact the actual number of FAs allocated to the Emitter under the UK ETS.

The number of Protected FAs is simply required to determine whether the Emitter should receive compensation under the ICC Contract for Forfeited FAs or a higher number of Protected FAs for the calendar year:

- If an Emitter's Protected FAs are greater than their Forfeited FAs for the relevant calendar year, the Emitter will receive a monthly payment for the number of Protected FAs.
- If an Emitter's Protected FAs are less than or equal to their Forfeited FAs for the relevant calendar year, the Emitter will receive a monthly payment for the number of Forfeited FAs.

[13] See section 6 of December 2022 publication https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1125226/industrial-carbon-capture-business-model-summary-december-2022.pdf

As such, volume assurance acts as a backstop in the event that an Emitter's Forfeiture FAs fall below the level of Protected FAs. The number of FAs that the Emitter will receive compensation for is referred to as the number of Annual Settlement FAs.

Equation 2: Annual Settlement FAs for calendar year (f)

$$S_{FA,f} = MAX\left(\left(T_{FA,f} \times CF_f\right), \left(H_{FA} \times CF_f \times Y_{FA,f}\right)\right)$$

4.4.1 Theoretical FAs

The number of Theoretical FAs will be set during negotiations (at a time to be determined by the Department during negotiations) based on the number of FAs allocated in respect of the UK ETS Installation for scheme year 2025 as set out in the most recently published UK ETS allocation table available during negotiations, but potentially adapted to reflect any proposed changes in law or changes in government policy that are made or announced prior to the date on which the number of Theoretical FAs is set which change the number of FAs in the UK ETS FA allocation table for 2025 available during negotiations (that will not yet be reflected in the allocation table). Scheme year 2025 (rather than any later scheme year) was chosen because the allocation table for 2026 onwards will not be available during negotiations, hence this will be the figure available at that point for the scheme / calendar year nearest to the Start Date Calendar Year. The number of Theoretical FAs will be set out in the ICC Agreement.

Emitters may receive a change in FA allocation, or notice of a change in FA allocation, mid-year because of Activity Level Changes (ALCs) or other allocation changes as part of the UK ETS scheme. Where there is a specified increase or decrease in a UK ETS Installation's activity levels, there may be changes to the level of free allocation awarded to the Installation under UK ETS. Contrary to the position set out in the December ICC business model summary, our position is now that the number of Theoretical FAs under the ICC will be fixed for the Initial Term and will not be affected by ALCs.

4.4.2 FA Trajectory

The FA Trajectory is a stepped downwards trajectory which gradually reduces government support during the Initial Term.

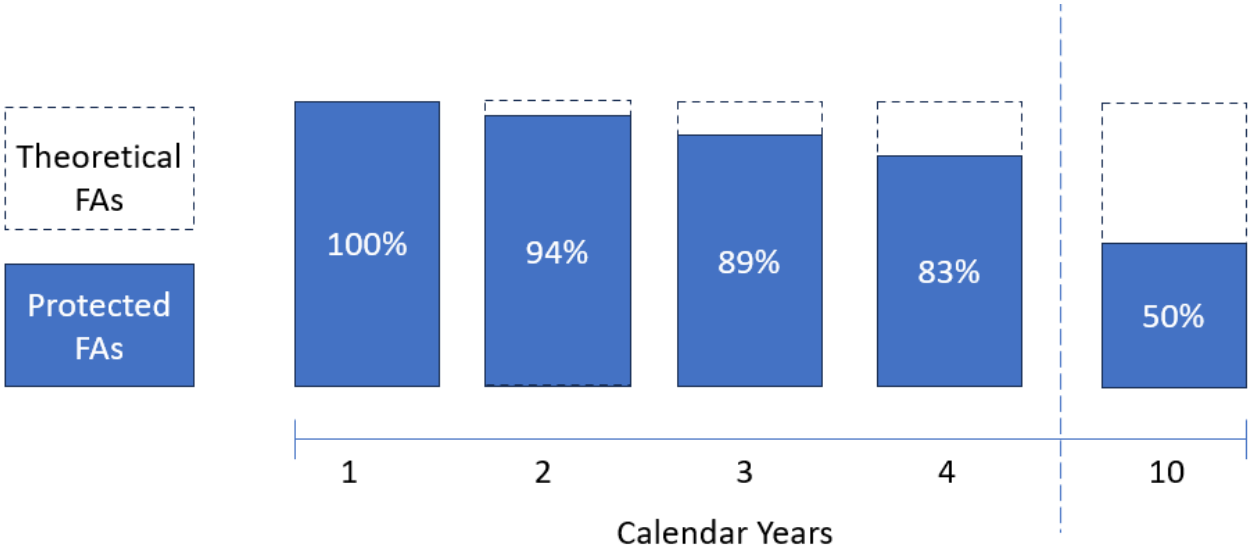
For incumbent Installations, the FA Trajectory is a linear downward trajectory from 100% in the calendar year in which the Contract Payment Term Commencement Date occurs to 50% in the calendar year in which the ninth anniversary of the Contract Payment Term Commencement Date occurs (Calendar Year 10) (i.e. annual reduction of 6%).

The April 2022 update stated that the minded-to-position was that the FA Trajectory would decrease on an Opex Payment Year basis. However, the FA Trajectory is always applied to calculate the number of Protected FAs on a calendar year basis, so that it can be compared with the number of Forfeited FAs which is also calculated on a calendar year basis. This comparison is done to calculate the FA payments for the relevant calendar year. If the FA

Trajectory were to decrease on a Opex Payment Year basis, the trajectory would then have to be weighted annually to calculate Protected FAs on a calendar year basis.

In order to simplify the approach, the FA Trajectory will decrease on a calendar year basis (and continue to be applied to calculate the number of Protected FAs on a calendar year basis). This means the weighting calculation will no longer need to be carried out. In light of this simplification, the FA Trajectory will now be set out in the ICC Agreement.

Figure 1: Illustration showing the impact of the FA Trajectory on the level of Protected FAs (assuming a fixed Capture Factor throughout).



4.5 Capture Factor

This section describes the concept of the Capture Factor and the ways in which it is used within the business model. The Capture Factor is used in the Forfeiture / Forfeited FAs formula and the Protected FAs formula. Accordingly, it is used to (i) calculate the number of FAs the Emitter is required to forfeit and (ii) calculate the number of FAs for which the Emitter receives protection, so that the latter can be compared to the former to ascertain whether volume protection payments are required.

4.5.1 Calculating the Capture Factor

The Capture Factor represents the net percentage reduction in CO_2 emissions as a result of installing the Capture Plant. It will be calculated in relation to the UK ETS Installation, which will comprise the Industrial Installation and the Capture Plant and may comprise other regulated activities under the UK ETS (should these be undertaken at a UK ETS Installation, e.g. C_D emitted in Figure 2 below).

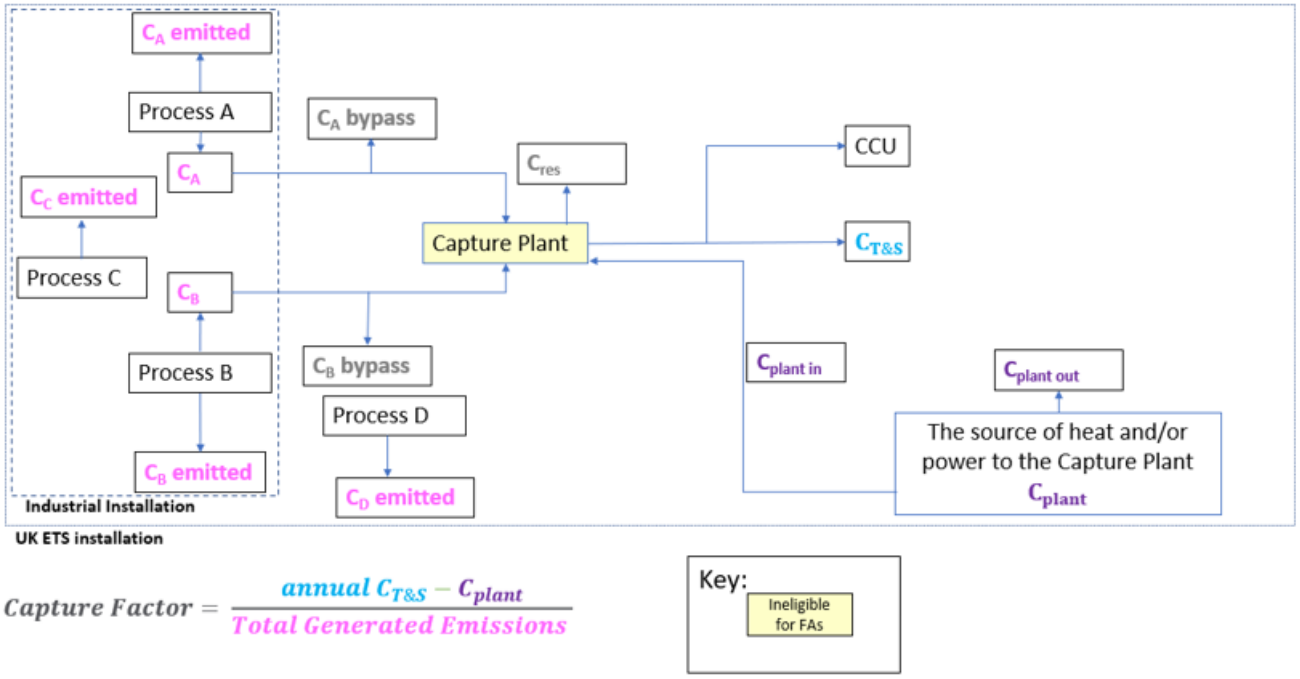
The Initial Capture Factor will be agreed during negotiations and set out in the ICC Agreement. It will be fixed subject to a mandatory Initial Rebasing and, in limited circumstances, any (non-mandatory) Subsequent Rebasing(s). The actual Capture Factor will need to be calculated and

compared against the prevailing Capture Factor (either the Initial Capture Factor, or the Capture Factor that the Initial Capture Factor has been replaced with if there has been a subsequent Rebasing), annually as part of the rebasing process(es) (see section 4.5.3).

Equation 3: Capture Factor that applies for calendar year (f)

$$CF_f = \frac{annual\ C_{T\&S} - C_{plant}}{Total\ Generated\ Emissions}$$

Figure 2: Schematic showing how the Capture Factor is determined for a fictitious UK ETS Installation.



Annual Metered CO_2 Output to T&S

The numerator in the Capture Factor calculation consists of the annual CT&S minus Cplant[14].

CT&S is the Metered CO_2 Output to T&S, which (unless a Capture Outage Relief Event[15] occurs) is the mass quantity of CO_2 entering the relevant T&S network from the Installation (as defined in the ICC Agreement, including the Industrial Installation and the Capture Plant) during the relevant Settlement Unit.

[14] In the ICC Contract this is described as 'Annual Metered CO_2 Output to T&S' minus the 'Auxiliary CO_2 Generated'

[15] Capture Outage Relief Event means a Capture Outage Event which occurs as a direct result of a T&S Outage Event (including a T&S Planned Outage) but excluding any T&S Outage Event that arises out of or in connection with any act, omission, breach or default of the Emitter or its Representatives (including any breach by the Emitter or its Representatives of an Industry Document).

CT&S will be metered and provided to the ICC Contract Counterparty on a monthly basis, to daily (i.e. Settlement Unit) granularity; this is already required for the purpose of the Opex Payment and Capex Payment calculations. Annual CT&S will be the sum of the daily CT&S figures (which are reported monthly) for all days during the relevant calendar year.

Auxiliary CO_2 Generated

The numerator in the Capture Factor calculation consists of annual CT&S minus Cplant.

Cplant is the term used to describe the additional CO_2 emissions within the UK ETS Installation which are associated with the supply of heat and/or power to the Capture Plant (Auxiliary CO_2 Generated). It includes all of those CO_2 emissions, regardless of whether (or not) they are captured (i.e. it includes Cplant out and Cplant in as shown in Figure 22). Cplant will need to be calculated annually as part of the rebasing process(es) (see section 4.5.3).

Total Generated Emissions

The denominator in the Capture Factor calculation consists of Total Generated Emissions.

Total Generated Emissions (TGE) means the mass quantity (expressed in tCO_2) of the total CO_2 emissions (both fossil and biogenic) generated by the UK ETS Installation in a calendar year, consisting of all measured streams of CO_2 generated by the UK ETS Installation which are directed to the Capture Plant and all measured streams of CO_2 which are emitted directly to the atmosphere from the UK ETS Installation, in each case excluding any Auxiliary CO_2 Generated, as calculated in accordance with the Total Generated Emissions Methodology.

TGE includes:

1) Measured streams of CO_2 which are directed to the Capture Plant from emissions sources within the UK ETS Installation (subject to the exclusion above): C_A and C_B in Figure 22

2) Measured streams of CO_2 which are emitted directly to the atmosphere from the UK ETS Installation (subject to the exclusion above): C_A emitted, C_B emitted, C_C emitted, C_D emitted in Figure 22.

4.5.2 Initial Capture Factor

During negotiations, the Emitter and the Department will agree the Initial Capture Factor for the project, which will be set out in the ICC Agreement. The Initial Capture Factor will be set at the point of contract signature (i.e. the Agreement Date) and apply for the Initial Term, subject to the rebasing process(es) (see section 4.5.4 and 4.5.5).

Methodology

The methodology for setting the Capture Factor will also be agreed during negotiations[16] and included in the ICC Agreement. This will include:

- how Cplant should be determined;
- how TGE should be determined (e.g. what are the relevant emission sources; are those sources routed to the Capture Plant; where are the measurement points); and
- what percentage reductions have been applied to the forecast capture factor to account for outages/poor Capture Plant performance.
- In addition, annual CT&S for the purpose of setting the Initial Capture Factor will be the Metered CO_2 Output to T&S Estimate divided by five (as this covers a five-year period).

This methodology will (subject to any changes to the methodology – see section 4.4.5.3) be used for any rebasing of the Capture Factor. If there is any dispute in relation to such rebasing, an expert can apply the agreed methodology to resolve such dispute.

4.5.3 Rebasing(s)

There may be scenarios in which the emissions profile of the UK ETS Installation could change significantly during the Initial Term of the ICC Contract and/or the performance of the Capture Plant could differ to design expectations. Therefore, it may be appropriate to re-base the Capture Factor in some scenarios to reduce the risk of over-compensating or under-compensating the Emitter for FAs. Accordingly, a mechanism has been designed for the Capture Factor to be re-based after an initial period of operations and then further re-based if it becomes materially unrepresentative of what is happening within the UK ETS Installation, including if there is a Material Change or a TGE Material Change.

Material Change

A Material Change means, in relation to the Outlet CO_2 Metering Equipment and/or the Inlet CO_2 Measurement Equipment, a change to the systems and/or processes relating to such equipment which is of such a type or magnitude as to raise the reasonable expectation that the Emitter's ability to meet its obligations under the ICC Contract relating to the Outlet CO_2 Metering Equipment and/or the Inlet CO_2 Measurement Equipment will be affected.

TGE Material Change

A TGE Material Change means a change to the systems and/or processes relating to the UK ETS Installation, or to the UK ETS Monitoring and Reporting Methodologies, which is of such a type or magnitude as to raise the reasonable expectation that the TGE Methodology will be inaccurate.

If there is a TGE Material Change, the Emitter will be required to notify the ICC Contract Counterparty of whether or not it considers that (i) any updates may be required to the

[16] A proposed Capture Factor methodology will be provided by the Emitter and technically assured as part of the negotiations process.

methodology for rebasing the Capture Factor, and (ii) any changes may be required to the prevailing Capture Factor.

When the Emitter is submitting the end of year rebasing notice to the ICC Contract Counterparty (as part of the rebasing process(es) – see sections 4.5.4 and 4.5.5), if there is a change in the Capture Factor which is due to a Material Change and/or a TGE Material Change, the Emitter must submit an updated methodology for calculating the Capture Factor (if applicable). Such proposed updated methodology must be provided by the Emitter as part of the Supporting Information provided in the rebasing process(es) (see sections 4.4.5.4 and 4.4.5.5).

4.5.4 Initial Rebasing

There will be an initial rebasing near the start of the operational term of the ICC Contract to ensure the Capture Factor more accurately represents the Capture Plant's operational performance, recognising the FOAK nature of CCUS in the UK.

The initial rebasing could occur if the Initial Capture Factor Rebasing Condition is satisfied. The Initial Capture Factor Rebasing Condition means a change in value of the Capture Factor (calculated by the Emitter) in an amount that exceeds (upwards or downwards) two per cent (2%) of the Initial Capture Factor.

This process will occur after the earlier of:

- 12 Valid Billing Periods[17] and one full calendar year (January-December) of operations; and
- 24 Billing Periods and two full calendar years (January-December) of operations (to provide a backstop to account for potentially long outage periods whilst ensuring the Capture Factor is reflective of actual operations).

Initial Rebasing Process

Within 20 Business Days of the relevant trigger occurring (see 4.5.4.4), which will be within the first 20 Business Days of January, the Emitter must notify the ICC Contract Counterparty:

- of its TGE data and Cplant data for the previous calendar year;
- that it considers that the Capture Factor either:
    - does not satisfy the Initial Capture Factor Rebasing Condition and therefore does not need to be rebased;
    - satisfies the Initial Capture Factor Rebasing Condition and needs to be re-based; or

[17] A Valid Billing Period is a Billing Period in which the Metered CO_2 Output is equal to or greater than eighty-five per cent (85%) of the Monthly Metered CO_2 Output Estimate.

- satisfies the Initial Capture Factor Rebasing Condition but does not need to be rebased, giving reasons; and

- provide Supporting Information (including, if required, the proposed rebased Capture Factor, which will be rounded to the nearest percent), a Directors' Certificate and a report from the Emitter's technical adviser addressed to the ICC Contract Counterparty.[18]

In order to take a view on whether the Initial Capture Factor is accurate or needs to be re-based, the Emitter will need to calculate its actual Capture Factor for the previous calendar year. It will need to do so by either;

- applying the existing methodology (as set out in the ICC Agreement); or
- if the change in the actual Capture Factor is due to a Material Change and/or a TGE Material Change, applying an updating methodology for setting the Capture Factor, which the Emitter must provide as part of the Supporting Information described above (if applicable).

Within the next ten Business Days[19], the ICC Contract Counterparty will give a notice to the Emitter which will specify whether the ICC Contract Counterparty (a) agrees, (b) disagrees, or (c) needs more information; the notice given determines how the Capture Factor is applied to calculate the Forfeiture FAs and Protected FAs.

(a) The ICC Contract Counterparty **agrees** that either:

- the Initial Capture Factor does not need to be rebased (whether or not it satisfies the Initial Capture Factor Rebasing Condition), in which case the Initial Capture Factor will continue to apply; or
- the Initial Capture Factor needs to be re-based and agrees with the Emitter's proposed re-based Capture Factor, in which case the proposed re-based Capture Factor will apply i.e. it will become the Capture Factor (on a forward-looking basis).

The ICC Contract Counterparty will then have three Business Days from the date of its rebasing response notice to calculate the Forfeiture FAs and Protected FAs (using the relevant Capture Factor – see above) and notify the Emitter of the number of Forfeiture FAs and Protected FAs.

(b) The ICC Contract Counterparty **disagrees** that the Capture Factor needs to be rebased, the Initial Capture Factor will not be adjusted.

The ICC Contract Counterparty will then have three Business Days from the date of its rebasing response notice to calculate the Forfeiture FAs and Protected FAs (using the Initial Capture Factor) and notify the Emitter of the number of Forfeiture FAs and Protected FAs.

[18] If the Emitter fails to provide this notice and/or information, payments may be suspended.
[19] The timings for the ICC Contract Counterparty throughout the rebasing process are subject to further review by the Department.

(c) The ICC Contract Counterparty **needs more information**:

- the Emitter will have five Business Days to provide that information;[20]
- the ICC Contract Counterparty will have ten Business Days[21] from receipt of that information to give a further response notice, specifying whether it agrees or disagrees with the Emitter.
- The ICC Contract Counterparty will then have a further three Business Days from the date of its notice to calculate the Forfeiture FAs and Protected FAs (if it agrees – using the proposed re-based Capture Factor which will become the Capture Factor (on a forward-looking basis); if it disagrees – using the Initial Capture Factor) and notify the Emitter of the number of Forfeiture FAs and Protected FAs; and
- the Emitter will then have two Business Days to transfer the Forfeiture FAs to the ICC Contract Counterparty.

Any disputes relating to the rebasing, including any proposed updated methodology, will be resolved by an expert in accordance with the Expert Determination Procedure. In the meantime, the Capture Factor will remain unchanged (the Emitter will be obliged to forfeit FAs and will receive compensation for Forfeited FAs/Protected FAs on the basis of the prevailing Capture Factor). The expert will be required to determine:

- the re-based Capture Factor (or confirm that the 'prevailing' Capture Factor should apply i.e. there should not be a rebasing) and;
- any reconciliation of payments and (if applicable) FAs, taking into account the Capture Factor that was applied before the Expert Determination and the re-based Capture Factor.
- Any CORE return FAs and payments (where applicable) will also be reconciled against the re-based Capture Factor.

Any rebased Capture Factor will apply on a forward-looking basis only (unless it is determined via the Expert Determination Procedure – see above).

4.5.5 Subsequent Rebasing(s)

A subsequent rebasing could occur if, after the Initial Rebasing, the Subsequent Capture Factor Rebasing Condition is satisfied. The Subsequent Capture Factor Rebasing Condition means a change in the value of the actual Capture Factor (as calculated by the Emitter) in an amount that exceeds (upwards or downwards) 15% of the prevailing Capture Factor. For example:

- if the prevailing Capture Factor is 80%, 80 x 0.15 = a 12 percentage point change; and

[20] If the Emitter fails to provide this information, payments may be suspended.
[21] The timings for the ICC Contract Counterparty throughout the rebasing process are subject to further review by the Department.

- the threshold for a subsequent rebasing would be met if the actual Capture Factor (calculated by the Emitter) was < 68% or > 92% of the prevailing Capture Factor.

Subsequent Rebasing(s) Process

Every year during the Initial Term (after the Initial Rebasing process has occurred), the Emitter must notify the ICC Contract Counterparty within 20 Business Days of the end of the previous calendar year (which will be within the first 20 Business Days of January):

- of its TGE data and Cplant data for the previous calendar year;
- that it considers that the Capture Factor agreed pursuant to the Initial Rebasing (or any previous Subsequent Rebasing) either:
    - does not satisfy the Subsequent Capture Factor Rebasing Condition and therefore does not need to be rebased;
    - satisfies the Subsequent Capture Factor Rebasing Condition and needs to be re-based; or
    - satisfies the Subsequent Capture Factor Rebasing Condition but does not need to be rebased, giving reasons; and
- provide Supporting Information (including, if required, the proposed rebased Capture Factor, which will be rounded to the nearest percent), a Directors' Certificate and a report from the Emitter's technical adviser addressed to the ICC Contract Counterparty.[22]

In order to take a view on whether the prevailing Capture Factor is accurate or needs to be re-based, the Emitter will need to calculate its actual Capture Factor for the previous calendar year. It will need to do so by either:

- applying the existing methodology (as set out in the ICC Agreement or, if an amended methodology is adopted during the Initial Rebasing or any prior Subsequent Rebasing, the amended methodology); or
- if the change in the actual Capture Factor is due to a Material Change or a TGE Material Change since the Initial Rebasing or any prior Subsequent Rebasing, applying an updating methodology for setting the Capture Factor, which the Emitter must provide as part of the Supporting Information described above.

Within the next ten Business Days[23], the ICC Contract Counterparty will give a notice to the Emitter which will specify whether the ICC Contract Counterparty (a) agrees, (b) disagrees, or (c) needs more information. The notice given determines how the Capture Factor is applied to calculate the Forfeiture FAs and Protected FAs.

[22] If the Emitter fails to provide this notice and/or information, payments may be suspended.
[23] The timings for the ICC Contract Counterparty throughout the rebasing process are subject to further review by the Department.

(a) The ICC Contract Counterparty **agrees** that either:

- the Capture Factor does not need to be rebased (whether or not it satisfies the Subsequent Capture Factor Rebasing Condition), in which case the prevailing Capture Factor will continue to apply; or
- that the Capture Factor needs to be rebased and agrees with the Emitter's proposed re-based Capture Factor, in which case the proposed re-based Capture Factor will apply i.e. it will become the Capture Factor (on a forward-looking basis).

The ICC Contract Counterparty will then have three Business Days from the date of its notice to calculate the Forfeiture FAs and Protected FAs (using the relevant Capture Factor – see above) and notify the Emitter of the number of Forfeiture FAs and Protected FAs.

(b) The ICC Contract Counterparty **disagrees** that the Capture Factor needs to be re-based, the prevailing Capture Factor will not be adjusted.

The ICC Contract Counterparty will then have three Business Days from the date of its notice to calculate the Forfeiture FAs and Protected FAs (using the prevailing Capture Factor) and notify the Emitter of the number of Forfeiture FAs and Protected FAs.

(c) The ICC Contract Counterparty **needs more information**:

- the Emitter will have five Business Days to provide that information[24];
- the ICC Contract Counterparty will have ten Business Days[25] from receipt of that information to give a further response notice, specifying whether it agrees or disagrees with the Emitter;
- the ICC Contract Counterparty will then have a further three Business Days from the date of its notice to calculate the Forfeiture FAs and Protected FAs (using the relevant Capture Factor - depending on whether, and to what, it agrees or disagrees) and notify the Emitter of the number of Forfeiture FAs and Protected FAs; and
- the Emitter will then have two Business Days to transfer the Forfeiture FAs to the ICC Contract Counterparty.

Any disputes relating to the rebasing, including any proposed updated methodology, will be resolved by an expert in accordance with the Expert Determination Procedure. In the meantime, the Capture Factor will remain unchanged (the Emitter will be obliged to forfeit FAs and will receive compensation for Forfeited FAs/Protected FAs on the basis of the prevailing Capture Factor).

[24] If the Emitter fails to provide this information, payments may be suspended.
[25] The timings for the ICC Contract Counterparty throughout the rebasing process are subject to further review by the Department.

The expert will be required to determine:

- the re-based Capture Factor (or confirm that the 'prevailing' Capture Factor should apply i.e. there should not be a rebasing); and
- any reconciliation of payments and (if applicable) FAs, taking into account the Capture Factor that was applied before the Expert Determination and the re-based Capture Factor.

Any rebased Capture Factor will apply on a forward-looking basis only (unless it is determined via the Expert Determination Procedure).

4.5.6 FA Treatment in T&S Outages/Constraints

We also recognise that the emissions profile of the UK ETS Installation could change significantly during a full or partial outage of the T&S network during the Initial Term, as the Emitter may be required to emit uncaptured CO_2 emissions to atmosphere. The business model will provide a mechanism which seeks to ensure that Emitters have the FAs they require from their annual FA allocation to help meet their surrender obligations.

Capture Outage Relief Events

A Capture Outage Relief Event (CORE) is a full or partial outage of the Capture Plant which is directly caused by a full or partial outage of the T&S network (which lasts for one day or more), provided the Emitter is not at fault[26].

For consistency with our approach to cross-chain risks where the Emitter is not at fault, we intend to include a mechanism in the business model in which Forfeited FAs will be returned to the Emitter if there is a CORE (unless the Emitter is receiving 100% volume protection), provided that compensation for such FAs has been returned to the ICC Contract Counterparty (which may be done by way of set-off against another amount due to the Emitter).

If **no volume protection** applies (i.e., the Emitter is receiving payments for Forfeited FAs only and is not receiving any payments for Protected FAs, as Forfeited FAs ≥ Protected FAs):

- Return of FAs to Emitter:
    - *Number of FAs to be returned to Emitter by ICC Contract Counterparty = Capture Factor x Total Annual FA Allocation x n/number of days in calendar year x percentage average T&S Network unavailability for the outage period in the relevant Billing Period*

[26] "Capture Outage Relief Event" means a Capture Outage Event that occurs as a direct result of a T&S Outage Event (including a T&S Planned Outage) but excluding any T&S Outage Event that arises out of or in connection with any act, omission, breach or default of the Emitter or its Representatives (including any breach by the Emitter or its Representatives of an Industry Document).

- Subject to the return of corresponding payments (see below), this means an Emitter receives 1/365th (in a non-leap year) of its Forfeited FAs back for each day (n) that the T&S Network is unavailable, by reference to the level of unavailability of the T&S Network during that Billing Period.
- The percentage average T&S Network unavailability for the outage period in the relevant Billing Period will be calculated by adding up the outage percentage for each day during the outage period and dividing that figure by the number of days during the outage period.
- These FAs will be returned to the Emitter as soon as reasonably practicable once the amount of FA payments to be returned has been determined and such amount has either been paid by the Emitter or deducted from a payment due to the Emitter by the ICC Contract Counterparty.

- Return of FA payments to ICC Contract Counterparty:
  - *Amount of FAs payments to be returned to ICC Contract Counterparty by Emitter = Capture Factor x Total Annual FA Allocation x n/number of days in calendar year x percentage average T&S Network unavailability for the outage period in the relevant Billing Period x Fixed Trajectory Reference Price*
  - This amount will be reconciled in the next monthly Billing Statement (once this data is verified in line with the CORE processes) and the amount must be either paid to the ICC Contract Counterparty by the Emitter or deducted by the ICC Contract Counterparty from a payment due to the Emitter before the FAs are returned to the Emitter (see above).

If **volume protection** applies (i.e., Forfeited FAs < Protected FAs (and Forfeited FAs may be > zero or zero)):

- If the Emitter is receiving < 100% volume protection (i.e. the Emitter is receiving payments for Forfeited FAs, although the number of Protected FAs is higher so they are also receiving payments for the difference between the number of Protected FAs and the Forfeited FAs - in practice, these two elements of the payment will be combined into one payment);
  - FAs and FA payments are returned as described above.
  - This means FAs and FA payments are only returned for Forfeited FAs. The additional payment for the difference between the number of Protected FAs and Forfeited FAs will be retained by the Emitter.

- If the Emitter is receiving 100% volume protection (i.e. the Emitter is not receiving payments for Forfeited FAs, so is only receiving payments for Protected FAs);
  - FAs would not be returned to the Emitter as there would be no FAs to return (because no FAs have been forfeited).

- The Emitter would continue to receive full volume protection payments, as they would need to purchase allowances to cover the additional CO_2 emitted.
- The ICC Contract Counterparty will rely on the rebasing mechanism which adjusts the Capture Factor if it becomes materially unrepresentative of what is happening on within the UK ETS Installation.

Non-COREs

A Capture Outage Event is a full or partial outage of the Capture Plant. Such outage will not be a CORE if it is either:

- not directly caused by an outage (full or partial) of the T&S network (which lasts for one day or more), or
- directly caused by an outage (full or partial) of the T&S network but the Emitter is at fault.

If **no volume protection** applies (i.e. Emitter is receiving payments for Forfeited FAs only and is not receiving any payments for Protected FAs, as Forfeited FAs ≥ Protected FAs):

- The ICC Contract Counterparty is not required to return any Forfeited FAs.
- The Emitter is not required to return payments in respect of any Forfeited FAs.
- If applicable, the ICC Contract Counterparty will rely on the rebasing mechanism which adjusts the Capture Factor if it becomes materially unrepresentative of what is happening on within the UK ETS Installation.

If volume protection applies (i.e. Forfeited FAs < Protected FAs (and Forfeited FAs may be ≥ zero)):

- As above for the "no volume protection" scenario.
- The Emitter will continue to receive payments for Protected FAs.

COREs (i.e. the Capture Plant is not operating or is only partially operating because of a full or partial T&S network outage (≥ one day), which is not caused by the Emitter) are therefore the only events in which adjustments to Forfeited FAs forfeited and payments in respect of Forfeited FAs can be made via the monthly billing process.

4.6 FA Forfeiture Timeline

4.6.1 FA Allocation and Forfeiture Deadlines

FAs are allocated on or before 28 February in each UK ETS scheme year[27]. In the ICC Contract, this latest date on which FAs are allocated will be called the “FA Allocation Deadline”.

[27] This deadline is currently legislated up to 2030.

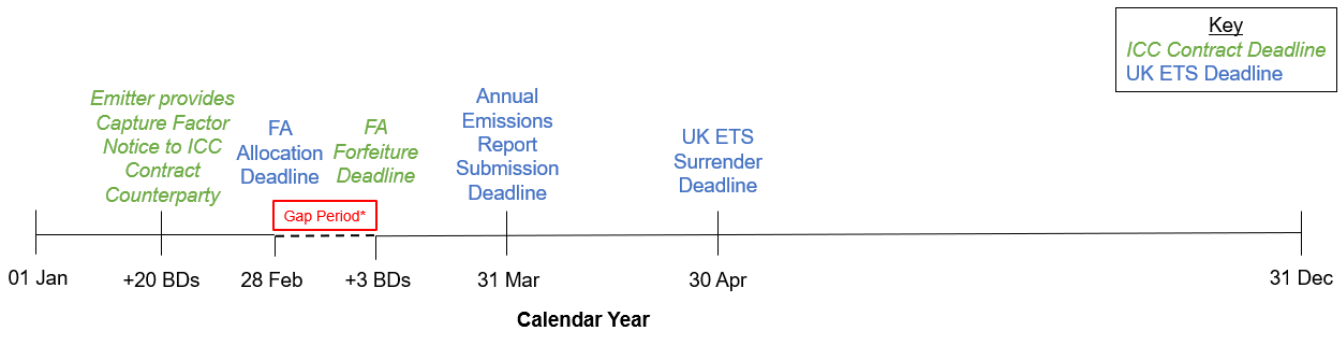
The Emitter must give the ICC Contract Counterparty notice that it has received FAs, including evidence considered relevant by the Emitter of the receipt of the FAs in its Operator Holding Account. The notice needs to be sent to the ICC Contract Counterparty as soon as reasonably practicable and in any event within one Business Day of receiving FAs from the Registry Administrator. This notice must include confirmation from the Emitter that it acknowledges the gap period restrictions (see section 4.6.44.6.4) and the restrictions on the creation of security (see section 4.6.5). The notice must be accompanied by a Directors' Certificate.

The FA Forfeiture Deadline will be the deadline for the Emitter to transfer the Forfeiture FAs to the ICC Contract Counterparty. This will be three Business Days after the FA Allocation Deadline (with two exceptions: (i) if the Start Date occurs on or after the FA Allocation Deadline in the Start Date Calendar Year, and (ii) if the Capture Factor rebasing process (described in section 4.5.34.5.34.5.3) results in an extension to the FA Allocation Deadline). If the Emitter fails to forfeit as required, there will be specific contractual remedies (see section 4.6.64.6.6).

The Emitter must give the ICC Contract Counterparty notice of the transfer of FAs to the ICC Contract Counterparty's trading account, including confirmation from the Emitter that it has complied with the gap period restrictions (see section 4.6.4) and the restrictions on the creation of security (see section 4.6.54.6.54.6.5), along with supporting evidence (for example, a record of the Emitter's Operating Holding Account showing that no transactions have been made in relation to the Forfeited FAs during the Gap Period). This notice will be accompanied by a Directors' Certificate. This notice must be given as soon as reasonably practicable and in any event within one Business Day of the date on which the Emitter transfers the Forfeiture FAs to the ICC Contract Counterparty (see section 4.6.4).

Once the ICC Contract Counterparty has received the Forfeited FAs from the Emitter, it must give notice of receipt to the Emitter within five Business Days so that the end of the Gap Period is known.

Figure 3: Key dates in the calendar year for the Emitter regarding FA forfeiture[28].



*Gap Period may start before FA Allocation Deadline (as it starts from the date of actual allocation) and may end after FA Forfeiture Deadline (as it extends to the later of the FA

[28] Timings for year 1 may be different. These timings apply until 2030 as the FA Allocation Deadline timing is currently legislated up to 2030.

Forfeiture Deadline and the date of actual receipt of the correct number of FAs by the ICC Contract Counterparty).

4.6.2 FA Forfeiture in Year 1

In the Start Date Calendar Year, the exact date on which the Start Date falls will not be known at the Agreement Date and may not be known at the FA Allocation Deadline. There are two potential scenarios:

- The Start Date occurs prior to the FA Allocation Deadline in the calendar year in which the relevant FA allocation occurs.
    - The Emitter will be required to forfeit the correct number of FAs to the ICC Contract Counterparty by the 'standard' FA Forfeiture Deadline (i.e. three Business Days after the FA Allocation Deadline).
    - The usual gap period restrictions and restrictions on the creation of security will apply.
- The Start Date occurs on or after the FA Allocation Deadline in the same calendar year.
    - The ICC Contract Counterparty will have three Business Days after the Start Date to calculate and notify the Emitter of the number of FAs the Emitter is required to forfeit (pro-rated according to the Start Date).
    - The Emitter will then be required to forfeit the correct number of pro-rated Forfeiture FAs to the ICC Contract Counterparty within three Business Days of the date of receipt of that notice from the ICC Contract Counterparty.
    - There will be no contractual restrictions on the Emitter's ability to deal with FAs up until the Start Date.

For both of these scenarios, from the Agreement Date to the Start Date, the Emitter will be required to notify the ICC Contract Counterparty monthly of the number of FAs in its Operator Holding Account. This should ensure the Emitter will be in a position to satisfy its forfeiture requirements in the calendar year in which the Start Date occurs.

In Calendar Year 10 or 11 (depending on whether, and the extent to which, there is any erosion of the contract term), the number of FAs to be forfeited will be pro-rated to the Specified Expiry Date.

4.6.3 Estimated Start Date and ‘Safety Factor’ FAs

Previously, forfeiture of FAs for the Start Date Calendar Year was due to occur by the ‘standard’ FA Forfeiture Deadline (i.e. three Business Days after 28 February) and was due to be pro-rated according to the Estimated Start Date in the relevant calendar year.

In addition, a ‘safety factor’ of an additional 90 days’ worth of FAs was also due to be forfeited. This was designed to cover the scenario in which the Start Date occurred earlier than anticipated. If the Start Date occurred on time or later than anticipated, FAs would be returned

to the Emitter. However, with the simplified approach to forfeiture in the Start Date Calendar Year, the concepts of the Estimated Start Date and safety factor FAs (as previously described in our December 2022 publication) are now redundant and are not included in the ICC Contract.

4.6.4 Gap Period Restrictions

The Emitter will be unable to trade, sell, lease or transfer the Forfeiture FAs and operator holding account during the relevant gap period. In Calendar Years 2 – 10, the gap period is the period between the date of transfer of FAs to the Emitter under the UK ETS and the later of (i) the FA Forfeiture Deadline, and (ii) the date of receipt of the Forfeited FAs by the ICC Contract Counterparty. In the Start Date Calendar Year, the gap period will differ depending on whether the Start Date occurs before, or on or after, the FA Allocation Deadline. The reason for this is that for the Start Date Calendar Year, where the Start Date occurs on or after the FA Allocation Deadline, the gap period restrictions only apply from the date of receipt by the Emitter of the notice requiring them to forfeit FAs.

The purpose of these restrictions is to protect against the risk that an Emitter does not have sufficient FAs to forfeit when required under the ICC Contract. The gap period is anticipated to be short, so these restrictions are considered to be proportionate.

There are no specific contractual remedies for breach of these restrictions. However, if the Emitter does not have sufficient FAs to forfeit by the FA Forfeiture Deadline, then it will breach its forfeiture obligation and specific contractual remedies will be available to the ICC Contract Counterparty.

4.6.5 Interface with Security Arrangements

A particular risk in connection with the Gap Period is that the Emitter may have granted security in favour of third parties over the FAs and/or the Operator Holding Account in which these FAs are held. This could, for example, be security granted by an Emitter in favour of its lenders in support of the Emitter's obligations under its financing arrangements.

If this security exists (or is created) during the Gap Period, it could prejudice the ability of the Emitter to forfeit the FAs. Two examples of how this prejudice might arise would be (i) if the terms of the security or the connected financing arrangements required the consent of the lender to the forfeiture of the FAs, and such consent was not granted or not obtained in time, or (ii) if an Emitter defaulted on its financing arrangements such that the FAs might be held for, transferred to, or appropriated by, the lender and would not be capable of being forfeited.

Security granted before the Agreement Date:

The ICC Contract will require, as an Initial Condition Precedent, a consent and waiver from any existing lenders with security over the FAs and/or the operator holding account. The key features of the consent and waiver are summarised below:

- The consent and waiver would need to be obtained from the secured lender or security agent where appointed (e.g. for a syndicated facility) at the time the ICC Contract is entered into (as one of the Initial Conditions Precedent under the ICC Contract); and
- under the consent and waiver, the secured lender or security agent would:
    - consent to the forfeiture of the FAs to the ICC Contract Counterparty during the gap period;
    - waive its rights to take any enforcement action or to make any recovery in respect of those FAs; and
    - require the secured lender or security agent to transfer FAs to the ICC Contract Counterparty if the secured lender or security agent receives them.

Security granted after the Agreement Date:

There will be a restriction on Emitters granting any security over the FAs and/or their Operator Holding Account which applies during the Gap Period.

This means that Emitters can grant security over the FAs and/or their Operator Holding Account after the Agreement Date, but such security cannot apply during the Gap Period. In practice, this will be achieved by obliging Emitters to enter into a new consent and waiver with the relevant secured lender (or security agent) and the ICC Contract Counterparty, and to provide this evidence to the ICC Contract Counterparty, at the same time as new financing is entered into.

4.6.6 Remedies if the Emitter fails to forfeit the Forfeiture FAs

During the Initial Term, Emitters are required to transfer FAs to the ICC Contract Counterparty by the standard FA Forfeiture Deadline at the start of each calendar year after the Start Date (in line with the Capture Factor), except in the Start Date Calendar Year if the Start Date occurs after the FA Allocation Deadline. If the Emitter fails to forfeit the Forfeiture FAs by the relevant FA Forfeiture Deadline, the ICC Contract Counterparty has the right to suspend payment of any amounts which would otherwise be payable by the ICC Contract Counterparty to the Emitter during the period of breach.

To suspend payments, the ICC Contract Counterparty must issue a notice to the Emitter stating that it intends to suspend such payments and the date from which it proposes to do so. If the Emitter subsequently rectifies the breach, the ICC Contract Counterparty will pay any suspended amounts to the Emitter (without interest).

Regardless of whether (or not) it issues a notice to suspend payments, the ICC Contract Counterparty can notify the Emitter that it has failed to transfer the Forfeiture FAs by the relevant FA Forfeiture Deadline. If such failure is not remedied within twenty Business Days, of the ICC Contract Counterparty's notice, this will be a Termination Event and the ICC Contract Counterparty will have the right to terminate the ICC Contract. If served, a termination notice can be revoked by the ICC Contract Counterparty before the designated termination date.

4.7 New Entrants

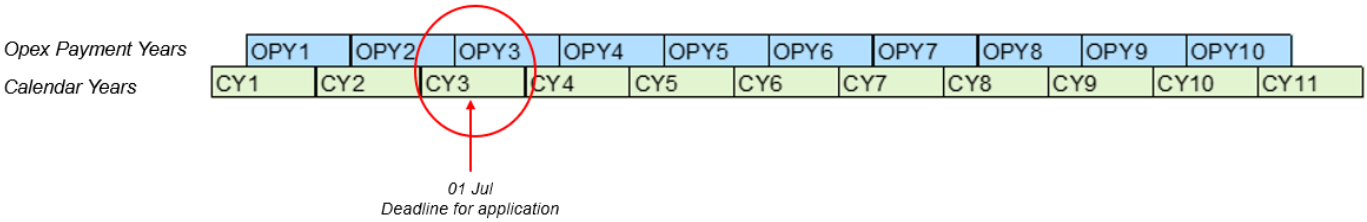
For the purposes of the ICC Contract, a New Entrant may be described as any installation which does not receive FAs in the current allocation period (2021-2025).

During negotiations, it will be confirmed whether (or not) an Emitter is a "New Entrant". New Entrants who are ICC Contract holders will be treated differently under the ICC Contract compared to incumbent installations, in particular in respect of FA forfeiture and compensation in the Start Date Calendar Year and the two immediately succeeding calendar years (as New Entrants can only apply for FAs once the UK ETS Installation is operational). If the Emitter is identified as a New Entrant, certain provisions in the Terms and Conditions will be different.

4.7.1 Requirements of New Entrant applications for ICC Contract holders

ICC Contract holders who are confirmed as New Entrants will be required to make an application for FAs under the UK ETS as soon as practicable and in any event before 1 July in the calendar year in which the third Opex Payment Year commences). They must notify the ICC Contract Counterparty when such application has been made.

Figure 4: Illustration of deadline for ICC Contract holders who are classified as New Entrants to make their application for FAs under the UK ETS.



4.7.2 First FA Forfeiture

The standard forfeiture and compensation process will apply from the first year in which FA allocation occurs in the normal way (i.e. where FAs are allocated in advance, on or before 28 February in the calendar year in which the fourth Opex Payment Year commences).

If, in the calendar year in which the fourth Opex Payment Year commences, the Emitter has either:

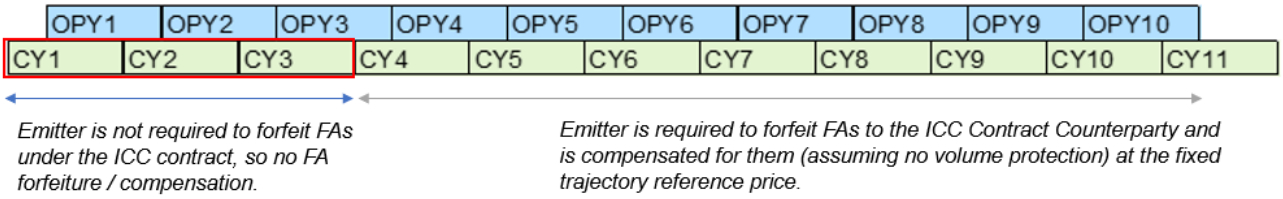
- failed to forfeit FAs to the ICC Contract Counterparty by the FA Forfeiture Deadline because it has failed to make its New Entrant application on time; or
- failed to forfeit the correct number of FAs to the ICC Contract Counterparty by the FA Forfeiture Deadline,

then the usual remedies for failure to forfeit will apply (payment suspension and/or termination as described in section 4.6.64.6.64.6.6).

The first FA Forfeiture Deadline will be three Business Days after 28 February in the calendar year in which the fourth Opex Payment Year commences (subject to the Capture Factor rebasing process).

Price and volume assurance in the ICC Contract for New Entrants applies from the calendar year in which the fourth Opex Payment Year commences. Any FAs received by the Emitter before the calendar year in which the fourth Opex Payment Year commences are not required to be forfeited under the ICC Contract. The usual forfeiture and compensation process will apply from the calendar year in which FA allocation starts to occur in the normal way, which is anticipated to be the fourth Opex Payment Year. Such process will apply on a forward-looking basis only, from (and including) that calendar year.

Figure 5: Illustration of FA forfeiture for ICC Contract holders who are confirmed as New Entrants.



4.7.3 Volume Protection

The forfeiture and compensation process applies from the calendar year in which the fourth Opex Payment Year commences. Therefore, volume protection also applies from the calendar year in which the fourth Opex Payment Year commences.

Theoretical FAs

For incumbent installations, Theoretical FAs are based on the number of FAs allocated to the UK ETS Installation for scheme year 2025 as set out in the most recently published UK ETS FA allocation table (see section 4.4.1). For Track-1, New Entrants will not have a FA allocation for 2025 at the time of negotiations, so a different approach is needed to calculate the number of Theoretical FAs.

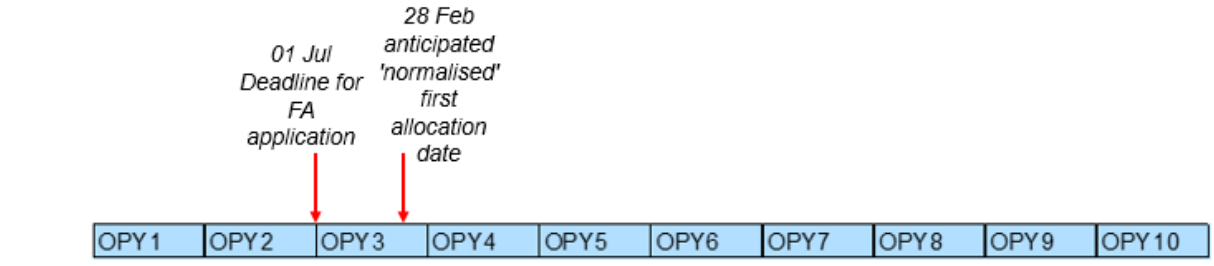
For New Entrants, the number of Theoretical FAs will be the Emitter's FA allocation for the calendar year in which the fourth Opex Payment Year commences as set out in the most recently published UK ETS FA allocation table as at 1 February in that calendar year (unless the parties agree an alternative date). This means that, for New Entrants, Theoretical FAs cannot be written into the ICC Agreement from the Agreement Date (as they will be for incumbent installations).

FA Trajectory

Forfeiture and compensation of FAs, and therefore volume protection, do not commence until the calendar year in which the fourth Opex Payment Year commences. The FA trajectory therefore needs to be modified. The same reduction in the FA Trajectory as for incumbent installations (i.e. 100% to 50%) will apply, although this will occur over seven years (as opposed to nine years for incumbents).

The trajectory will start at 100% in the calendar year in which the fourth Opex Payment Year commences and will decrease to 50% in the calendar year in which the tenth Opex Payment Year commences (i.e. 8% reduction each calendar year). The FA Trajectory will also be 50% in the calendar year in which the Specified Expiry Date occurs (which will either be the calendar year in which the tenth Opex Payment Year commences or the next calendar year). For clarity, the FA Trajectory for New Entrants will be set out in the ICC Agreement.

Figure 6: Illustration of FA Trajectory for ICC Contract Holders who are confirmed as New Entrants.



	Partial initial CY										Tail end partial CY
	CY1	CY2	CY3	CY4	CY5	CY6	CY7	CY8	CY9	CY10	CY11
NE	n/a	n/a	n/a	100%	92%	83%	75%	67%	58%	50%	50%

5 Monitoring, Reporting and Verification[29]

Effective monitoring, reporting and verification using accurate measurement approaches such as metering or calculation is important for determining the Achieved CO_2 Capture Rate and the quantity of CO_2 captured from the Industrial Installation and sent to the T&S network.

5.1 Pre-capture measurement requirements

Pre-capture measurement involves using either direct measurement devices to measure the flue gas flowrate and CO_2 concentration or an indirect approach via calculation to determine the mass quantity of CO_2 in the stream(s) intended to be routed to the Capture Plant.

Pre-capture measurement is necessary to:

- monitor the performance of the Capture Plant (including Capture Plant outages);
- calculate the Achieved CO_2 Capture Rate;
- calculate the Capture Factor; and
- enable access to real time, auditable and traceable information.

For the purposes of the ICC and Waste ICC Contracts, pre-capture measurement approaches must achieve a combined overall measurement uncertainty of ≤7.5% of the measured value at 95% confidence interval (for the Measured CO_2 Input) and daily reported granularity. These minimum requirements underpin the selection of each Emitter's proposed measurement approach(es) and are set out in technical schedules annexed to the ICC and Waste ICC Contracts published alongside this document[30]. These schedules set out more detail on the requirements of each measurement approach, which are summarised below.

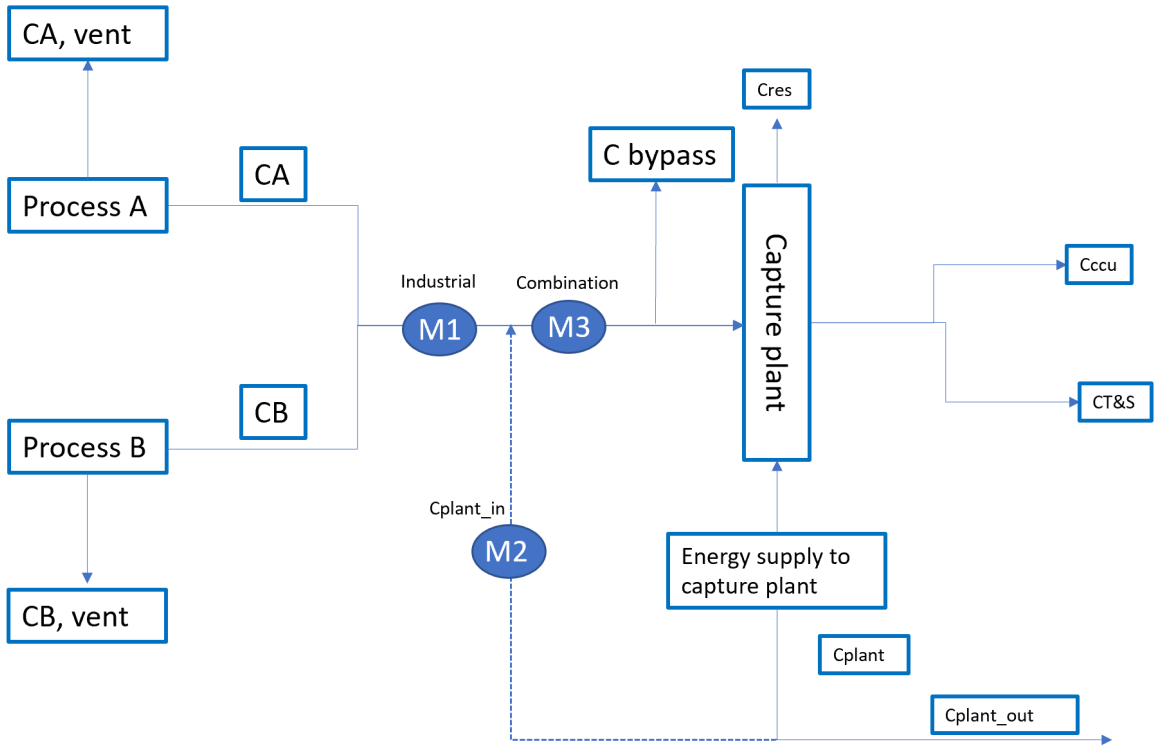
For the purpose of the business model, it is essential to measure the CO_2 intended to be routed to the Capture Plant at a minimum of two out of three measurement points, if applicable (i.e. streams of CO_2 directed to the Capture Plant). These measurement points are highlighted below and set out in Figure 7:

- M1: stream from the Industrial Installation (the "Measured CO_2 Input from Industrial Installation");
- M2: stream from any utility system generating and supply heat and/or power to the Capture Plant (the “Auxiliary CO_2 Generated Input"), if applicable;
- M3: combination stream (the “Measured CO_2 Input”).

29 Refer to Part 7.2 for the Biogenic LTSS monitoring, reporting and verification requirements for Waste ICC Contract holders.
30 Refer to Annexes 8, 9 and 10 of the ICC Contract for the pre-capture metering, indirect methodology based on ETS and stack metering annex and Annexes 9 and 10 of the Waste ICC Contract published in parallel for the pre-capture metering, and stack metering annexes.

Measurement at two out of three designated measurement points ensures that each of M1, M2 and M3 can be measured.

Figure 7 : Pre-capture measurement CO_2 measurement points.



For industrial facilities that are not part of a Capture as a Service (CaaS) group (e.g. cases where the Capture Plant is dedicated to serving an individual Industrial Installation and is located within the Emitter's UK ETS monitoring boundary), use of direct measurement via pre-capture meter(s) at two of the three designated measurement points (incorporating both flow measurement and compositional analysis, to determine the mass quantity of CO_2) is the default measuring approach.

However, provided that all contractual requirements are met, including daily reported granularity and overall measurement uncertainty of (≤ 7.5%), of the measured value at 95% confidence interval there are two exceptions to this default measurement approach:

1. Emitters that meet both of the following criteria, (a) and (b) below, may be permitted to use an indirect measurement approach based on the UK ETS[31] to determine the Measured CO_2 Input, the Measured CO_2 Input from the Industrial Installation and/or the Auxiliary CO_2 Generated Input (as applicable):

    a. the CO_2 intended to be routed to the Capture Plant is solely sourced from the combustion of homogenous gaseous or liquid fuel(s); and

31 Greenhouse Gas Emissions Trading Scheme Order 2020

b. the Emitter has existing, or will install, fiscal quality metering (with an overall measurement uncertainty ≤ 1.5%) of both flow and composition of these fuel(s).

2. Where there are site-specific constraints that make the installation of pre-capture metering equipment technically unfeasible or would lead to the Emitter incurring unreasonable costs, the Emitter may be permitted to use stack metering to determine the Measured CO_2 Input.

The measurement approach(es) for determining the Measured CO_2 Input, the Measured CO_2 Input from the Industrial Installation and/or the Auxiliary CO_2 Generated Input (as applicable), will be proposed by the Emitter and subject to approval by the Department on a project-by-project basis during project negotiations.

5.1.1 Data requirements for all measurement approaches

This section outlines our approach to data frequency, missing data and inaccurate data when using either of the pre-capture meter, stack meter or indirect measurement approach.

Missing Data:

1. The Emitter is required to take measurements (from the pre-capture meter(s), stack meter(s) or fuel meter(s) (for the indirect measurement approach, as applicable) at least once every minute.

2. If there are more than 60 minutes of missing measurements in any Settlement Unit then the Settlement Unit is deemed to be invalid and the Measured CO_2 Input[32], Achieved CO_2 Capture Rate, Achieved CO_2 Storage Rate and/or Achieved CO_2 Utilisation Rate (as applicable) for that Settlement Unit will be deemed to be zero.

3. If there are more than five invalid Settlement Units in a Billing Period, or more than 20 invalid Settlement Units within a period of 12 consecutive Billing Periods, then the Emitter will be deemed to have breached certain undertakings in relation to the measurement equipment and the measurement data.

4. If the Emitter breaches a measurement data obligation, the Contract Counterparty will have a right to suspend payments, the Emitter will be required to provide revised measurement data if it is technically feasible to do so.

5. If the Emitter breaches a measurement obligation, it will be required to remediate such a breach and if it fails to do so, a Technical Compliance Termination Event will be deemed to have occurred and the Contract Counterparty will have the right but not the obligation to terminate the ICC/Waste ICC Contract.

6. If the Emitter provides misleading CO_2 measurement data or its failure to provide data is misleading, then a Misleading CO_2 Measurement Data Termination Event will be

[32] This is subject to further review by DESNZ.

deemed to have occurred and the Contract Counterparty will have the right but not the obligation to terminate the ICC/Waste ICC Contract.

Inaccurate Data:

1. The Emitter is required to ensure that all measurement data provided by or on behalf of the Emitter is true, complete and accurate in all material respects and is not misleading.

2. If the Emitter provides inaccurate data:

a. if it is technically feasible to correct such inaccurate data, the Emitter will be required to correct such inaccurate data, and this will be reflected in a future Billing Statement; or

b. if it is not technically feasible to correct such inaccurate data, such inaccurate data will be treated as missing data (i.e. if there are more than 60 minutes of inaccurate data in any Settlement Unit then the Settlement Unit will be an invalid Settlement Unit and the Measured CO_2 Input[33], Achieved CO_2 Capture Rate, Achieved CO_2 Storage Rate and/or Achieved CO_2 Utilisation Rate (as applicable) for that Settlement Unit will be deemed to be zero for the purposes of the ICC and Waste ICC Contracts).

3. If there are more than five invalid Settlement Units in a Billing Period, or more than 20 invalid Settlement Units within a period of 12 consecutive Billing Periods, then the Emitter will be deemed to have breached certain undertakings in relation to the measurement equipment and the measurement data.

4. If the Emitter breaches a measurement obligation, it will be required to remediate such a breach and if it fails to do so, a Technical Compliance Termination Event will be deemed to have occurred and the Contract Counterparty will have the right but not the obligation to terminate the ICC/Waste ICC Contract.

5. If the Emitter provides misleading measurement data or its failure to provide data is misleading, then a Misleading CO_2 Measurement Data Termination Event will be deemed to have occurred and the Contract Counterparty will have the right but not the obligation to terminate the ICC/Waste ICC Contract.

5.2 Post-capture measurement requirement

Post-capture measurement involves using direct measurement equipment (i.e. instruments) to measure the flowrate and CO_2 concentration in order to determine the mass quantity and concentration of CO_2 in the stream routed to the T&S Network.

[33] This is subject to further review by DESNZ.

The ICC and Waste ICC Contracts require the measurement at the CO_2 Delivery Point of the Metered CO_2 output to T&S[34] (CO_2) and Metered CO_2 Rich Stream Output to T&S[35] (CO_2 Rich Stream) that is captured by the Capture Plant and routed to the T&S network for the following reasons:

1. the Emitter is responsible for the payment of the T&S Flow Charge to the T&SCo, based on the total mass quantity entering the T&S network, and this cost is passed through to the Contract Counterparty in the ICC/Waste ICC Contract. Therefore, direct measurement using a flow meter (or combination of volumetric and densitometer) to determine the CO_2 Rich Stream is required;

2. contractual payments are calculated based on the mass quantity of Metered CO_2 output that is captured and stored, therefore by measuring the CO_2 mass fraction and multiplying this by the CO_2 Rich Stream flow rate is required to determine the mass quantity (tonnes of CO_2) of CO_2 routed to the T&S Network;

3. the mass quantity of CO_2 that is captured by the Capture Plant is required to determine the Achieved CO_2 Capture Rate and Capture Factor.

Post-capture measurement is also required to meet the Emitter's obligations under the Network Code including the calculation of T&S Charges and to monitor pipeline integrity. Section F of the Network Code[36] specifies the requirements Emitters must comply with in order to deliver CO_2 to the T&S Network. Pursuant to the Network Code, it is the responsibility of the Emitter to install, commission, operate and maintain the measurement equipment in accordance with the relevant specifications. However, T&SCo's prior approval will be required in relation to the siting, specifications and installation of the measurement equipment.

The UK ETS article IV of the Monitoring Reporting and Verification order (MRR)[37] also requires the use of instruments to determine the mass quantity of CO_2 in order to align with regulatory requirements associated with the transfer of ownership of CO_2 from the Emitter to the T&SCo

We are currently in the process of developing the T&S metering annex which will be shared in due course. As part of this work, we are minded to set the following requirements in relation to measurement uncertainty and measurement equipment.

5.2.1 Measurement Uncertainty

The overall uncertainty of the measurement of the Metered CO_2 Output to T&S shall at all times be equal to or less than +/-1.5% of the measured value at 95% confidence interval.

[34] The mass quantity of CO_2 (i.e. CO_2 only) directed to be routed to the T&S Network
[35] CO_2 Rich Stream refers to the CO_2 plus any impurities (e.g., CO_2, CO, H_2O NO_x, Ar, O_2, Amines, Ammonia) in the stream directed to the T&S network.
[36] Transport and storage business model update documents https://www.gov.uk/government/publications/carbon-capture-usage-and-storage-ccus-business-models
[37] https://www.legislation.gov.uk/eur/2018/2066/annex/IV/adopted

The overall uncertainty of the measurement of the Metered CO_2 Rich Stream output to T&S, which includes CO_2 and additional impurities, shall at all times be equal to or less than +/-1% of the measured value at 95% confidence interval.

These shall be calculated in accordance with internationally and accepted standards including but not necessarily limited to ISO.IEC Guide 98.

5.2.2 Measurement Equipment

An Emitter will be required to install a flow meter and compositional analysis equipment in order to determine the CO_2 and the CO_2 Rich Stream captured by the Capture Plant and directed to the T&S Network.

Flow meter instrumentation

The flow meter serves a dual function; it will be used to determine the quantity of the CO_2 Rich Stream needed to determine the T&S Flow Charge payable to the T&SCo, and it will also be used to determine the CO_2 mass quantity, Achieved CO_2 Capture Rate and Capture Factor.

In relation to the flow meter, a technology agnostic approach will be taken (although this may be influenced by T&SCo requirements). Emitters will have the option to utilise either a mass flow meter or a volumetric flow meter. For fiscal purposes, the Emitter must be able to satisfy and demonstrate the uncertainty budget is achieved with its selected instrumentation. If an Emitter uses a volumetric flow meter, then a densitometer would also be required to calculate the mass quantity of CO_2. These requirements are based on a gaseous phase metering skid design and may need revisiting should dense phase CO_2 transport networks arise.

Compositional Analysis Equipment

Compositional analysis is necessary to determine CO_2 concentration in the CO_2 Rich Stream, as a percentage of the overall gas mass flow, in order to determine the capture quantity and capture rate.

In relation to the compositional analysis equipment necessary to determine CO_2 concentration, we are minded to require direct measurement of CO_2 concentration. This is because, where CO_2 Rich Stream composition is variable, inferring CO_2 concentration is inherently more uncertain due to the risk of the unknown gas composition including impurities that are not being measured. Secondly, we understand that it is technically more onerous to measure a range of impurities in the CO_2 Rich Stream relative to CO_2 only, and therefore direct measurement provides a more cost-efficient approach, additionally verification and quality assurance of a direct measurement system is more straightforward. However, it is noted that indirect measurement of CO_2 concentration by measuring impurities in the CO_2 rich stream and thereby inferring the CO_2 concentration may provide a viable alternative approach to meeting the overall uncertainty budget. We are continuing to engage with industry on this matter and this position is subject to change as policy and evidence base is developed.

6 Greenhouse Gas Removals (GGR)

In the December 2022 Update and Annex 9 of the ICC and Waste ICC Contracts, there were a number of outstanding policy positions that needed confirmation or development, as denoted by footnotes. In this section an update will be provided on these elements.

6.1 Audit obligations for facilities with minimal GGR potential

In Annex 12 of the updated ICC and Waste ICC Contract, Emitters are required to provide an independent third-party annual audit report to provide reassurance to the Contract Counterparty that the Emitter has not registered for, been accredited for, applied for, generated, sold or transferred any GGR Credits prior to the date on which the GGR Credit restrictions have been lifted or the Emitter has provided an accreditation notice (as applicable).

The Emitter is required to provide an annual GGR audit report in relation to each GGR Audit Year. A GGR Audit Year is, other than in relation to the final GGR Audit Year which may be shorter, a period of one year, commencing on the Contract Payment Term Commencement Date and each anniversary of such date thereafter. The deadline for submitting each annual GGR audit report to the Contract Counterparty is the final Business Day of the second billing period immediately after the end of each GGR Audit Year.

This provision is necessary where there is a significant probability that the Capture Plant will be capturing biogenic CO_2 and therefore the Emitter has the potential to generate GGR Credits. However, unlike in the waste sector where there is likely to be significant biogenic CO_2 generated and captured, for many industrial facilities that use fossil fuels there will be little to no biogenic CO_2 generated and captured. In these scenarios, the annual audit requirement may seem to be redundant and create an unnecessary burden on the Emitter and Contract Counterparty. Therefore, for Emitters that do not generate and capture significant volumes of biogenic CO_2, a threshold has been set to determine when such Emitters could be inclined to generate and sell GGR Credits, prior to the lifting of the restrictions and such Emitters will only have to comply with these annual auditing requirements if this threshold has been exceeded.

For Waste ICC Contract holders, third-party annual audit reporting is always required and the threshold and associated reporting requirements (set out below) are not applicable.

Sustainable Biogenic CO_2 Emissions Threshold

Under the ‘generic’ ICC Contract, Emitters that do not exceed the threshold of 25,000t sustainable biogenic CO_2 emissions in a calendar year will not be obligated to provide an annual GGR audit report.

Instead, an Emitter must provide, on an annual basis, a Sustainable Biogenic CO_2 Emissions Notice setting out if they have exceeded the sustainable biogenic CO_2 emissions threshold. Emitters must submit the total sustainable biogenic CO_2 emissions (tCO_2) produced by the UK

ETS Industrial Installation in each calendar year as reported in the Annual Emissions Report that was submitted to their regulator as part of their UK ETS reporting requirements. If the sustainable biogenic CO_2 emissions value does not exceed the threshold, then the Emitter will not have to carry out a full GGR audit on the basis that there is a low probability that the Emitter could be generating GGR Credits.

GGR Credits Monitoring Reporting

Under the 'generic' ICC Contract, an Emitter must provide a Sustainable Biogenic CO_2 Emissions Notice to the Contract Counterparty by 31 March in each calendar year of the contract (this date has been set to align with UK ETS reporting deadlines), together with a copy of the Emitter's UK ETS Annual Emissions Report and confirmation that the Emitter has complied with the GGR Credit restrictions and accompanied by a Directors' certificate. Failure to comply with this obligation may result in suspension of payments.

Upon receipt of this information, the Contract Counterparty will have 20 Business Days to review the notice and provide a response. If the Contract Counterparty agrees that the Emitter has exceeded the sustainable biogenic CO_2 emissions threshold, the Emitter shall have to comply with the GGR auditing requirements going forwards and demonstrate compliance with the voluntary and/or compliance GGR credit restrictions until the restrictions are lifted.

The Emitter will have to provide the first annual GGR audit report by the Annual GGR Reporting Deadline (i.e. 2 billing periods after the end of GGR Audit Year) after the threshold has been exceeded and this audit report should cover the period from 1 January in the calendar year immediately preceding full calendar year in which the Annual Emissions Report data showed that the sustainable biogenic CO_2 threshold was exceeded to the relevant Annual GGR Reporting Deadline. This means that the first annual GGR audit report is likely to cover a period greater than 12 months. Following this first annual GGR audit report, each subsequent annual GGR audit report should be provided in respect of the immediately preceding GGR Audit Year, as set out in Annex 12 of the ICC Contract.

6.2 GGR Credit Sales Price Provisions

The GGR Credits provisions set out in the December 2022 Update Document state that GGR Credits can have the following use cases and, for the purposes of the ICC and Waste ICC Contracts, associated values:

1. The gross voluntary GGR Credit sales revenues from sales to a third party (i.e. any person other than a linked entity);

2. The gross compliance GGR Credit sales revenues from sales to a third party (i.e. any person other than a linked entity);

3. The "fallback price" applied to all those compliance GGR Credits that are surrendered or otherwise transferred by the Emitter to cover a compliance obligation; and

4. The value associated with each compliance GGR Credit transferred/sold to a linked entity, calculated by taking the higher of the “fallback price” applicable as at the date of the transfer/sale and the achieved sales revenues,

(the “Monthly GGR Credit Revenue”).

The Emitter pays 90% of the Monthly GGR Credit Revenue to the Contract Counterparty (the “Monthly GGR Credit Revenue Payment”). This is to ensure that Emitters do not benefit from a windfall after contracts are signed with the development of GGR markets, and therefore protects taxpayers’ value for money. The 10% of the Monthly GGR Credit Revenue that is retained by the Emitter is intended to cover the costs and provide an incentive for an Emitter to participate in the market and maximise the value of their 10% share.

However, it is conceivable that in certain scenarios the fair market value of a GGR Credit sold to a third party may not be achieved, which would reduce the Monthly GGR Credit Revenue Payment to the Contract Counterparty. For example, an Emitter could sell undervalued GGR Credits to a third party in return for realising better commercial and contractual terms with that third party.

To ensure that the original policy intent is not undermined and that 90% of the true and full value of the GGR Credits is accounted for within the payment calculation, an Emitter is obligated to (i) act in accordance with the Reasonable and Prudent Standard to ensure that a fair market value is achieved for the GGR Credits; and (ii) not enter into any sale or transfer that might circumvent or reduce the GGR Credit revenues that might otherwise be payable to the Contract Counterparty.

6.3 Collateral from a single institution

The GGR Credit rider included a footnote stating that the Department was considering whether a cap should limit the value of the Letter(s) of Credit and/or GGR Bond(s) that could be provided by a single financial institution. The rationale for this footnote was on the basis that the Contract Counterparty could technically be exposed to a single financial institution for £50 million (the “Accumulated GGR Credits Amount Cap”) multiplied by the number of projects that have entered into a subsidy contract and provided a Letter(s) of Credit and/or GGR Bond(s) from that financial institution. This number could be very significant with numerous projects in the portfolio.

After further consideration, no additional provisions have been included to limit the value of the Letter(s) of Credit or GGR Bond(s) that can be provided by a single financial institution. The rationale for not including any additional provisions is that the Contract Counterparty should be sufficiently protected by the credit rating requirements relating to the financial institutions (A-1 with S&P; P-1 with Moody's or F1 with Fitch) which should provide sufficient reassurance in relation to the stability of the financial institution.

6.4 Security taken over GGR Credits by financiers

After the Compliance GGR Credit Restriction(s) or the Voluntary GGR Credit Restriction(s) have been lifted, an Emitter has the ability to generate Compliance GGR Credits or Voluntary GGR Credits respectively. These GGR Credits have value and therefore, it is feasible that the Emitter could hold GGR Credits which a CCS project financier could take security over.

There are a number of provisions within Annex 12 of the ICC and Waste ICC Contracts which could be subject to and impacted by the rights of the lenders' right under their CCS financing documents (e.g. the objectives set out under Annex 12 might not be fully achieved if lenders have the ability to restrict when GGR Credits may be sold, at which price, or to require consent prior to entering into any other arrangement in relation to the GGR Credits). The Department therefore has considered whether additional provisions should be included in Annex 12 to ensure that any security arrangements relating to the GGR Credits would not hinder its operation, while recognising that lenders may want to take some form of security over GGR Credits.

As a result, a new undertaking has been created which prohibits the Emitter granting 'fixed' security in favour of its lenders but recognises that a floating charge may be created which would include the GGR Credits. If such floating charge is taken by the lenders, the undertaking provides that the Emitter is required to notify the ICC and Waste ICC Contract Counterparty of its details. Failure to comply with the undertaking will result in a suspension right for the ICC and Waste ICC Contract Counterparty. The Department has concluded that, whilst not restricting the ability of a CCS project financier to take security over GGR Credits, no security in respect of GGR Credits will be allowed until and unless a Consent and Waiver is provided from the relevant lenders, confirming that they will not interfere in any way in how GGR Credits are generated, sold, surrendered, or transferred by the Emitter.

Further, it is important that the ICC and Waste ICC Contracts include provisions to protect against value leakage on the basis that this specific scenario is not covered under the existing provisions. To protect against this risk, a clause has been added to ensure that any GGR Credits transferred to a lender (or its agent or trustee etc.) will be deemed to be sold at the fallback price (i.e. a lender/agent/trustee will be considered as a linked entity for the purposes of Annex 12).

6.5 Indexation of collateral limit values

In Annex 12 of the ICC and Waste ICC Contracts, there was previously a footnote stating that further consideration was required to determine whether indexation should apply to the collateral threshold/cap values (e.g. the Accumulated GGR Credits Threshold of £5 million in years 1-8 and £1 million in years 9 onwards, and the £50 million Accumulated GGR Credits Amount Cap). It has been concluded that no indexation is required as this is not consistent with government accounting methods.

7 Waste ICC Contract

The Waste ICC Contract has been developed as a bespoke adaptation of the ICC Contract. The Waste ICC Contract is being published alongside this update document in full form for the first time[38]. However, waste stakeholders have had opportunities to review the draft ICC Contract that was the basis for consultation in April 2022, and the ICC Contract published in December 2022. Alongside the ICC Contract, Waste ICC Contract specific riders have been published in July 2022 and December 2022 to highlight the key contractual drafting that would be incorporated into the Waste ICC Contract. Additionally, in December 2022, the publication of a Summary Table highlighted the key areas of difference between the Waste ICC Contract and the ICC Contract.

This section provides an update on policy positions that have changed since the previous publications outlined in the paragraph above.

7.1 Cap on symmetric payments

Under the Waste ICC Contract, Emitters are required to pay the Waste ICC Contract Counterparty when the net payments from the Emitter in a given Billing Period are greater than the net payments to the Emitter. This two-way nature of payments between an Emitter and the Waste ICC Contract Counterparty is referred to as symmetric payments.

In the December 2022 Update, a cap on symmetric payments was proposed to protect against a scenario where the Emitter would have been worse off than a project that had waited until the carbon price and GGR credit price were sufficiently high to deploy CCS without a Waste ICC Contract.

The cap on symmetric payments will be assessed in respect of each Billing Period and will be considered to have been reached once the cumulative payments paid or payable by the Emitter to the Waste ICC Contract Counterparty are greater than the cumulative payments paid or payable by Secretary of State (in respect of the GFA) and Waste ICC Contract Counterparty to the Emitter. Once the cap has been reached, the excess amount beyond the cap will be deemed to be zero for the relevant Billing Period (i.e. there is no obligation for the Emitter to pay the Waste ICC Contract Counterparty the excess amount).

[38] As set out in Section 3, the Department reserves the right to review all provisions set out in the Waste ICC Contract.

Table 2: Types of payments that are made to and from the Emitter under the Waste ICC Contract (and GFA)

	Payments to the Emitter	Payments from the Emitter
Contractual Payment Type	• Capex • Opex (if Reference Price is lower than the Strike Price) • T&S • QCiL compensation • Payments under the GFA • GGR Credit Recalculation Amounts / GGR Credit Compensatory Payments	• Capex recalculations (if applicable) • Opex (if Reference Price is higher than the Strike Price) • T&S recalculations (if applicable) • QCiL compensation • Monthly GGR Credit Revenue Payments • Contract End GGR Credit Revenue Payments • GGR Credit Recalculation Amounts / GGR Credit Compensatory Payments

Payments that are not considered in Table 2 and are not within the cap on symmetrical payments regime are amounts due and payable to compensate the Waste ICC Contract Counterparty for a breach by the Emitter (e.g. Default Termination Payment, Biogenic LTSS Fees, Supply Chain Report Fees and indemnity payments).

If the cap has been reached in previous Billing Periods, but in a subsequent Billing Period net payments from the Emitter to the Waste ICC Contract Counterparty resume, then the payments begin immediately without any regard for "missed payments" from the Emitter to the Waste ICC Contract Counterparty that would have occurred in the absence of the cap.

In the event that amounts payable from the Emitter to the Waste ICC Contract Counterparty in respect of previous Billing Periods have not been paid, these amounts will remain due regardless of the cap being reached in a following Billing Period. In other words, the operation of the cap in respect of any subsequent Billing Period will not frustrate any sums due and payable by the Emitter in respect of previous Billing Periods where the cap did not apply.

7.2 Determining the monthly fossil / biogenic CO_2 percentages

Measuring the relative percentages of fossil and biogenic CO_2 captured is required under the Waste ICC Contract to ensure that the Opex Payment calculations are accurate, timely and reflective of the Emitter's counterfactual exposure to the UK Emissions Trading Scheme (ETS)

(once expanded to cover the waste sector) when determining the application of the Applicable Carbon Reference Price.

Government considers that carbon-14 analysis on a monthly composite sample, collected using a biogenic CO_2 long-term sampling system (LTSS), will provide a robust, accurate measurement that is representative of the monthly biogenic/fossil CO_2 percentages.

Full details on the requirements (including all requirements set out in the remainder of this section) for determining biogenic / fossil CO_2 percentages can be found in Annex 13 (*Biogenic LTSS Requirements*), which also includes Appendix 1 (*Biogenic LTSS Operational Framework and Technical Specification*), of the Waste ICC Contract.

7.2.1 Requirements for determining the monthly fossil / biogenic CO_2 percentages

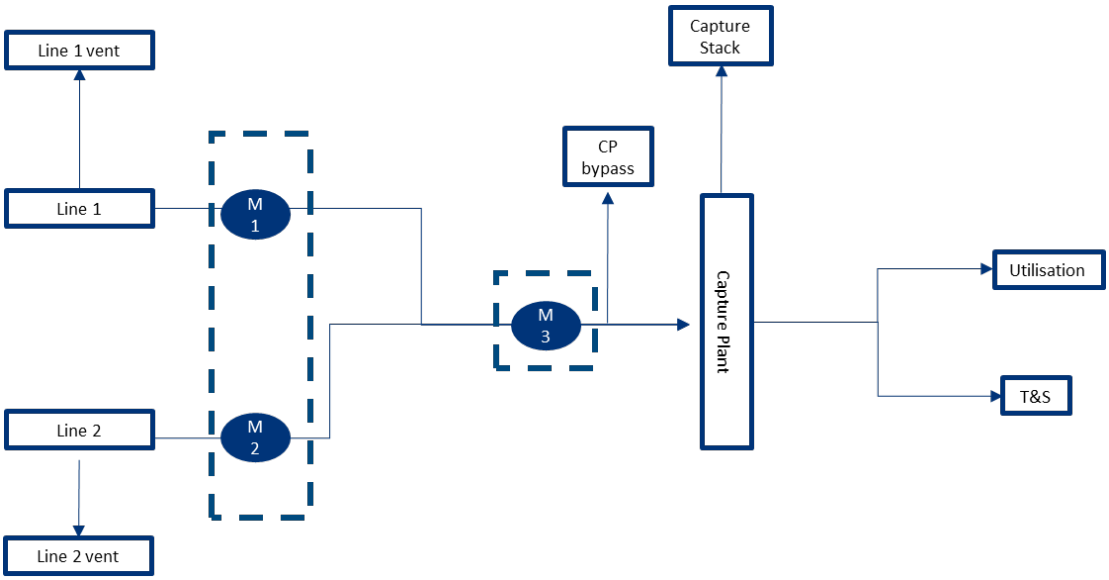
The satisfaction of the Biogenic LTSS requirements will be tested as an Operational Condition Precedent (OCP) and then apply from the Start Date. The following sections provide an overview of the technical requirements, obligations and contractual implications for breaches to these obligations, how the monthly fossil percentage will be calculated, and audit and verification requirements.

Biogenic LTSS Measurement Points

Each Biogenic LTSS must be installed in a location on the stream of CO_2 that is routed to the Capture Plant and upstream of any CO_2 that is bypassed and emitted to atmosphere. Additionally, the measurement point(s) of the Biogenic LTSS will need to capture all streams of CO_2 going to the capture plant.

If there are multiple streams, as shown in the example in Figure 8, a Biogenic LTSS could be installed on either each individual stream (M1 and M2, provided that the pre-capture measurement(s) are available in respect of each individual stream) or in a common location that captures all streams (M3).

Figure 8: Biogenic LTSS measurement points.



Biogenic LTSS Data Obligation: monthly biogenic / fossil CO_2 percentages data requirements

The Emitter is required to comply with the Biogenic LTSS Data Obligation undertaking, which requires that:

- the Waste ICC Contract Counterparty is provided with all information it requests to calculate the relevant Fossil Emission Multiplier within [two][39] Business Days at the end of the relevant billing period (other than the monthly laboratory report referred to in the 'laboratory report requirements' section); and
- all information provided by or on behalf of the Emitter is true, complete and accurate in all material respects and is not misleading.

There are also certain circumstances, which can constitute to a deemed breach of the Biogenic LTSS Data Obligation. These include:

- The Biogenic LTSS Operating Time Fraction not being satisfied (summarised in paragraph 1 below);
- Leak check results being over certain thresholds[40];
- Incorrect calibration of certain components; and
- Certain functional requirements not being complied with.

For each Biogenic LTSS sample to be considered valid and representative of the biogenic / fossil CO_2 percentages of the entire Month, the Emitter will be required to comply with various technical requirements, including the requirements numbered 1 to 4 set out below.

[39] The Department is still considering this time period.
[40] The Department is still considering the leak check techniques and thresholds.

1. Biogenic LTSS Operational Time Fraction

Each Biogenic LTSS will be required to sample for 95% or more of the facility's operating time each Month. If not, this will be a deemed breach of the Biogenic LTSS Data Obligation.

To provide Emitters some leniency (e.g., to account for certain Biogenic LTSS faults), each Biogenic LTSS will be required to sample for a minimum of 95% of the time in the Month. The 95% sampling time will be determined in accordance with the following equation:

Equation 4: Biogenic LTSS Operational Time Fraction

$$Biogenic\ LTSS\ Operational\ Time\ Fraction = \frac{Total\ Biogenic\ LTSS\ Operating\ Time}{Total\ Measured\ Process\ Stream\ Operating\ Time} \times 100$$

Each Biogenic LTSS Operating Time represents the total sampling time of the Biogenic LTSS during the Total Measured Process Stream Operating time (see below), excluding any period during which inaccurate data is recorded. The technical conditions within which each Biogenic LTSS should be sampling have been summarised under requirement 2 below and are set out in more detail in Appendix 1 of Annex 13.

The Total Measured Process Stream Operating Time represents the total operating time of the Waste Installation during which each Biogenic LTSS is required to sample. The Department is still developing the concept of the Total Measured Process Stream Operating Time.

2. Key technical sampling requirements

As summarised under requirement 1 above, each Biogenic LTSS must operate and sample during the Total Measured Process Stream Operating Time. Each Biogenic LTSS will be required to record any errors as an event alarm and to stop the sample flow during the period which the error is being rectified. This time will not be included in the Biogenic LTSS Operating Time. Event alarms will include:

(a) Sample handling system fault;

(b) leak check failures (applicable in circumstances where leak monitoring is carried out continuously);

(c) DAHS faults;

(d) CO_2 sensor faults;

(e) breach of the sampling flow rate requirements; and

(f) any other alarm events as required in the manufacturer's specification.

3. Monthly reporting requirements

The Emitter will be required to submit monthly meta-data, to allow the Waste ICC Contract Counterparty to confirm compliance with the key technical requirements. This submission must be made within [two][41] Business Days of the end of the relevant Month. The data is required to provide the Waste ICC Counterparty the ability to:

(a) calculate and confirm the Emitter has complied with the 95% Biogenic LTSS Operational Time requirement;
(b) confirm that the Emitter has satisfied the leak check requirements;
(c) confirm that the Emitter has satisfied the sampling flow rate requirements; and
(d) understand the Measured CO_2 Input in respect to each Biogenic LTSS Measurement Point.

4. Inaccurate data

If the Emitter provides "Inaccurate Biogenic CO_2 Measurement Data", i.e. an error caused by a correction of scaling factor within the DAHS, a transcription error or the data recorded is otherwise inaccurate:

(a) if it is technically feasible to correct such inaccurate data, the Emitter will be required to correct such inaccurate data as soon as possible and in any event by the start of the next monthly billing period; or

(b) if it is not technically feasible to correct the inaccurate data (or the Emitter does not correct such data within the period referred to in (a) above), then the time during which such data was recorded will be excluded from the Total Biogenic LTSS Operating Time (see requirement 1 of this section, above).

Biogenic LTSS Obligation

The Emitter is also required to comply with the Biogenic LTSS Obligation undertaking. In summary this undertaking, requires the Emitter to comply with the requirements set out in Appendix 1 of Annex 13 and that the Biogenic LTSS is installed, commissioned, calibrated, configured, registered, operated and maintained as required.

The Emitter is required to notify the Waste ICC Contract Counterparty of any breach of the Biogenic LTSS Obligation undertaking.

Any breaches of the Biogenic LTSS Obligation undertaking will require the Emitter to follow a cure regime. If the Emitter does not comply with the cure regime then the Installation Fossil Emission Multiplier (IFEM) will be deemed 100% (or a fee will be payable if carbon pricing has not yet been extended to the waste sector) for the relevant Biogenic LTSS during each Month until (and including) the Month in which the breach is remediated.

[41] The Department is still considering this time period.

Laboratory report requirements

Each monthly Biogenic LTSS sample will need to be analysed at an accredited laboratory and the Emitter will be required to provide the Waste ICC Contract Counterparty with a laboratory report certifying the monthly biogenic CO_2 percentage[42].

This laboratory report must be provided to the Waste ICC Contract Counterparty by the last Business Day of the third Month that falls after the Month being considered. If the Emitter does not provide the laboratory report within this timeframe, the IFEM will be deemed 100%, pending receipt of the relevant laboratory report. The Emitter has up to the last Business Day of the sixth Month that falls after the Month being considered in order to provide a laboratory report, after which point no reconciliation will be allowed.

If the Emitter has multiple samples (in a month) relating to the same Biogenic LTSS, then these samples will need to be analysed at the accredited laboratory as a composite sample to produce one laboratory report result. If the Emitter has multiple Biogenic LTSSs installed on different streams, then a laboratory report detailing the monthly biogenic CO_2 percentage will need to be provided for each Biogenic LTSS.

Proving test

A proving test will be required to provide assurance that each Biogenic LTSS is functioning as required and sampling in accordance with the technical requirements. The proving test will be a comparison of each Biogenic LTSS against the standard reference method ISO 13833 (manually extractive tests). A proving test will be required as an OCP and where other contractual triggers are satisfied, as set out in more detail in Annex 13.

A proving test should be conducted using the following steps:

1. A minimum of five proving tests should be conducted in a seven-day maximum period, each test consisting of a six to eight hour sampling period. Each Biogenic LTSS will be required to sample only during this time, in parallel with the manually extractive tests.

2. The five manually extractive tests will need to be combined to form a composite sample, which is then to be analysed at an accredited laboratory to produce one single laboratory report and biogenic percentage (laboratory report A).

3. Each Biogenic LTSS sample will also need to be analysed at an accredited laboratory to produce a laboratory report and biogenic percentage (laboratory report B).

4. The manually extractive biogenic percentage (as evidenced by laboratory report A) and corresponding Biogenic LTSS biogenic percentage (as evidenced by laboratory report B) should be within [+/- 3%][43] for the proving test to pass.

[42] The fossil percentage, which is applied to the Monthly Opex Payment, will be determined by the biogenic percentage being subtracted from 100%. Therefore, the remainder of the 'Determining the monthly fossil /and biogenic CO_2 percentage split' section makes reference to the fossil percentage.
[43] The Department is still considering this value.

If the proving test is being conducted as part of the OCP requirements, a successful proving test evidenced to the satisfaction of the Waste ICC Contract Counterparty will be required in order to trigger the Start Date.

After the Start Date, in a Month where a proving test is conducted, each Biogenic LTSS will be required to sample as per the usual monthly requirements for the remainder of the Month when the proving test is not being conducted. The proving test period of up to seven-days will not be included in the Total Measured Process Stream Operating Time and the following commercial regime will apply in respect of the proving test:

- If the proving test is determined to pass, then the monthly IFEM will be applied to the entire Month, as determined per the usual monthly requirement.
- If the proving test is determined to fail, then the Biogenic LTSS Data Obligation will be breached and the IFEM will be deemed to be at 100% fossil for the period from which the first proving test (of the five) was conducted up until a repeat proving test has passed, following which a reconciliation will occur in respect of the period from which the repeat proving test was conducted.

Calculating the Installation Fossil Emission Multiplier (IFEM)

The IFEM will be applied in the calculation of the Applicable Carbon Reference Price for the purpose of calculating payments and is calculated by reference to the biogenic percentage measured by the Biogenic LTSS(s). If only one Biogenic LTSS is installed, then the IFEM (expressed as a percentage) will be the fossil percentage associated with the Biogenic LTSS (i.e. 100% minus the biogenic percentage). If an Emitter has installed multiple Biogenic LTSSs, an overall IFEM, expressed as a percentage, will need to be calculated.

Additionally, Emitters will be required to provide forecast IFEM values to the Waste ICC Contract Counterparty each month, as part of the Forecast Data requirements.

The remainder of this section provides an overview of how the overall IFEM is calculated, where an Emitter has installed more than one Biogenic LTSS.

Table 3: IFEM equation symbols

Symbol	Description
$IFEM_m$	The IFEM is the overall facility fossil emission percentage for the Month (expressed as a percentage (%)).
$CO2in_{LTSS,m}$	The Monthly Measured CO_2 Input (expressed in tCO_2) is the total monthly Measured CO_2 Input, as determined by the pre-capture measurement approach, in relation to the relevant Biogenic LTSS.[44]
$LFEM_{LTSS,m}$	The LTSS Fossil Emission Multiplier is the fossil percentage for the Month in relation to a Biogenic LTSS.
N	The number of Biogenic LTSS that are installed at the Installation, in accordance with Annex 13.

The IFEM will be a weighted average of the fossil percentage determined by each Biogenic LTSS, with the associated CO_2 data determined by the corresponding pre-capture measurement approach, as shown in Equation 5 below.

Equation 5: IFEM equation

$$IFEM_m = \frac{\sum_{LTSS=1}^{N} CO2in_{LTSS,m} \times LFEM_{LTSS,m}}{\sum_{LTSS=1}^{N} CO2in_{LTSS,m}}$$

As set out in the relevant pre-capture provisions, missing or inaccurate data (measured by the pre-capture meter) can constitute a Pre-capture Meter Invalid Settlement Unit[45]. For the purpose of calculating the IFEM (Equation 5), a minimum of five Valid Inlet Pre-capture Settlement Units (i.e. not an Invalid Pre-capture Meter Invalid Settlement Unit) will be required . If there are less than five Valid Inlet Pre-capture Settlement Units in a given month, then the IFEM will be calculated by arithmetic mean of each LTSS Fossil Emission Multiplier. In this instance the Monthly Measured CO_2 Input will not be considered.

[44] This is still subject to further review by the Department.
[45] The treatment of Pre-capture Invalid CO_2 Settlement Units is addressed under other provisions in the Waste ICC Contract (refer to the pre-capture metering provisions).

Non-compliance with the Biogenic LTSS Data Obligation and the Biogenic LTSS Obligation

This section sets out the consequences of any non-compliances with the Biogenic LTSS Data Obligation and the Biogenic LTSS Obligation. The consequence imposed will differ depending on whether the waste sector is or is not exposed to carbon pricing at the time of the non-compliance.

In respect of the period between the Start Date and the date on which the waste sector is exposed to carbon pricing (if applicable):

1. A fee will be payable by the Emitter for any non-compliance with the Biogenic LTSS Data Obligation.

2. Furthermore, a fee will be payable for any breaches with the Biogenic LTSS Obligation where an Emitter does not follow the cure regime and up until the cure regime has been implemented.

The fee will be assessed on a per Biogenic LTSS basis such that only one fee per Biogenic LTSS will apply per Month of non-compliance. The monthly fees payable by the Emitter will increase over time if multiple non-compliances are identified on a 12-month rolling basis, as summarised in

Table 4 below.

Table 4: Fees associated with non-compliance if carbon pricing does not apply to the waste sector

Month(s) during which a non-compliance was identified per Biogenic LTSS	Monthly fee per Biogenic LTSS non-compliance
1	£1000
2	£2000
3	£4000
4	£6000
5 or more	£8000

In respect to a period from which the waste sector is exposed to carbon pricing (if applicable):
3. Any breach of the Biogenic LTSS Data Obligation will result in the IFEM for the relevant

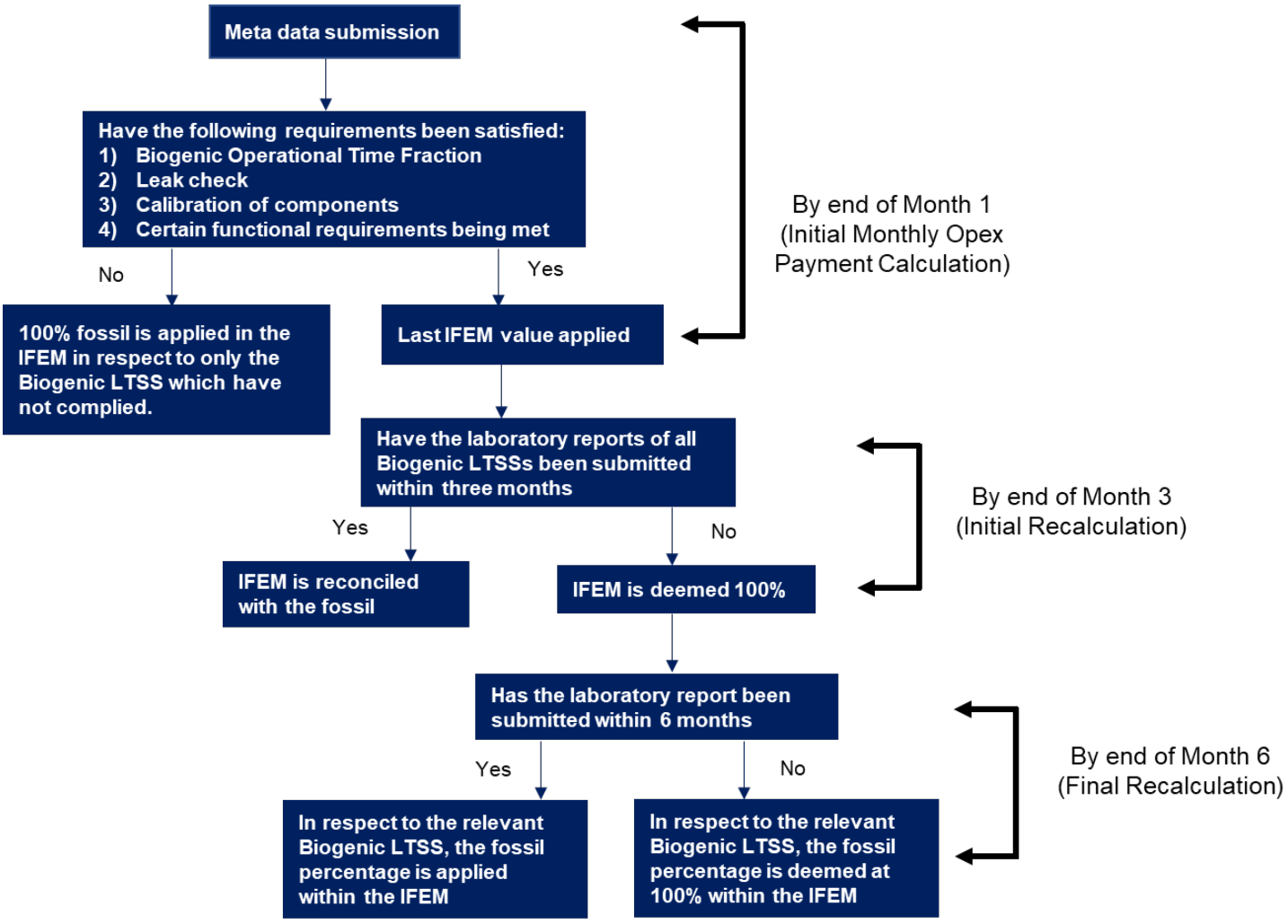
Biogenic LTSS to be deemed at 100% in respect to the relevant Month (subject to the ability of the Emitter to technically correct any breach of the Biogenic LTSS Data Obligation).

4. Any breach of the Biogenic LTSS Obligation where the Emitter does not follow the cure regime will result in the IFEM for the relevant Biogenic LTSS being deemed at 100% until the cure regime has been implemented.

Calculation of the Monthly IFEM and Opex Payment

In respect to a period when the waste sector is exposed to carbon pricing (if applicable), and unless the Emitter is in breach of the Biogenic LTSS Data Obligation, a proxy value will be required to be applied as the IFEM for the payment of the Opex Payment for the relevant Month, until such a point where the actual data becomes available. This is because the carbon-14 measurement methodology requires a sample to be collected and sent to an accredited laboratory, which will lead to a time lag between confirming the relevant IFEM of each Biogenic LTSS and the Opex Payment being due under the Waste ICC Contract for the relevant Month.

Figure 9: A summary of the calculation steps of the IFEM



The Waste ICC Contract Counterparty will calculate or recalculate the applicable Monthly IFEM at the following points in time (shown in Figure 9):

a) Initial Monthly Opex Payment calculation;

- If the date on which the Waste sector becomes exposed to carbon pricing occurs prior to the last day of the fourth Month after the Start Date, (including the Month in which the Start Date occurs) in respect of each Opex Payment calculation a proxy value of 50% will be used on the basis that no 'actual' data is likely to have been collected by the Emitter at that point in time. The proxy value of 50% will only be applied during the initial four Months and will not be applied if an actual IFEM is available as a result of any 'Initial Recalculation' or 'Final Recalculation' (see paragraphs (b) and (c) below).
- If the date on which the Waste sector becomes exposed to carbon pricing occurs after the last day of the fourth Month after the Start Date (including the Month in which the Start Date occurs), in respect of each Opex Payment calculation, the most recent IFEM (in respect of which an Initial Recalculation or Final Recalculation has been conducted by the Waste ICC Contract Counterparty) will be used to calculate the initial Monthly Opex Payment calculation (see paragraphs (b) and (c) below).
- Please note that in both scenarios listed above, when calculating the relevant Opex Payment, the most recent Month's IFEM applied can be from a laboratory report that has been provided when carbon pricing does not apply to the waste sector. The laboratory report will need to comply with the requirements as set out in Annex 13.
- In exception to the above paragraphs (and if the Emitter has only one Biogenic LTSS), if the Emitter has breached the 95% Biogenic LTSS Operational Time sampling requirement, the leak check requirements, incorrect calibrations of components and certain functional requirements not being complied with (as set out in the Biogenic LTSS Data Obligation section), and subsequently in breach of the Biogenic LTSS Data Obligation, then the IFEM will be deemed at 100%. If there is more than one Biogenic LTSS, the IFEM will be calculated following Equation 5, applying a deemed 100% Fossil Emission Multiplier to the Biogenic LTSS for which a non-compliance has occurred, and the remaining Fossil Emission Multiplier(s) calculated on the basis set out above in respect of the other Biogenic LTSS(s).

b) Initial Recalculation;

- The IFEM will be recalculated once the Emitter has provided a laboratory report for each Biogenic LTSS (unless the Emitter is in breach of the Biogenic LTSS Data Obligation in respect of the relevant Biogenic LTSS, or it will not be able to provide the relevant laboratory report, in which case the provision of the laboratory report is not strictly required), in accordance with paragraph 4 of the 'Biogenic LTSS Data Obligation' section.

- If the Emitter has not provided a laboratory report for each Biogenic LTSS by the last Business Day of the third calendar Month that falls after the Month being considered (the “Fossil Emission (FE) Submission Deadline”), the IFEM will be deemed 100% (subject to any further Final Recalculation).

c) Final Recalculation;

- If the Emitter has not provided all the required information prior to the FE Submission Deadline (see paragraph (b) above), the Emitter will be required to provide the Waste ICC Contract Counterparty with the relevant accredited laboratory report(s) by the last Business Day of the sixth Month that falls after the Month being considered.
- If the Emitter provides the laboratory report(s) in accordance with paragraph 4 of the ‘Biogenic LTSS Data Obligation’ section, then the deemed 100% Fossil Emission Multiplier, in relation to the relevant Biogenic LTSS, applied as a result of the Initial Recalculation will be reconciled using the actual laboratory value during the Final Recalculation.
- Any laboratory reports that are submitted after the six-month deadline will not be considered and the 100% deemed Fossil Emission Multiplier will remain applicable for the Biogenic LTSS to which such report(s) relate.

The Opex Payment will be reconciled following each Initial and Final Recalculation.

Audit and verification rights and requirements

Emitters will be required to submit an independent third-party annual audit report and verification statement, as one document, by the end of the seventh Month that falls after each Contract Payment Term Year. The audit report and verification statement will be undertaken by an independent third party with appropriate knowledge, appointed by the Emitter and will need to be approved by the Waste ICC Contract Counterparty.

In summary, the audit report is intended to confirm that the Emitter has complied with the requirements set out in Annex 13 and/or identify any non-compliance which has occurred. The verification statement is intended to provide the Waste ICC Contract Counterparty with confirmation of whether any non-compliances identified in the audit report have had an impact on the Biogenic LTSS data and, if so, the materiality of the impact.

If an Emitter fails to submit an annual audit report and verification statement by the deadline, the Waste ICC Counterparty will have the right to suspend payments. These payments shall be paid to the Emitter (without interest) once the Emitter complies with the audit report and verification requirements.

For full details, please refer to the Waste ICC Contract, part D of Appendix 1 of Annex 13.

Suspension and Termination

Suspension of payments is available to the Waste ICC Contract Counterparty (in relation to the Biogenic LTSS requirements) in circumstances where the Emitter:

- fails to comply with its obligation to permit the Waste ICC Contract Counterparty to exercise the Biogenic LTSS Access Right;
- is in breach of the Measurement Equipment Schematic Obligation requirement to notify the Waste ICC Contract Counterparty of material changes to Biogenic LTSS equipment;
- is in breach of an Automated Data Systems Obligation (which obligation applies to all Automated Data Systems, which would include the Biogenic LTSS); and
- fails to submit an annual audit report and verification statement by the required deadline.

A default termination right for the Waste ICC Contract Counterparty (in relation to the Biogenic LTSS) arises in circumstances where the Emitter is:

- knowingly or recklessly providing misleading information in relation to the Biogenic LTSS data; or
- in a prolonged failure to comply with prolonged Biogenic LTSS Access Right.

7.3 Extension Conditions

The proposed Waste ICC Contract market extension condition included the potential revenues that could be generated from GGR Credits, which would contribute to supporting the ongoing running of the CCS facility without support from the Waste ICC Contract.

Equation 6:

$$Opex\ strike\ price\ (£/t) + T\&S\ fees\ (£/t) - \left(\frac{GGR\ Credits\ Generated\ (t)}{Total\ CO_2\ captured\ (t)} * Fallback\ price\ (£/t)\right) >$$

$$Applicable\ Carbon\ Reference\ price\ (£/t)$$

To ensure that facilities that opt not to participate in GGR markets are not more likely to be granted an extension than an equivalent facility that does participate, an additional GGR Credits Extension Condition was introduced in the December 2022 Update.

To meet this extension condition, the Emitter must have converted at least 95% of the total biogenic CO_2 captured into GGR Credits. A 95% conversion rather than 100% conversion provides some flexibility to the Emitter. The assessment would be made over 3-years (the "GGR Credits Extension Condition Assessment Period"), with the responsibility falling on the Emitter to provide the required supporting evidence to the Waste ICC Contract Counterparty to demonstrate that this level of conversion has been achieved.

The conversion percentage of captured biogenic CO_2 into GGR Credits is assessed on the basis of i) the captured biogenic CO_2 in respect of which the Emitter has applied for GGR Credits; as a proportion of ii) the total captured biogenic CO_2. It is not assessed by measuring the tonnage of GGR Credits that arise per tonne of captured biogenic CO_2. The assessment is made in accordance with the methodologies permitted under the relevant Acceptable Compliance Schemes and/or Acceptable Voluntary Schemes.

Since the December 2022 publication, an update has been made to account for scenarios where the Compliance GGR Credit Restrictions and the Voluntary Credit Restrictions are lifted at a point in the Waste ICC Contract Term where it would be unrealistic to expect an Emitter to be generating GGR Credits within the GGR Credits Extension Condition Assessment Period. Two scenarios have been considered:

1. the Compliance GGR Credit Restrictions and the Voluntary GGR Credit Restrictions are lifted **within** the GGR Credits Extension Condition Assessment Period; or

2. the Compliance GGR Credit Restrictions and the Voluntary GGR Credit Restrictions are lifted sufficiently **close to the start** of the GGR Credits Extension Condition Assessment Period to mean that the Emitter is unable to become certified as a generator of GGR Credits.

The Department considers that accreditation should be able to be achieved within 24-months from the point of application. Therefore, up to a 24-month buffer period will be provided from the point that the first of the Compliance GGR Credit Restrictions and/or the Voluntary GGR Credit Restrictions are lifted, to provide the Emitter with sufficient time to become accredited (or a shorter period, if the Emitter becomes accredited prior to the end of the 24-month period).

The assessment window was stated to be 3-years in the December 2022 publication, ending 12-months prior to the end of the Waste ICC Contract (either the Initial Term or the relevant Contract Payment Year). However, in light of the above, additional flexibility will be provided. The number of years for which the assessment will be carried out will be determined based on the number of full years available within the GGR Credits Extension Condition Assessment Period (up to a maximum of 3-years), utilising the earlier date of; 1) an accreditation notice (a notice provided by the Emitter to the Waste ICC Contract Counterparty confirming their accreditation under a GGR Credits market), or 2) the end of the 24-month buffer period (Table 5).

Table 5: Summary of updated GGR Credits Extension Condition Assessment

Number of potential years of participation in GGR market prior to assessment window, defined by earlier of: **1) accreditation notice or** **2) end of 24-month buffer period**	**Percentage of captured biogenic CO_2 in respect of which the Emitter has applied for GGR Credits as a proportion of the total captured biogenic CO_2**
3-full years	95%
2-full years	90%
1-full year	85%
Less than 1-full year	Extension condition not required to be satisfied to be eligible for an extension

This approach provides additional flexibility to allow Emitters to satisfy the GGR participation assessment extension condition by reducing the percentage of biogenic CO_2 that needs to be sent for conversion to GGR Credits. If less than 1-full year is available for assessment, then this extension condition will not be considered as part of the assessment as to whether the Emitter is eligible for an extension.

8 Miscellaneous

8.1 Know Your Customer

Know Your Customer (KYC) checks have been a long-standing requirement under the ICC and Waste ICC Contracts. In the latest iteration of the ICC and Waste ICC Contracts we have expanded the KYC provisions such that the KYC information must now also be provided at OCP stage in addition to solely at ICP stage and such that the Emitter undertakes to provide KYC information upon the counterparty's request throughout the term of the contract (to ensure routine due diligence can be undertaken).

If the Emitter fails to comply with this obligation, then the counterparty may elect to suspend payment of any amount(s) which would otherwise be payable (by the counterparty to the Emitter) in any period during which the Emitter is not in compliance with such obligation. Should the Emitter subsequently provide the counterparty with the information requested, the aforementioned suspension would cease to exist and any payments which were suspended will be paid, without interest, to the Emitter.

There is also an obligation for the Emitter to notify the counterparty as soon as reasonably practicable of any proposed/actual:

- change of the Emitter's legal name;
- change of Ownership;
- change of Ultimate Investor;
- appointment of a director of the Emitter; and/or
- change of the Emitter's legal jurisdiction.

9 Next Steps

9.1 Track-1

The ICC and Waste ICC Contracts (each comprising the Front End Agreement and Standard Terms and Conditions) published alongside this update document are broadly final versions, prior to detailed negotiations and final investment decisions for Track-1 projects. These publications provide projects sufficient understanding of the commercial proposals to undertake negotiations.

As set out in the disclaimer, the updates published within this document and accompanying contracts, are not final and are subject to further development including through the negotiations process. The negotiations for Track-1 projects have commenced, and we anticipate that the final terms that are entered into with successful projects will be published in some form, subject to matters such as the consideration of commercially sensitive information.

The Energy Bill is progressing through Parliament. In March 2023, the government published a consultation on secondary legislation considered needed to be in place to be able to enter into business model contracts[46]. Subject to Parliamentary approval of the Energy Bill, we intend to deliver the relevant secondary legislation as soon as departmental and Parliamentary timelines allow.

9.2 Track-2 and Track-1 expansion

The government has launched Track-2, which aims to establish two CCUS clusters, contributing to our ambition to capture 20-30 $MtCO_2$ per year across the economy by 2030. We consider the Acorn (Northeast Scotland) and Viking (Northeast England) T&S systems, at this stage, best placed to deliver our objectives for Track-2, subject to final decisions, due diligence, consenting, subsidy control and value for money assessments. We will set out the process by which capture projects for Track-2 will be selected in due course.

To further contribute to our ambition of capturing and storing 20-30 $MtCO_2$ per year, we will continue to develop the Track-1 clusters to increase the benefits they can deliver. We will launch a process later this year to enable further expansion of the Track-1 clusters, beyond the initial deployment, identifying and selecting projects to fill the available storage and network capacity anticipated to be available in and around 2030.

We plan to engage with industry on the potential for any changes to the ICC and Waste ICC business models in due course.

[46] https://www.gov.uk/government/consultations/proposals-for-hydrogen-production-and-industrial-carbon-capture-regulations

This publication is available from: www.gov.uk/government/publications/carbon-capture-usage-and-storage-ccus-business-models

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