UK Government

Department of Agriculture, Environment and Rural Affairs
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Scottish Government
Riaghaltas na h-Alba
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Llywodraeth Cymru
Welsh Government

UK Emissions Trading Scheme: Free Allocation Review

A joint consultation of the UK Government, the Scottish Government, the Welsh Government and the Department of Agriculture, Environment and Rural Affairs for Northern Ireland

Closing date: 11 March 2024

December 2023

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

Contents

General information

Why we are consulting

The UK Emissions Trading Scheme (UK ETS) Authority (UK Government, Scottish Government, Welsh Government and the Department of Agriculture, Environment and Rural Affairs for Northern Ireland, hereinafter 'the Authority') is seeking input on a number of proposals to improve our approach to free allocations.

We have committed to better target free allocations for sectors most at risk of carbon leakage ahead of the next allocation period in 2026, and to tailor this to the UK context. This consultation seeks views on our proposals to meet these commitments. It proposes options for changes to the free allocation methodology including:

- The approach to accounting for activity
- Benchmarking
- The way we assess carbon leakage risk
- Additional aspects of methodology such as consideration of decarbonisation technologies and conditionality
- Technical proposals to improve operability and deliverability of the scheme.

Consultation details

Issued: 18 December 2023

Respond by: 11 March 2024

Enquiries to:

Emissions Trading,
Department for Energy Security and Net Zero
3rd Floor
3-8 Whitehall Place
London
SW1A 2EG

Email: ukets.consultationresponses@energysecurity.gov.uk

Consultation reference: UK ETS Free Allocation Review

Audiences:

This consultation will be of particular interest to individual companies and representatives of industrial and power sectors with obligations under the UK ETS and environmental groups. This consultation is not limited to these stakeholders; any organisation or individual is welcome

to respond. (To note, this consultation does not apply to NI electricity generators who participate in the EU ETS by virtue of the Ireland / Northern Ireland Protocol.)

Territorial extent:

This consultation relates to proposals to develop the UK ETS, which operates across England, Scotland, Wales and Northern Ireland. This is a joint consultation, published by the UK Government, Scottish Government, Welsh Government and the Department of Agriculture, Environment and Rural Affairs for Northern Ireland.

How to respond

Respond online at: https://energygovuk.citizenspace.com/energy-markets/uk-ets-free-allocation-review

or

Email to: ukets.consultationresponses@energysecurity.gov.uk

Write to:

Emissions Trading,
Department for Energy Security and Net Zero
3rd Floor
3-8 Whitehall Place
London
SW1A 2EG

A response form is available on the GOV.UK consultation page: https://www.gov.uk/government/consultations/uk-emissions-trading-scheme-free-allocation-review

When responding, please state whether you are responding as an individual or representing the views of an organisation.

Your response will be most useful if it is framed in direct response to the questions posed, though further comments and evidence are also welcome.

Confidentiality and data protection

Consultation responses will be shared across the UK ETS Authority. Information you provide in response to this consultation, including personal information, may be disclosed in accordance with UK legislation (the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004).

Consultation responses will be shared across the UK ETS Authority.

If you want the information that you provide to be treated as confidential please tell us, but be aware that we cannot guarantee confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not be regarded by us as a confidentiality request.

We will process your personal data in accordance with all applicable data protection laws. See our privacy policy.

We will summarise all responses and publish this summary on GOV.UK. The summary will include a list of names or organisations that responded, but not people's personal names, addresses or other contact details.

Quality assurance

This consultation has been carried out in accordance with the government's consultation principles.

If you have any complaints about the way this consultation has been conducted, please email: bru@energysecurity.gov.uk.

Introduction

Free allocation of UK ETS allowances is the main policy instrument through which carbon leakage risk is currently addressed in the UK. The provision of free UK ETS allowances means that an operator needs to buy fewer allowances to cover their emissions, in effect, reducing the carbon price they pay and mitigating the risk of carbon leakage. The incentive to decarbonise is maintained as, in general, recipients of free allocation that decarbonise keep any surplus free allocations. They can sell these on the secondary market to their benefit. The benchmarking methodology also further incentivises decarbonisation by awarding the most efficient installations within a sector with more free allocations.

Our current approach to free allocations for stationary installations under the UK ETS prioritised continuity for operators and largely carried over methodology from the EU ETS Phase IV. The Authority launched a review into free allocation policy in 2021 with a call for evidence, the aim is to ensure free allocation policy is working effectively in the UK context to both incentivise emissions reduction and protect energy intensive, trade exposed industries from the risk of carbon leakage. We will also conduct an impact assessment of the measures proposed in the consultation on industries that would be affected. This impact assessment will include sector-specific assessments. In the Developing the UK ETS consultation it was announced that the review would be conducted in two phases.

The first phase aimed at aligning the industry cap (the share of free allocations under the cap available to be given out for free) with the overall UK ETS net zero consistent cap and proposed short-term technical changes to address concerns flagged as part of the call for evidence.

This consultation makes up the second phase of the review which will focus on changes to the methodology for distributing free allocations ensuring that support is better targeted for sectors most at risk of carbon leakage, in the context of UK industry and within the bounds of the new net zero consistent industry cap. These bottom-up changes will be implemented to take effect by 2026 to align with the second allocation period of the UK ETS.

Free allocations are calculated using the following equation:

$$\text{Preliminary Free Allocation} = \text{Historical Activity Level} \times \text{Benchmark} \times \text{Carbon Leakage Exposure Factor}$$

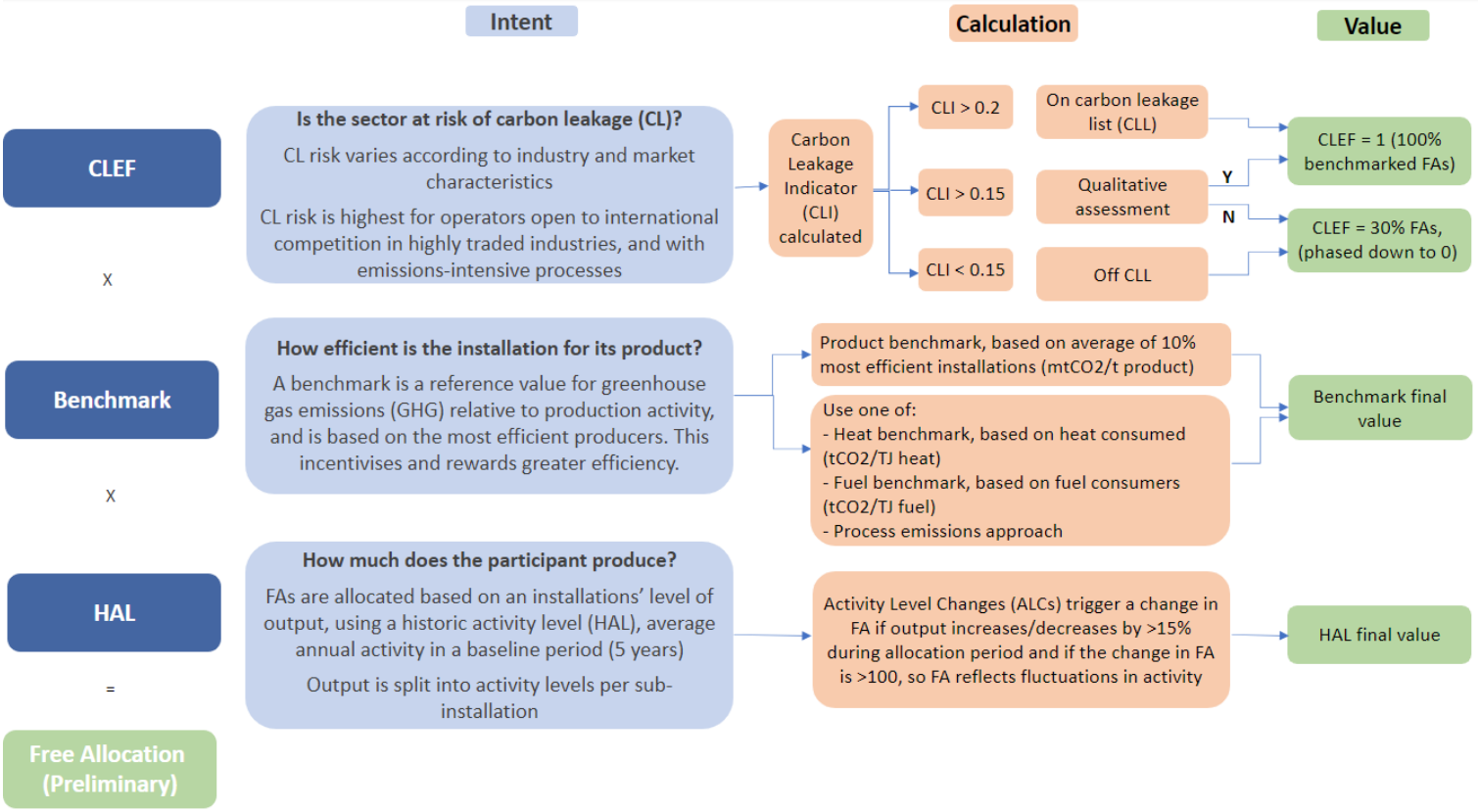

Figure 1 Diagram showing how free allocations are calculated

This consultation will address each of the aspects of the free allocation equation and will consider new methodologies with the primary aim of ensuring better targeted carbon leakage support for UK industry.

The proposals

In this consultation document, the Authority is seeking stakeholder views on proposals to alter the free allocation methodology for the stationary sectors to better target those most at risk of carbon leakage and ensure that free allocations are fairly distributed. This will broadly focus on four key areas: how we account for emissions and activity, benchmarks, the carbon leakage list, and additional factors we might want to introduce to free allocation methodology.

Based on the responses we received via the Developing the UK ETS consultation that we ran in 2022, the Authority proposes that we will make changes to free allocation methodology on the basis of the following principles:

- Principle One – To ensure that the UK ETS effectively mitigates carbon leakage risk by the carbon price it sets, ensuring a true reduction to global emissions.
- Principle Two – To take into consideration the availability and accessibility of decarbonisation technologies for UK ETS sectors.
- Principle Three – Future changes to free allocation policy will align with our wider climate targets.

The Authority will consider the compatibility of free allocation policy with our net zero ambitions and development of wider alternative carbon leakage policies as we make any future changes.

We welcome engagement from all stakeholders in this consultation, whether they are operators who receive free allocations, regulatory bodies, climate groups or NGOs. Some areas of the consultation which will seek evidence to support responses. Where this is requested we would encourage written evidence is sent in. Written evidence will help the Authority in its future policy development, ensuring that final decisions take into account all available information.

Free Allocations and Other Carbon Leakage Mitigation Measures

The UK Government recently consulted on a range of potential policy mechanisms to mitigate carbon leakage risk and ensure the right environment for UK industry to decarbonise This included consideration of a carbon border adjustment mechanism and mandatory product standards, alongside other policy measures to grow the market for low carbon products.

Carbon leakage refers to the movement of production and associated emissions from one country to another due to different levels of decarbonisation effort through carbon pricing and climate regulation. As a result of carbon leakage, the objective of decarbonisation efforts – to reduce global emissions – would be undermined. One way carbon pricing can cause carbon leakage is due to business facing higher costs than producers in other jurisdictions, causing a drop in domestic production and associated emissions, and an expansion elsewhere. If all countries faced the same carbon price, then carbon pricing would not lead to a risk of carbon leakage, because all producers would have the same costs per tonne of carbon associated with their production.

Free allocation policy under the UK ETS addresses carbon leakage risk by reducing a firm's exposure to the carbon price. Eligibility for free allocations is calculated on the basis of a firm's trade exposure and emissions intensity. The more trade exposed a production process, the more likely it is to face carbon leakage risk, particularly when competing against firms in jurisdictions who do not need to factor a carbon price in as part of their production process. The more emissions intensive a production process, the higher a firm's exposure to the carbon price, and the more likely that this will factor in to create carbon leakage risk.

As set out in UK Government's consultation on carbon leakage, a carbon border adjustment mechanism (CBAM) would address carbon leakage risk by applying an effective carbon price to products being imported into a jurisdiction which has a domestic carbon price. An effective carbon price accounts for any discount to the headline carbon price such as free allocations which are distributed to domestic firms at risk of carbon leakage under an ETS. Using the effective carbon price to calculate the price applied by a CBAM to imported products, would ensure it is comparable to the carbon price faced by domestic producers. By applying this price to imports, relevant products being sold on a

domestic market would have a comparable carbon price associated with their embedded emissions, enabling domestic firms to decarbonise without those efforts being undercut.

The UK Government has committed to introduce a CBAM, to protect against carbon leakage risk. The UK ETS Authority will give consideration to all options including how free allocation policy could be adjusted to reflect the reduced risk of carbon leakage for given sectors and the wider policy mitigation in place to support UK industry. This is in line with other approaches taken internationally such as in the EU.

However, the characteristics of sectors differ, so not all mitigation options impact sectors, and the carbon leakage risks that they face, in the same way. As such, not all mitigation options operate as effectively for imports and exports, and there could be a role for free allocation to continue in some instances.

Now that UK Government has committed to introduce a CBAM, one approach could be to phase out free allocation gradually for sectors covered by a UK CBAM. However, any adjustment to free allocation would need to consider risks specific to individual sectors, to ensure that the risk of carbon leakage is mitigated effectively, and would be subject to policy development and consultation. A methodology to determine the rate of free allocation phase out, if this were the preferred policy option going forward, would need to be determined depending on the technical detail of UK CBAM policy design. There would also need to be an assessment of impacts on affected sectors and a consideration of the wider framework of carbon leakage mitigation, as set out in the consultation on 'Addressing carbon leakage risk to support decarbonisation'. The UK Government will continue to engage with the UK ETS Authority as both develop carbon leakage policies.

Questions

1. Do you have any views on the interactions between other carbon leakage mitigation measures and a CBAM and/or the broad policy scenarios which the UK ETS Authority should explore in the future, in light of the UK Government's decision to introduce a CBAM? Please explain your answer.

The proposals in the consultation have considered the future landscape, ensuring that certainty can be given to operators within the scheme, setting the long-term signal that businesses need to invest in decarbonisation projects now, whilst having a clearer understanding of what their free allocation entitlement might be and allowing them to assess their exposure to the carbon price. This consultation focuses specifically on the second allocation period for free allocations over 2026-2030. We will consult on further details on how free allocation policy should work ahead of any future phases of the UK ETS from 2031 onwards. While further consultation will be dependent on the technical policy design of a UK CBAM, policy on free allocations will still take additional factors into consideration.

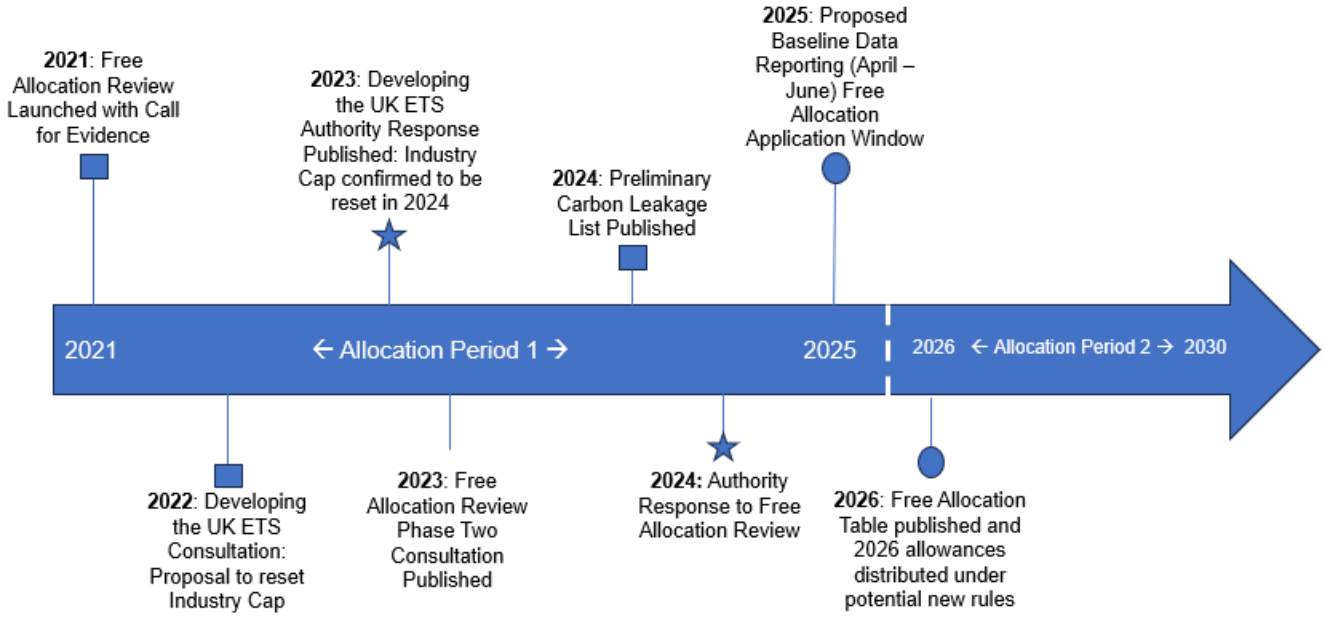

Figure 2 Free Allocation Review Timeline

The changes taken forward following this consultation will be implemented for the second allocation period starting in 2026. The free allocation review timeline in Figure 2 demonstrates our timings for future publications to ensure this takes place. The UK ETS Authority will make best endeavours to announce changes to free allocations, as soon as is practicably possible following the baseline data reporting period, noting the need for certainty for participants in the scheme.

Changes to Activity Level Changes

Changes to accounting for activity

To effectively mitigate the risk of carbon leakage, free allocation must be reflective of the scale of an operator's activity. Under current free allocation methodology, the basic quantity of free allowances that eligible operators can receive is determined by historical activity level (HAL), multiplied by the relevant benchmark and carbon leakage exposure factor (CLEF).

HAL is defined as the average activity level over the baseline years for a given allocation period (e.g., for the 2021-2025 allocation period the baseline years were 2014-2018). HAL is calculated using data from the baseline data report (BDR) that operators submit to regulators before the start of each allocation period.

The quantity of free allowances that an operator will receive in each year of the allocation period is published by the UK ETS Authority in the allocation table and changes only if the criteria for an activity level change (ALC) are met. The ALC mechanism is intended to ensure that free allocation reflects changes in the scale of activity.

Proposal 1: Updating Activity Level Changes

Phase 1 of the UK ETS is split into two 'allocation periods', 2021-2025 and 2026-2030. Ahead of each allocation period the quantity of free allocation each operator is eligible to receive is calculated and published in the allocation table. Phases are split into allocation periods to ensure free allocation eligibility is up to date and reflective of activity levels and decarbonisation progress across each sector. Changes to free allocation can also be made within allocation periods if there are significant changes to an operator's activity levels.

During the allocation period, operators submit an activity level report (ALR) at the end of each scheme year. If an operator's average activity level in any two-year period increases or decreases by 15% or more relative to their historic activity level (HAL), an activity level change (ALC) is triggered. Free allocation is recalculated for the scheme year following the two-year period in which the threshold was exceeded, using the two-year average in place of HAL. An adjustment is only made when the change in activity levels would lead to an annual adjustment of 100 free allowances or more. The allocation table is then updated, and the operator's free allocation remains at the adjusted level for the remainder of the allocation period unless a further ALC is triggered. The threshold for subsequent ALC within the allocation period increases at 5% intervals: e.g., the threshold for a second ALC is 20%, the threshold for a third is 25%, and so on.

In the case of heat and fuel benchmarks, activity cannot be measured in terms of output (or production). Activity is instead measured in terms of the amount of heat or fuel used for production. Activity levels are therefore not directly reflective of production. Increases or decreases in activity can instead be due to changes in the energy efficiency of production. When the two-year average activity level of a sub-installation using the heat or fuel benchmarks exceeds the ALC threshold, the corresponding increase or decrease in free allocation is not processed if the change in activity is due to a change in energy efficiency. In such cases, energy efficiency (average activity divided by average production) in the two-year period is compared to energy efficiency in the five-year baseline period. If a reduction in reported activity (exceeding the ALC threshold) is due to increased energy efficiency rather than a decrease in actual production, then no reduction in free allocation is applied. Conversely, if an increase in reported activity (exceeding the ALC threshold) is due to decreased energy efficiency, no additional free allocation is granted.

The use of HAL means that free allocation is based on historical activity during the baseline period rather than actual activity during the allocation period, and therefore may not accurately reflect current activity levels. While the ALC mechanism ensures that larger changes in activity are taken into account, the minimum 15% threshold allows changes below this level to occur without any impact on free allocation. For example, operators who increase activity by less than the threshold do not receive any additional free allocation even if the increased activity results in them facing a higher carbon cost, which may create an incentive to limit production. Conversely, operators who reduce activity by less than the threshold do not lose any free allocation even if the reduction in activity results in them facing a lower carbon cost, which may create an incentive to reduce production.

Option 1: Do nothing

The UK ETS Authority is considering maintaining current HAL and ALC rules and thresholds as the mechanism for ensuring that free allocation reflects activity and changes in activity. This would provide continuity for operators, maintain current administrative burden on operators and regulators, and ensure that free allocation reflects significant changes in activity levels above the current ALC thresholds.

Option 2: Dynamic allocation

To better target free allocation where it is needed, the UK ETS Authority is considering replacing the current HAL/ALC mechanism with a dynamic allocation approach. This approach would mean that the free allowances allocated at the start of each scheme year would be treated as a provisional allocation. Provisional allocation could be based on a historical baseline, as is currently the case, or it could be calculated using a rolling period that would more accurately reflect recent activity levels (e.g., the average of the most recent two years for which data is available, such as 2023/24 for 2026). Free allocation would then be adjusted after the end of each scheme year to reflect actual activity as reported in the ALR. If actual activity was higher than in the period used to calculate provisional free allocation, then free allocation would be topped up. If actual activity was lower, then the over-allocation would be

returned. This would ensure that free allocation accurately reflects actual activity for every scheme year, removing the possible incentive to reduce or limit production.

Under a dynamic allocation approach there would be no 15% threshold for ALCs. This would mean that free allocation for most installations would be adjusted each year, although the current 100 allowance threshold could be maintained to avoid the need to make small changes. ALRs would be assessed by regulators and approved by the UK ETS Authority as under the current rules, but, due to the increase in number of the allocation changes, the approval process could take longer. Confirmation of the quantity of free allowances to be topped up or returned would therefore occur at some point after the compliance date for a given scheme year.

The UK ETS Authority currently publishes an allocation table, which shows initial allocations based on HAL and is updated to show changes resulting from ALCs. With no 15% ALC threshold the allocation table could not provide operators with the same level of certainty as to overall allocation in future years. However, the table would continue to provide some certainty as to provisional allocations.

In the case of heat and fuel benchmarks, ALCs are currently only processed if energy efficiency has not decreased. Changes in energy efficiency are currently measured against average energy efficiency in the five-year historical baseline period. This mechanism may not function as effectively without reference to a fixed baseline period. Under a dynamic allocation approach, therefore, the energy efficiency calculation used to determine the validity of changes in activity for heat and fuel benchmarks could continue to refer to a fixed five-year historical baseline, as is currently the case.

If, based on responses to this consultation and further policy development, the UK ETS Authority decides not to take forward a dynamic allocation approach, we may reconsider the thresholds at which ALCs are triggered and would welcome respondents' views on this.

Questions

2. Should the UK ETS maintain the current approach to activity level changes or switch to a dynamic approach (i.e., should free allocation be adjusted after the end of the scheme year, based on reported activity levels)?

3. If a dynamic approach were to be implemented, should provisional allocation be calculated based on a rolling period of recently reported activity?

4. If provisional allocation were to be calculated via a rolling period, should this be based on the most recent two full calendar years of verified activity (e.g., 2023-2024 for 2026 allocation)?

5. Under the dynamic approach, should the energy efficiency calculation for fall-back benchmark sub-installations continue to refer to a fixed historical baseline?

6. If the UK ETS does not switch to a dynamic approach, should the UK ETS Authority consider reducing the 15% ALC threshold, and, if so, what would be an appropriate threshold?

Changes to Benchmarks

Benchmarks in the UK ETS
A benchmark is a reference value for greenhouse gas emissions (GHG) relative to production activity. There are 52 product benchmarks, each representing the average of the top 10% most efficient installations for a given product across Europe. Where use of a product benchmark is not possible, two fall-back benchmarks based on heat production and fuel consumption, or a process emissions factor, are used.

Benchmarks are used within the UK ETS to determine how many free allocations installations are entitled to receive. The intent of benchmarks is to reward the most efficient installations and incentivise decarbonisation. In principle, installations whose carbon efficiency is closer to the benchmarks will have a higher proportion of their emissions covered by free allowances, and installations whose carbon efficiency is further away from the benchmark will have a lower proportion of their emissions covered by free allowances.

In the first UK ETS allocation period (2021-2025), Phase IV EU ETS benchmarks were used. This was to ensure continuity for operators, that benchmarks were based on sufficiently broad sets of data, and ensure free allocation were awarded on a comparable basis to EU counterparts, while presenting minimal impact on the profitability of affected businesses.

The UK ETS Authority had previously stated that it would consider changes to the methodology for determining preliminary and final free allocation, including consideration of benchmarks, as part of the free allocation review.

Proposal 2: Updated benchmarks

The UK ETS Authority is considering changes to benchmarks, and whether updated benchmarks should include UK installation data. The UK ETS currently uses the same benchmark values[1] as the EU ETS Phase IV, which were brought into UK law, as set out in the UK ETS Authority's response to the Developing the UK Emissions Trading Scheme consultation[2]. Data from UK installations was not used in updating benchmarks from EU ETS Phase III to Phase IV.

Benchmarks are currently updated via Annual Reduction Rates (ARRs) methodology. For the EU ETS Phase IV benchmark update, ARRs were determined by calculating the average performance of the 10% most efficient installations for 2016-2017 for each benchmark then

[1] The only exception is the lime benchmark, which has been temporarily changed for the 2024 and 2025 scheme years.
[2] https://www.gov.uk/government/consultations/developing-the-uk-emissions-trading-scheme-uk-ets

comparing this to the EU Phase III benchmark. The ARR was then applied up to 2022-2023, the mid-point of the first allocation period. ARRs currently have an upper and lower limit, of 0.2% and 1.6% respectively. Benchmarks that have decreased in emissions intensity by more than an average of 1.6% per annum since the baseline data are given an ARR of 1.6%. Benchmarks that have decreased in emissions intensity by less than an average of 0.2% per annum are given an ARR of 0.2%[3].

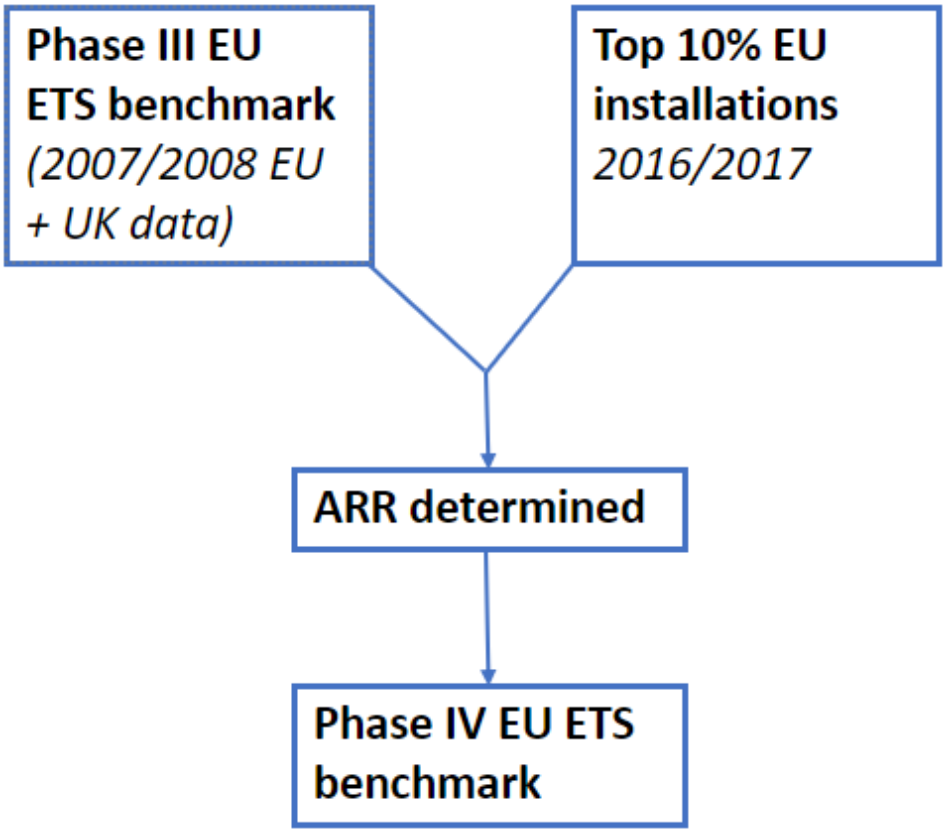

Figure 3 Diagram showing how ARR is used to calculate Benchmarks for Phase IV EU ETS

The intent of ARRs is to reflect projected emissions intensity in a phase. The intent of ARR thresholds is for reductions in the benchmark between allocation periods to consider improvements in emissions intensity achieved by the top performing installations in their respective sector.

Sectors that have significantly improved their emissions intensity have more significant benchmark reductions to reflect the decarbonisation potential of that sector, requiring fewer free allowances to appropriately mitigate their carbon leakage risk. Sectors with more limited improvements in their emissions intensity will have a less significant benchmark reduction, requiring more free allowances to appropriately mitigate their carbon leakage risk.

The Authority explored whether alternative methodologies should be considered to effectively allocate free allowances, such as emissions-focused allocation. The Authority's view is that these methodologies typically reward historically high emitting installations and are not

[3] See Figure 7 in the Analytical Annex for an illustration of the ARR calculation.

consistent with the free allocation objective of incentivising decarbonisation. The Authority believes that benchmarking continues to be the appropriate mechanism to ensure UK ETS free allowances are allocated in a way that rewards high performing installations and incentivises decarbonisation, consistent with UK ETS objectives.

The Authority is considering several options for the approach to benchmarks ahead of the 2026-2030 allocation period.

Option 1: No change to benchmarks

The “do nothing” scenario is that current benchmarks used in the 2021-2025 period would continue to be in effect for the 2026-2030 allocation period. There would therefore be no updates to benchmarks through the ARR methodology.

Without an update, benchmarks would not account for improvements in efficiency achieved by sectors since the previous update.

Option 2: Use updated 2026 EU benchmarks

The EU will be updating Phase IV EU ETS benchmarks ahead of the 2026-2030 allocation period. Using these updated benchmarks would keep UK ETS benchmarks consistent with those used in the EU and maintain a level playing field for operators between both schemes. It will also be based on more recent data than the Phase IV benchmarks currently used, and so will be reflective of the technological advances that are now available.

These updated EU benchmarks are expected to be significantly more ambitious than current benchmarks. The EU has proposed for 2026 onwards to increase the upper threshold for ARRs to 2.5%, which will create more stringent benchmark values for those sectors where the annual improvement rate is >1.6%. The EU has also set out that installations using new technologies that partly or fully reduce GHGs to be included in the scope of EU ETS, which may further tighten benchmarks as the intensity of GHG emissions for the most efficient 10% of installations may reduce as a result.

UK data will not be used in the benchmark update. This could therefore mean that the update would be based on efficiencies not available to UK operators.

The UK ETS Authority will not have certainty on the benchmark values until they are announced, or when they will be published. This would limit the amount of notice and certainty the Authority could provide to UK ETS operators.

Given that UK installation data will not be used in the next EU benchmark update and the limited certainty on benchmark values, the UK ETS Authority is minded not to use updated EU benchmarks for the 2026-2030 allocation period. However, the Authority will continue to consider whether there is a way of using updated EU benchmarks in future if they can be made reflective of UK industrial participants emissions efficiencies.

Option 3: UK focused benchmark update (Minded to Option)

The UK ETS Authority is minded to update benchmarks for the next allocation period based on UK installation data only. Using UK data in the update would lead to ARRs and benchmarks that reflect improvement rates achieved by UK installations.

Unlike option 2, which proposes wholesale changes to benchmarks with changes to ARR thresholds and inclusion of new technologies, the methodology[4] for option 3 would be to:

- Determine the ARR for each product benchmark by comparing the UK's most efficient installation in 2016/2017 and 2022/2023 respectively.
  - We suggest this period as 2016/2017 was used in the previous benchmark update as a comparison point, and 2022/2023 is the mid-point of the current allocation period.
  - We suggest comparing the most efficient UK installation, instead of the "top 10%", for product benchmarks given the more limited number of sub-installations in the UK.
  - For fall-back benchmarks (heat and fuel), the ARR would be determined by comparing the average performance of the UK 10% most efficient installations.
- Apply the ARR to the benchmark values from first UK ETS allocation period.
- Extrapolate the ARR from 2017 to 2028, the mid-point of the next allocation period.
  - With ARR thresholds of 0.2%-1.6% per year, an 11-year period (2017-2028) would lead to benchmark reductions ranging between 2.2%-17.6%.

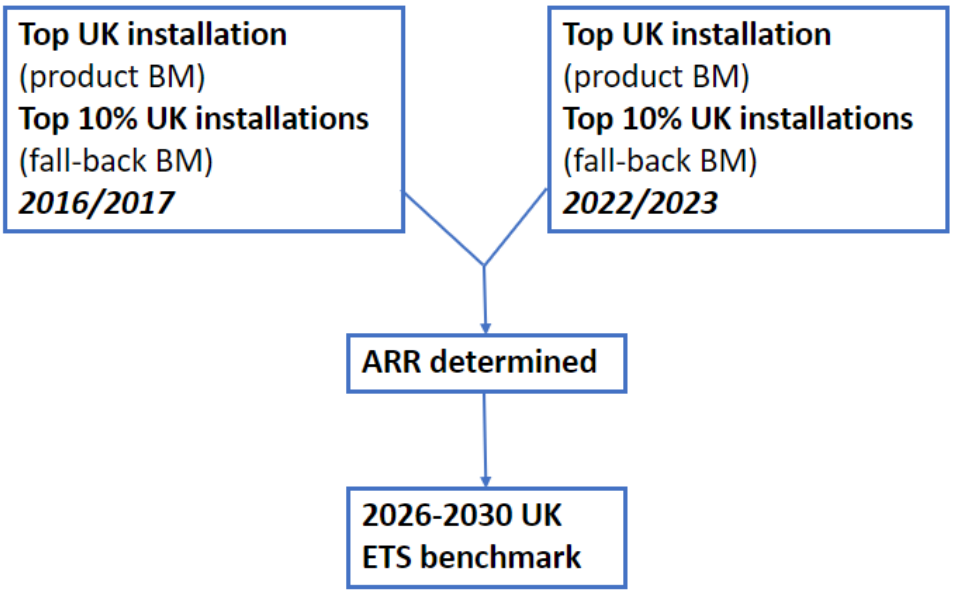

Figure 4 Diagram showing how ARR is proposed to update 2026-2030 UK ETS Benchmarks

The Authority is conscious that some product benchmarks have a limited number of sub-installations, which may lead to the ARR being based on a limited sample size. This is mitigated by the fact that the ARR will be based on the most efficient UK sub-installation for each product benchmark. Furthermore, this methodology is not a full re-benchmarking

[4] Explanations and examples of the methodology for this option are included in the Analytical Annex, figures 9 and 10.

exercise, with the first UK ETS allocation period benchmark remaining the starting point from which the ARR is applied.

The Authority is also conscious that certain product benchmarks do not have any UK sub-installations. Updating these benchmarks would require alternative methodology, such as applying the minimal ARR threshold. In practice however, this will not have an immediate impact on UK ETS operators, as there are no UK operators currently using these benchmarks.

In summary, this option will lead to updated benchmark values based on UK data, which will mean that ARRs and benchmarks should better reflect efficiencies achieved by UK installations. As benchmarks would reduce from the first to the second allocation period, free allowances would in turn reduce. The reduction will depend on efficiencies achieved by UK installations and as such will depend on data provided to the Authority as part of the next baseline data collection.

Questions

7. Do you agree that benchmarking is the appropriate methodology to ensure free allowances reward top performing installations and incentivise decarbonisation? (Y/N Please explain your answer)
8. What are your views on the proposed options for updating UK ETS benchmarks?
9. Do you agree with the proposed minded to position for updating benchmarks using UK data only to set the ARR? (Y/N Please explain your answer)
10. If you do not agree with the suggested methodology, please provide accompanying evidence as to why it should not be pursued and suggestions for an alternative methodology for updating benchmarks.
11. Do you have any views as to alternative methodologies that can be applied for updating benchmarks with zero UK sub-installations?

Changes to the carbon leakage list

The Carbon Leakage List
The Carbon Leakage List (CLL) is a list of sectors which are deemed to be at risk of carbon leakage. The UK ETS currently uses the EU ETS Phase IV CLL. The CLL defines the sectors at greatest risk of carbon leakage based on an assessment of their emissions intensity and trade intensity.

Currently, those UK ETS industry sectors on the CLL, receive a provisional allocation of 100% of their benchmarked free allocation as part of the preliminary free allocation stage (a Carbon Leakage Exposure Factor (CLEF) of 1). Those industry sectors not on the CLL receive a provisional allocation of 30% of their benchmarked free allocation as part of the preliminary free allocation stage (a CLEF of 0.3).

Proposal 3: how to assess the risk of carbon leakage.

Approach to methodology

For the current carbon leakage list[5] the sectoral risk of carbon leakage was assessed in two stages. The first stage was a quantitative assessment that assigned each sector a carbon leakage indicator. This quantitative assessment used the calculation:

Carbon Leakage Indicator = Trade Intensity x Emissions Intensity

Sectors and subsectors with a carbon leakage indicator exceeding 0.2 were considered at risk of carbon leakage and included on the carbon leakage list, as shown by Figure 1. The second stage was for consideration of sectors and subsectors that were borderline cases (i.e., had a carbon leakage indicator exceeding 0.15 but not exceeding 0.2) and could apply for the second-level qualitative assessment structured around three criteria:

1. Abatement potential – the extent to which it is possible for individual installations in the sector or sub-sectors concerned to reduce emission levels or electricity consumption.

2. Market characteristics – the current and projected market characteristics, including any common reference price where relevant (i.e., commodity prices)

3. Profit margins – profit margins as a potential indicator of long-run investment or relocation decisions, considering changes in costs of production relating to emission reductions.

[5] https://www.legislation.gov.uk/eu-origin/2019/708

44 sectors passed the first-level assessment, and an additional 19 sectors and sub-sectors were included on the carbon leakage list after the second-level assessment.

As part of the review into free allocation methodology, we have considered whether we should use additional, or alternative, factors to trade intensity and emissions intensity to calculate the carbon leakage indicator. As discussed in the section on other carbon leakage mitigation measures on p.10, the more trade exposed a production process, the more likely it is to face carbon leakage risk, particularly when competing against firms in jurisdictions who do not need to factor a carbon price in as part of their production process. The more emissions intensive a production process, the higher a firm's exposure to the carbon price, and the more likely that this will factor in to create carbon leakage risk. The use of these metrics to calculate the carbon leakage indicator was developed over four phases of the EU ETS, where the UK played a pivotal role in its development.

The UK ETS Authority believe these metrics are an accurate assessment of carbon leakage risk for the calculation of an installation's entitlement to free allocations. Furthermore, maintaining these metrics in the calculation of a carbon leakage indicator will provide certainty to industry on our approach to this assessment. Therefore, our minded to position is to maintain the current methodology for the carbon leakage indicator for the second allocation period.

Use of data

Trade intensity and emissions intensity for the carbon leakage indicator calculation are currently calculated on the basis of EU (EEA) data, which included historic UK data, and calculating these on the basis of UK only data could yield different results for sectors.

As part of our review into the carbon leakage list, we considered whether we should use alternative data sources to calculate the list. We have explored alternative data sets which would enable us to better reflect UK industry carbon leakage risk. We have explored the following alternatives, which we believe to be an exhaustive list of data currently available in this space.

1. **EU** Transaction Log Data (currently being used – *the counterfactual*)
2. **OECD's** TECO2 database
3. **ONS** emissions and trade data
4. **UK data** compiled from ONS and supplemented by Annual Business Survey (ABS) and HMRC trade data.

We have used several key criteria for assessing the data; accuracy in reflecting carbon leakage likelihood, a defensible methodology, coverage of ETS sectors, UK focussed, availability of information and longevity of data streams. Further detail on our assessment can be found in the Analytical Annex to this consultation, however a summary of our initial assessment of the options based on the multi-criteria decision approach taken is set out below.

Whilst the EU Transaction Log Data would maintain continuity, no UK firm data has been submitted since 2018 and the current data set is not representative of the UK's risk of carbon leakage on the basis of domestic industry's trade exposure or emissions intensity. For this reason the Authority is currently minded to not continue using this data set to produce the carbon leakage list.

Exploring the OECD's TECO2 database and the ONS data sets for emissions intensity and trade intensity found that there are many key UK sectors missing from these lists, a lack of transparency on both the methodology and underlying data. In addition these data sets do not accurately reflect the likelihood of carbon leakage risk. Therefore, the Authority is currently not minded to use these data sets to calculate the carbon leakage indicator.

If any new information comes to light, through consultation responses or future policy development ahead of the Authority response, we may re-consider use of the above data sets to assess the carbon leakage indicator.

The Authority has also explored using UK data on the basis of ONS supplemented by Annual Business Survey and HMRC trade data, details of which can be found in the Analytical Annex to this consultation. This data set has a defensible and clear methodology, broad sectoral coverage, is UK focused, transparent and frequently updated. The Authority is planning on exploring further the accuracy of this data set and we would welcome views on whether this data is representative of UK's sector trade intensity and emissions intensity. If, through further policy development and consideration of responses to this consultation, the Authority considers this data set to be representative against the multi-criteria assessment, then we would be minded to use this to determine the carbon leakage indicator in the future.

Questions

12. Do you agree that the carbon leakage list should be updated to reflect UK industrial sector's risk of carbon leakage? If you disagree, please explain how you think the carbon leakage list should be calculated in the future.

13. Do you agree that carbon leakage risk should continue to be calculated on the basis of emissions intensity and trade intensity, or are there other factors which you think the Authority should consider?

14. Based on the data sets we have explored, do you agree with our approach to explore using UK data based on ONS, ABS and HMRC trade data? And, if this data set is found to be representative, do you agree that the Authority should use this to calculate the carbon leakage indicator?

15. Do you agree with the risks we have set out with the alternative data sets? If not, please provide evidence.

Proposal 4: application of the carbon leakage exposure factor

Under the current rules, those installations that are included on the carbon leakage list are currently eligible for free allocations at up to 100% of the relevant benchmark level. Those not on the carbon leakage list receive 30% of the relevant benchmark level up to 2026, with free allocation intended to be phased out by 2030. This factor is referred to as the Carbon Leakage Exposure Factor (CLEF).

Approach to not at risk sectors

The CLEF for those not deemed at risk of carbon leakage is currently due to be phased out in 2030, however this phase out date could be brought forward to 2026, removing free allocations for sectors not at risk of carbon leakage and instead targeting support at those with a greater risk. Providing a CLEF of 0 to those not deemed at risk of carbon leakage from 2026 onwards will also help mitigate the risk of triggering the Cross-Sectoral Correction Factor (CSCF) (see figure below). In addition, this would align with the phase-out date for free allocations to the aviation sector. Given these reasons, our minded to position is to bring forward the phase out date for the CLEF for those not on the carbon leakage list to 2026. This will apply to the 2026 carbon leakage list that we develop using the methodology determined in proposal three.

The Cross Sectoral Correction Factor

If the total free allocations for all industrial operators is above the industry cap, then we reduce stationary installation's free allocation proportionately. This is known as the Cross Sectoral Correction Factor (CSCF).

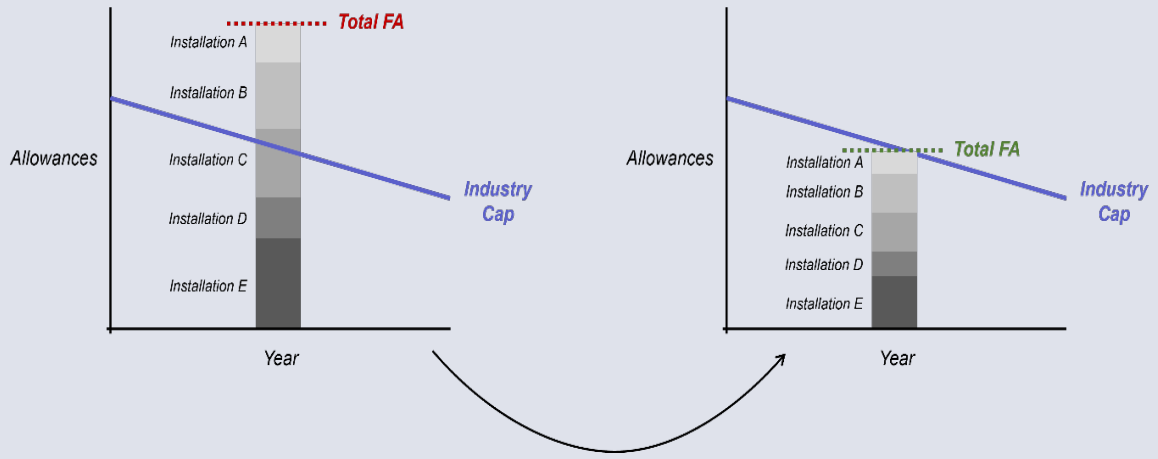

Figure 5. Diagram demonstrating the CSCF

Tiering the carbon leakage list

One way that the carbon leakage list could be altered to better target those industries at greater risk of carbon leakage would be to tier the list. The carbon leakage list is currently binary and does not differentiate between sectors with greater and lower risk of carbon

leakage. Under the current binary approach, those sectors with a relatively low risk of carbon leakage receive the exact same CLEF as those sectors that score highly on the list. Tiering the list will also support mitigating the risk of triggering the Cross-Sectoral Correction Factor (CSCF).

For the final tier design the Authority will need to consider how we set the thresholds. The Authority has considered several different designs for how we could tier the carbon leakage list, three of which are outlined below as illustrative examples to demonstrate what tiering means.

For any final tier designs we could consider ranges for the percentage of free allocations received against the benchmark, for example:

- Top Risk Tier: 70%-100%
- Medum Risk Tier: 40%-70%
- Low Risk Tier: 10%-40%
- No Risk Tier: 0%

Tier Design Example 1: Equal Tiers. This design would entail four tiers which are equally spread, relating to a high risk, medium risk, low risk, and no risk of carbon leakage. Within each of these tiers we would consider a range for the CLEF.

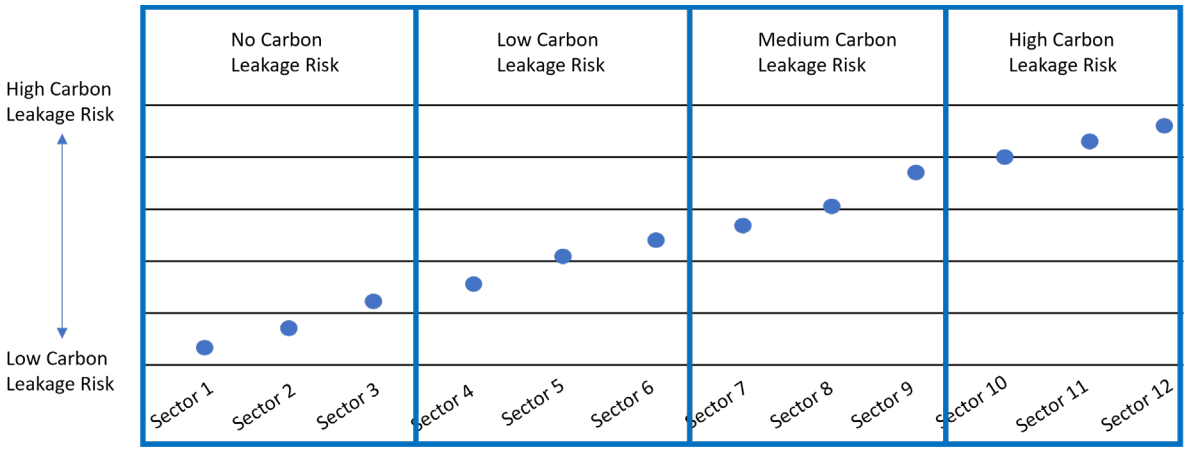

Figure 6. Illustrative Diagram of Equal Tiers

Tier Design Example 2: Large high-risk tier. This design would prioritise having more sectors covered in the high-risk tier, with smaller tiers for medium and low risk. For each tier we would look at the same ranges for CLEF as stated above.

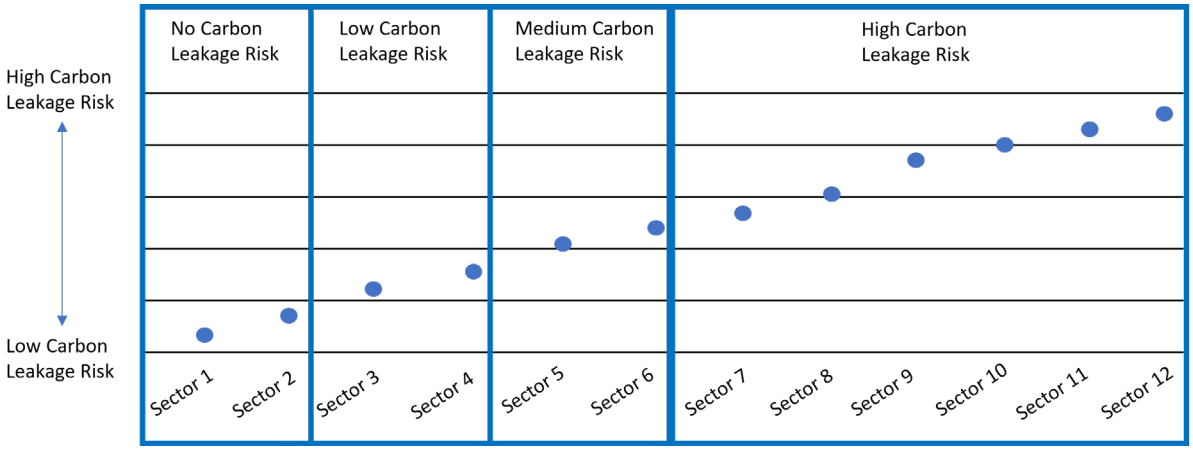

Figure 7. Illustrative Diagram of Large-High Risk Tier

Tier Design Example 3: Tiering on a continuum. This design would involve taking the highest risk sector and giving it a CLEF of 1, and then giving each other sector a lower CLEF on the basis of a weighted continuum. This option would also still have the possibility to include a 'no risk' tier.

When determining final design of tiers, if we opt to tier the list, we will consider the following principles:

- The carbon leakage risk of sectors
- The number of sectors in each tier
- The number of tiers
- The total number of Free Allocations within the Industry Cap

Proposal 5: Tiering the Cross Sectoral Correction Factor

A separate way that the Authority has considered better targeting those most at risk of carbon leakage is to tier the CSCF in the event of its application.

Instead of applying an even reduction in free allocation across all installations, the reduction could be weighted on the basis of how at risk of carbon leakage different sectors are. In the instance of a CSCF being triggered, those at the highest risk of carbon leakage would receive a proportionately lower reduction in their free allocation than those at lower risk.

Questions

16. Do you agree with our minded to position to bring forward the phase out date of the CLEF for those not on the 2026 carbon leakage list to 2026?

17. Do you agree that the Authority should tier the carbon leakage list to better target those most at risk of carbon leakage?

18. Do you have views on the principles that the Authority should use to guide decision making on tier design if we opt to tier the carbon leakage list?

19. Above, we have outlined 3 illustrative examples of ways we could tier the carbon leakage list. Do you have any views on these? Do you have views on alternative ways that this could be done?

20. Do you have views on whether we should tier the Cross-Sectoral Correction Factor in the instance of its application?

Additional Factors for Free Allocation Calculation

As part of the review on free allocation, the Authority has considered additional factors that could be introduced into the calculation for free allocation entitlement. These factors are availability of decarbonisation technology and conditionality. For each of these factors, there is a “do nothing” option which would not introduce any additional aspects to the free allocation methodology. The do nothing option would provide continuity for operators, and maintain the current administrative burden on operators and regulators.

Consideration of Availability of Decarbonisation Technology

One of the key principles for the second phase of the free allocation review was to ‘consider the availability and accessibility of decarbonisation technology’. Through this review we have examined whether, and how, free allocation calculation might take the availability of large-scale decarbonisation technology into consideration.

One concern that was raised by stakeholders in the responses to the Developing the UK ETS consultation (2022), was that within sectors there might be a discrepancy between those with earlier access to large-scale decarbonisation technologies through government support schemes, and those without. Those who have access to large-scale decarbonisation technologies, will be able to reduce their emissions significantly but maintain their levels of free allocation, they can then sell their free allocation for additional revenue. Within the same sector, if other competitors do not have the same access to this decarbonisation technology, then they will not be able to sell their free allocation for revenue. This potentially creates an unlevel playing field between operators within the same sector.

The Authority has explored methods that we could utilise to consider any discrepancies in availability of decarbonisation technologies. This workstream will consider how to define which technologies should be included, and how ‘availability and access’ should be considered for operators. We set out three key principles for this process, which are outlined below:

1. Actions taken in this space must take care to not inadvertently disincentivise market-driven investment in large-scale decarbonisation technology.
2. The focus of this work should be to look at potential market distortions being created by free allocation policy and whether/how we could address them.
3. Free allocation policy should not dictate which technologies sectors should look to for decarbonisation.

Option 1: Disaggregating Benchmarks

When considering options that address the risk of market distortions being driven by government policies, the Authority has explored the option of disaggregating benchmarks to account for this.

Benchmarks could be disaggregated to consider whether a sub-installation has access to a large-scale decarbonisation project. This approach would put installations with different availability of decarbonisation technologies on different benchmarks and so they would not be measured against each other.

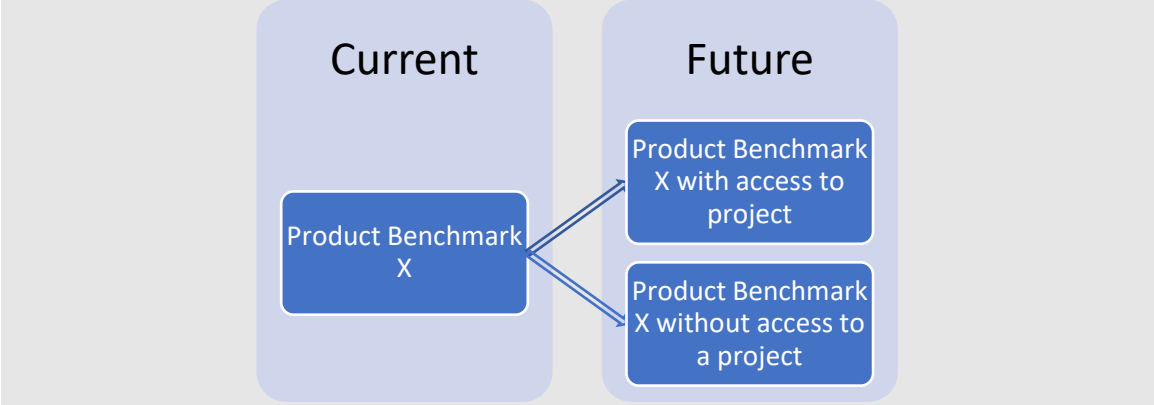

Figure 8 Diagram illustrating approach to disaggregating benchmarks

There are several risks and challenges with this option which are outlined below.

This option links to the benchmark proposals outlined in the section above. Current benchmarks do not disaggregate on the basis of access to government funding and therefore this option would require the development of new benchmarks for the UK. Calculating new benchmarks on the basis of access to a funded project may be challenging due to the small number of installations in the UK already covered by certain benchmarks. If we were to make these benchmark groups even smaller, this could create difficulties in calculating representative benchmark values.

These new disaggregated benchmarks would be difficult to calculate before the 2026 allocation period as regulators would not be able to get the data on new benchmark values before any sites have installed new technology. It would be necessary to develop a methodology that differentiated between the % of emissions that different projects funded are expected to cover. Without this method for example, an installation which has access to a large-scale government-supported decarbonisation project which covers 40% of its emissions could be moved to the exact same benchmark as an installation that has the same access but covers 95% of its emission, despite the differing levels of government support.

This would require a very rigorous approach to identifying which government schemes related to decarbonisation to include, and a consideration of how to treat aspects such as access to grid connections for electrification. It could be difficult to design this in a way that maintains flexibility if new government schemes are introduced within the next allocation period.

Having different benchmarks for the same product may also limit the incentive to switch to a lower carbon process. If there is just one benchmark for one product, then there is a clear incentive to switch to a lower carbon production, if available, as this puts installations nearer to the top range of their benchmarks, providing them with more free allocation to be sold for extra revenue.

There would also be uncertainty provided through this approach, as regulators would not have data on what the impact on the improvement of energy efficiency would be for different technologies until after these technologies have been deployed. It could therefore be difficult to develop these new benchmarks ahead of the 2026 allocation period.

Option 2: Including low/no carbon production processes in benchmark calculations

The Authority has also examined an alternative way that we might consider decarbonisation technologies in free allocation methodology that would consider industrial processes that have very low or no carbon emissions in the calculation of benchmarks (such as green hydrogen). Including these no-carbon production processes in the calculation of benchmarks would lower the benchmark for production and encourage a switch to more efficient processes.

There is currently limited deployment of very low or no-carbon production processes in the UK. As we would need to calculate benchmarks before the next allocation period in order to provide certainty, taking this approach would likely have minimal impact on benchmarks for the 2026-2030 allocation period. However it is an approach that could be considered for the longer term as the deployment of very low and no-carbon production processes increases.

Questions

21. Do you have views on the principles we have outlined for consideration of decarbonisation technology?

22. Do you have views on how the UK ETS Authority should define decarbonisation technologies to be included in this work?

23. Above we have outlined two possible methodologies for how we could consider access to decarbonisation technology in FA calculation. Do you have any views on the approaches outlined above?

24. Are there alternate ways that you think we should examine to alter the free allocation methodology to consider access to decarbonisation technology?

25. Are there alternative ways, outside of free allocation, that the ETS could consider access to decarbonisation technology?

Conditionality

In addition to mitigating carbon leakage risk, free allocations also incentivise decarbonisation through the benchmark design, as benchmarks are designed to effectively reward the most energy efficient producers. Conditionality could support free allocations to further incentivise decarbonisations, by ensuring that free allocations are allocated the most effectively to installations who are actively engaging with decarbonisation efforts.

The UK ETS Authority has given consideration to conditionality for the UK ETS. Specifically, the Authority has considered conditionality that aims to encourage installations to invest in emissions reduction or resource efficiency measures. An international example of a jurisdiction utilising conditions in their ETS is the EU ETS, who announced as part of their 'Fit for 55' package that installations receiving free allocations will need to comply with conditionality requirements.

There are several different ways that conditions on free allocation could be designed which the Authority has examined. Positive conditionality focuses on rewarding installations who are most efficient or innovators in their sector. This could involve giving additional free allocation to operators or protecting their existing levels of free allocation through excluding them from processes which might reduce their allocation. Negative conditionality aims to incentivise decarbonisation by not giving, or reducing, free allocation to operators who are not actively engaging with reducing their emissions.

The Authority has explored several different ways of designing conditions, both positive and negative, and are considering whether to pursue conditionality for free allocations further. We will also seek to assess the impacts of conditionality on affected industries if this policy proposal is taken forward.

Below we have outlined three possible designs of conditions as illustrative examples of what conditions for free allocation could look like.

Condition Design Example 1: Reducing free allocation to an installation by a pre-determined amount (for example 10%) if an installation has not made any emissions reductions or resource efficiencies over a certain period of time. This option would require a mechanism which accounts for increases in activity which are linked to an increase in emissions.

Condition Design Example 2: Exclude the most efficient installations from any potential application of a CSCF. This option could define most efficient installations as those who are operating at the benchmark level, and then ensure that these installations do not see a reduction in their free allocation from a CSCF.

Condition Design Example 3: Require installations to have a decarbonisation plan in place or they will have their free allocations reduced by a pre-determined amount (e.g. 10%). This option could be developed in a variety of ways which require a higher or lower stringency of regulation. For example, at the lowest regulatory end, the condition could be for installations to

submit a plan to the Authority, but that there are no requirements on the level of detail or evidence required for these plans. At the highest level of regulatory burden, this condition could be designed in such a manner that these decarbonisation plans are assessed by the Authority and there are strict criteria and evidence required for these plans before free allocation can be awarded.

Questions

26. Do you have views on whether the Authority should introduce conditions, related to decarbonisation efforts, on receiving free allocations?

27. Above we have outlined three illustrative designs for conditions for free allocations. Do you have views on whether we should introduce any of these options, how they are designed, and do you have a preference out of the stated options?

28. Do you have views on alternate conditions that the Authority should consider for receiving free allocations?

29. Do you have views on whether there are alternative decarbonisation incentives that could be implemented through free allocations?

30. Do you have views on whether there would be barriers to an equitable application of conditionality in principle, if the Authority was to pursue this option?

Technical Changes to Free Allocations

As the UK ETS Authority makes improvements to its approach to free allocation policy, we are also considering a number of broader technical changes to improve operability and deliverability of free allocation.

Technical Change One: Treatment of permanent cessations

Under current rules, in cases of permanent cessations of activity, free allowances are no longer distributed in the year after activity stops. However, operators retain free allowances they were entitled to during the final year in which they operated. This is because operators will continue to be exposed to the carbon price in the final year of activity, and as such will still have a carbon leakage exposure which must be mitigated. This process is different to cases of temporary stoppages in activity, where ALC rules apply.

Current rules relating to permanent cessations can however lead to some operators receiving more free allowances in the final year of activity than they require to adequately mitigate their carbon leakage risk, and in certain cases receiving free allowances beyond their reported emissions.

The UK ETS Authority is considering a change to the treatment of free allowances in the final year of activity in cases of permanent cessations, for installations and sub-installations, where operators' free allowance entitlement in the final year would be based on actual activity levels. Under this proposal, operators would be required to submit an Activity Level Report containing activity data for the final year of operation. Regulators would then recalculate free allowances based on actual activity levels, similar to the new entrants' free allocation calculation. If free allowances distributed at the start of the scheme year that is the operator's final year of activity were higher than this recalculation, the operator would be required to either return over-allocated allowances, or in cases where their allocation had been withheld by the Regulator, free allowance entitlements would be adjusted.

As part of this proposal, the Authority will have consideration for situations where the closure of a sub-installation is for the purpose of decarbonisation, such as the electrification of formerly gas and coal-powered facilities and processes. This is to ensure that the proposal is consistent with free allocation policy's decarbonisation incentive.

Technical Change Two: Updating the permanent cessation definition

Under current rules, an installation has ceased operation if a regulated activity is no longer being carried out at an installation and it is "technically impossible to resume operation". A sub-installation has ceased operation if the sub-installation is no longer operating and it is "technically impossible to resume operation". This definition can lead to difficulties as "technically impossible to resume operation" can be interpreted in various ways.

The UK ETS Authority is proposing to update the definition of permanent cessation to remove the reference to "technically impossible to resume operation" and instead refer to the permanent cessation of activity.

The Authority also intends to provide further clarity in scenarios where temporary cessations of activity become permanent, in particular regarding the date of permanent cessation for the purpose of determining entitlement to free allocation in accordance with Proposal One above. The Authority proposes that if a regulated activity is no longer being carried out at an installation/sub-installation, the cessation will be treated as permanent unless the operator demonstrates to the regulator that:

i. the installation/sub-installation is technically capable of resuming carrying out regulated activities without physical changes being made or it intends to restore the technical capability of the installation/sub-installation to resume carrying out regulated activities; and,
ii. it intends to re-start regulated activities.

If the operator does not demonstrate the above, the date the installation/sub-installation ceases operation is the date that the regulated activity ceases to be carried out. If the operator does demonstrate the above at a point in time and intends to re-start activities but does not do so, the date the installation/sub-installation ceases operation is the date on which the operator suspends carrying out the regulated activities at the installation/sub-installation.

The Authority is minded to amending the permanent cessation definition either through legislation or alternative routes, such as the publication of guidance.

Technical Change Three: Updating minimum content of the monitoring methodology plan

The Free Allocation Regulation (FAR) includes a requirement for installations to maintain Monitoring Methodology Plans (MMPs), which form part of an operator’s permit. The regulators are required to include permit conditions requiring operators to (i) monitor their data in accordance with their MMP and the FAR, (ii) retain records of data in accordance with the FAR, (iii) apply to vary their permits where there will be a significant modification to their MMP and (iv) notify the regulator of non-significant modifications.

The MMP currently requires that at sub-installation level a description of the methods used to quantify the amounts of electricity consumption and production, and the exchangeable part of consumption should be included where applicable.

The Authority is considering updating the FAR to require highest accuracy metering for those sites where exchangeability of electricity information is needed for the purposes of allocation.

The Authority is considering updating the free allocation regulation to reflect that only sites generating electricity for export or covered by exchangeability need to report the electricity balance.

Technical Change Four: Changes to Heat Metering Measurement Hierarchies

The FAR states hierarchy for heat measurement is subject to National Legal Metrological Control or compliant with the Measuring Instruments Directive (MID), however only liquid metering (e.g. water) can ever meet this; therefore a large number of sites cannot meet the hierarchy and have no accuracy standard to meet – i.e. that metering can be ±10% or more.

The Authority is considering updating this to include that for heat metering equivalent accuracy of MID compliant metering can be accepted (e.g. for measurable heat ±3% of actual reads). This means that operators receiving free allocation under the heat benchmark for consumption of steam will need to carry out an uncertainty assessment and if the required level of uncertainty cannot be demonstrated then improvements to the measurement system may be required. This would not require sites where heat is not part of the benchmark, for example with most product benchmarks, to measure heat to the highest in the hierarchy.

Technical Change Five: Adjustment to Monitoring Principles with relation to Hierarchy

There is no requirement to review an MMP where the most accurate measurement methods are not used. The Authority proposes to adjust the Monitoring Principles in the FAR to request that the operator re-visits where derogations to the hierarchy for monitoring methods are granted every allocation period.

Technical Change Six: Updating the Unreasonable Cost Calculation

The unreasonable cost calculation allows the Authority to consider where an operator's cost estimation would exceed the benefit of a specific determination methodology. The Authority is considering updating the reference price figure used in this calculation to be more reflective of UK ETS Allowance prices. The Authority will make a decision on the appropriate level of the UKA price for unreasonable cost calculation in the Government response to this consultation.

Technical Change Seven: Requirement of control system checks to be made at yearly intervals.

Operators are required to make an assessment of their control systems to the Authority upon request and for the purpose of verification. Control activity measuring equipment is currently required to be calibrated, adjusted and checked at regular intervals prior to use. To align with requirements for Emissions Monitoring, the Authority is considering introducing yearly checking requirements on measuring equipment to ensure it is preforming to the required standard.

Questions

31. Do you agree with the Authority's approach on Technical Change One for treating free allowances in the final year of operation in cases of permanent cessations of activity? (Y/N Please explain your answer)

32. With the Authority's proposed approach on Technical Change One, what risks should the Authority consider regarding the return of overallocated allowances?

33. Do you agree with the Authority's approach on Technical Change Two for updating the definition of permanent cessations of activity? (Y/N Please explain your answer)

34. Do you agree with the Authority's approach on Technical Change Three to update the minimum content of the monitoring methodology plan? (Y/N Please explain your answer)

35. Do you agree with the Authority's approach on Technical Change Four to change the heat metering measurement hierarchies? (Y/N Please explain your answer)

36. Do you agree with the Authority's approach on Technical Change Five to adjust Monitoring Principles with relation to hierarchies? (Y/N Please explain your answer)

37. Do you agree with the Authority's approach on Technical Change Six to update the unreasonable cost calculation reference price? (Y/N Please explain your answer)

38. Do you agree with the Authority's approach on Technical Change Seven to require control systems checks be made at yearly intervals? (Y/N Please explain your answer)

Summary of Proposals

The table below summarises the key areas of proposed changes to the current free allocation calculation. The Authority is mindful of the need to provide certainty on future levels of free allocations and have set out below steps it will take to mitigate any uncertainty.

Area of Current FA Policy	Policy Proposal	Key Changes in New Proposal	Impact on aggregate Free Allocation	Mitigating the risk of Uncertainty
Activity Level Changes	**Dynamic Allocations**	Initial allocation is provisional, based on a rolling period of recent years available. FA adjusted after each scheme year based on reported activity, removing the 15% threshold for changes. Activity level changes for fallback benchmarks would still be assessed against an energy efficiency baseline to determine whether to process them.	 A dynamic approach **may increase or decrease total FA**	The Government response will outline details of the methodology to be taken forward, allowing operators to forecast their free allocations based on their projected activity. Preliminary allocation tables will continue to be published.
Benchmarks	**UK Annual Reduction Rate**	The Annual Reduction Rate (ARR) would be calculated based on UK data reflecting an improvement in emissions efficiencies for UK installations between two points in time. This ARR would be applied to the current benchmarks.	 UK Annual Reduction Rates will be applied to current benchmarks and so **reduce FAs,** the extent will be subject to the outcomes of the Baseline Data Reporting Exercise	The Authority's current assessment of the range of annual reduction rate is detailed in the analytical annex. The Authority will publish benchmark values as soon as is practicably possible after the baseline data reporting exercise.

Carbon Leakage List	**Carbon Leakage Indicator Based on UK Data**	The Authority is considering changes to data used to underpin the assessment of carbon leakage indicator, exploring further the use of UK trade and emissions intensity data.	 UK based data for assessment of a carbon leakage indicator **may increase or decrease total FA**, however this must be treated in coordination with the proposals for tiering of the CLEF	The Authority will take into consideration consultation responses as part of further policy development and will publish a preliminary carbon leakage list with associated carbon leakage exposure factors for different sectors, ahead of the final Government response in 2024. This will enable participants and interested parties to provide further input ahead of final decisions being made. The Authority will ensure that the final carbon leakage list is published in advance of the free allocation application window to ensure operators have certainty about their eligibility for support.
	Remove Carbon Leakage Exposure Factor for sectors not at risk of carbon leakage	The Authority would bring forward the phase out of free allocations to 2026 for sectors whose carbon leakage indicator scores deem them not at risk of carbon leakage, reducing their exposure factor to 0.	 Removal of FA for sectors not at risk of carbon leakage **would reduce the total number of FA**	
	Tiering the Carbon Leakage Exposure Factor *or* the Cross Sectoral Correction Factor	The carbon leakage exposure factor is currently binary with two levels deeming sectors at risk, or not at risk, of carbon leakage. The options included in the consultation proposes different methods for tiering the exposure factor or cross sectoral correction factor based on different carbon leakage indicator scores, allowing better targeting of support.	 Tiering **improves targeting** and **reduce the total number of FA** to be in line with the industry cap	

Consultation questions

1. Do you have any views on the interactions between other carbon leakage mitigation measures and a CBAM and/or the broad policy scenarios which the UK ETS Authority should explore in the future, in light of the UK Government's decision to introduce a CBAM? Please explain your answer.

2. Should the UK ETS maintain the current approach to activity level changes or switch to a dynamic approach (i.e., should free allocation be adjusted after the end of the scheme year, based on reported activity levels)?

3. If a dynamic approach were to be implemented, should provisional allocation be calculated based on a rolling period of recently reported activity?

4. If provisional allocation were to be calculated via a rolling period, should this be based on the most recent two full calendar years of verified activity (e.g., 2023-2024 for 2026 allocation)?

5. Under the dynamic approach, should the energy efficiency calculation for fall-back benchmark sub-installations continue to refer to a fixed historical baseline?

6. If the UK ETS does not switch to a dynamic approach, should the UK ETS Authority consider reducing the 15% ALC threshold, and, if so, what would be an appropriate threshold?

7. Do you agree that benchmarking is the appropriate methodology to ensure free allowances reward top performing installations and incentivise decarbonisation? (Y/N Please explain your answer)

8. What are your views on the proposed options for updating UK ETS benchmarks?

9. Do you agree with the proposed minded to position for updating benchmarks using UK data only to set the ARR? (Y/N Please explain your answer)

10. If you do not agree with the suggested methodology, please provide accompanying evidence as to why it should not be pursued and suggestions for an alternative methodology for updating benchmarks.

11. Do you have any views as to alternative methodologies that can be applied for updating benchmarks with zero UK sub-installations?

12. Do you agree that the carbon leakage list should be updated to reflect UK industrial sector's risk of carbon leakage? If you disagree, please explain how you think the carbon leakage list should be calculated in the future.

13. Do you agree that carbon leakage risk should continue to be calculated on the basis of emissions intensity and trade intensity, or are there other factors which you think the Authority should consider?

14. Based on the data sets we have explored, do you agree with our approach to explore using UK data based on ONS, ABS and HMRC trade data? And, if this data set is found to be representative, do you agree that the Authority should use this to calculate the carbon leakage indicator?

15. Do you agree with the risks we have set out with the alternative data sets? If not, please provide evidence.

16. Do you agree with our minded to position to bring forward the phase out date of the CLEF for those not on the 2026 carbon leakage list to 2026?

17. Do you agree that the Authority should tier the carbon leakage list to better target those most at risk of carbon leakage?

18. Do you have views on the principles that the Authority should use to guide decision making on tier design if we opt to tier the carbon leakage list?

19. Above, we have outlined three illustrative examples of ways we could tier the carbon leakage list. Do you have any views on these? Do you have views on alternative ways that this could be done?

20. Do you have views on whether we should tier the Cross-Sectoral Correction Factor in the instance of its application?

21. Do you have views on the principles we have outlined for consideration of decarbonisation technology?

22. Do you have views on how the UK ETS Authority should define decarbonisation technologies to be included in this work?

23. Above we have outlined two possible methodologies for how we could consider access to decarbonisation technology in FA calculation. Do you have any views on the approaches outlined above?

24. Are there alternate ways that you think we should examine to alter the free allocation methodology to consider access to decarbonisation technology?

25. Are there alternative ways, outside of free allocation, that the ETS could consider access to decarbonisation technology?

26. Do you have views on whether the Authority should introduce conditions, related to decarbonisation efforts, on receiving free allocations?

27. Above we have outlined three illustrative designs for conditions for free allocations. Do you have views on whether we should introduce any of these options, how they are designed, and do you have a preference out of the stated options?

28. Do you have views on alternate conditions that the Authority should consider for receiving free allocations?

29. Do you have views on whether there are alternative decarbonisation incentives that could be implemented through free allocations?

30. Do you have views on whether there would be barriers to an equitable application of conditionality in principle, if the Authority was to pursue this option?

31. Do you agree with the Authority's approach on Technical Change One for treating free allowances in the final year of operation in cases of permanent cessations of activity? (Y/N Please explain your answer)

32. With the Authority's proposed approach on Technical Change One, what risks should the Authority consider regarding the return of overallocated allowances?

33. Do you agree with the Authority's approach on Technical Change Two for updating the definition of permanent cessations of activity? (Y/N Please explain your answer)

34. Do you agree with the Authority's approach on Technical Change Three to update the minimum content of the monitoring methodology plan? (Y/N Please explain your answer)

35. Do you agree with the Authority's approach on Technical Change Four to change the heat metering measurement hierarchies? (Y/N Please explain your answer)

36. Do you agree with the Authority's approach on Technical Change Five to adjust Monitoring Principles with relation to hierarchies? (Y/N Please explain your answer)

37. Do you agree with the Authority's approach on Technical Change Six to update the unreasonable cost calculation reference price? (Y/N Please explain your answer)

38. Do you agree with the Authority's approach on Technical Change Seven to require control systems checks be made at yearly intervals? (Y/N Please explain your answer)

Next Steps

The responses to this consultation will be used to develop final policy decisions for the free allocation review.

This consultation will be open for 12 weeks before closing. The Authority will then work through the responses and aim to publish the Government Response in 2024, with a view to implement changes ahead of the next allocation period in 2026.

Glossary

Industry Cap: The share of free allocations under the cap available to be given out for free.

Cross Sectoral Correction Factor: Where, if the total free allocations for all industrial installations is above the industry cap in any given year, then everyone's free allocation is reduced proportionately.

Carbon leakage: Carbon leakage is the movement of production and associated emissions from one country to another due to different levels of decarbonisation effort through carbon pricing and climate regulation.

Export Leakage: Where exported products market lose their share abroad and are replaced by more emissions-intensive products from other countries, leading to an overall increase in emissions.

Carbon Border Adjustment Mechanism: A carbon price on imported products. This often reflects both the carbon emitted in their production together with any gap between the carbon price applied in the country of origin and the carbon price that would have been incurred had they been produced in the jurisdiction with a carbon price.

Historic Activity Level: The average activity level over the baseline years for a given allocation period (e.g., for the 2021-2025 allocation period the baseline years were 2014-2018).

Benchmarks: A benchmark is a reference value for greenhouse gas emissions (GHG) relative to production activity.

Product Benchmarks: There are 52 product benchmarks, each representing the average of the top 10% most efficient installations for a given product.

Fallback Benchmarks: Where use of a product benchmark is not possible, two fall-back benchmarks based on heat production and fuel consumption, or a process emissions factor are used.

Carbon Leakage Exposure Factor: The percentage against the benchmark that a sector receives in the FA calculation.

Carbon Leakage List: A list of sectors which are deemed to be at risk of carbon leakage.

Carbon Leakage Indicator: The value given to a sector to indicate how at risk of carbon leakage they are.

Activity Level Changes: The process triggered if an operator's average activity level in any two-year period increases or decreases by 15% or more relative to their historic activity level (HAL)

Annual Reduction Rates: The reduction rate applied to benchmarks to calculate projected emissions intensity in a phase.

Baseline Data Reporting: The data report that operators submit to regulators before the start of each allocation period.

Activity Level Reports: The activity level data that operators must submit at the end of each scheme year.