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UKPIA Response to BEIS Consultation: Developing the UK Emissions Trading Scheme (UK ETS)

Dear Sirs,

UKPIA represents the eight main oil refining and marketing companies operating in the UK. The UKPIA member companies – bp, Essar, Esso Petroleum, Petrolneos, Phillips 66, Prax Refining, Shell and Valero – are together responsible for the sourcing and supply of product meeting over 85% of UK inland demand, accounting for a third of total primary UK energy¹.

The refining and downstream oil sector currently lies at the centre of the UK economy. It provides a secure supply of affordable energy for road and rail transport, aviation and marine applications, as well as for commercial and domestic heating. It also supplies feedstocks for the petrochemicals sector, along with specialised non-energy products such as lubricants, bitumen for use in road surfacing, and graphite for use in electric vehicle batteries and as electrodes in steel and aluminium manufacture.

The sector, therefore, has an opportunity to be at the heart of an orderly and just transition to a Net-Zero economy. By reinventing itself, using its extensive resources to decarbonise its activities and products, the sector has an important role also in future supply of new energy carriers and technologies such as hydrogen, energy storage and carbon capture, utilisation and storage.

UKPIA welcomes the opportunity to respond to the consultation “Developing the UK Emissions Trading Scheme (UK ETS)”. Key points in our response are as follows:

- In principle, UKPIA supports alignment of the UK ETS cap with a trajectory consistent with the Net Zero Strategy. However, although the additional objectives of providing a smooth transition for participants have been considered, the cap and trajectory must also take into account the availability and affordability of the technologies enabling


¹ [BEIS Digest of UK Energy Statistics \(DUKES\) 2021 Tables 3.2-3.4.](#)

installations to reduce their emissions in line with the cap trajectory. In this regard UKPIA note the absence of a policy impact assessment supporting the policy proposals.

- UKPIA believe the consultation proposals involve a serious disconnect between the planned trajectory and the ability of both industry, and wider society, to decarbonise. The restricted availability of free allowances after 2025 imposes a significant burden on industry in the UK, which cannot be mitigated against.
- Practicalities associated with the carbon price signal resulting from increasingly constrained availability of allowances must also be considered. In the absence of further measures, this is likely to lead to:
 - Considerable uncertainty regarding short- and longer-term loss of competitiveness for energy intensive industries against their EU and global competitors, introducing additional challenges for investment in decarbonisation projects, increased risk of carbon leakage and UK deindustrialisation.
 - Incentives for investment funds to purchase and hold allowances further removing allowances from the traded market.
 - Loss of competitiveness for UK exports.

Our detailed responses to the questions posed in the consultation document are given in Attachment 1.

Yours faithfully,



Dr Andrew Roberts
Director – Downstream Policy

cc: Michael Duggan BEIS
Simon Stoddart BEIS
Mike Mackay BEIS

Attachment 1

UKPIA Response to BEIS Consultation: Developing the UK Emissions Trading Scheme (UK ETS)

Chapter 1. Net zero consistent cap

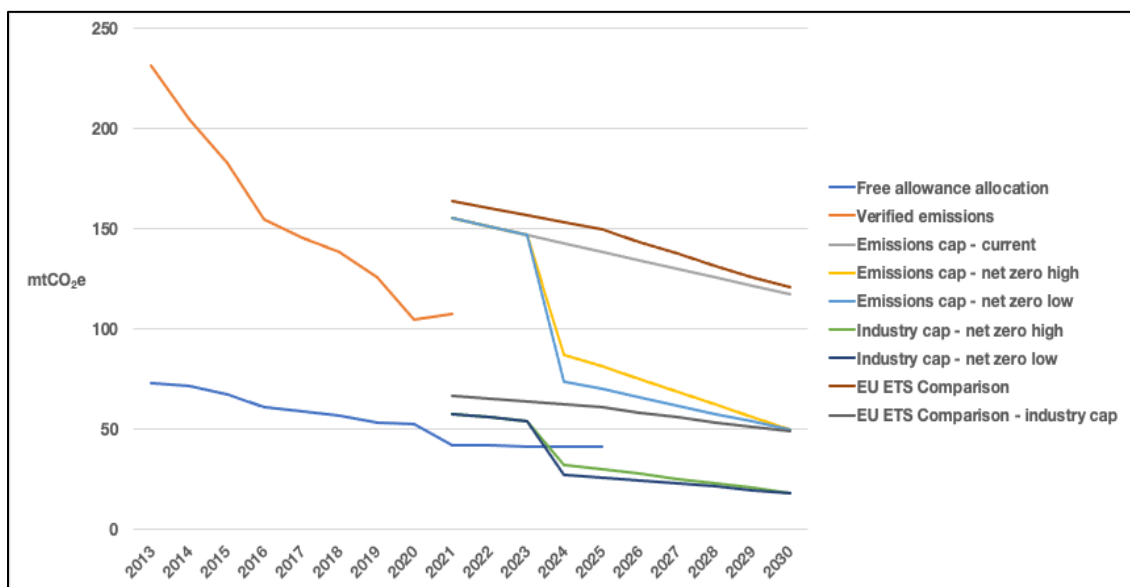
- 1) Do you agree with the Authority's proposed range for the net zero consistent cap? (Y/N) Please explain your answer.

No.

In principle, UKPIA supports alignment of the UK ETS cap with a trajectory consistent with the Net Zero Strategy. However, although the Authority has considered the additional objectives of providing a smooth transition for participants and to mitigate any unintended effects that the resulting trajectory may have on carbon leakage risk and competitiveness, the cap and trajectory must consider the availability and affordability of the technologies enabling installations to reduce their emissions in line with the cap trajectory. In this regard UKPIA note the absence of a policy impact assessment supporting the policy proposals - this appears to be a serious omission and contrary to Chapter 13 of the Cabinet Office "Guide to Making Legislation 2022"².

UKPIA believe the consultation proposals involve a serious disconnect between the planned trajectory and the ability of both industry, and wider society, to decarbonise. The restricted availability of free allowances after 2025 imposes a significant burden on industry in the UK, which cannot be mitigated against. At present, non-UK carbon reduction schemes are not planning to take such an aggressive approach to decarbonisation, for example, the latest EU proposals under the 'Fit for 55' package is for a 4.2% linear reduction factor³.

Diagram 1. Proposed UK ETS emissions cap and trajectory



Data source: EUTL, UK ETS Authority Compliance Report, UK ETS Allocation Table

When the UK ETS was first implemented, the UK Government applied a reduction of 5% to the emissions cap on the basis that UK installations had already achieved

² [Cabinet Office Guide to Making Legislation 2022](#).

³ EU Commission, 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality, COM(2021) 550 final, July 2021.

significant emissions reductions below the cap that would have been applied had the UK remained in the EU. The decision was also taken to set the industry cap at 37% of the total cap, in contrast to the 43% with an additional 5% flexibility found under EU ETS Phase 4. Under the proposals for a net zero consistent cap, these decisions have an important impact on the availability of free allowances and seriously undermine free allowance allocation (FAA) as the most important mitigation measure against risk of carbon leakage and loss of competitiveness (Diagram 1). Under the proposals set out in the consultation document and in the absence of further changes proposed under the EU 'Fit for 55' package, the availability of allowances under the UK ETS post 2024 is less than half that of what it would have been under EU ETS Phase 4.

Practicalities associated with the carbon price signal resulting from increasingly constrained availability of allowances must also be considered. In the absence of further measures, this is likely to lead to:

- Considerable uncertainty regarding short- and longer-term loss of competitiveness for energy intensive industries against their EU and global competitors, introducing additional challenges for investment in decarbonisation projects, increased risk of carbon leakage and UK deindustrialisation.
- Incentives for investment funds to purchase and hold allowances further removing allowances from the traded market.
- Loss of competitiveness for UK exports.

In the case of the refining sector, this is likely to lead to increased risk of refinery closure and replacement of domestic production by increased imports. In turn, this would lead to a reduction in UK supply resilience and undermine the British Energy Security Strategy⁴.

Although some mitigation of price impacts would be available from releasing unallocated allowances and/or the flexible share into the market, the options presented all have relatively short-term impacts and may not be sufficient to limit increases in EUA costs to allow time for investment in major decarbonisation projects. For the refining sector, these would typically require a minimum of four to five years to implement and cost more than £500m. Such projects are also at risk of being delayed if economic conditions change as seen in recent years due to the COVID pandemic and conflict in Ukraine.

Given the importance of FAA in providing some mitigation against loss of competitiveness in sectors exposed to carbon leakage, along with the timescale for investment in major decarbonisation projects, a balanced approach will be required when bringing unallocated allowances and/or the flexible share to market. The market must have sufficient liquidity and an active cost containment mechanism to smooth the transition to the net zero consistent cap, but also retaining sufficient allowances to maintain FFA in the second period without use of a cross-sector correction factor for as long as possible. Steps should also be taken to curb speculative investment in the UK ETS market by investment funds (see also responses to Questions in Chapter 4).

UKPIA also have concerns regarding the lack of clarity concerning future protection against carbon leakage. The Government has recently announced that it is “exploring a range of policies that could potentially mitigate future carbon leakage risk” and that it is the intention of HM Treasury to consult later in 2022 on a range of carbon leakage

⁴ [British Energy Security Strategy](#), April 2022.

mitigation options, including on “*whether measures such as product standards and a carbon border adjustment mechanism (CBAM) could be appropriate tools in the UK’s policy mix*”⁵. The Consultation Document also states that BEIS will consult on the current methodology for distributing free allowances and better targeting of FAA “*no later than the end of 2023*” and will implement any changes for the second allocation period (2026 to 2030).

It is important that carbon leakage protection policies are complementary and cohesive, and that greater certainty is provided to support business planning and development of robust decarbonisation plans. Continued uncertainty can only lead to increased risk of carbon leakage and UK deindustrialisation, or that Government targets (carbon budgets) are not met.

- 2) What do you expect the effect of the cap set at the bottom of the range (i.e., total of around 887 million allowances over the entire phase) to be on your plans for emissions reductions over the 2020s?

Given the uncertainties and challenges identified in the response to Question 1, UKPIA believe that a cap set at the bottom of the range from 2024 onwards may well impose additional challenges to investment in major decarbonisation projects in the UK, in particular, if UKAs continues to attract a premium over EUAs or should the premium increase as a result of imposing a cap at the bottom of the range.

- 3) What do you expect the effect of the cap set at the top of the range (i.e., total of around 936 million allowances over the entire phase) to be on your plans for emissions reductions over the 2020s?

Again, due to the uncertainties and challenges identified in the response to Question 1, UKPIA believe a longer transition period may be preferable to setting the cap at the top of the range for a net zero consistent cap, such that installations can avoid higher compliance costs until they have been able to commission decarbonisation projects with an extended lead time (see response to Question 1). Also, with current levels of economic uncertainty, high energy and ETS compliance costs may well delay final investment decisions such that projects are unlikely to be commissioned until the latter part of the second period.

Chapter 2. Free allocation review

- 4) Do you agree with the Authority’s minded to position to reset the industry cap, as presented above? (Y/N) Please explain your answer.

No.

The minded to position appears based on the basic principles of how an emissions trading system should operate, without sufficient consideration given to mitigation of carbon and investment leakage risks and other practicalities. If the industry cap is set too low, there is risk that the UK ETS market will fail or, even worse, lead to deindustrialisation and carbon and investment leakage.

UKPIA note that it is not possible to assess the level of free allowance allocation (FAA) for the years 2023 to 2030, or to compare this against proposals for the industry cap due to the following considerations:

⁵ [Written Statement to the House of Commons on 16th May 2022 by Lucy Frazer MP, Financial Secretary to the Treasury.](#)

- The level of free allocation for 2022 remain subject to adjustment after application of the relevant Activity Levels (ALs). These may well be affected by reduced production in years impacted by the Covid pandemic and planned shutdowns where the combined impacts exceed a 15% reduction below the Historical Activity Level (HAL) and result in a reduction in free allowances equivalent to the percentage reduction below the HAL (see also responses to Questions 13-18).
- Reductions in the level of free allowances for installations exceeding the 15% threshold in 2021 and 2022 may have a lasting effect, as the AL would have to rise above the 15% threshold before restoration of the level of FAA above the HAL.
- Under existing legislation⁶, the level of FAA for the second period of UK ETS from 2026 to 2030 is based on the HAL from 2019 to 2023, which includes years where production levels have been impacted by Covid slowdowns or shutdowns and planned maintenance shutdowns. In the absence of any revisions to the current FAA rules, these impacts are also likely to reduce the HAL used as the basis for FAA in 2026, although additional free allowances may be allocated after application of the AL for 2024/2025 and in subsequent years through to the end of the period.
- Under the existing legislation and assuming the EU benchmark methodology is taken into UK law, the product benchmarks used in the second period are due for revision using data from the period 2021 and 2022 and on the basis of applying the annual reduction rate in respect of each year between 2008 and 2028 (the benchmark ratchet mechanism). Again, production levels in 2021 and 2022 may well be impacted by the Covid pandemic, planned maintenance shutdowns and impacts from the conflict in Ukraine, but it is also clear that the level of FAA will be reduced by the ratchet mechanism (see also response to Question 21).

If the industry cap is set too low, there is risk that the UK ETS market will fail or, even worse, lead to deindustrialisation and carbon and investment leakage.

- 5) Do you agree with the rationale put forward to support decisions the Authority will make in the future if resetting the industry cap? (Y/N) Please explain your answer and set out if there are any other aspects you think we should take into consideration.

No.

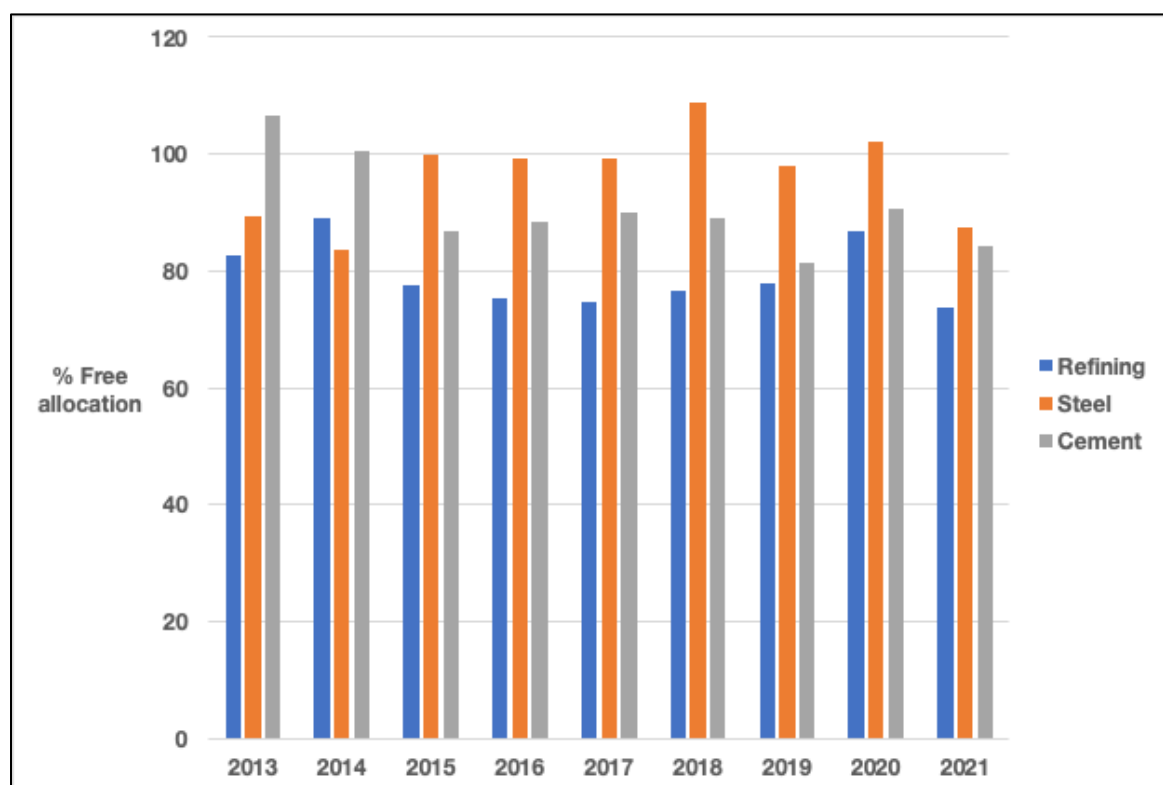
UKPIA agree with the first three considerations, although the need for application of a cross-sector-corrector factor (CSCF) should be avoided at all costs, rather than mitigated against. However, the fourth consideration “*The cost to government through foregone revenue vis the issuance of free allocation versus the affordability of decarbonisation technologies for businesses*” appears inappropriate. The prime objective of emissions trading schemes is to reduce emissions to a given target at lowest cost and not to generate revenue for the government, indeed, EU Directive 2003/87/EC (as amended), from which the UK ETS has been derived, calls for at least 50% of revenues generated from auctioning of allowances to be used for specific purposes.

⁶ [Directive 2003/87/EC \(as amended\)](#) and [Commission Delegated Regulation \(EU\) 2019/331](#) as amended by the [Greenhouse Gas Emissions Trading Scheme \(Amendment\) Order 2020](#) and the [Greenhouse Gas Emissions Trading Scheme \(Amendment\) Order 2021](#). [Directive 2003/87/EC \(as amended\)](#) and [Commission Delegated Regulation \(EU\) 2019/331](#) as amended by the [Greenhouse Gas Emissions Trading Scheme \(Amendment\) Order 2020](#) and the [Greenhouse Gas Emissions Trading Scheme \(Amendment\) Order 2021](#).

UK ETS compliance costs must be covered by operators before they undertake any decarbonisation investments. Therefore, UKPIA believe the criteria proposed should be revised to include consideration of:

- The year in which the headroom between the industry cap and the level of free allowances narrows to a point where it is clear that a cross-sector correction factor will be required within 3-4 years. This would avoid sudden compliance costs impacts and allow time to implement changes in business strategy, for example budget planning or implementation of decarbonisation projects.
- Fairness in the distribution of free allowances under the cap, whilst continuing to drive decarbonisation of the electricity grid and power generation via other policy measures, for example, no eligibility for FAA and full exposure to carbon pricing, Contracts-for-Difference and the Renewables Obligation, which have been shown to be effective in decarbonising UK electricity generation.
- The context provided in the Analytical Annex, identifying 2019 emissions as a percentage of all traded sector emissions and 2021 free allocation by region and 2019 emissions as a percentage of all traded sector emissions (Table 1A) is not relevant to resetting the industry cap. The concentration of energy intensive ETS installations varies across the UK regions and should not be expected to be consistent, either as total traded sector emissions or at sector level.

Diagram 2. Free allocation (%) as a proportion of verified emissions – high emitting sectors



Data source: EUTL, UK ETS Authority Compliance Report, UK ETS Allocation Table

- Similarly, identifying 2019 emissions as a percentage of all traded emissions and 2021 free allocation by sector (Table 2A) is also not relevant to setting the industry cap. The proportion of free allowances allocated to energy intensive sectors that are difficult to decarbonise, or where decarbonisation costs are high, would be expected to increase as the level of FAA decreases. There is also evidence that the product benchmarks are not of equivalent challenge, in particular for UK

energy intensive industries, where the proportion of FAA as a percentage of verified emissions (Diagram 2) leads to disproportionate compliance costs being borne by the refining sector.

See also response to Question 21.

- 6) Do you have a preference for a tighter or looser proportion than 37% for the industry cap? (Y/N) Please explain your preference.

UKPIA has a strong preference for a higher proportion for the industry cap. As stated in the response to Question 1, FAA is critically important in providing mitigation against loss of competitiveness in sectors exposed to carbon leakage. At present it is one of the few mitigation measures available to the refining sector, which at current UKA prices, is exposed to high compliance costs (£170m in 2021⁷), which must be covered before investment in decarbonisation projects can be considered.

Setting a looser proportion above 37% for the industry cap or introducing additional flexibility would guarantee FAA at current levels without use of a cross-sector correction factor for a longer time period (see also responses to Questions 7-10).

- 7) Do you agree with the principles set out above, by which we will propose future changes to free allocation policy? (Y/N) Please explain your answer or whether there are any others you would like us to consider.

Yes.

UKPIA broadly agree with the three principles proposed but Principle One should be strengthened to ensure that FAA continues to mitigate against carbon leakage to the maximum extent possible, rather than “*appropriately*” mitigate against carbon leakage risk”. Free allowances are increasingly important for energy intensive sectors that are difficult to decarbonise or where decarbonisation costs are high. Here they provide a level of mitigation against carbon leakage and distribute compliance costs fairly across industry sectors.

For Principle Three, future changes to free allocation policy and alignment with wider climate targets must also consider carbon leakage and broader risks associated with deindustrialisation of the UK.

- 8) Do you agree with the proposal to not use a cross-sectoral correction factor to reduce free allocations proportionally for sectors, but to find alternative means of better targeting those allowances? (Y/N) Please explain your answer.

Yes.

Use of a cross-sector correction factor is a blunt policy instrument and does not take into consideration the availability and affordability of decarbonisation technologies for some high emitting sectors, in particular those such as refining, with relatively high process CO₂ emissions.

⁷ Calculated from 2021 verified emissions less 2021 FAA identified in the [UK Emissions Trading Registry Compliance Report](#) and the average 2021 UKA cost calculated using [ICE Dec 21 Futures daily close prices](#).

- 9) Are there specific elements of free allocation design with regards to eligibility, calculations, or other rules where you would like to see changes made, if you have not already flagged these via your call for evidence response? (Y/N) Please explain your answer and how they would align with the principles we have proposed.

Yes.

As observed in the response to Question 5, UKPIA believes the existing product benchmarks are not necessarily equitable, in particular, for the refining sector. Background on the refinery benchmark has been provided in the response to Question 21, along with details of potential improvements to the existing benchmarks within the scope of the proprietary methodology (see response to Question 10), as UKPIA understand has been implemented under the AB-32 greenhouse gas cap-and-trade programme in the US State of California.

- 10) Are there alternative areas you think we should consider making changes to, or alternative methodologies for the provision of free allocations which you would like us to consider? Please set these out and explain your rationale.

Free allowances are allocated to refineries using a complex benchmark methodology. This was developed by Concawe, the European technical body for the refining sector, in conjunction with the European Commission under an agreement with Solomon Associates LLC (Solomon), a US consultancy. It is based on a proprietary benchmarking methodology used by Solomon for international benchmarking of refineries for over 30 years. Although the free allocation rules have been revised for EU ETS Phase IV (as described in Commission Delegated Regulation (EU) 2019/331) and used for the UK ETS, the methodology behind the refinery benchmark is unchanged and continues to use the Solomon methodology.

No alternative benchmarking methodologies are known which allow comparison of refineries with different configurations and product outputs. UKPIA therefore strongly supports retention of the existing methodology and rules for FAA. See also response to Question 21.

- 11) Are there changes which you have not already flagged to us as part of your call for evidence response which you believe should be implemented sooner than the above timetables? (Y/N) Please explain your answer.

No.

- 12) Are there other carbon leakage mitigation policies which are not already being considered by the UK Government, Scottish Government, Welsh Government, and DAERA, as listed above, which you would like to flag to us? (Y/N) Please explain your answer.

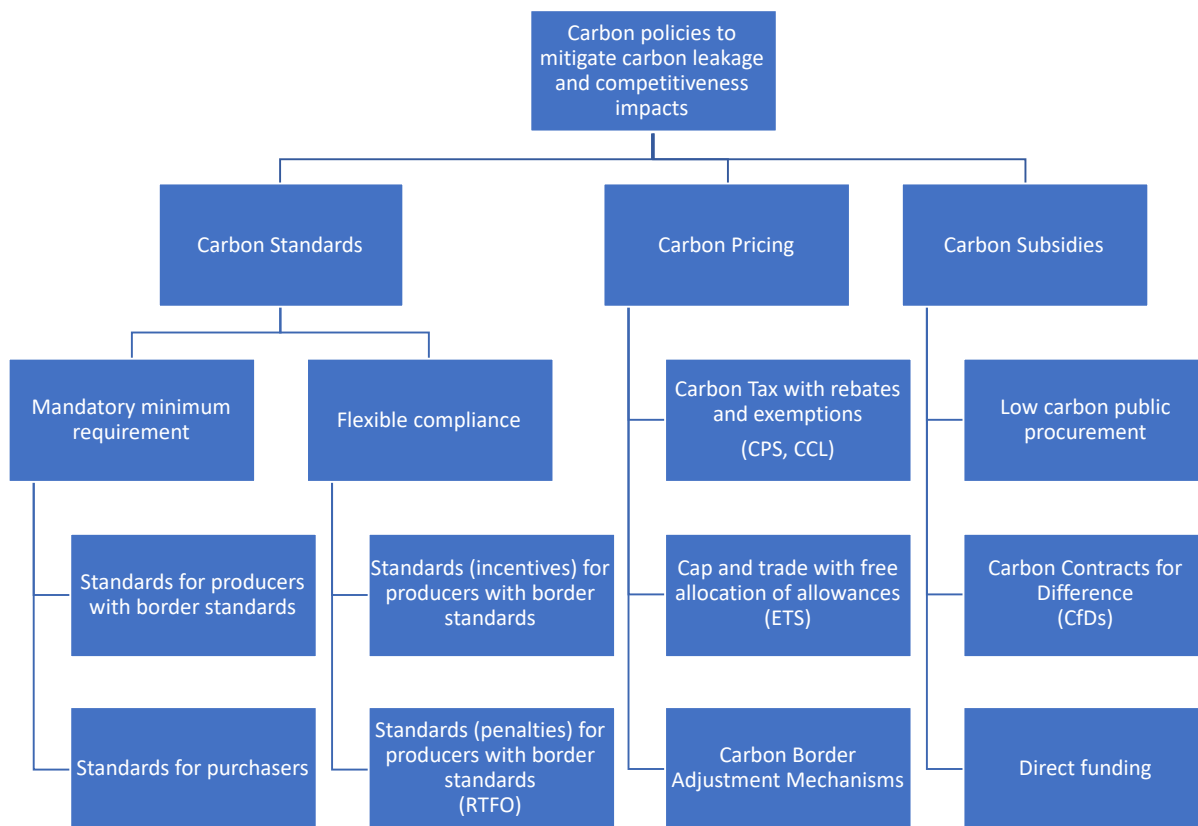
Yes.

UKPIA believe a broad range of coordinated policies are required to address carbon leakage risks. The Climate Change Committee recently co-funded a study⁸ by Energy Systems Catapult to provide input to the Sixth Carbon Budget, HM Treasury Net-Zero Review and to inform their positioning in preparation for COP 26. The report considers several policy mechanisms that can be used to mitigate carbon leakage and competitiveness impacts (Diagram 3). These should be considered together to

⁸ Energy Systems Catapult "[Industrial Decarbonisation: Net Zero Carbon Policies to Mitigate Carbon Leakage and Competitiveness Impacts](#)" (2020).

provide a cohesive policy framework, rather than be developed in isolation or piecemeal fashion.

Diagram 3. Carbon policies used to mitigate carbon leakage and competitiveness impacts



Source: Energy Systems Catapult

Examples of current UK Government policies are given in brackets, but additional policy measures such as low carbon standards, low carbon public procurement and additional CfD schemes (for example to support CCUS and hydrogen production and use) are under consideration by BEIS under the Industrial Decarbonisation Strategy. These too offer potential for mitigation of carbon leakage by supporting the business case for investment in CCUS and hydrogen production projects, with a level of guaranteed support until the capex and a return on investment has been paid off.

UKPIA remain concerned that uncertainties associated with the UKA price can hinder investment decisions – a capped carbon or UKA price would reduce the level of uncertainty.

- 13) Should the current rules be maintained for the 2022 Activity Level Changes process? (Y/N) Please explain your answer.

No.

Reduced throughputs and unit shutdowns implemented at some of the UK refineries in response to reduced demand seen due to the Covid pandemic, led to significant changes in Activity Level (AL) during 2020 and continuing into 2021. For those refineries exceeding the 15% threshold in AL, these have a lasting effect on the level of FAA and compliance costs at current UKA price levels.

This is also true when the Phase 1 ALs are taken into account when setting HALs for Phase 2 of the UK ETS, i.e. lower ALs including years impacted by the Covid

pandemic should be excluded when calculating the HAL for the second UK ETS period 2026 to 2030.

The 15% threshold is an arbitrary, single cut-off which can significantly penalise operators who exceed this. A tapered approach would be more suitable, particularly for the refining sector.

- 14) What accurate, robust and verifiable data could you provide to the Authority to evidence that the discrepancy between reductions in output and emissions was caused specifically by the Covid-19 pandemic?

UKPIA does not hold data on refinery UK ETS ALs, throughputs, or unit shutdowns due to competition law constraints. However, the reductions in refinery output and demand for petroleum products can clearly be seen in BEIS DUKES statistics Table 3.2-3.4⁹ and in HMRC duty returns. For more detailed verification of CWT™ data and linkage to unit shutdowns and reduced throughputs, a separate data gathering and verification exercise would be required undertaken by the UK ETS Authority. However, installation operators would normally be expected to hold this information on an individual basis.

- 15) How should the determination of “significant discrepancies between reductions in output and emissions” be made? Which data should be used in making this determination?

Reductions in petroleum product supply and demand in 2020 can be clearly seen in statistical data published by BEIS⁹. Significant discrepancies between reductions in output and emissions should also be visible in an increase in carbon intensity, i.e., verified CO₂ emissions/activity level for each year particularly at a sector-by-sector level.

UKPIA is aware of broad trends across energy intensive sectors through the Covid pandemic from discussions with relevant trade bodies. For example, UKPIA understand that a significant percentage of brick plants were shut down during the pandemic but have recovered strongly in 2022 due to increased activity in the construction sector. In contrast, the refining sector continues to face significant pressures. Demand for jet fuel is taking time to recover to pre-pandemic levels, with full recovery of the aviation sector unlikely until 2024¹⁰.

It should be noted that AL reporting for the refining sector does not correlate with the level of economic activity but is more a measure of the level of throughput weighted according to the level of refining complexity. This is unique for the Refining Sector, whereas for other sectors there is a correlation between production levels, product margins and the level of economic activity. The Complexity or Carbon Weighted Ton™ (CWT™) used for AL reporting for refineries should therefore not be used as an indicator for the level of economic activity.

⁹ For example, the [Digest of UK Energy Statistics \(DUKES\) Tables 3.2-3.4](#) and [Energy Trends March 2021](#).

¹⁰ IATA, [Air Passenger Numbers to Recover in 2024](#), March 2022.

- 16) Should specific thresholds be set between the reduction in output levels and reduction in emission levels for operators to be eligible to have the 2020 Covid year omitted from the 2022 Activity Level Changes calculation? (Y/N) Please explain your answer.

Yes, although outputs were also reduced in 2021 due to Covid impacts.

Where the reduction in output levels exceeds 15% or a level where there is no doubt the reduction in 2020 was due to a production shutdown, operators should be allowed to omit 2020 and 2021 from calculation of the AL in 2021, 2022 and 2023. This would avoid sudden reduction in the proportion of emissions covered by FFA, which leads to increased compliance costs at a time when operators are also seeking to recover from Covid cost impacts.

- 17) If the 2020 year is omitted, which years should be taken into account in the calculation of Activity Level Changes in 2022? Please explain your answer.

For the refining sector Covid restrictions and reductions in demand impacted operations in both 2020 and 2021. If the 2020 year is omitted from the AL calculations, the AL applied in 2021 and 2022 could either be based on the averages for 2018/2019 and 2019/2021, or a single year, 2019 and 2021. This would reduce the likelihood that installation exceed the 15% threshold where normal levels of production are better represented by either of these options.

- 18) Do you agree that no changes should be made to the Activity Level Changes Regulation to take into account the turn-off of activity? (Y/N) Please explain your answer.

Yes.

Installations such as refineries must undertake planned maintenance periodically for several reasons, including safety inspection to maintain regulatory compliance. For refineries, the length of these shutdown periods is minimised and requires detailed planning to cover supply during the shutdown, often using imports to cover the supply shortfall, incurring higher costs. UKPIA believe the inclusion of turnaround years in calculation of both the HAL and AL is one factor in lowering the proportion of emissions covered by FAA being relating low for refineries compared to other high emitting sectors with significant process emissions (e.g., steel and cement) – see also response to Question 5.

- 19) Do you agree with this proposed change? (Y/N) Please explain your answer.

Yes.

Existing sub-installations should be treated in the same way as new sub-installations when making investments in increase production capabilities. This would treat existing installations equitably, especially when increasing production capability at a level lower than the 15% threshold required to increase FAA via the AL.

- 20) How can operators provide evidence that their increase in output is due specifically to investments to increase production capabilities?

Operators are required to update their GHG permit through engagement with the ETS Regulators before start-up of any new unit or expansion of their operations. The permit update will include details of the units and anticipated GHG emissions. An update is also required to the Monitoring and Measurement Plan (MMP), which must be submitted to the ETS Regulator in advance of any change. This would also

capture new units but would not normally capture debottlenecking of existing units. The MMP is subject to external verification.

For refineries, the annual AL report includes unit throughputs; these are also subject to external verification.

21) Do you agree with this proposed amendment? (Y/N) Please explain your answer.

Yes.

The current benchmark methodologies and values used for FAA should be brought into UK law to safeguard FAA against changes made by the EU, where the UK no longer has any input. UKPIA also note that following UK withdrawal from the European Union, UK installations are not considered in derivation of the EU ETS Phase 4 benchmarks. However, UKPIA also note that the number of UK installations under each of the product or sector benchmarks is insufficient to allow development of valid benchmarks based on UK installations only.

We agree that the inclusion of benchmarks should be under secondary, rather than primary legislation, allowing any changes to be amended in a more efficient manner, with a shorter legislative process.

Bringing the product benchmarks and FAA rules into UK legislation would also provide an opportunity for revision to make specific benchmarks (including the heat and electricity benchmarks) more representative of UK installations. UKPIA will provide details of proposed changes in the refinery benchmarking methodology separately.

Free allowances are allocated to refineries using a complex benchmark methodology. This was developed by Concawe, the European technical body for the refining sector, in conjunction with the European Commission under an agreement with Solomon, a US consultancy. It is based on a proprietary benchmarking methodology used by Solomon for international benchmarking of refineries for over 30 years.

Use of the CWT™ benchmarks in the EU ETS system was enabled through an agreement between the EU Commission and Solomon. However, following the UK's withdrawal from the European Union, the legal basis for the use of the CWT™ benchmarks under the UK ETS is unclear and may not be permitted. We would therefore encourage BEIS to engage with Solomon on this issue as soon as possible to provide assurance that the benchmarks can continue to be used. UKPIA is not aware of any alternative benchmarking methodologies which allow comparison of refineries with different configurations and product outputs.

22) Do you agree with this proposed amendment? (Y/N) Please explain your answer.

Yes.

Within refineries and petrochemical complexes, Combined Heat and Power (CHP) plants offer a highly efficient means of producing both heat for industrial processes, and for electricity production. Typically, these plants produce steam as their primary energy vector, with electricity potentially being a (albeit valuable) by-product. Their use should be incentivised as part of the energy transition, rather than discouraged.

A further complication arises for refinery CHP plants where, to provide additional resilience, the electricity produced may all be exported to a National Grid sub-station and then imported for use. The definition should therefore be revised to consider net electricity exports in the baseline period.

- 23) Should minimal or one-off electricity exports be excluded from the electricity generator classification? (Y/N) Please explain your answer.

Yes.

As outlined in our response to Question 22, CHP plants offer an efficient way of providing electricity as part of the energy transition and should be encouraged. This includes offering flexibility where low levels of electricity are exported.

The “de-minimis” level for electricity exports should be established; this should be on a case-by-case basis depending on the capacity of the CHP plant.

- 24) Should the current rules be maintained? (Y/N) Please explain your answer. If you answered ‘Yes’ please set out what the benefits of doing so are in your view.

No.

We propose that Option 2 be introduced as soon as possible to incentivise CHP plants as part of the energy transition. Given the fact that changes are being made to the current phase, we would question why the changes for CHP plants cannot also be introduced to come into effect before 2026.

- 25) Should an amendment to the electricity generator classification be made to exclude installations that produced electricity for sale to third parties, if that electricity was produced by means of a CHPQA-certified plant, operating as part of an operator’s industrial activity? (Y/N) Please explain your answer.

Yes.

As per our response to Question 25, Option 2 should be introduced as soon as possible to incentivise CHP plants as part of the energy transition. Given the fact that changes are being made to the current phase, we would question why the changes for CHP plants cannot also be introduced to come into effect before 2026.

- 26) Should a cap be set on the maximum amount of electricity that can be exported as a condition to this exclusion? (Y/N) Please explain your answer.

No.

For supply resilience purposes and technical reasons (it is important that electricity generation is synchronised with grid phasing), most refineries export all of the electricity produced via auto-generation and re-import from the grid. The exclusion should therefore be based on net exports. A sharp cut off between inclusion or exclusion would encourage operators with the potential to export electricity above the cap to restrict generation to below the cap to avoid compromising the cost of internally generated power and generation at lower levels of efficiency and higher CO₂ intensity.

- 27) Do you believe that the Option 2 proposal will support investments in long-term decarbonisation solutions? (Y/N) Please explain your answer.

Yes.

In the short-term fossil fired CHP has a lower carbon intensity of power generation than standalone fossil fired power production or steam generation. It therefore has an immediate impact on CO₂ emissions, which should be supported by policy.

In the medium-term, CHP fired using low carbon hydrogen would be completely decarbonised. Hydrogen fired CHP offers an attractive addition to the energy mix – providing a truly dispatchable source of low carbon electricity to complement variable

renewables and baseload nuclear generation. Green hydrogen could also be stored for the long-term and then converted to power in a CHP. Using hydrogen in a CHP will generate power and heat at high efficiency and is therefore a better use of valuable low carbon hydrogen than use in standalone CCGT or steam boilers.

As such, appropriate use of CHP to decarbonise industry with the lowest possible use of primary energy should be incentivised under ETS policy.

- 28) How can operators provide robust evidence that their CHPQA certified CHP plant operates as part of their industrial process, and does not operate independently for the sole purpose of generating electricity for sale?

Competent operators operating under a CHPQA scheme would be expected to be able to provide verifiable data on the steam and electricity produced by the facility, and to identify the consumers of this steam and electricity. This can be used to verify that, for example, steam or other sources of process heat were used in relevant industrial processes. The absence of this (other than for, for example periods of maintenance) would indicate that the CHP was being used solely for the purpose of generating electricity for sale.

For refineries, a steam balance and energy balance must be submitted to the ETS Regulator as part of the annual AL report, which is subject to external verification.

Chapter 3. Unallocated free allowances and flexible share (AJR)

- 29) Do you agree that, should the industry cap be reset to a level that would fall below free allocation in 2024 and 2025, a portion of unallocated allowances and/or flexible share should be used, as currently legislated, to mitigate against the application of a cross-sectoral correction factor? (Y/N) Please explain your answer.

Yes.

As mentioned in the response to Question 1, FAA is crucial in providing some mitigation against loss of competitiveness in sectors exposed to carbon leakage. A balanced approach will be required when bringing unallocated allowances and/or the flexible share to market. The market must have sufficient liquidity and an active cost containment mechanism to smooth the transition to the net zero consistent cap, but also retaining sufficient allowances to maintain FAA in the second period without use of a cross-sector correction factor (CSCF) for as long as possible. See also response to Question 5.

- 30) Do you agree that a portion of unallocated allowances and/or flexible share should be auctioned to smooth the transition to the net zero cap? (Y/N) Please explain your answer.

Yes.

It will be important to balance the need to maintain FAA without application of a CSCF against the desire to manage increases in the EUA price to smooth the transition to a net zero cap. The current premium for UKAs over EUAs, must also be reduced, as this leads to a loss of competitiveness against EU competitors.

- 31) Do you agree we should consider auctioning a portion of unallocated allowances and/or flexible share before 2024 to support market liquidity? (Y/N) Please explain your answer.

Yes, if this can be shown to improve liquidity in the secondary market and contain increases in the UKA price achieved at auction.

- 32) Do you agree that a portion of unallocated allowances and/or flexible share should be retained for market stability purposes? (Y/N) Please explain your answer.

Yes.

However, there should be a presumption that HM Treasury will authorise intervention by the ETS Authority if the Cost Containment Mechanism is triggered. See also response to Question 39.

Chapter 4. A call for evidence on future markets policy (AJR)

- 33) Are there features of ETS markets that put them at greater risk of market abuse than other financial markets? (Y/N) If so, what features and why?

No.

UKPIA has no evidence that ETS markets are at greater risk of market abuse than other financial markets. However, the recent entry of investment funds such as KraneShares into the market gives cause for concern; the KraneShares Global Carbon Strategy ETF holds both EUAs and UKAs¹¹. Although the UKA holding position represents a relatively small proportion of UKAs in the market, the entry of investment funds and speculators into the market may reduce liquidity and lead to market instability – this has been highlighted in the EU parliamentary process to revise the EU ETS as part of the EU “Fit for 55” package³.

- 34) Are there other drivers of evolving market conditions that future UK ETS markets policy should take into account? (Y/N) If so, what are they? What evidence do you have to support your view?

Yes.

UKPIA strongly support linkage to the EU ETS as a priority to avoid loss of competitiveness against EU competitors, with further linkage with other ETS markets also highly desirable to make faster progress towards a global carbon price. Future UK ETS policy must therefore take into account developments in other ETS design to optimise the chances of linkage. As an example, the proposals to monetise part of the EU Market Stability Reserve to support countries impacted by EU sanctions on Russian oil and gas may have an impact on the EUA price, leading to an increase in the UKA premium and further loss of competitiveness for UK installations against their European counterparts.

- 35) What impacts do you envisage that these drivers could have in the UK ETS in the coming years, particularly in relation to market stability and integrity? What evidence do you have to support your view?

There are many factors which could impact UK market stability and integrity, not least the proposals to align the UK ETS cap with a trajectory consistent with the Net Zero Strategy. This has the potential to force UK decarbonisation at a faster rate than other countries with clear signals for the UK carbon price as noted in the response to Question 1.

- Considerable uncertainty regarding short- and longer-term loss of competitiveness for energy intensive industries against their EU and global competitors, introducing

¹¹ [KraneShares Global Carbon Strategy ETF fact sheet.](#)

additional challenges for investment in decarbonisation projects, increased risk of carbon leakage and UK deindustrialisation.

- Incentives for investment funds to purchase and hold allowances further removing allowances from the traded market.
- Loss of competitiveness for UK exports.

Although some mitigation of price impacts would be available from releasing unallocated allowances and/or the flexible share into the market, the options presented all have relatively short-term impacts and may not be sufficient to limit increases in EUA costs to allow time for investment in major decarbonisation projects.

- 36) Do you agree that these are the right objectives for markets policy as the UK ETS matures? (Y/N) Please explain your answer.

Yes.

UKPIA support the objectives for markets policy as the UK ETS matures for the reasons identified under each of the policy objectives.

- 37) On what timescale should we look to withdraw the ARP: as soon as possible; as part of the introduction of a potential wider markets policies package; alongside the introduction of the net zero consistent cap; or another timescale? If another timescale, what timescale? Why that timescale?

UKPIA has no particular views on withdrawal of the ARP, although it is difficult to see an ARP set at the current level of £22 per UKA playing any useful purpose.

- 38) Should the ARP be replaced by another mechanism? (Y/N) If so, what type of mechanism should replace it and why?

Again, UKPIA has no particular views on replacement of the ARP by a different mechanism to guard against low prices or rapidly falling prices. This scenario seems unlikely with introduction of a net zero consistent cap and increasing scarcity of allowances.

- 39) Do the thresholds for triggering the CCM remain fit for purpose? (Y/N) If not, how should they be amended?

No.

With hindsight, the increasing thresholds for triggering the CCM mean that it is now unlikely to serve any useful purpose. The prospects that the UKA price in the secondary futures market in 2023 exceeds three times the average price in 2021/2022 for six consecutive months - above £200/UKA - are considered unlikely. It also seems unlikely that the CCM will be triggered in 2022.

High UK ETS compliance costs and the UKA premium over EUAs already introduce a competitiveness challenge for UK installations, in particular for UK refineries, as import facilities already exist to receive imports from North West Europe and further afield. This introduces additional challenges for investment in decarbonisation projects, increased risk of carbon leakage and loss of competitiveness for UK exports.

A viable CCM is therefore required. One option to improve the potential relevance of the CCM would be for the threshold to revert to that used in the first year of the UK ETS - to twice the average UKA price in the secondary futures market in the preceding two-year period for three consecutive months. Further, there should be a

presumption that HM Treasury will authorise intervention by the ETS Authority if the Cost Containment Mechanism is triggered.

A second option would be to use an alternative approach to cost containment such as that used for the Californian Cap and Trade Program¹². This allows limited use of offsets, which offer additional low-cost emissions reduction opportunities and includes two cost containment mechanisms, an Allowance Price Containment Reserve, which allows covered entities access to allowances at set prices as a hedge against higher costs, and an allowance price ceiling to ensure robust cost containment while delivering the necessary GHG emission reductions. The price ceiling price increases by 5% plus inflation each year.

- 40) Do the intervention options available to the Authority remain fit for purpose? (Y/N) If not, how should they be amended?

Yes – UKPIA believe the interventions available should prove effective in managing elevated price levels.

- 41) Following the triggering of the CCM in December and January, are there elements of the CCM process or design that could be improved? (Y/N) If so, what are they and how can they be improved?

Yes.

UKPIA believe there were grounds in December and January for HM Treasury to authorise market intervention to address the lack of liquidity in the secondary futures market. This remains an issue, with little likelihood that the CCM will be triggered in 2022 or 2023, before the proposed reduction in the cap, which is also likely to further reduce liquidity. The intentions under UK ETS policy design were that the CCM should be more responsive than the EU ETS Market Stability Reserve – if the CCM is triggered, there should be a presumption that an intervention will be made.

- 42) Does the current auction process remain fit for purpose? (Y/N) If not, how should it be amended?

Yes.

- 43) Are there other measures that the Authority should consider to further support liquidity in the UK ETS? (Y/N) If so, what are they?

Yes.

UKPIA believe there should be greater transparency in the secondary futures market such that the number of trades and UKA volumes can be identified as a measure of the level of market liquidity. Traders should also be required to identify to the Authority the operators on whose behalf they are buying and selling allowances, along with new measures to exclude speculators and investment funds from holding positions which otherwise reduce market liquidity.

As noted in our response to Question 34, we support the linkage of the UK and EU ETS schemes. There is significant concern regarding the lack of progress around linking and the introduction of Paris Agreement Article 6 mechanisms¹³. We

¹² As implemented under the California Global Warming Solutions Act of 2006 as amended by [Assembly Bill No. 398 Chapter 135](#). A summary of the cost containment mechanisms is available on the California Air Resources Board [website](#).

¹³ [UNFCCC Paris Agreement](#), 2015

understand that the UK Emissions Trading Group (ETG) have previously written to Ministers noting that progress in linking UK ETS to EU ETS is required to increase liquidity. In future, this would also enable the UK to avoid the significant administrative hurdles from the planned EU CBAM when exporting to the EU. Although linking and Article 6 are mentioned in the consultation, there are no proposals to progress this – increasing divergence of the UK scheme from that of the EU will only make linking more difficult in the future. Urgent progress is required so that the carbon price faced by UK industry is aligned with that faced by our closest neighbours and competitors and should be done as soon as possible.

- 44) Should the Authority consider stocking the market stability mechanism account with allowances? (Y/N) Please expand on your answer and if Y, provide views on how the account should be stocked.

No.

UKPIA has no particular views on the need for a market stability mechanism account when there are sufficient unallocated allowances and the flexible share to allow intervention under the CCM. However, should these allowances be used to mitigate against the impacts of constrained availability of allowances in the early years under a net zero consistent cap, a portion should be retained for potential use if the CCM were to be triggered and intervention authorised.

- 45) Does the current banking and borrowing policy remain fit for purpose? (Y/N) If not, how should it be amended?

Yes.

Chapter 5. Aviation

- 46) Do you agree with the conclusion of the study that risk of carbon leakage is minimal for the UK aviation sector under the current UK ETS scope? (Y/N) Please expand on your answer and give evidence where possible.

There is a risk of carbon leakage from the aviation sector with aircraft on short journeys such as to continental Europe being able to fill up for the return journey, however this incurs higher fuel consumption and operating costs¹⁴. If UK ETS prices are substantially higher than (for example) the EU ETS costs then this could off-set the higher operating costs and encourage aviation companies to fill aircraft with EU, rather than UK, fuel. Ultimately these risks increasing CO₂ emissions across both jurisdictions, rather than encouraging their reduction.

However, we agree that the risks of carbon leakage are lower with long haul flights due to the inability of aircraft to make return trips at that range.

- 47) Do you have any additional views on the economic research study and its conclusions? (Y/N) Please expand on your answer and give evidence where possible.

As per our response to Question 46, the study looks to have looked at the risks associated with travel migrating out of UK hubs and does not appear to have identified risks associated with fuelling short range aircraft for a return trip outside of UK airports. We would encourage this to be investigated in more detail.

¹⁴ J Bailey, [What Is fuel tankering and why should you care?](#) Simple Flying, 2019

- 48) Do you agree that if there are minimal risks of carbon leakage and competitiveness risks associated with carbon leakage from the UK ETS for the aviation sector, free allocation should be withdrawn or phased out? (Y/N) Please expand on your answer and give evidence where possible.

Given that there are potential risks associated with carbon leakage for short term flights, we would ask that this assumption be reviewed with appropriate mitigations put in place.

If the decision is taken to remove FAs from the aviation sector, there should be no reduction in the overall level of FAs available within the UK. The cap for other UK ETS Operators should therefore be increased to take account of the basis change and avoid undue penalties.

- 49) Are there any other reasons for maintaining free allocation in the UK ETS? (Y/N) Please expand on your answer and give evidence where possible.

UKPIA is unable to comment further on the appropriateness of free allowances in the aviation sector.

- 50) Please provide views on the three proposed options for aviation free allocation, as well as how the trajectory should be set, such as a linear or weighted approach?

UKPIA is unable to comment further on the appropriateness of free allowances in the aviation sector.

- 51) Should the UK ETS Authority consider free allocation trajectory options that could maintain aviation free allocation entitlement past the first phase of the UK ETS (2030)?

UKPIA is unable to comment further on the appropriateness of free allowances in the aviation sector.

- 52) Should the UK ETS aviation free allocation methodology be updated to use a more recent year? (Y/N) If yes, which year and why? How often should UK ETS aviation activity data be updated in the future? Please expand on your answer and give evidence where possible.

UKPIA is unable to comment further on the appropriateness of free allowances in the aviation sector.

- 53) Do you think that the aviation benchmark should reflect UK ETS aviation activity? (Y/N) Please expand on your answer and give evidence where possible.

UKPIA is unable to comment further on the appropriateness of aviation benchmarks and their ability to reflect UK aviation activity.

- 54) Do you think the UK ETS aviation free allocation policy should account for changes in aviation activity and new entrants? (Y/N) Please expand on your answer and provide evidence where possible.

UKPIA is unable to comment further on the appropriateness of free allowances in the aviation sector.

- 55) How often should aircraft operators report their TKM data under the UK ETS? Alternatively, are there other appropriate data sources the UK ETS could use to monitor aviation activity? Please expand on your answer and provide evidence where possible.

UKPIA is unable to comment further on the reporting of data by aircraft operators.

- 56) How can we ensure free allocation entitlements, including in a transition to full auctioning, are proportionate and equitable for all UK ETS aircraft operators?

UKPIA is unable to comment further on the appropriateness of free allowances in the aviation sector.

- 57) Are there ways we could mitigate any unintended impacts on regional connectivity that may arise due to changes to aviation free allocation, through the UK ETS or by other means? (Y/N) Please explain your answer and provide evidence where possible.

It may be possible to allocate free allowances based on the risk of carbon leakage. For example, free allowances could be in place for short haul flights where there is a risk of fuelling for the return journey outside of the UK. However, there would be no free allowances made available for long haul flights where the risk of carbon leakage is much lower.

- 58) How do we ensure that GHG emissions from SAF are accounted for appropriately with respect to aircraft operators' UK ETS obligations?

There needs to be consistency between the accounting of GHG emissions for SAF and other renewable fuels consumed in ground fuels to prevent market distortions, minimise the administrative burden and avoid any unintended consequences. The Renewable Transport Fuels Obligation (RTFO)¹⁵ has been in place for many years and has robust mechanisms in place to quantify and manage the GHG emissions under its jurisdiction. Therefore, the GHG emissions for SAF should follow the same methodology as those under the jurisdiction of the RTFO.

- 59) Should emissions reductions delivered through SAF supplied to comply with the proposed SAF mandate contribute towards reductions in UK ETS obligations for aircraft operators? (Y/N)

This is an area that needs significant discussion. The RTFO for ground fuels does not allow the rewarding of the same fuel under multiple schemes. The same principle should apply for SAF as it does for renewable fuels covered under the RTFO. In the long term as the transport sector moves away from liquid fuels, we would encourage the merging of the SAF and RTFO schemes to ensure on-going GHG reductions.

However, the trading of GHG reduction certificates between the SAF mandate scheme and the UK ETS should be considered to allow fuel suppliers who over-blend SAF to sell excess GHG credits into the UK ETS ticket market. This would incentivise increased GHG reductions without providing multiple incentives in different schemes.

¹⁵ Department for Transport [Guidance on the Renewable Transport Fuel Obligation](#).

- 60) If so, how should supply of SAF and its emissions reductions be reported in a way that ensures SAF usage is only reported under one carbon pricing scheme, whilst minimising the administrative burden for aircraft operators?

Please see our response to Question 59. The SAF mandate scheme and the UK ETS scheme should reward GHG reductions separately; however, there should be trading of GHG reduction certificates between the two schemes to drive decarbonisation at lowest cost.

- 61) Do you agree that we should continue to ensure that UK ETS rules keep pace with the latest SAF sustainability criteria? This would include reflecting the latest amendments to the RTFO sustainability criteria. (Y/N) Please explain your answer.

Please see our response to Question 59. The SAF mandate scheme and the UK ETS scheme should reward GHG reductions separately. The latest SAF sustainability criteria should apply to the SAF mandate rather than the UK ETS scheme.

- 62) Should we consider capturing aviation's non-CO₂ impacts in the UK ETS? (Y/N) Please explain your answer

No.

The EASA report "Updated analysis of the non-CO₂ effects of aviation"¹⁶ and analysis confirms the complexity of measuring non-CO₂ climate impacts. Together with the uncertainty regarding trade-offs between the various impacts, this makes targeted policy development in this area very challenging. However, the SAF deployment supported by the UK ETS may address some of the challenges associated with non-CO₂ emissions, but further studies will be required before reaching conclusions about the preferred policy framework to regulate non-CO₂ emissions.

- 63) How could we treat NO_x in the UK ETS to reflect its differing climate impact compared to CO₂?

UKPIA is unable to comment further on the capture of aviation's non-CO₂ impacts in the UK ETS.

- 64) How could we monitor aircraft NO_x emissions, whilst seeking to minimise the additional administrative burden for airlines?

UKPIA is unable to comment further on the capture of aviation's non-CO₂ impacts in the UK ETS.

- 65) How could the UK ETS address additional non-CO₂ aviation impacts, such as contrail cirrus? Please explain your answer and give evidence where possible.

UKPIA is unable to comment further on the capture of aviation's non-CO₂ impacts in the UK ETS.

- 66) Should we explore any other near term pricing measures, such as charges, to account for non-CO₂ impacts whilst consideration is given to full incorporation into the UK ETS? (Y/N) How could these work in the UK ETS? Please explain your answer and give evidence where possible.

No.

¹⁶ EASA, [Updated analysis of the non-CO₂ effects of aviation](#), November 2020

UKPIA is aware of the ReFuel EU Legislation being developed by the EU, which at this stage propose only reporting of non-CO₂ impacts (namely the average levels of sulphur, naphthenes and aromatics in batches supplied to airports). We would ask that the UK Government follow a similar approach and avoid further charges to UK operators on a unilateral basis.

- 67) Do you agree that flights from the UK to Switzerland should be included in the UK ETS from January 2023? (Y/N) Please expand on your answer and give evidence where possible.

UKPIA does not have a firm view on this. However, the emissions do need to be regulated under one jurisdiction; this could either be the UK ETS or CORSIA. UKPIA is unable to comment further on the benefits of each option.

- 68) Do you agree that this aviation activity should be subject to the same free allocation rules and review outcomes as the rest of the aviation sector in the UK ETS? (Y/N) Please expand on your answer and give evidence where possible.

UKPIA is unable to comment on this question.

- 69) Do you agree that we should not adjust the current UK ETS cap to account for the inclusion of UK to Switzerland flights? (Y/N) Please expand on your answer and give evidence where possible.

Please see our response to Q68. However, if the decision is taken to include flights from the UK to Switzerland, then this constitutes a basis change in emissions. The cap should therefore be adjusted to take account of the basis change to avoid unduly penalising existing operators.

- 70) Are there any other flights departing the UK mainland that are not covered by carbon pricing schemes that we should seek agreement with the destination state or territory to include in the UK ETS? (Y/N) Please expand on your answer and give evidence where possible.

UKPIA is unable to comment on this question.

- 71) What areas of co-operation between the UK ETS and other emissions trading schemes, such as the EU ETS, do you think should be prioritised for aviation?

There needs to be discussion and consistency between the UK ETS and other emissions trading scheme in order to avoid carbon leakage effects. Aviation needs to be aligned in this regard just as much as stationary operators.

As noted in our response to Question 34, we support the linkage of the UK and EU ETS schemes. There is significant concern regarding the lack of progress around linking and the introduction of Paris Agreement Article 6 mechanisms. We understand that the UK Emissions Trading Group (ETG) have previously written to Ministers noting that progress in linking UK ETS to EU ETS is required to increase liquidity. This also enables the UK to avoid the significant administrative hurdles from the EU CBAM when exporting to the EU. Although linking and Article 6 are mentioned in the consultation, there are no proposals to progress this and divergence of the UK scheme from that of the EU will only make linking more difficult in the future. Urgent progress is required so that the carbon price faced by UK industry is aligned with that faced by our closest neighbours and competitors and should be done as soon as possible.

- 72) How can operational features of the UK ETS be simplified for aircraft operators through co-operation with other schemes?

UKPIA is unable to comment on this question.

- 73) Should we permit verifiers of aviation activities to conduct remote site visits if an appropriate risk assessment has been carried out and any precautionary conditions, such as Regulator approval, have been met? (Y/N) Please explain your answer.

UKPIA is unable to comment on this question.

Chapter 6. Expanding UK ETS coverage within covered sectors

- 74) Do you agree with the inclusion of CO₂ venting from upstream oil and gas in the UK ETS, and with the approach outlined above regarding MRV, meter installation, point of obligation, and timings? (Y/N) Please provide evidence to support your answer where possible.

No.

As a general principle, to ensure a level playing field, all potential sources of GHG emissions should be included.

However, we note the detailed analysis included in Table 6.1 of the Consultation Document which indicates that Venting and non-Combustion emissions together provide 2.68% of the upstream oil and gas production emissions. There may be an argument that this is a very small part of overall emissions and attention would be better focused in areas of larger emission.

- 75) What threshold, if any, should be set for CO₂ from venting? Please give evidence to support your answer where possible.

Given that the analysis in Table 6.1 of the Consultation document indicate that the sector CO₂ emissions from venting were 0.06% of the emissions from the sector we would ask whether these are material, and the focus should be on larger emission sources.

- 76) How would inclusion of CO₂ from venting incentivise behavioural change and/or decarbonisation? For example, would it incentivise improved design, the use of Carbon Capture and Storage (CCS) or other abatement? Please explain your answer.

No.

Given the relatively small quantity of CO₂ emitted from venting by the sector, the potentially high costs of abatement technologies and the investment landscape for the Upstream Sector we would question whether the inclusion of CO₂ from venting would lead to a material change.

- 77) How would the inclusion of CO₂ from venting interact with existing and announced policies and regulations (including any relevant non-decarbonisation policies)?

UKPIA is unable to comment on this question in detail.

- 78) Is the sector likely to be impacted by the inclusion of CO₂ from venting in the UK ETS? (Y/N) If so, how would the sector be impacted? For example, could early decommissioning or security of supply be concerns? Please give evidence to support your answer.

Given the relatively small quantity of CO₂ emitted from venting by the sector as indicated in Table 6.1 of the Consultation Document, it is unlikely that the inclusion of CO₂ from venting will materially affect the viability of the sector.

- 79) What other traded sectors, if any, vent CO₂? What are the likely number of installations and scale of emissions? Should these proposals be applied to these sectors? Please provide evidence to support your answer.

Several other sectors would vent CO₂ as part of their operations; this can include hydrogen production from for example Steam Methane Reforming (SMR) or Autothermal Reforming (ATR). However, we would expect that material emissions from these processes would already be covered by the UK ETS scheme.

UKPIA and its members have been in discussion with the BEIS Low Carbon Hydrogen teams on this topic to ensure that the correct mechanisms are in place to incentivise (“blue”) hydrogen production combined with Carbon Capture, Utilisation and Storage (CCUS) and we would encourage this discussion to continue.

- 80) Do you agree with the sources of methane from upstream oil and gas as venting, cold flaring, methane slip, fugitive emissions, and other process emissions? (Y/N) Please explain your answer.

Yes.

However, UKPIA broadly agrees with the sources of methane from the upstream sector as outlined in the Consultation Document.

- 81) How could methane emissions from the sources identified above be accurately MRV'd? In particular, how could methane slip and fugitive emissions be accurately measured or estimated?

Correlations for fugitive emissions are available and have historically been used by DEFRA to quantify emissions, for example for the UK Greenhouse Gas Inventory¹⁷ and Greenhouse Gas Inventory tools¹⁸. However, the methods available for measurement of fugitive emissions, which often use estimation methodologies, may not be able to achieve the level of accuracy required under the UK ETS. In this case fugitive emissions should be regulated through an alternative means and not under the UK ETS.

There should be consistency of approach between the approach taken by the Upstream sector with those of other sectors, for example, Refining. This would ensure a level playing field across industries regulated under the same UK ETS legislation.

- 82) Do you agree that the Methane Action Plan could be used to support and provide data for MRV to occur? (Y/N) Please explain your answer.

UKPIA cannot comment on this question in detail.

¹⁷ UK Greenhouse Gas Inventory Guidance [Appendix 3 Energy \(Fugitive Emissions\)](#).

¹⁸ [Greenhouse Gas Protocol](#) calculation tools.

However, we agree that this is one option to consider. Any options used for the MRV of methane should be technically robust, and apply to all relevant sectors, not just the Upstream Sector.

- 83) How should methane emissions be converted into CO₂ using a common standard or other approach? In your answer, please consider Global Warming Potentials and atmospheric lifetime.

We agree that there should be a technically robust and accepted mechanism to convert methane emissions into CO₂. As it is already commonly used in the UK, and has been scientifically reviewed and accepted, we agree that reporting of GHG emissions according to the Global Warming Potentials (GWP) of the IPCC's Fourth Assessment Report (AR4) would be a robust mechanism. This can be expanded to the Upstream sector, creating a level playing field across all sectors regulated by the UK ETS legislation.

- 84) Do you agree with the approach outlined above, regarding point of obligation and timings? (Y/N) Please provide evidence to support your answer.

Yes.

We agree that the point of obligation should fall on the operator of the installation that emits vented methane, as this provides a consistent approach with other sectors regulated under the UK ETS legislation.

UKPIA is unable to comment in detail on the timings outlined in the Consultation document.

- 85) What, if any, is a suitable threshold for the inclusion of methane from upstream oil and gas in the UK ETS? Please explain your answer.

UKPIA is unable to respond to this question due to limited expertise in this area.

- 86) How would inclusion of methane from upstream oil and gas emissions incentivise behavioural change and/or decarbonisation?

It is difficult to respond to this question without an estimation of the magnitude of the emissions.

Given the current very high natural gas price, then it would be reasonable to assume that routine methane emissions are minimised as far as possible.

Small levels of emissions may make it difficult to justify significant investment given the potentially high costs of abatement technologies and the investment landscape for the Upstream Sector. However, if the emissions were larger then this has the potential to justify investment.

- 87) What other traded sectors, if any, vent methane? What are the likely number of installations and size of emissions? Should these proposals be applied to these sectors? Please provide evidence to support your answer.

A number of sectors emit methane, including Agriculture, which accounts for more than 47% of UK methane emissions¹⁹.

¹⁹ UK Government [Agri-climate report 2021](#).

Further information on global emissions is available from the International Energy Agency (IEA), which lists historic levels of emissions ²⁰ .

It would seem reasonable to have a consistent approach to methane emissions across all sectors to ensure a level playing field across the UK ETS. However, if methane emissions are included (but see also response to Question 81), then the total cap on available allowances needs to be increased accordingly to ensure that risks of carbon leakage are managed effectively.

- 88) Is some cold flaring and venting necessary for safety reasons? (Y/N) If so, how could we identify cold flaring and venting of methane conducted for safety reasons as opposed to routine cold flaring and venting? For example, should it be aligned to the Categories of Flaring and Venting defined by the OGA?

UKPIA is unable to respond to this question due to limited expertise in this area.

- 89) Should there be a free allocation of allowances for safety cold flaring and venting of methane? (Y/N) Please provide evidence to support your answer.

Free allowances for non-routine safety cold flaring and venting are not provided in other sectors. To ensure a level playing field across all sectors regulated under the UK ETS legislation, it should not be included in the Upstream Sector. Further, providing free allowances in this scenario reduces the level available for other sectors, increasing the risk of carbon leakage.

If the decision is taken to provide FAs for safety cold flaring and venting, then there should be a corresponding increase in the overall level of FAs available within the UK. This will take account of the basis change and avoid undue penalties for other operators.

- 90) How should safety flaring be interpreted for the purposes of free allocation?

Free allowances for safety flaring are not provided in other sectors. To ensure a level playing field across all sectors regulated under the UK ETS legislation, it should not be included in the Upstream Sector. Further, providing free allowances in this scenario reduces the level available for other sectors, increasing the risk of carbon leakage.

If the decision is taken to provide FAs for safety cold flaring and venting, then there should be a corresponding increase in the overall level of FAs available within the UK. This will take account of the basis change and avoid undue penalties for other operators.

- 91) Do you agree with the remaining sources of upstream oil and gas emissions as non-combustion processes (process emissions, oil/gas terminal storage, oil loading) and as N₂O (from combustion, non-combustion processes, and flaring)? (Y/N) Please explain your answer.

UKPIA is unable to respond to this question due to limited expertise in this area.

- 92) How could the GHG emissions identified above be accurately quantified? How could they be MRV'd?

UKPIA is unable to respond to this question due to limited expertise in this area.

²⁰ [IEA Global Methane Tracker 2022](#).

- 93) Do you agree with the Proposal that the UK ETS be expanded to allow for the transportation of CO₂ through other forms of non-pipeline transport (i.e., shipping, rail and road)? (Y/N) Please explain your answer.

Yes.

UKPIA agrees that the UK ETS should be expanded to allow for the transportation of CO₂ through other forms of non-pipeline transport. This provides consistency in approach while increasing transport options to allow CCUS technology to be developed.

However, losses from other transport options have the potential to be higher than those for pipelines. Any CO₂ losses to atmosphere need to be taken into account as these would not be captured on a permanent basis. This needs to be considered, recognising that allowances would need to be surrendered for the transport losses incurred.

- 94) Do you have any evidence to suggest how expanding the UK ETS to include other forms of CO₂ transport may impact the wider UK ETS or other policy areas of the Governments of the UK, either positively or adversely? For example, considering the impacts of emissions produced by chosen means of transport. (Y/N) Please explain your answer.

No.

We have discussed the need to account for any CO₂ losses in our response to Question 93 above. However, the direct emissions associated with the transport itself, such as fuel used in trucking operations, needs to be regulated in a consistent manner with similar emissions associated with general transportation.

In the case of fuel used for CO₂ haulage, then this would be covered by the Renewable Transport Fuel Obligation (RTFO) which already aims to reduce GHG emissions from the transport sector. In the case of CO₂ shipping, then this could be brought into the UK ETS in a more general way. The electricity associated with pipeline operations, including those for CO₂, will be covered by the UK ETS system as a matter of course.

In conclusion, there should be no additional penalties created for specific CO₂ transportation to avoid creating a double penalty legislative framework, which has the potential to stunt growth and development in CCUS technology and limit options for the Energy Transition to Net Zero.

- 95) What mitigation strategies, if any, do you believe should be applied in relation to CO₂ emissions associated with all forms of CO₂ transport for CCUS (e.g., emissions produced by a cargo ship or those associated with the operation of pipelines)? For example, a mitigation strategy might include the requirement for a chosen means of transport to adhere to emissions standards, net proportion of emissions delivered criteria (after deduction of emissions from transportation) or similar sustainability criteria.

Please see response to Question 95.

There should be no additional criteria applied to the emissions related to the transport of CO₂ over and above those applied to transport of other materials and products.

Creating additional requirements risks creating a double penalty framework, with the potential to stunt growth and development in CCUS technology and limit options for the Energy Transition to Net Zero.

- 96) Do you agree with the proposal that we implement sustainability criteria for solid, liquid and gaseous biomass for installations? (Y/N) Please explain your answer.

Implementing sustainability criteria for all biomass is key to the effective implementation of decarbonisation policy, and prevents unintended consequences at a UK, and a global level. Sustainability criteria has been a cornerstone of the RTFO over many years and has allowed significant decarbonisation of the transport sector to occur while maintaining appropriate sources of biomass.

There should be harmonisation between biomass sustainability criteria used in all schemes, including both the RTFO and the UK ETS to prevent market distortions and potentially allow the trading of GHG reduction certificates between GHG reduction schemes. We would therefore suggest that the RTFO sustainability criteria is an appropriate starting point for UK Biomass, and that this is developed in a harmonised manner in the future. This may require coordination between the DfT and BEIS. Failure to have a harmonised system may lead to unintended consequences such as biomass being preferentially supplied to the sectors with lower sustainability criteria.

- 97) Which sustainability criteria should the UK ETS apply to solid, liquid and gaseous biomass (RO, CfD etc.), and would there be any value in developing UK ETS specific criteria? Please explain your reasoning.

See response to Question 96. The sustainability criteria used in the RTFO for the reduction of GHG in the ground fuels sector have worked well over many years. The UK ETS should not develop UK ETS specific criteria for biomass. There needs to be a harmonised approach across several GHG reduction schemes to prevent market distortions and potentially allow the trading of certificates across schemes. This may require coordination between the DfT and BEIS. Failure to have a harmonised system may lead to unintended consequences such as biomass being preferentially supplied to the sectors with lower sustainability criteria.

- 98) What are your views on the proposal that for installations and combustion units which only burn biomass to be exempt from the UK ETS, operators must only use sustainable biomass?

This would be a sensible approach to take, referring also to our answers to Questions 96 and 97.

- 99) What are your views on the suggestion that from the start of the second allocation period in the HSE scheme, sustainability criteria will be applied to biomass for the purpose of assessing eligibility, when calculating an emissions target for the installation and when determining whether an installation's reportable emissions exceed the emissions target?

This would be a sensible approach to take, referring also to our answers to Questions 96 and 97.

- 100) Do you have any evidence regarding how applying sustainability criteria for solid and gaseous biomass in the UK as proposed may impact the UK ETS and/or other policy areas? (Y/N) If so, please provide this in as much detail as possible.

We are unable to provide material evidence in this regard; however, the consistency of sustainability criteria across UK GHG reduction schemes should be considered as part of the Biomass Strategy currently being undertaken by BEIS.

- 101) Going forward, is there anything else you think we should consider regarding biomass in the UK ETS?

The availability of appropriate biomass for UK operators will be key to delivering future GHG reductions. A significant proportion of this will come from non-UK sources (as is the case with renewable liquid fuels used to meet the RTFO)²¹. Therefore, the impact of other countries increasing their renewable mandates in the future, potentially restricting the supply of biomass into the UK needs to be considered. Increasing penalties within the UK to attract biomass into the UK may lead to increases fuel costs that are ultimately picked up by the UK consumer and increase inflation measures.

The UK Biomass Strategy being undertaken by BEIS will be key to understanding the availability of biomass for all sectors of the UK economy.

- 102) Do you have data on the number, scale and/or emissions level of installations that are currently not monitored under the UK ETS because of the two thresholds? (Y/N) If so, please provide this where possible.

UKPIA is unable to comment on this question in detail.

- 103) Do you have data regarding the abatement costs of installations paying the carbon price and those not (i.e., exempt, USE, HSE)? (Y/N) If so, please provide this where possible.

UKPIA is unable to comment on this question in detail.

- 104) Do you have data regarding the compliance costs of installations and likely compliance costs of those outside of the UK ETS (i.e., exempt, USE, HSE)? (Y/N) If so, please provide this where possible.

UKPIA is unable to comment on this question in detail.

- 105) Do you have evidence of distortion in relevant markets caused by the 20MWth threshold (e.g., in the form of smaller installations coming on to the market at an increasing rate)? (Y/N) If so, please provide this where possible.

UKPIA is unable to comment on this question in detail.

- 106) Do you have evidence of adverse interactions of the current threshold level with other UK Government or Devolved Administration policies (e.g., with Carbon Price Support)? (Y/N)

UKPIA is unable to comment on this question in detail.

- 107) Do you believe there is other evidence that should be taken into account when considering lowering the 20MWth threshold? (Y/N) If so, please provide this.

UKPIA is unable to comment on this question in detail.

- 108) Do you believe that there is a case for lowering the 20MWth threshold to bring more operators of combustion units under the scope of the UK ETS? (Y/N) If so, please state why?

UKPIA is unable to comment on this question in detail.

²¹ Department for Transport [Renewable Fuel Statistics 2020 Final Report](#), November 2021.

109) Do you have evidence of distortion in relevant markets caused by the 3MWth threshold for calculating total thermal input? (Y/N) If so, please provide this where possible.

UKPIA is unable to comment on this question in detail.

110) Do you believe that there is a case for removing the 3MWth threshold to bring more operators of combustion units under the scope of the UK ETS? (Y/N) If so, please state why?

UKPIA is unable to comment on this question in detail.

111) Do you believe the UK ETS is an appropriate policy to ensure the decarbonisation of small power generators in alignment with Net Zero (Y/N) If yes, please say why. If no, what other policies do you think may be preferable?

UKPIA is unable to comment on this question in detail.

Chapter 7: Expanding the UK Emissions Trading Scheme to new sectors

112) Do you agree with our proposal for calculating emissions, based on volume of fuel multiplied by the carbon intensity as per the most recent UK Government greenhouse gas reporting conversion factors? (Y/N) Please explain your answer considering:

- Whether additional marine fuels need conversion factors developed
- What consideration needs to be given to blended fuels, or renewable and partly renewable fuels.

Yes.

There should be as much consistency as possible for fuels across the UK's GHG reduction schemes, and the UK ETS scheme should not seek to disrupt established practice, for example under the fuels covered by the RTFO. This should continue to be the case as the UK ETS expands into new sectors, such as marine.

There is a well-established approach to calculating GHG reductions from transport fuels in place under the RTFO²². For fossil fuels such as diesel, low sulphur gas oil and gasoline this uses default values originally derived at a European level. Marine gas oil is typically produced in the same way as the low sulphur gas oil obligated under the RTFO. Therefore, to avoid any market distortions, the same default GHG values should be used. However, we recognise that residue-based marine fuel oils do not have the same default values, and that these need to be developed.

For renewable fuels, as we have indicated a robust methodology already exists under the RTFO for these. Again, to ensure consistency the same process for the calculation of GHG emissions from these fuels should be used. This would also apply to blended fuels and partly renewable fuels.

²² Department for Transport Guidance - [Renewable Transport Fuel Obligation \(RTFO\): compliance, reporting and verification](#), December 2021.

113) Do you agree that our lead option to extend emissions trading to domestic maritime based on vessel activity is the most appropriate? (Y/N) Please explain your answer considering:

- Whether you agree with the proposed definition of a domestic journey, and whether this creates any loopholes which need to be addressed.
- Whether the scheme should be applied to ship owners or ship operators.

Yes.

The scheme should be applied to ship owners to ensure the reduction in emissions is delivered, as ship owners are responsible for investment in new ships and retrofit of decarbonisation technologies not the ship operators. UKPIA note that many ship owners have already committed to reduce emissions. Placing the obligation on ship owners will lead to demand for lower GHG emission fuels, supporting the development of new production facilities and a new supply chain for these fuels.

114) Do you agree with the proposed threshold for the lead option of 5000GT? (Y/N) Please explain your answer considering:

- Whether there be a de minimis threshold within this, based on emissions or number of journeys, for example.
- What other thresholds could be used instead, or in the future.

Yes.

UKPIA understand this threshold is also being discussed by the International Marine Organisation (IMO). It is important for the UK to be consistent with the approach adopted by the IMO. Only ships above 5000GT report fuel consumption under the IMO Data Collection System and EU MRV. This threshold was agreed to support monitoring of the majority of emissions without creating an administrative burden for lower emitters.

115) Would applying MRV requirements on an activity basis be possible and practical within existing processes and data collection? (Y/N) Please explain your answer considering whether additional processes would be required to identify domestic journeys.

Yes.

MRV requirements applied on an activity basis represent a pragmatic approach, although some revisions would be required to support use of lower GHG emission fuels.

116) How high do you consider the risk of gaming/non-compliance to be under the lead option? In your answer, please consider:

- How could it be designed out of the system.
- Whether the risk is lower under either of the alternative options.

UKPIA is unable to comment on this in detail.

117) Do you think there should be any specific exemptions to applying emissions trading to domestic maritime? (Y/N) Please explain your answer including what, if any, exemptions there should be.

UKPIA is unable to comment on this in detail.

118) Do you prefer one of the alternative options? (Y/N) Please explain your answer. It would be particularly helpful to understand:

- For the fuel supplied approach, whether MRV requirements are possible and practical within existing processes and data collection.
- For the hybrid approach, how the split between the two approaches would be determined, and how a mechanism to avoid 'double charging' of emissions could be designed.

Due to the international nature of shipping, it is difficult to see how a unilateral UK approach may work in practice and avoid any unintended consequences. We would urge the government to work with Marpol and the EU in this area to develop an internationally harmonised approach.

119) Do you consider that providing carbon pricing will drive decarbonisation in the domestic maritime sector as outlined above? (Y/N) Please explain your answer.

Please see our response to Question 118. As discussed, it is difficult to see how a UK specific approach would work in practice and avoid any unintended consequences.

120) Besides carbon not being fully priced into the market, what other market failures and barriers are present and what policies would be needed to support the UK ETS in decarbonising domestic maritime? In your answer, please consider how this may change over time.

Please see our response to Question 118. As discussed, it is difficult to see how a UK specific approach would work in practice and avoid any unintended consequences.

121) How might the UK ETS interact with existing and planned policies in the maritime sector, including any relevant non-decarbonisation policies?

Please see our response to Question 118. As discussed, it is difficult to see how a UK specific approach would work in practice and avoid any unintended consequences. The IMO is currently considering a number of options for market-based measures²³ coupled with fuel standards regulations, but no decisions have yet been taken. The Energy Efficiency Design Index (EEDI) was made mandatory for new ships and the Ship Energy Efficiency Management Plan (SEEMP) for all ships in 2011 with the adoption of amendments to MARPOL Annex VI²⁴. The UK must avoid duplication or policy development that undermines global measures.

122) How would application of the UK ETS to the domestic maritime sector impact participants (including ship owners, ship operators, fuel suppliers) and consumers? In your response, please provide evidence where possible and consider:

- Small and medium size operators
- Island communities
- Competitiveness impacts and carbon leakage risks
- Decarbonisation impact for different vessel types and maritime sub-sectors

UKPIA is unable to comment on this question in detail.

²³ IMO [Market Based Measures](#).

²⁴ IMO Marine Environment Protection Committee [Resolution MEPC.203\(62\)](#), July 2011.

- 123) Have you identified any other impacts, distributional or otherwise, arising from this proposal, which have not been captured by other questions? (Y/N) Please explain your answer, including how any concerns could be addressed.

UKPIA is unable to comment on this question in detail.

- 124) Do you agree with the proposed timing for when waste incineration and EfW could be introduced into the UK ETS? (Y/N)

No.

UKPIA believe waste incineration and EfW plants should be introduced into the ETS from the start of the second period of UK ETS Phase 1 in 2026.

- 125) For operators of waste incinerators, EfW plants, and local authorities (LAs), please outline the steps that you will need to take, and the time required to prepare for the expansion of the UK ETS to waste incineration and EfW.

UKPIA has no response on this Question.

- 126) Do you agree that the UK ETS should be expanded to include waste incineration and EfW? (Y/N) Please outline your reasoning, including alternative options for decarbonisation of the sector outside of the UK ETS.

Yes.

Municipal waste is becoming an important feedstock for potential decarbonisation of liquid fuels including sustainable aviation fuels (SAFs) and a number of waste-to-liquid (WtL) plants are due to be commissioned by or in this period²⁵. They will be required to register under the UK ETS and will compete for municipal waste as a feedstock with waste incineration and EfW plants. The latter should therefore be introduced into the UK ETS as soon as possible to ensure equitable treatment with WtL installations.

- 127) Do you agree that all types of waste incinerators should be included in the UK ETS? (Y/N) If you believe certain incineration activities should be exempt, e.g., incineration of hazardous or certain healthcare waste, please provide details and specify which waste stream.

Yes.

In principle all waste incinerators should be included to provide an incentive for decarbonisation of this activity.

- 128) Do you believe ATT should be included in the UK ETS? (Y/N) What challenges could arise as a result of including ATT, if any, that are different to conventional waste incineration plants?

Yes.

In principle ATT should also be included to provide an incentive for decarbonisation of this activity. UKPIA is not aware of any challenges that could arise as a result of including ATT that are different to conventional waste incineration plants.

²⁵ For example, the [Altalto Immingham](#) WtL plant and the [Fulcrum BioEnergy](#) SAF plant at the Essar Stanlow Manufacturing Complex.

129) Do you agree that the point of MRV obligation for the UK ETS should be placed on the operators of waste incinerators and EfW plants? (Y/N) Please outline your reasoning in as much detail as possible and provide evidence to support your views.

Yes.

130) If the point of MRV obligation is placed on operators of waste plants, should waste companies/operators or customers (either LAs or commercial and industrial customers) be responsible for meeting compliance obligations? (Y/N) Please outline your reasoning in as much detail as possible and provide evidence to support your views.

UKPIA believe plant operators should be responsible for meeting compliance obligations.

131) Do you believe that the Small and Ultra Small Emitter schemes that are currently available to eligible UK ETS participants should also be available to waste incinerators and EfW plants? (Y/N) Please provide details including, where relevant, whether your organisation is likely to be eligible for these schemes based on current rules.

Yes.

132) Which MRV proposal do you believe should be implemented to determine the UK ETS obligation for waste incinerators and EfW plants?

- i) If Option A, please provide your views on which methods could be used, along with any information on the practicality of their implementation and likely costs.
- ii) If Option B, please provide your views on how these emissions factors should be calculated, along with any information on the practicality of implementation and likely costs.

UKPIA has no response to this question.

133) Do you believe that one of the MRV options proposed is more likely to lead to perverse incentives (e.g., more waste diverted to landfill) or to unintended consequences as a result of applying the UK ETS to waste incineration and EfW? Please consider different scenarios and provide evidence to support your views where possible.

UKPIA has no response to this question.

134) Do you believe any additional greenhouse gases, other than CO₂, that are emitted by EfW plants or incinerators, should be covered by the UK ETS? (Y/N) If so, please provide details on which gases and how it could work in practice.

UKPIA has no response to this question.

135) How would the application of an ETS to waste incineration and EfW impact stakeholders (including operators of waste incinerators, operators of EfW plants, LAs, consumers, customers)?

UKPIA has no response to this question.

136) Could the introduction of a carbon price incentivise waste operators and/or LAs to improve their operations or processes to reduce fossil waste being incinerated? (Y/N) Please outline your reasoning in as much detail as possible and provide evidence to support your views.

UKPIA has no response to this question.

137) Could the introduction of a carbon price incentivise LAs to support households to improve recycling practices? (Y/N) Please outline your reasoning in as much detail as possible and provide evidence to support your views.

UKPIA has no response to this question.

138) Is there opportunity (in the medium-long term) for the carbon price to incentivise waste operators and/or LAs to invest in carbon capture and storage infrastructure, to reduce fossil carbon emissions? (Y/N) Please outline your reasoning in as much detail as possible and provide evidence to support your views.

UKPIA has no response to this question.

139) In the event of the carbon price being applied to waste operators, will waste operators be able to pass through their costs to customers (including LAs)? (Y/N) Please explain in as much detail as possible why, how, and to what extent this may or may not occur.

UKPIA has no response to this question.

140) For LA owned plants, would unitary authorities and waste disposal authorities be the only authorities exposed to the carbon price – in the event of waste operators passing through costs? (Y/N) Please explain in as much detail as possible and provide evidence to support your views.

UKPIA has no response to this question.

141) Do you believe that government should consider phasing in ETS obligations to the sector over time? (Y/N) If yes, please outline why, how, and to what extent phasing options could be provided.

UKPIA has no response to this question.

142) Would operators of incineration/EfW plants be exposed to competitiveness impacts abroad and carbon leakage risk, in the event of being exposed to the carbon price? (Y/N) Please explain in as much detail as possible and provide evidence to support your views.

UKPIA has no response to this question.

143) Have you identified any other distributional impacts (including wider environmental or social impacts) arising from this proposal? (Y/N) Do you have views on how government could address these concerns?

UKPIA has no response to this question.

144) What additional policies would be needed to support the UK ETS in decarbonising waste incineration and EfW? How would this change over time?

UKPIA has no response to this question.

- 145) How would the expansion of the UK ETS to waste incineration and EfW interact with existing and planned policies in waste incineration, EfW, and waste management more broadly, as well as any other relevant non-decarbonisation policies?

UKPIA has no response to this question.

- 146) Are there other parts of the waste management system that should be included in the scope of the UK ETS? For example, landfill or wastewater. (Y/N) Please explain in as much detail as possible and provide evidence to support your views.

UKPIA has no response to this question.

Chapter 8. Calls for evidence on greenhouse gas removals and agriculture and land use emissions

- 147) Do you believe the UK ETS could be an appropriate long-term market for GGRs? (Y/N) Please explain why, highlighting benefits and risks where possible.

Yes.

UKPIA agrees that the UK ETS could be an appropriate long-term market for greenhouse gas removal (GGR) technologies. Meeting the UK's Net Zero ambitions by 2050 requires dramatic reductions in GHG emissions. However, CO₂ reductions must be achieved while continuing to provide affordable and reliable industry and transportation energy across the UK economy. Bioenergy with CCS (BECCS) and nature-based soil carbon sequestration are negative emissions approaches that can provide substantial progress towards the UK's legislated ambitions.

Credible long-term emission reduction scenarios will require CCS and negative emissions technology. In the IEA's assessment of their Sustainable Development Scenario (SDS), CCUS drives 9% of global emissions reductions by 2050, underscoring its critical role in making progress towards SDS targets. As policymakers evaluate technology and regulatory options to reduce atmospheric levels of CO₂, BECCS is an option that can cost-effectively deliver CO₂ abatement solutions for the UK energy sector. Nature-based GHG removal options can also play a critical role in further reducing the carbon intensity of transportation energy.

Direct Air Capture (DAC) is also a technology that should be advanced through research and development support. DAC has the potential to address atmospheric CO₂ emissions at scale. According to the IEA, "As the technology has yet to be demonstrated at large scale, the future cost of direct air capture is uncertain. Capture cost estimates reported in the literature are wide, typically ranging anywhere from USD 100/t to USD 1,000/t²⁶. If research and policy support can help drive costs down over time, DAC has the potential to play a critical role in addressing climate-related risks.

In light of the substantial development needed to bring GGR technologies forward to play a constructive role in GHG emissions reductions, creating opportunities across the UK's policy framework to incentivise technologies like BECCS and DAC -

²⁶ Realmonte, G. et al. (2019), 'An inter-model assessment of the role of direct air capture in deep mitigation pathways', *Nature Communications*, Vol. 10, No. 1, p. 3277, [IEA Direct Air Capture Tracking Report](#), November 2021.

including under the UK ETS – would be a sensible development, subject to appropriate safeguards and design mechanisms.

- 148) How could the design of the UK ETS be adapted to include GGRs while still maintaining the incentive to decarbonise for ETS participants?

Inclusion of engineered approach GGR technologies within UK ETS would be unlikely to disincentivise sites participating in UK ETS from exploring more immediate GHG emissions reductions pathways, in light of the current lack of availability of technologies such as DAC in the market. The development of GGR technologies will likely include CCUS as a key intermediary step. This adds to the rationale to expand UK ETS to the transportation of CO₂ through other forms of non-pipeline transport (i.e. shipping, rail and road). This change is critical to ensuring that obligated sites under UK ETS that are remote from local carbon sequestration locations have the ability to progress towards carbon capture storage (CCS) and low-carbon hydrogen.

Beyond the stage of introducing CCS across all of the UK's industrial clusters, GGR development and deployment will likely only be achievable with effective, near-term policy support. We would encourage the Authority, therefore, to explore complementary policy initiatives that can spur GGR development. The United States' 45Q tax credit has been instrumental in accelerating the evaluation of CCS projects. The need for geological assessments and CO₂ sequestration permits will drive longer project evaluation timelines, but the 45Q tax credit has been the catalyst for evaluating CCS projects. Whilst a Contracts for Difference (CfD) model for CCS projects is the approach currently being taken in the UK, serious consideration should nonetheless be given to offering a similar incentive to 45Q to spur GGR project development at scale.

In addition, for GGR deployment in the fuel manufacturing sector, policymakers should identify ways to attract low-carbon biofuels manufactured with CCS into UK markets. Ethanol and renewable diesel paired with CCS can dramatically reduce the carbon footprint of the transportation sector, regardless of where the fuels are manufactured. Creating a regulatory framework that values investment in CCS and recognises the lower carbon intensity of biofuels manufactured with CCS, will incentivise use of the lowest-carbon liquid fuels by UK consumers. Increased volumes of low-carbon biofuels can help the UK make significant progress towards meeting its 'Net Zero' commitments.

- 149) To what extent could the UK ETS price signal incentivise development of the full range of GGRs, including engineered and nature based GGRs, given the expected differences in the project costs?

The UK ETS price signal can incentivise the development of GGR, especially engineered technologies, when paired with complementary, near-term policy support. As noted in the response to Question 148, this should include incentives akin to the United States 45Q tax credit, which has been instrumental in accelerating the evaluation of CCS projects.

For nature based GGR approaches, ensuring compatibility between UK ETS and wider decarbonisation of transport energy can also play an important part in incentivising their development. In the United States, nature based GGR has successfully led to the expansion of domestic biofuel feedstocks, a situation currently limited in the UK by the existing 'crop cap' under the Renewable Transport Fuel Obligation (RTFO). Nature-based soil carbon storage options can contribute to lowering the GHG emissions associated with transportation energy and hard-to-decarbonise sectors. Restorative agriculture practices, such as advanced multi-

paddock grazing, restoration of native prairie grasses, no-till planting and utilisation of cover crops all have been demonstrated to increase levels of soil carbon.

When these practices are utilised when growing biofuels feedstocks, they can create additional GHG reductions through the use of low-carbon biofuels. Over a number of years, one of the UKPIA Member Companies has actively participated in a working group led by Rice University's Baker Institute for Public Policy, developing an innovative measurement-based standard for soil-based carbon storage²⁷. This concept has the potential to drive long-term GGRs, while improving economics for the agriculture sector UPIA believes that expanding the scope of such nature-based GGR solutions – paired with inclusion under the UK ETS – could play a significant and positive role in biofuels development in the UK, and as such contribute to achieving Net Zero ambitions.

- 150) What impacts or opportunities could arise for the UK voluntary carbon markets, if GGRs were included in a compliance market like the UK ETS? For example, what impacts, or opportunities could there be for voluntary carbon market schemes such as the Woodland Carbon Code?

UKPIA has no response to this question

- 151) What impacts or opportunities could arise for the emerging markets for wider ecosystem services (e.g., biodiversity, flood management, water quality) if GGRs were included in a compliance market like the UK ETS?

UKPIA has no response to this question

- 152) Are there any impacts, constraints or unintended consequences that need to be managed if incorporating GGRs within an ETS?

One potential constraint of incorporating GGRs within UK ETS would be if the Authority placed any ill-advised or unnecessary constraints on what GGR technologies may play a part in the scheme. It is essential that GGR development in the UK is conducted according to technology neutrality principles, which allow different technology options to emerge at the lowest societal cost. The alternative approach of the Authority directing support for preferential GGR technologies ('picking winners') would create a substantial risk of reducing support for development and deployment of lower cost and shorter-term opportunities to provide earlier and more significant emissions reductions.

This emphasises the need for a collaborative, systems-based assessment of the whole economy to understand and better enable utilisation of captured carbon and therefore, how incentives could be provided for negative emissions technologies implemented both at installations and via collaboration across a number of companies at a CCUS industrial cluster level.

- 153) Do you think there are other eligibility requirements we should consider and what are these?

UKPIA has no response to this question.

²⁷ Jeff Falk, Rice University, *Baker Institute-led group develops proposed nationwide protocol for storing carbon*, <https://news.rice.edu/2020/11/02/baker-institute-led-group-develops-proposed-nationwide-protocol-for-storing-carbon/>, November 2020.

- 154) What MRV criteria need considering for GGRs and what steps need to be taken to ensure a framework of criteria is robust, cost-effective, and scalable? (a) for Nature-based GGRs; (b) For Engineered GGRs
- UKPIA has no response to this question.
- 155) For GGRs that have a risk of carbon being re-released into the atmosphere, are there any potential solutions we should consider enabling market participation?
- UKPIA has no response to this question.
- 156) What are challenges of integrating non-permanent removals alongside permanent removals in the UK ETS and how can these be overcome?
- UKPIA has no response to this question.
- 157) Who should own the rights of a possible GGR allowance or credit in a possible future market - the buyer, or the seller?
- UKPIA has no response to this question.
- 158) What can we learn from other countries on ownership and liability for greenhouse gas removals?
- UKPIA has no response to this question.
- 159) Should GGRs be incorporated into the UK ETS, or would it be preferable to establish a separate, but linked, market for GGRs?
- UKPIA believes that establishing separate mechanisms to incentivise GGR technologies would add unnecessary complexity. Enabling GGRs to participate in the UK ETS – with additional, complimentary near-term policy support in place to spur research and development – would be the preferable approach.
- 160) Are there other market designs or proposals we should consider for longer-term GGR deployment that would be preferable to inclusion in the UK ETS?
- Please see our response to Question 159.
- 161) How and when could eligible GGRs be phased into a market such as the UK ETS?
- UKPIA has no response to this question
- 162) Should any GGR approaches, or methods be considered for earlier inclusion in a market than others? Why should we consider these?
- No.
- As noted above (see our response to Q152), it is essential that GGR development in the UK is conducted according to technology neutrality principles, which allow different technology options to emerge at the lowest cost societal cost. The alternative approach of the Authority directing support for preferential GGR technologies ('picking winners') would create a substantial risk of reducing support for development and deployment of lower cost and shorter-term opportunities to provide earlier and more significant emissions reductions.

163) Should we trial eligible GGRs in a market or scheme before fully integrating to an existing market like the UK ETS? How and when could this happen?

UKPIA has no response to this question

164) Are there any relevant sources of evidence and expertise we should use to help inform our thinking?

UKPIA has no response to this question.

165) For farm businesses: Are you currently using carbon audit tools? (Y/N)

- If so which one(s), and what farm practices or management have you changed as a consequence of using the tool?
- If no, what has prevented you from using these tools?

UKPIA has no response to this question.

166) What are the barriers to implementing robust Monitoring, Reporting and Verification of greenhouse gas emissions, and how can we improve record-keeping?

- In the agriculture sector
- In the land use sector

UKPIA has no response to this question.

167) Remote sensing technologies and earth observation could be used to compliment carbon reporting tools. Do you have any concerns about utilising this technology and what could reassure you?

UKPIA has no response to this question.

168) How can carbon audit & reporting tools be used in conjunction with other business planning mechanisms?

UKPIA has no response to this question.

169) How can MRV be best utilised for the purpose of:

- decarbonising agriculture;
- identifying both emissions mitigating and negative emissions opportunities, e.g., through carbon sequestration;
- attracting investment for carbon management in agriculture and the land use sector?

UKPIA has no response to this question.

170) Should eligibility to trade in sequestered carbon on farms be conditional on the vendor demonstrating that an acceptable level of farm emission reduction has been achieved? (Further work would be needed to define 'acceptable' levels of emissions reduction and could be sub-sector or farm specific).

UKPIA has no response to this question.

171) Which sectors within agriculture & land use should we prioritise to establish baseline data with MRV?

UKPIA has no response to this question.

- 172) What do you consider Government's role should be in farm and land use based MRV?
- a) Should Government consider mandating the use of MRV for the sector or sub-sectors?
 - b) To support this, should Government introduce standardised protocols or tools, beyond the voluntary PAS2050 code?
 - c) Or alternatively, should Government provide a standardised framework for the market to develop protocols to achieve the data reporting outcomes required?

UKPIA has no response to this question.

- 173) Is voluntary monitoring, reporting and verification in the agricultural and land use sectors likely to achieve sufficient uptake and accuracy to improve business efficiency, decarbonisation and decision making by farmers, retailers, and government?

UKPIA has no response to this question.

Chapter 9. Operational amendments to UK ETS

- 174) Should electricity generators who have not exported measurable heat produced by means of high-efficiency cogeneration in the "relevant period", but start to do so in following scheme years, be eligible for free allocation once they can demonstrate that they meet the eligibility criteria? (Y/N) Please explain your answer.

Yes.

There should be harmonisation between the rules for the export of measurable heat for district heating and for process heat from a CHP plant, to incentivise improvements in heat utilisation as part of electricity generation through the energy transition.

- 175) Over which period should the determination of whether the measurable heat is produced by means of high-efficiency cogeneration be assessed?

UKPIA cannot comment on this question in detail; however, it would seem pragmatic to align the period with a typical annual reporting cycle under the UK ETS system.

- 176) Do you agree that in the case of new entrants that are classified as electricity generators and who wish to apply for a free allocation of allowances on the basis that they produce measurable heat by means of high-efficiency co-generation, they may not apply for a free allocation until the operator can provide a full calendar year of activity level data? (Y/N) Please explain your answer.

Yes.

UKPIA cannot comment on this question in detail; however, it would seem pragmatic to align the period with a typical annual reporting cycle under the UK ETS system.

- 177) Do you agree that the Authority should have the ability to create the total number of allowances from the flexible share in a scheme year in addition to the annual cap? (Y/N) Please explain your answer.

Yes.

UKPIA is supportive of releasing allowances from the flexible share in a scheme year in addition to the annual cap.

However, as we have outlined in our response to Q1, although some mitigation of price impacts would be available from releasing unallocated allowances and/or the flexible share into the market, the options presented all have relatively short-term impacts and may not be sufficient to limit increases in EUA costs to allow time for investment in major decarbonisation projects.

- 178) Do you have any comments on the way that a verifier is defined in the legislation, and in particular do you agree that the phrase ‘or another legal entity’ should be deleted? (Y/N) Please explain your answer.

No.

UKPIA agrees that there should be as much consistency as possible between the EU and UK ETS legislation. The amendment proposed aligns with the EU legislation.

- 179) Do you agree that in the case of a full transfer of a permit (with a merger), that allocations for the scheme year in which the transfer occurs should be treated differently based on the effective date of the transfer? (Y/N) Please explain your answer.

Yes.

The approach proposed seems to be a reasonable way of dealing with transfers and mergers as well as the complexities of the UK ETS timetable. It would be helpful to provide some indicative deadlines for the closure of the OHA relating to the transferred installation and the return of any over-allocations as this has not been outlined in detail in the consultation.

- 180) Do you agree with our proposed approach? (Y/N) Please explain your answer.

Yes.

As per our response to Question 179, this seems a reasonable way of dealing with transfers and mergers and the complexities of the UK ETS timetable.

- 181) Is there an alternative approach that has not been considered? (Y/N) Please explain your answer.

No.

We are not aware of a suitable alternative approach at this time.

- 182) Do you agree that in the case of a partial transfer of a permit, that allocations for the scheme year in which the partial transfer occurs should be treated differently based on the effective date of the partial transfer? (Y/N) Please explain your answer.

Yes.

The treatment of full, and partial transfer of permits should be consistent. As per our response to Question 179, the approach proposed seems to be a reasonable way of dealing with transfers and mergers and the complexities of the UK ETS timetable.

- 183) Do you agree with our proposed approach? (Y/N) Please explain your answer.

Yes.

As per our response to Question 179, this seems a reasonable way of dealing with transfers and mergers and the complexities of the UK ETS timetable.

184) Is there an alternative approach that has not been considered? (Y/N) Please explain your answer.

No.

We are not aware of a suitable alternative approach at this time.

185) Do you agree with the proposal that we should apply the AR5 without-feedback values for the purposes of the UK ETS? (Y/N) Please explain your answer.

Yes.

We agree that, as agreed at COP-26, the AR5-without feedback values should be used for the purposes of the UK ETS.

However, the use of values should be consistent with those used by the other emission control schemes for major world economies. If this is not the case, then it risks creating global market distortions and increases the risks of carbon leakage.

186) Do you agree that we should amend the Order to reflect EN ISO 14065:2020? (Y/N) Please explain your answer.

Yes.

We agree that the order should be amended to the latest available version of the internationally recognised standard, ISO 14065:2020. This creates certainty for all stakeholders while ensuring that the standard remains up to date and fit for purpose.

187) For which other decisions made by the Authority would it be desirable to provide a statutory appeal route?

We agree that it is reasonable and desirable to set up a statutory appeal process for operators. Currently the only option available to operators is to request a judicial review, which can be extremely costly and time consuming.

Rather than define in exact terms what can, and cannot be appealed, we broadly agree with the principle outlined in the consultation response. This covers decisions which impact individual operators, rather than the overall policy of the UK ETS.

The appeals process needs to be transparent, fair, and clear with an inherent degree of independence.

188) Do you agree that current Hospital or Small Emitters should be offered a window for re-entry into the main UK ETS? (Y/N) Please explain your answer.

UKPIA is unable to answer this question.

189) Do you agree that they should be eligible to apply for Free Allocation on the condition that they had made an application for Free Allocation under Phase IV of the EU ETS? (Y/N) Please explain your answer.

UKPIA is unable to answer this question.

190) Do you agree with the inclusion of this £5000 penalty in the UK ETS? (Y/N) Please explain your answer.

UKPIA is unable to answer this question.

- 191) Do you agree with the recommendation that, instead of the deficit being added onto the next year's surrender obligation, the regulators should be empowered to issue a deficit notice to require operators/aircraft operators who fail to surrender allowances to cover any deficit? (Y/N) Please explain your answer.

UKPIA does not agree with this recommendation. The recommendation assumes that any deficit can simply be covered by the purchase of additional allowances in a market that is operating in a rational and liquid manner.

Given the fact that the UK ETS system operates in isolation from other schemes, such as the EU ETS, there are concerns over the liquidity of the market and the availability of FAs to purchase. The risk of there not being allowances to purchase is likely to increase as the market tightens over the course of Phase 1, and indeed Phase 2.

Simply issuing a deficit notice in this case does not mean that operators can simply purchase allowances to cover their deficit, and so will face further financial penalties that are out with their control.

- 192) Do you agree that the deficit penalty should be applied in two parts, the first being a mandatory penalty when an operator or aircraft operator fails to make up a deficit by the date specified in a deficit notice, and the second a discretionary daily penalty that applies if the operator/aircraft operator has not made up the deficit within a month of the deficit notice deadline? (Y/N) Please explain your answer.

UKPIA does not agree that the deficit penalty should be applied in two parts.

As we have outlined in our response to Question 192 this assumes that the allowance market is liquid, and operators can simply purchase the ticket deficit. This may not be the case, particularly as the market tightens in the future and exposes operators to further financial penalties that are out with their control.

- 193) Do you agree with the suggested penalty amounts, with the mandatory penalty calculated as the number of outstanding allowances multiplied by 1.5x the relevant carbon price and the additional daily penalty set at £1,000 a day until the operator/aircraft operator surrenders the deficit? (Y/N) Please explain your answer.

UKPIA does not agree with the suggested penalty amounts.

These penalties are excessive. As we have outlined in our responses to Questions 191 and 192, operators may not be able to purchase allowances in the market and therefore cannot meet the notices.

- 194) Do you agree with the recommendation that the regulators should be empowered to issue further notice requiring operators who fail to surrender allowances in line with surrender / revocation notices to surrender the allowance deficit? (Y/N) Please explain your answer.

UKPIA does not agree with this recommendation, for the reasons outlined in our response to Questions 191, 192 and 193.

- 195) Do you agree that penalties for the above should align with those proposed for the failure to surrender allowances to cover a deficit in non-surrender / revocation situations? (Y/N) Please explain your answer.

UKPIA does not agree with this recommendation, for the reasons outlined in our response to Questions 191, 192 and 193.

196) What are your thoughts on implementing powers to pursue operators after their permit has been surrendered / revoked if historic errors are discovered in emissions reporting? Please explain your answer.

The open nature of these powers would seem to provide a means to penalise operators without any limitation of time, which is manifestly unfair and unjust in the context of normal legal frameworks.

Given that emissions are subject to stringent verification, the risks of reporting errors would appear to be minimal, and we would request further justification including the levels of historical reporting inaccuracy.

There needs to be a statute of limitation of time where regulators can apply these powers. Our recommendation was that this should be up to two years from the deadline for surrendering of allowances in any reporting year.