

## **UK ETS Consultation Member Discussion 2:**

### ***Green Gas Removals (GGRs) and Biomass Sustainability Questions***

*13<sup>th</sup> May 2022*



# Agenda

- Context for the Consultation
- Overview of how the UK ETS Works
- Overview of High-level UK ETS Proposals
- Deep dive into GGR proposals
- CCUS and Transportation
- Deep dive into Biomass Sustainability proposals
- Consideration of 20 MWth threshold proposals
- Next Steps

**Webinar will be recorded for note taking purposes.**



# “Developing the UK Emissions Trading Scheme (UK ETS)”

UK Emission Trading Scheme (UK ETS) Authority are seeking input on a large number of proposals to further develop the UK ETS

Follows commitments in the Net Zero Strategy to consider expansion of the Emission Trading Scheme and alignment with Net Zero ambitions.

Since 1<sup>st</sup> January 2021 the UK ETS was established to replace UK Participation in EU ETS.

*“Our goal is to make the UK ETS the world’s first net zero consistent cap and trade market, and ensure it plays a crucial role towards achieving the UK’s ambitious climate targets, including net zero greenhouse gas emissions by 2050.”*

UK Withdrawal Agreement also committed both parties to exploring the options of linking the UK and EU ETS.



# How does the UK ETS work?

The UK ETS is a 'Cap and Trade' Scheme on obligated parties.

Government sets a cap that limits the total amount of certain Green House Gasses that can be emitted by sectors covered by the scheme. This cap decreases over time to reduce emissions.

Within the cap, obligated parties receive free allowances and can also buy allowances at an auction or trade within the secondary market, to ensure they meet their obligation. A carbon allowance therefore has a market value.

Each year, installation operators and aircraft operators covered by the scheme must surrender allowances to cover their reportable emissions.

The ETS is separate to the Voluntary Carbon Market (a credit-based system) .

## Who does the UK ETS Currently Apply too?

- Energy Intensive Industries
- Power Generation Sector
- Aviation Industry (UK Domestic and to EEA flights)

The scheme currently covers activities involving the combustion of fuels in installations with a total rated thermal input of more than 20 MW

***Exemptions currently apply for Biomass and Energy from Waste.***

***Northern Ireland electricity generators remain in the EU ETS under the Ireland/ Northern Ireland Protocol***



# Why is Energy from Waste and Biomass Energy Production Currently Exempt?

Energy From Waste is exempt on grounds of it being a sanitation service, treating waste and diverting it from land fill.

Biomass is exempt on the grounds that it is defined as renewable – releasing biogenic carbon as part of the carbon cycle, in accordance with the IPCC Green House Gas Inventory.

Mixed generation sites see their biogenic carbon emissions zero rated.



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The Greenhouse Gas Emissions Trading Scheme Order 2020

## Meaning of installation

2.—(1) Subject to sub-paragraph (2), in this Order, “installation” means a stationary technical unit or units where one or more regulated activities are carried out.

(2) “Installation” does not include any of the following (which are outside the scope of the UK ETS)—

- (a) an installation that uses only biomass as a fuel;
- (b) an installation, or part of an installation, the primary purpose of which is research and development (including the testing of new products and processes);
- (c) an installation, the primary purpose of which is the incineration of hazardous or municipal waste;
- (d) a relevant Northern Ireland electricity generator.

(3) In sub-paragraph (2), a reference to an installation is a reference to what would be an installation, but for that sub-paragraph.

(4) References in this Order to an installation include references to part of an installation.



## ***Overview of High-level UK ETS Proposals***



# Overview of High-level Proposals in Consultation

High-level Proposal	REA initial Position
<b>UK ETS Cap And Trajectory</b>  Sets out proposals for changes to align the UK ETS cap and trajectory with net zero target. It would allow a total cap for the entire first Phase (2021-2030) of between 887 – 936 million allowances. Compared to the current legislated cap for the whole phase, this would equate to a reduction of between around 30-35% over the course of the phase.	REA to support tightening of cap to ensure scheme is aligned to net zero.  Although will need to be carefully considered dependent on the outcome of other proposals
<b>Free Allowances under the Industry Cap</b>  The authority has proposed to reset the industry cap (ie the share of free allocation under the UK ETS cap for industrial and energy production ) to align it with a net zero consistent cap. This proposal would reset the industry cap to make up a percentage of the cap (37%) rather than being set as fixed numbers, as in current legislation.	



# Overview of High-level Proposals in Consultation

High-level Proposal	REA initial Position
<p><b>Future Market Policy</b></p> <p>Asks if the following mechanisms remain fit for purpose:</p> <ul style="list-style-type: none"><li>• Auction Reserve Price</li><li>• Cost Containment Mechanism</li><li>• Auction process</li><li>• The market stability mechanism</li><li>• Banking and borrowing of allowances</li></ul>	<p>REA welcomes specific comments relating to specific market adaptations.</p>
<p><b>Aviation</b></p> <p>The Authority is considering withdrawing free allocation for the aviation sector, including the following three policy options.</p> <ul style="list-style-type: none"><li>• Early phase-out: full auctioning will apply from 2026.</li><li>• Intermediate phase-out: full auctioning will apply no later than 2028.</li><li>• Later phase-out: full auctioning will apply from the start of 2031.</li></ul> <p>The Authority has proposed including flights to Switzerland as part of the UK Aviation ETS.</p>	<p>REA still considering position but could support intermediate phase out to allow time for establishment of Sustainable Aviation Fuel market. Member feedback is welcome.</p>





# Overview of High-level Proposals in Consultation

High-level Proposal	REA initial Position
<b>Expanded UK ETS Coverage within Covered Sectors</b> <ul style="list-style-type: none"><li>• The Authority proposes extending the Monitoring, Reporting and Verification (MRV) regime to cover carbon dioxide from venting.</li><li>• The Authority proposes revision to 20MWth combustion threshold, or an alternative threshold that is specific to vented CO2.</li><li>• The authority proposes methane could be converted to its carbon dioxide equivalent by multiplying the mass of methane emissions by the appropriate GWP.</li><li>• The authority proposes the UK ETS be expanded to allow for the transportation of CO2 through non-pipeline transport.</li></ul>	<p>REA will be working with effected members to understand impact of the proposals on venting and methane.</p> <p>Specific discussion later on MWTh threshold</p> <p>We will support non-pipeline transport of CO2</p>
<b>Inclusion of Energy From Waste within the UK ETS</b> <p>Expanding the UK ETS to waste incineration and energy from waste by the mid to late 2020s</p>	<p>REA held a members discussion on the proposals last Tuesday.</p> <p>Additional input can also be provided at REA member discussion on gasification and pyrolysis meeting, 24<sup>th</sup> May</p>



# Questions and Discussion

Any initial comments relating to High level proposals?

Very happy to receive specific point by email to [policy@r-e-a.net](mailto:policy@r-e-a.net) or set up a bilateral phone call.



## ***Deep Dive: Green Gas Removal Call for Evidence***



# A long-term policy for Green House Gas Removals (GGRs)

The Authority is interested in exploring the UK ETS as a potential **long-term policy** support mechanism for GGRs.

They acknowledge that a range of support mechanisms will need to be considered to enable deployment of GGRs in the short term, these will be addressed in separate consultations and schemes.

The consultation recognises the opportunities provided by GGRs, including:

- Sending market signals for investment and drive down costs
- Accelerate both nature based and engineered GGRs
- Encourage competitiveness and increased efficiency of GGRs
- Maximise co-benefits of nature-based approaches such as biodiversity, water quality and climate adaptation
- Provide additional liquidity as UK ETS allowance falls.

***Nature-based approaches:*** could include afforestation, and different types of land, coastal and marine habitat restoration.

***Engineered approaches:*** could include Direct Air Carbon Capture and Storage (DACCS), Bioenergy with Carbon Capture and Storage (BECCS), wood in construction, biochar, and enhanced weathering.



# Identified Considerations

**Incentive to decarbonise** – scheme should not weaken any incentive to decarbonise those sectors covered.

**Monitoring reporting and verification (MRV) of emissions reductions.** Includes consideration of additionality, permanence of removal and that a effective MRV will be needed. (This includes in agricultural business for nature-based solutions.)

**Voluntary carbon market:** interaction with UK ETS and ability to attract further investment.

**Double counting:** avoiding double-counting of removals with other schemes.

**UN Article 6:** establishment of a international framework for countries and companies to exchange carbon credits.

**Land management:** recognising additional environmental benefits of nature base solutions. Will need to consider local control and community benefits.

**Phasing and timing** – recognising different GGR technologies are at different stages of development.



# Questions

**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.**

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

**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?**

**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?**

**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?**

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



# Questions on developing a framework of criteria for eligibility for the UK ETS

- **Robust Monitoring, Reporting and Verification (MRV) of emissions**

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

- **Permeance**

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?

156) What are the challenges of integrating non-permanent removals alongside permanent removals in the UK ETS and how can these be overcome?

- **Property Rights**

157) Who should own the rights of a possible GGR allowance or credit in a possible future market - the buyer, or the seller?

158) What can we learn from other countries on ownership and liability for greenhouse gas removals?



# Questions on potential market design

## Market Design

159) Should GGRs be incorporated into the UK ETS or would it be preferable to establish a separate, but linked, market for GGRs?

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?

## Phasing GGRs into the Market

161) How and when could eligible GGRs be phased into a market such as the UK ETS?

162) Should any GGR approaches, or methods be considered for earlier inclusion in a market than others? Why should we consider these?

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?

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





## Reducing Emissions from Agriculture and Land Use - A Suitable MRV

**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?

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

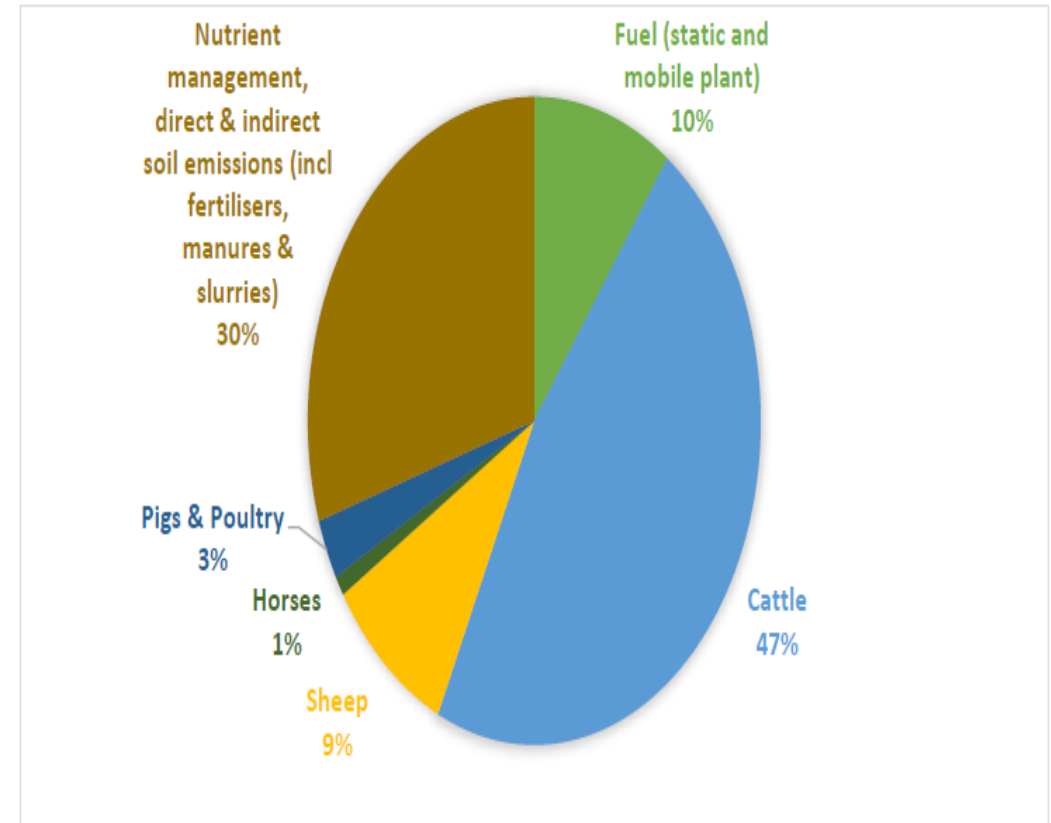
- In the agriculture sector
- In the land use sector

**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?

**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?**

**Figure 8.2: Breakdown of the main sources of all GHG emissions in the agriculture sector (2019/145)**



# CCUS and Transportation

Currently UK ETS only recognises transport of CO2 via pipeline, not shipping, rail, barge or road.

Future industrial sites are likely to be dissuaded from looking for a non-pipeline solution to CO2 abatement as CO2 not transported via pipeline would be subject to the full carbon price, and need to surrender allowances, in the current UK ETS legislation.

Consultation proposes that in addition to allowing for transport via pipeline, the UK ETS be expanded to allow for the transportation of CO2 through other forms of non-pipeline transport by including them as a regulated activity.

## Questions

**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.**

**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?**

**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 (eg. 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.**



## ***Deep Dive: Biomass Sustainability Governance***



# Context for the Proposals

***Consultation is seeking evidence as to whether a more consistent approach to biomass between the UK ETS and other UK policy areas, such as biomass sustainability policy in the heat and power sectors, would be beneficial to participants in the UK ETS.***

- Combustion of solid and gaseous biomass is 'zero-rated' within mixed combustion units.
- Installations that only use biomass as a fuel are exempt.

There are currently no sustainability governance requirements placed on biomass within the UK ETS – as governance arrangements are applied through government support mechanism, mirroring EU ETS approach.

Consultation refers to the treatment of solid and gaseous biomass under the UK ETS – where combustion is used in energy intensive industries or power generation sectors in scope of the UK ETS. This includes:

- Solid biomass (inc waste wood and energy crops)
- Liquid Biomass (or bioliquids) such as waste fats, oils, grease
- Other wastes (e.g. Sewage sludge, slurries, distillery by-products, etc.)

This does not cover biofuels where sustainability criteria is already applied to bioliquids in order to be considered zero rated.



# Biomass Sustainability Governance Proposals

- Sustainability criteria for solid, liquid and gaseous biomass for all installations, are applied using a set of criteria mirroring one of the UK policies which already applies these standards, ensuring a more consistent approach to biomass between the UK ETS and the relevant biomass policies in each sector.
- Require that for installations and combustion units which generate energy (power, heat, etc.) solely through biomass combustion to be exempt from the UK ETS, they must exclusively burn biomass which adheres to the relevant sustainability criteria.
- For plants that fit within the Hospital and Small Emitter (HSE) category (less than 25,000 tonnes of CO<sub>2</sub> per year), the sustainability criteria are applicable for the purpose of (a) assessing eligibility to be a HSE in the second allocation period, (b) calculating of emissions targets and (c) determining whether an installation's reportable emissions exceed the emissions targets. An emissions factor of zero would also only apply to biomass that meets the sustainability criteria. Propose that this change comes into effect from the start of the second allocation period.



# Questions

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



## ***Focus on Proposals for Reviewing 20 MWth Threshold***



# 20MWth threshold and 3MW aggregation threshold call for evidence

The threshold for combustion has been set such that only installations where the combustion of fuels in units with a total rated thermal input exceeding 20 megawatts are operated are required to participate in the UK ETS

Additionally, installations which operate above the 20MWth threshold but below 3MWth may qualify for Hospital and Small Emitters (HSE) status while installations operating above 20MWth but have low emissions qualify as Ultra-Small Emitters (USE).

## ***Consultation considered if these thresholds are set at the right level?***

- Consultation raises concern that the threshold is failing to meet ETS objectives by encouraging smaller installations below the threshold.
- Currently evidence as to how many combustion units exist under the 20MWth threshold is lacking but preliminary analysis has suggested that they might account for almost a third of industrial emissions.
- Government state they Would consider a change in the threshold if it can create a more level playing field by requiring more installations to consider the carbon price. This should not be at the expense of creating adverse distortions in the markets in which these installations operate.





# Questions and Discussion

- 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.
- 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.
- 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.
- 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.
- 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?
- 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.
- 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)



# Next Steps

Second Webinar on UK ETS: Friday 13<sup>th</sup> May, 10.30 – 12.00

Focuses on proposals for Green Gas Removal and Biomass Sustainability. Sign up on the REA events webpage.

Draft Response will be circulated to members by the end of the month.

Any further points should be send to [policy@r-e-a.net](mailto:policy@r-e-a.net), or we are happy to arrange a bi lateral phone call.



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