ERCST
Roundtable on
Climate Change and
Sustainable Transition

Integrating Greenhouse Gas Removals in the UK Emissions Trading Scheme

ERCST Submission to online survey

1. **Do you agree with the Authority's principles for policy design?** (Yes/**No**)
   Please give further details to support your answer.

   Although ERCST would agree with these principles, its final support will depend on the final shape in which these basic principles are implemented.

   There are two very fundamental principles that you do not mention. One is that of cost minimization, and that any feature should work towards minimizing the cost of compliance and decarbonization. This is fundamental to keep industry competitive and viable.

   The second principle is that of technology neutrality. The goal is, as per Article 2 of the UNFCCC to "stabilize greenhouse gases concentration in the atmosphere at a level that would prevent ….". Therefore, the level of application and use of a technology should depend on its ability to reduce emission in the atmosphere at a competitive cost. The role of the regulator is to set the framework that ensures accurate accounting and that one approach or another contributes to the reduction of GHG in the atmosphere.

   It is not, in our view, the role of the regulator to favour any particular technology, provided that they do the job of reducing GHG in the atmosphere. If all is equal, the rest are economic decisions that, in a market economy, rest with management. Should removals be the most economic solution of reducing GHG in the atmosphere, then that should not be prevented from being the preferred choice.

   We also want to emphasize that the reduction of emissions objective needs to be reinterpreted in light of GGR and the principle of technology neutrality. Without GGR, indeed, all emissions would result in rising GHG concentrations in the atmosphere and would require reductions.

   With GGR, this needs to be reinterpreted as emission reductions and removals need, in light of the principle of technology neutrality, need to be put on the same footing. While some will argue that the technology is not ready, untested, not enough storage capacity, etc, the role of the regulator is to ensure that it is a technology that delivers, but not to put limits on what can be achieved though innovation.

2. **Do you agree the Authority should maintain the gross cap for initial integration of GGRs in the UK ETS (Option 2)?** (Yes/**No**)
   Please give further details to support your answer

   Given the statement in Question 1 above, the ERCST preferred option has to be Option 1. Using a GGR removes a ton from the atmosphere and creates additional emission space. That does not detract anything from the ability of the Authority to set the cap as low it is dictated by science. The objective, as per Art 2 of the UNFCCC, is the concentration of GHG in the atmosphere. The UK, as a signatory of the UNFCCC framework of climate change, needs to follow the Convention.

   The options presented in the consultation and their implications are not clear and should be better explained. It is unclear what will trigger the inclusion of GGR in the UK ETS, and the removal of a UKA. The lack of clarity on what triggers the inclusion of GGR reverberates in the choices that we make in answering the rest of the questions.

   We present below our interpretation, but probably many other variations are possible.

   One scenario is that one GGR is made available by a storage site operator, it is then certified, and then automatically integrated in the UK ETS by the Authority, without the need for a buyer. The cost of such GGR, and the price that it will need to be purchased at, will not be subject to any constraints and the incentive of the operator to minimize costs is not there. A reverse auction mechanism should be strongly considered. This will lead to the removal of UKA and the forced use of a GGR in the UK ETS. It is a way to create a storage obligation, but if that is the case, that should clearly stated.

   In this scenario, Option 2 would seem to allow for the integration of GGR as they become available. It is a storage obligation that emerges in time, somewhat unpredictable as no one will know how many GGRs will be available. This will make hedging more difficult and costs unpredictable. Option 3 is an ex-ante integration, essentially clearly creating a storage obligation for the amount of GGR that the Authority will forecast as being available.

3. **How can the UK ETS sustain demand for GGRs in the long-term, taking into account the consideration of setting a new cap (Option 3)?**

   The demand for GGRs should be driven by the market and not set by the Authority. In the case of Option 2 and 3 it seems that the demand is set by the supply. That was tried with the CDM in the EU ETS and the experiment was deemed unsatisfactory. A potential way of additionally incentivising demand for GGRs could be through subsidies or funding programmes, reverse auctioning, CCfDs, etc.

4. **Do you agree that GGR allowances in the UK ETS should be issued ex-post (i.e. after the removal has taken place and been verified)?** (**Yes**/No)
   Please give further details to support your answer

ERCST agrees that GGR allowances in the UK ETS should be issued ex-post, unless a financial mechanism is put into place to guarantee the delivery of GGR, such as a Carbon Central Bank currently being put forward by Prof Edenhofer and others and supported by ERCST.

Right now, in the UK ETS, following the MRVA monitoring cycle, GHGs are emitted and verified. Allowances are given to ETS operators with a 1-year delay following previous year's emissions. ETS operator has the obligation to surrender a number of allowances to cover the amount of verified (and certified) emissions from the previous year. A similar and aligned system should be put in place for GGR allowances.

5. **Does the Authority need to consider any additional measures for the UK ETS to ensure GGR operators are able to arrange offtake agreements?** (**Yes**/No)
   If yes, please provide specific details of which measures should be considered.

   Off-take agreements in which the price is defined in advance can be important solutions for the deployment of GGRs by providing long-term stability and fixed-income security to investors in GGRs.

   The parameters of these contracts play a critical role in their effectiveness. Aiming at encouraging these investments, lowering the risks, and guaranteeing the return in a specific period of time is essential.

   Parameters to be considered in off-take agreements could take the example of Power Purchase Agreements (PPAs), starting with the duration of these contracts and continuing with the concept of these contracts in terms of based competitive auctions, the technologies to be covered, any other terms and conditions which have an impact on the capability of those at hedging risks over the contracting period i.e. indexation rules, collateral requirements risk recovery, etc. All these elements are fundamental in the case in which these contracts become available for GGR operators.

6. **Does the Authority need to consider any specific measures for smaller scale GGR operators, including smaller scale landowners if woodland is included in the scheme?** (Yes/No)
   If yes, please provide specific details of which measures should be considered.

   N.A.

7. **Who should receive the GGR allowance? Please consider whether this would also apply for GGRs that involve multiple actors in the value chain and provide examples.**

   Given the complexity of the GGRs' value chain, GGR allowances are best allocated at the end of the value chain, meaning when the storage takes place. This is addressed specifically to technological solutions.

   According to this model, all the other operators of the value chain (e.g., operators dealing with the capture/removal and transport of GHGs) will be 'feedstock/service

providers' and sell their product/service to the storage operator, which should then receive the GGR allowance and become able to sell it in the market. Following this model, storage operators will also become liable in case of reversals.

In final analysis, all arrangements between the emitter and the rest of the value chain should be of a commercial nature. The storage operator should get the GGR as it also carries the liability for any reversal.

8. **Should allowances from GGRs be differentiated from UKAs and, if so, how?** (Yes/**No**)
Should allowances from GGRs be differentiated from UKAs and, if so, how?

   Allowances from GGRs should not be differentiated from UKAs since market mechanisms should look for simplicity rather than complexity. However, this statement needs to be coloured by the interpretation of Options 2 and 3 in this consultation document.

9. **Do you think that differentiated GGR allowances would attract a higher price than existing emissions allowances and why? To what extent does this depend on the degree of differentiation (e.g. a generic GGR allowance versus a technology specific GGR allowance)?** (**Yes**/No)
Please give further details to support your answer.

   Whether GGR allowances attract a higher price than existing emissions allowance will depend on the scenario/option that is chosen. GGR allowances and UKAs are both used for compliance for 1 tonne of CO2, but GGR allowance will have a higher cost currently and for the near to mid-term.

   This is a complex question to answer given the lack of clarity on Options 2 and 3. In principle GGRs and UKA, if fungible, will have to attract the same price. However, it is unclear that the introduction of GGR will be through a push or pull approach.

   If it is done through a push approach, meaning that GGRs will be introduced in the pool of compliance mechanism without a buyer, then it is possible that the marginal cost will dictate that the price will increase for the whole pool. Alternatively, through a CCfD like mechanism they may be subsidized to bring the cost/price in line with UKA price.

   If the introduction of GGRs is done through a pull approach, then GGRs will enter in the UK ETS compliance only if there is buyer which implies that the price of UKA is high enough or there is some subsidization mechanism which will equalize prices.

   In addition to this, the conditions in the market should be specified. Indeed, if GGR allowances and UKAs have the same function, it will not command a higher price unless other conditions are attached to that (like obligation to buy GGRs). In any case there may be differences in price in the case of technology specific GGR allowance as these technologies vary based on permanence and risk of reversal, image, temporal capacity of the GGR, technology risk, etc. This may lead to different price differentiation.

10. **Will differentiated GGR allowances encourage non-compliance or non-trading entities to purchase these allowances?** (**Yes**/No)
Please give further details to support your answer.

There is a possibility that non-trading and non-compliance entities are incentivised to enter the market and provide the opportunity of arbitrage. It is desirable that they do as they will provide much necessary finance and liquidity.

As long as there is a market, and the expectation to generate profits, non-compliance or non-trading entities will have an incentive to participate in the carbon market.

11. **What should the Authority's role be in facilitating a route to market for allowances from GGRs?**

The authority should define the type of removals considered for compliance, to facilitate transactions in the market, to manage liquidity, and avoid abusive speculative behaviour, and inter-temporal flexibility.

In addition to this, ensuring market delivery of GGRs (i.e., through a carbon bank), defining clear standards (MRV), etc. Based on how options are defined, an obligation to buy may be created. In any case, the preference is that the entry of GGR in the UK ETS is not forced by the regulator but is rather driven by the demand of the market.

Ensuring the availability of GGR ex ante would also give a huge boost to the entry of GGRs in the market.

12. **Do you agree that allowances should only be awarded to UK-based GGRs? We welcome views from all stakeholders including sector-specific considerations.** (**Yes**/No)
Please give further details to support your answer.

As a first step, allowances may only be awarded to UK-based GGRs. The inclusion of UK-based GGRs only. It will encourage the development of technologies and domestic storage. However, strong and rapid consideration should be given to the recognition in the UK ETS of GGRs based outside the UK.

The Paris Agreement includes Art 6 which was specifically created to facilitate matching emissions and removals globally. The net zero goal in the Paris Agreement is not a local net zero but a global net zero.

13. **Do you agree with the proposed permanence framework of both a minimum storage period, a liability measure and a fungibility measure?** (Yes/No)
Please give further details to support your answer.

N.A.

14. **What minimum storage period duration should the Authority set for GGRs entering the UK ETS?**

A minimum storage period of 100 years sounds reasonable.

While the IPCC identifies three different storages of timescale (decades to centuries, centuries to millennia, and 10,000 years), such definition may not be relevant for the scope of integrating GGR into the UK ETS. Indeed, the timescale proposed by the IPCC works on a geological scale, which is quite different from a more 'human-scale' and 'policy-scale' timeframe. Already setting up a storage period of 50 years may be already too long considering the speed by which policies change.

However, IPCC's timescale is based on maximising the positive effects of removals on stabilising the climate, so a compromise is necessary. Setting a minimum storage period of 100 years sounds reasonable.

15. **How should the Authority manage potential reversal events from GGRs? Please consider the liability options outlined above, whether any options exist that have not been considered, and how the potential liability options could be used together or in sequence.**

N.A.

16. **Where should the liability for any re-release of stored emissions apply if there are multiple actors in the GGR value chain?**

No liability for leakage should apply to ETS operators. It should apply to the storage operator that has received GGR allowance.

17. **Should the liability measure differ if the GGR is also subject to a fungibility measure? For example, if the reversal event was avoidable (i.e. within the control of the GGR operator) or unavoidable (i.e. due to factors outside of control of GGR operator)**

Unless an institution is set up to take the responsibility, the only entity that should be liable is the storage operator who has received the GGR allowance. The similarity to other longer-term operational liabilities such as nuclear waste management can be examined.

18. **Should the Authority use a buffer pool or equivalence ratio?** (Buffer pool/ Equivalence ratio)
Please give further details to support your answer.

The preferred option is to use a buffer pool because it is the measure that is mostly adopted by many carbon market actors, as also outlined in the consultation, and it has been proposed as the preferred option under the UNFCCC process, with the UK being a signatory of the Paris Agreement.

19. **How could the Authority set the contribution rate for a buffer pool? Should this be a flat rate contribution across all applicable projects, or should this vary per project?** (Flat rate contribution across all applicable projects/ Vary per project)
Please give further details to support your answer.

The preferred option is to have a combination of both systems (flat rate based on the type of project + a variable percentage based on the specificities of the project). If one option should be chosen, then it should vary per project to reflect all the different elements involved.

20. **Which factors should be considered when determining the appropriate contribution rate for a buffer pool?**

Basic elements include the size of the project, location of the project, duration of the activity and project lifecycle, technology type (nature-based or engineering-based approaches), leakage and reversal risks, co-benefits, and whether it is a cross-border project. However, this list should not be considered exhaustive.

21. **How should the Authority decide which GGRs would be required to contribute to a buffer pool and at what level any threshold should be set for contributions?**

The Authority should issue a set of instructions in which it is pre-decided which GGRs would be required to contribute, possibly based on the type of project and related characteristics (as above in question 20). The set of instructions should be involved in consultation of experts from the involved sectors.

22. **Should buffer pool contribution rates remain fixed over time or could they vary? If they vary how should this be assessed? For example, the Authority could require projects to contribute depending on an assessment of risk at each verification period, and this could change over time.** (Fixed over time/ Variable)
Please give further details to support your answer.

The buffer pool contribution rates should remain fixed over time to keep the system as clear and predictable as much as possible.

23. **How could the Authority design equivalence ratios?**

The preferred option should be the buffer pools as the equivalence ratios could easily become an unfair approach.

24. **Which inputs should be used in determining the appropriate equivalence ratios?**

Inputs should not be directly used, but rather the knowledge provided by experts working on and with these inputs.

25. **Should these equivalence ratios be fixed over time or regularly reviewed and amended?** (Fixed over time/ Regularly reviewed and amended)
    Please give further details to support your answer.

The equivalence ratios should remain fixed over time to keep the system as clear and predictable as much as possible.

26. **Should new ex-post woodland units generated in line with UK Woodland Carbon Code standards be considered for inclusion in the UK ETS? Please base your response on the evidence outlined around permanence, costs and wider land management impacts, and on the policy options outlined in the rest of this consultation.** (Yes/No)
    Please give further details to support your answer.

    N.A.

27. **If the Authority does include new ex-post woodland units generated under the UK Woodland Carbon Code in the UK ETS, should any changes be made to the Woodland Carbon Code? For example, this could include changing the 20% flat-rate buffer contribution, or changes to the MRV and measures to mitigate wider land management impacts. Details of the woodland carbon code can be found here: https://woodlandcarboncode.org.uk/standard-and-guidance** (Yes - changes should be made/ No - no changes should be made)
    Please give further details to support your answer.

    N.A.

28. **If the Authority does include new ex-post woodland units generated under the UK Woodland Carbon Code in the UK ETS, should any measures be taken to mitigate potential social and cultural impacts? Please provide details of the impacts, including consideration of impacts on different land ownership models, and potential measures.**

    N.A.

29. **Do you agree with the Authority's assessment of peatland restoration? Please explain your answer.** (Yes/No)
    Please give further details to support your answer.

    N.A.

30. **Do you agree with the Authority's assessment that, by maintaining the gross cap on emissions, additional controls could be used to target wider impacts but not mitigation deterrence?** (Yes/**No**)
    Please give further details to support your answer.

ERCST believes in the principle of technology neutrality and does not support mitigation deterrence since it does not align with the principle of technology neutrality. The final objective is to reduce the amount of CO_2 in the atmosphere, so as long as CO_2 in the atmosphere is removed, other elements are not relevant. Pricing, instead, is a technology-neutral approach by definition.

31. **To what extent will GGR operators seek to sell into voluntary markets and will this provide a control on GGR supply entering the UK ETS?**

    GGR operators should be free to sell GGRs in any market. In any case, given the cost/price differential, it is unlikely that GGR will penetrate the VCM in any significant quantity.

32. **Should the Authority consider the use of demand controls to target any impacts other than mitigation deterrence?**

    No further demand control measures should be introduced a priori unless it is demonstrated that such measure is needed. So, no demand control measure for specific sectors should be introduced and the market shall be free to decide and work as there are already enough constraints imposed on emitters.

33. **Do you agree with the Authority's minded to position to adopt supply controls to target other objectives, such as phasing GGR integration or addressing market impacts? Please consider how supply controls can be used in a way that is compatible with providing a strong demand signal for GGRs.** (Yes/**No**)
    Please give further details to support your answer.

    ERCST does not agree with setting supply controls as there is already enough regulation on the market. Also, supply and demand control mechanisms in a market economy are usually not a great idea as they lead to inefficient economies and need to be removed at greater costs, as proven historically.

    Moreover, since the ETS is not a revenue-making mechanism, it is difficult to answer this question as it also depends on the integration of the different options, as it is not clear whether the gradual integration of GGR as per option 2 is done on a voluntary basis or not.

34. **What would be the optimal timing for GGRs to be integrated into the UK ETS, taking into account the considerations set out above?** Please explain your answer with reference to impacts on both the UK ETS and GGR deployment.

    GGRs should be integrated into the ETS as soon as possible. The earlier we start scaling up, the cheaper it will be and the sooner GGRs can contribute to achieving net zero. The next ETS period must focus on how to enable the industry to really achieve the targets and not lose competitiveness, with GGRs meant to play a role in achieving net zero.

The inclusion of GGRs in the UK ETS will be essential to prevent carbon prices from going too high and causing further deindustrialization.

With no GGR allowances issued before 2030, the risk is that the prices of emission allowances in the UK ETS will become unbearably high for the industry. Moreover, the remaining residual emissions will need to be compensated in order for the country to achieve its climate neutrality target.

The integration of GGR in the UK ETS should be done by 2028 at the latest, in parallel with the inclusion of waste incineration looks like a logical approach. This is true due to the potential of waste to generate negative emissions through the capture and storage of biogenic carbon.