REA response to UK Emissions Trading Scheme: Non-pipeline transportation of carbon dioxide consultation

About the REA

The REA (Renewable Energy Association) is pleased to submit this response. The REA represents industry stakeholders from across the sector and includes dedicated member forums focused on green gas & hydrogen, biomass power, renewable transport fuels, biomass heat, thermal storage and energy from waste (including advanced conversion technologies). Our members include generators, project developers, heat suppliers, investors, equipment producers and service providers. Members range in size from major multinationals to sole traders. There are around 500 corporate members of the REA, making it the largest renewable energy trade association in the UK.

Note we have not answered questions 6-11 (shipping and multiport journeys) as we do not have adequate data to respond to that section.

Regulatory approach

1. **What are your views on the proposed regulatory framework? You may wish to consider: the choice not to make NPT of CO2 a regulated activity; the metering, monitoring, permitting implications; the approach to fugitive emissions, and any other practical implications.**

We fully support the need to ensure a feasible market for CO_2 capture and storage with NPT. The ongoing government support for Bioenergy Carbon Capture and Storage (BECCS) will result in the increased retrofit of existing projects and drive new ones. However, as these assets vary in scale and are located throughout the country, including outside the proposed carbon capture clusters, getting the framework right for NPT is critical for ensuring a just transition to net zero.

It is important that as the NPT framework is developed, any proposed contracts and regulations should not disincentivise the use of NPT. We support a framework that is clear and straightforward, as one of the core objectives should be about stimulating the market.

Emitters typically do not have control over transport and storage infrastructure, meaning they can't necessarily control or manage potential risk around carbon leakage directly but would, in the minded to position, still hold all the risk. Asking emitters/CCS installations to take on extra liability downstream could make projects less investable as the risk is considered too high.

Once a capture unit has satisfied MRV requirements and confirmed that the next stationary intermediary has received the CO2, they should be granted their UK ETS allowance and able to trade. This will help boost confidence in NPT CCS investment for emitters and balance risk across the chain.

However, we recognise the need to stimulate the market and create a level playing field, while at the same time not overburdening or overregulating the transport operators who do not own the CO_2. As such, we do not believe that land transport of CO2 necessitates regulation under the ETS. Instead, it should be left to the operator in question to decide how they want to account for their cargo. For example, they could sub-contract to the emitter, an ETS regulated hub, or a transport and storage company, who would assume and price the ETS obligations for any losses in transit. Similarly, they themselves could be sub-contracted by an ETS regulated hub, or alternatively, they could choose to be ETS regulated directly.

This position would enable those transporting CO2 for utilisation purposes, including AD plants who often rely on road transport, to continue producing and trading biogenic CO2 effectively without additional UK ETS regulatory burden. Maintaining the growth of this nascent market will be crucial given the growing demand for biogenic CO2 for products such e-fuels (including SAF), bioplastics, and chemical products.

Lastly, DESNZ should ensure that the GGR business model is inclusive of NPT options and functioning within the UK ETS, as this will provide operators and investors with the clarity and confidence to invest and deliver CCS at scale.

2. **Are there any issues or concerns, not set out in our proposals, that the Authority should consider or address in order to enable this framework? Please provide detail/evidence where appropriate.**

GGR business model alignment

As outlined in our response to question one, DESNZ should ensure that the GGR business model is inclusive of NPT options and functioning within the UK ETS to enable some REA members who start coming to the end of their Renewables Obligations (RO) from 2027 to move to a GGR business model.

London Protocol

The London Protocol was amended in 2006 and in 2009 to create a mechanism for cross-border transportation of CO_2. If a party submits a declaration with the International Maritime Organisation (IMO) – as the UK has done – it can act as if the 2009 amendment is in force and export CO_2 to any country provided it complies with same amendment. While

a number of countries have declarations with the IMO, many others do not – this should be reflected in any cross-border transportation framework.

Transport

3. **Between Option 1 and Option 2, which is your preferred approach? Please give reasons for your answer. You may wish to consider decarbonisation benefits, MRV/compliance implications, and possible impacts on accessibility of NPT.**

Option 1 offers a sensible option if road or transport is assumed to be a generic diesel/biofuel blend, and a single factor for rail seems appropriate.

Option 2 could risk overburdening transport providers with costly MRV when road/rail transport itself does not yet fall within the scope of the ETS. As such, any MRV *required* by transport companies should be lighter touch.

However, the UK ETS should want to reward greater GHG savings and reward emitters/T&SCos for doing better than average in this area, e.g. by using electric or high biofuel vehicles. We would therefore recommend that service operators are allowed to use actual values if they are able to demonstrate improvements, opting-in to Option 2 to prove their transport is low-carbon. If a transport company had a fleet of a similar type e.g. electric, it would not be that burdensome to calculate a factor to apply across journeys, and this type of MRV is likely to become more common for those looking to reduce emissions across supply chains.

4. **What are your views of the merits of Option 1/Option 2 vs Option 3? Please provide as much detail as possible on direct and associated costs of our proposed approaches to transport emissions, in the context of the overall costs of NPT journeys.**

See Q3 for Option 1/2.

Regarding option 3, it may be worth noting that regulating transport emissions is likely to disincentivise emitters from considering NPT projects as the deemed CO2 captured from their plants will be less than at pipeline solutions. The point here is that this is due to factors external to the amount of CO2 entering storage which would be unique to NPT – pipeline transport is not subject to any subtractions for process/embodied emissions e.g. from building pipelines or pumping. Transport emissions beyond the CO2 boundary e.g. power, transport or steel, could be included in those sections rather than via NPT regulation.

However, overall, we agree that credits received for capturing carbon should match the net carbon benefit achieved to maintain the integrity of the market, and factoring in transport emissions could have the added benefit of incentivising take up of low carbon-transport methods, so we much prefer our recommended combination of option 1 and 2 as described in Q3, with opt-in actual transport emission MRV.

5. **What are your views on the possible emissions factors we propose for road and rail?**

We do not have a comment on specific emissions factors, but as outlined in our response to question 1, the factors chosen should be reputable and transparent, with clarity on the process of revisions to avoid shocks for developers and operators over time.

Intermediate Storage

12. **What are your views on the three options presented for the regulation of intermediate storage? Would you suggest any alternative approaches? In your answer, you may wish to consider: the possible infrastructure/compliance costs of each option; compatibility with any other likely metering or monitoring requirements; potential impacts on the viability of any possible form of NPT; and whether all types of intermediate storage and associated emissions would be captured.**

We would advise against option 1. Leaving emitters to retain responsibility for the full duration of the NPT journey would make delivery of CCS projects far more challenging. Emitters do not necessarily have control over the T&S infrastructure downstream so may have limited options for risk mitigation regarding CO2 release, making CCS investment less appealing. Using rules of thumb to attribute leakage down the chain is a poor option given the risk of wrongly attributing/burdening a store or emitter with a bad leak.

Option 2 is our preferred option for accurately attributing and transferring liability. UK ETS legislation already regulates emissions from intermediate storage facilities at capture plants and in the pipeline network, so NPT intermediate storage and hubs should be similar. Project investors are likely to require information about the volume and quality of CO2 from each source. Therefore, to ensure the correct allocation of ETS liabilities, and to accurately track volumes and emissions throughout the NPT chain, measurements of CO2 will need to be recorded at each store.

Option 3, a mixed regulatory approach, may also be appropriate for protecting smaller single-source stores from MRV burden if required, and ETS emitters will likely prefer an ETS regulated store, so a loophole is unlikely. However, deciding which installations are to be

regulated could be overly interventionist, and most stores are likely to be undertaking the necessary MRV already.

The above focuses on emitters regulated under the ETS, but we also note that DESNZ should consider GGR providers, particularly from the AD industry, who are likely to be collecting purely biogenic CO_2 from decentralised sites and aggregating prior to offtake to the T&SCo. Leaving open a pathway that maintains a lighter touch for those only dealing in biogenic CO_2 could be appropriate. Biogenic CO_2 volumes could be metered in and out of intermediate storage, with any fugitive emissions would be zero rated based on their biogenic origin. Full NPT emissions would be captured within the LCA required to accredit GGRs. It may be possible to weave this option into Option 3 or could represent a further approach outside of the considered options so far.

13. **Do you have a preferred option, and if so, which one? If you would suggest any other approach to the regulation of intermediate stores, please outline it here.**

Option 2, as above.

Obligation Transfer and CO2 Mixing

- **Option 1: UK ETS responsibility transfers at each installation in the chain, with each major intermediate store treated as a full installation. Allows for greater oversight of the NPT journey.**
- **Option 2: UK ETS responsibility transfers when CO_2 reaches final geological storage or the T&S pipeline network. Mass balance/first-in-first out approaches are used to track and assign responsibility for CO_2 as it moves through the NPT journey.**

14. **Please give your opinion on the two proposed options for UK ETS custody transfer, and state whether you have a preference, explaining the reasons for your views.**

If DESNZ opts to adopt the alternative option for the NPT regulatory framework, as outlined in our response to question 1, then we suggest option 1 would be most appropriate here as all intermediate stores would choose to be ETS regulated and assume responsibility for their emissions and any carbon leakage.

15. **Please give your opinion on the three proposed options for regulating the mixture of CO2, and state whether you have a preference, explaining the reasons for your views.**

Given that some sites will likely be receiving a mixture of piped and transported CO_2, option 1 would not be suitable, Additionally, CO_2 is already transported all over the country, primarily for utilisation, and there is no requirement to use standardised containers, so we would not want to see specific requirements introduced.

We would support option 2 or 3. Option 2 may work well if all installations become ETS regulated, while Option 3 allows more flexibility, particularly with consideration to GGRs.

GGRs, ETS cap, and Implementation timeline

16. **Does this NPT model have any implications for GGRs if they are included in the UK ETS?**

MRV to calculate the biogenic emissions from energy from waste facilities will already be in place for the waste ETS expansion/GGR eligibility. This should be allocated upon departure from an emitter, and any deductions to GGRs post departure will need to be determined by a Government-endorsed methodology, for both pipeline and NPT. There should not be any specific interaction with NPT and GGRs that we are aware of.

As mentioned in Q1, it is also urgent that clarity is given on the GGR Business Model being inclusive of NPT options.

17. **Do you agree with our position on cap adjustment for NPT?**

Agree.

18. **What are your views on this implementation timeline?**

The Authority had previously confirmed intention to implement this change by the mid-2020s, but UK ETS NPT regulations now look to be implemented in the late 2020s. This delay risks disrupting the advancement of NPT and could lead to pipeline locations being favoured, given the uncertainty and risk around NPT projects. This is despite the value for money many NPT projects are placed to offer relative to pipeline options.

Regulations should be confirmed as soon as possible – before CCS facilities come online – to encourage bids and allow the market to structure itself so that NPT projects can enter CfD funding rounds as quickly as possible. There are also GGR projects that will be ready before cluster projects, including biomethane plants who are already capturing biogenic CO_2 but using it for utilisation, who will want to deliver via NPT pathways as soon as

possible. Decisions are needed imminently to ensure a level playing field between NPT and pipeline solutions.

Additionally, many of our biomass and energy from waste members' installations will lose support under the Renewables Obligation scheme, starting from 2027. Given the large amount of time needed to plan and install CCS technology and the certainty on regulation/business models needed for investment and construction, we would also recommend that DESNZ consider a transitional support scheme to allow these plants to remain operational and transition to CCS, rather than seeing the further loss of assets primed to contribute to GGRs.