DRAFT 22/10/2025 to provide opportunity for REA member feedback – not final or for public circulation.

CCUS Future Network Strategy

Submission from the Renewable Energy Association [DRAFT]

The Renewable Energy Association (REA) is a not-for-profit trade association representing renewable energy and clean technology producers across the entire value chain. We have around 500 corporate members; making us the largest renewable energy and clean tech trade association in the UK.

We have members involved in wide range of renewable and low carbon technologies across power, heat, transport, and circular bioresources. This includes members developing both engineered and nature based GGRs such as BECCS and WECCS, and agricultural land management techniques (including the production of biochar, addition of organic materials to soils, and diversification of crop species). More info available at www.r-e-a.net.

Key Ask

Within the wider GGR sector, the REA specialises in bioenergy (biomass, biogas) and energy from waste carbon capture. These forms of technology not only provide for our negative emissions ambitions but generate critical, dispatchable power and heat.

We want to ensure that the government enables the private sector to deliver on these forms of carbon capture – including that **distributed producers of biogenic CO2 which will rely on non-pipeline transport (NPT) are considered appropriately in future developments of the UK's CCUS networks**. We are supportive of a 'portfolio' approach to the UK's GGR ambitions which requires adequate consideration of both large- and small-scale solutions.

Enabling access for NPT to Track 1 and 2 clusters, supporting the logistics and aggregation infrastructure required, and guaranteeing a transparent, public T&S price will unlock early negative emissions, reduce reliance on subsidy mechanisms such as the RSA and GSP, and accelerate a resilient, market-led CCUS sector. NPT also strengthens network resilience, mitigates stranded-asset risks, and can deliver dispatchable, flexible CO_2 flows to maintain sequestration targets. **While we are supportive of moving away from the RSA and GSP towards a market-led CCUS sector, we emphasise that this can only be done through adequate government investment and signalling.**

We encourage DESNZ to continue to engage with us, and our members, on enabling this critical sector. Please contact our GGR Team; James Heath jheath@r-e-a.net and Helen Motwani hmotwani@r-e-a.net

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REA

Detailed Submission

Question	Answer
1. Who are you responding on behalf of, and what is your interest in this call for evidence?	We are responding on behalf of our ~500 corporate members as the UK's Renewable Energy Association. Within the wider GGR sector, we specialise in bioenergy (biomass, biogas) and energy from waste carbon capture policy and public affairs. We are interested in ensuring that the government enables the private sector to deliver on bioenergy and energy from waste carbon capture – including that distributed producers of biogenic CO2 which will rely on non-pipeline transport (NPT) are considered appropriately in future developments of the UK's CCUS networks. We are supportive of a 'portfolio' approach to the UK's GGR ambitions which requires adequate consideration of both large- and small-scale solutions.
2. In responding you confirm that you consent to members of the team reaching out for clarifications on responses provided, please provide contact details.	Yes.
3. In responding you confirm that you give permission for your anonymised responses to be shared with external advisors, ALBs and regulators where appropriate for the purpose of analysis.	Yes.
4. What are the key positive drivers for investment from your perspective that would remove the need for RSA and GSP support?	The key driver for investment that would reduce the need for RSA and GSP support would be the provision of infrastructure, or funding for said infrastructure (via DESNZ and the GGR business model or by GBE or another suitable fund) to open up T&S networks to NPT of biogenic CO2 derived from biogas. This would result in an increase in demand for storage services and provide a steady state supply of biogenic CO2 derived from biogas that would not be seasonally dependent, thereby helping to prevent payment of the RSA.

	These projects can also leverage revenue from realising engineered GGRs in VCMs (or in future regulated markets like the UK ETS) to guard against any issues with revenue gaps and mitigate potential stranded assets. Moreover, giving access to Track 1 and 2 clusters for biogenic CO2 NPT will allow UK businesses a means to deliver high quality engineered GGRs before much of the rest of the world and providing: • negative emissions before 2030, helping meet the 4th and 5th carbon budget • new revenue streams for the waste and biomethane industries, further incentivising the production of green energy from these sectors NPT of biogenic CO2 can also help to guard against RSA and GSP by being a dispatchable source of CO2 that can be directed flexibly towards different T&S networks depending on the need of each network. This can mitigate any temporary loss of CO2 supply from supplier outages due to planned or unplanned maintenance and ensure sequestration targets are hit.
5. What do current, and prospective network operators predict needs to be done to mitigate and manage future demand fluctuations and stranded asset risks?	No comment.
6. How can commercial insurance products be tailored to better characterise the unique risks associated with CO2 transport and storage, such as leakage and stranded asset risks?	No comment.
7. How can cross-sector collaboration (from	Cross-sector collaboration should focus on improving transparency, standardisation, and risk-sharing across the CO_2 value chain. Financiers and insurers require greater visibility of network utilisation, storage performance, and long-term

financiers and insurance providers) be optimised to enhance financing and investment in future CO2 networks?	liability in order to assess and price risk. Government and industry should therefore develop a consistent framework for data sharing and monitoring from Track 1 and 2 projects, alongside standardised offtake and T&S contracts to reduce transaction costs and improve bankability—particularly for smaller distributed biogenic CO_2 sources. Establishing a recognised risk taxonomy and encouraging development of tailored financial and insurance instruments—such as pooled risk facilities or CO_2 storage performance guarantees—would further de-risk investment. Collaboration between DESNZ, Great British Energy, and private finance could also pilot blended finance for enabling infrastructure like aggregation hubs and non-pipeline transport (NPT) logistics, helping crowd in private capital and accelerate delivery of a commercially sustainable CCUS market.
8. Should government evolve the nature of support made available to future T&S networks, to help enable market transition? Please set out your rationale and suggest any steps that could be taken.	There are three changes required to support T&S networks: 1. Targeted support for developing the infrastructure required for the acceptance of NPT of distributed biogenic CO2 to the Track 1 and 2 clusters. The infrastructure to be supported could include anything from injection hubs to intermediate storage and aggregation facilities. 2. Expand the licensed T&S operators to encompass NPT logistics to facilitate connection of distributed biogenic CO2 sources. 3. Provide the support required to guarantee a public T&S price, reducing uncertainty for CO2 producers in building business cases for new CO2 capture projects. We are supportive of a ‘portfolio’ approach to the UK’s GGR ambitions which requires adequate consideration of both large- and small-scale solutions. For example, the smaller size of the typical projects capturing biogenic CO2 from biogas present a lower barrier to securing finance. Combined with opening these projects to the future GGR business model, these projects could provide up to 1 MtCO2/year in negative emissions by 2030 to help reach the UKs carbon.
9. How can co-investment from bodies such as NWF/GBE best play a role in deploying future CO2 networks and help enable market transition?	Great British Energy should play a key role in providing capital (via equity stakes) to reduce upfront cost barriers to capture projects and to help build the infrastructure needed to enable NPT of CO2 to Track 1 and 2 clusters both of which will increase demand for sequestration services. NPT infrastructure would support the delivery of GBE’s investment and development activities priorities, as set out in its SPS, including investing in developed projects that are entering construction (i.e. track 1 clusters), co-developing and building projects through equity stakes and joint ventures.

	Providing this support can also help to insulate CO_2 providers from unknowns around T&S costs thereby increasing the number of viable CO_2 sources and in the case of NPT, enable a broader range of biogenic CO_2 producers to underpin new networks and provide negative emissions before 2030 to help the carbon budgets. It is worth also noting again the dispatchable benefit of bioenergy and energy from waste carbon capture, in relation to the strategic aims of Great British Energy; not just providing for negative emissions but providing critical energy infrastructure.
10.How can the evolution of the Code and capacity products be optimised to enhance network utilisation and reduce reliance for the T&S operator, on external financial support mechanisms?	Prioritising CO_2 sources that provide steady state non-seasonal supply to T&S operators like landfill gas, energy from waste and non-crop anaerobic digestion can help to increase reliability of supply and minimise support by reducing the likelihood of triggering the RSA. Furthermore, prioritising consistent NPT sources of biogenic CO_2 will mean that any variable sources of CO_2 supporting low carbon electricity generation should have a reduced impact on the likelihood of triggering RSA. A balance of fixed capacity charging and variable charging based on network utilisation would provide an incentive for a minimum consistent supply of CO_2 to T&S networks and reduce reliance on subsidy. Finally, NPT producers could play a key role in providing floating capacity for all networks if such a flexible contract were made possible – this could ensure that NPT CO_2 could be directed at the T&S network that is most in need of extra capacity given the more flexible nature of NPT CO_2. Again, this would require transparency in T&S costs across clusters to be viable.
11.What specific flexible capacity products, interruptible offerings and/or network access would be required by different user types to best address the inefficiencies caused by seasonal fluctuation or another other reason for	See answer above.

variable CO2 Flows under the current Code?	
12.Does industry see a need for government to help define wider commercialisation priorities for the Network Code? Or are priorities sufficiently clear that industry can deliver on them, outside of or through an Ofgem SCR?	We believe that government guidance on commercialisation priorities is essential to ensure the Network Code supports a diverse, investable CCUS market. Without clear direction, smaller emitters, biogenic CO_2 producers, and non-pipeline transport (NPT) participants face significant uncertainty, which risks delaying investment and limiting participation. DESNZ should provide a clear framework for how commercial rules—including access rights, T&S charging, and liability allocation—will evolve across Track 1, 2, and future clusters, ensuring effective interoperability between pipeline and NPT systems. The more clarity the better, and the sooner the better. While an Ofgem Significant Code Review (SCR) can codify detailed arrangements, early policy leadership from government is critical to prevent market fragmentation and enable timely private sector delivery. Providing clarity now allows industry to co-develop the Network Code more efficiently, reduces regulatory risk, and accelerates the deployment of CCUS infrastructure and negative emissions across the UK.
13.What are the key considerations for spatial planning and optimisation when integrating CCUS with wider energy and industrial systems, particularly in relation to existing and new infrastructure for hydrogen and natural gas?	A key consideration is where to locate NPT entry points in relation to current and future CO2 pipelines to optimise logistics, minimise costs for NPT biogenic CO2 producers and maximise ease of access. A hybrid approach to spatial planning and optimisation with aspects of top down and bottom-up assessment would be beneficial for biogenic CO2 producers likely to use NPT. Top-down assessment could help map where gas network capacity exists on lower pressure networks and therefore allow planning for T&S networks to account for this potential demand and the logistical viability of transporting biogenic by road or rail to these networks. Additionally, this would allow for planning of NPT entry points to be located near to major road and rail links to maximise access and minimise local disruption. Bottom-up assessment could help understand whether NPT entry points could be better placed within the Track 1 and 2 clusters, along new pipeline routes (or potential expansion of these clusters inland) or justify a pipeline to a purpose-built NPT entry point if enough biogenic CO2 producers are clustered closely together.

14.How can the resilience and redundancy of CO2 networks be enhanced to mitigate the risks associated with single-point failures and ensure continuous operation during maintenance or unforeseen outages?	The role of NPT of CO2 in providing redundancy and resilience has been recognised in the text included in the call for evidence, but more can be done to bring this forward into the 2020s as highlighted in response to Questions 4, 8 and 9 above.
15.Is there potential for different roles and responsibilities on the planning of future network build-out and new connections? What would the advantages and disadvantages be of any alternatives?	No comment / TBC.
16.What benefits, disbenefits, complexities and challenges do you believe disaggregation of the Licence will bring?	No comment / TBC.
17.Do the two operator models as presented above show merit and meet expectations for a wider system model approach? Are there any significant benefits or challenges that either model presents from	No comment / TBC.

your perspective? Are there any other models you would propose?	
18.What broad provisions/concepts within the Code and accompanying contractual arrangements do you believe require further evolution to support the unbundling of network entities and manage the cross-chain risks that unbundling might create?	No comment / TBC.
19.What can the UK learn from the various delivery approaches in use by nearby countries, and could any learnings be beneficially applied in the UK context? Please include thoughts in respect of operating model implications.	No comment / TBC.
20.How do respondents envision the incorporation of non-government backed operators and users being realised and what do you believe are the key requirements for	No comment / TBC.

their inclusion in a timely manner?	
21.What key enabling factors/steps does industry see as being needed for a market transition phase to enable growth in a self-sustaining market? Are there any other significant considerations, benefits or challenges that you believe could impact market transition that have not been discussed within this document?	A key factor in achieving a market transition in the T&S networks is greater transparency and future certainty on costs, services and charges from the T&S networks and greater clarity around the infrastructure required to facilitate NPT. Without this, NPT project developers have significant uncertainty over when and how they can connect to T&S networks and how much it will cost to sequester CO2. As a result, biogenic CO2 producers will not be able to build business cases and attract the capital investment and financing required to build unsubsidised GGR projects and deliver negative emissions in the 2020s.
22.What does industry believe is within their power to do to aid in market transition as discussed in this document?	Industry can play a critical role in enabling the CCUS market transition by committing to early deployment of both large-scale and distributed CO_2 capture projects, including biogenic sources relying on non-pipeline transport (NPT). However, as articulated in this response, the industry needs clarity from government in order to enable this. REA members stand ready to deliver sustainable carbon removals through BECCS, WECCS and other modular solutions - provided there's a stable, long-term framework that rewards verified outcomes and enables early deployment.