

GREENHOUSE GAS REMOVAL TECHNOLOGIES STUDY

Call for evidence

**NATIONAL
INFRASTRUCTURE
COMMISSION**

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Introduction

The government has asked the National Infrastructure Commission to provide recommendations on the technologies that should be deployed to remove greenhouse gases from the atmosphere and deliver negative emissions.

Our approach will be informed by the terms of reference for the [Greenhouse Gas Removal Technologies Study](#). The focus will be on policies needed to incentivise the rollout of these technologies and the timeline for decisions that need to be made by government to enable the UK to use greenhouse gas removal technologies to support delivery of a net zero economy.

The study is complementary to wider consultation by government on the role of greenhouse gas removal technologies. In undertaking its independent study, the Commission will:

- 1.** assess Greenhouse Gas Removal (GGR) technologies to understand technology readiness levels, investment needed, input requirements, output levels and the best locations for GGR technologies.
- 2.** consider market mechanisms and policy frameworks to support deployment and ongoing operation.
- 3.** consider the required development and deployment timelines from both a policy, engineering and planning perspective to support the setting of realistic targets for government on when actions will be needed.

The Commission is limiting the scope of the study to engineering-based approaches with Direct Air Carbon Capture and Storage (DACCS) and Bioenergy with Carbon Capture and Storage (BECCS) being the most developed options. Nature-based solutions are likely to be an important part of the system to reduce emissions but they are out of scope of this study.

The Department of Business, Energy and Industrial Strategy (BEIS) [Greenhouse Gas Removals Call for Evidence](#) is also looking at GGR technologies and it covers the broader role of GGRs, including nature-based approaches and options for GGR monitoring and reporting. The Commission is interested in some of the areas covered by the BEIS call for evidence and there are related questions included in this call for evidence. Please see the 'How to respond' section for details on how you can align your response to this call for evidence with your submission to BEIS. The Commission's recommendations will feed into the government's broader GGR strategic approach.

Questions

Evaluation of GGR Technologies

1. What technological approaches do you consider fall under the two categories of GGR technologies covered by this study of BECCS (including biogenic waste with CCS) and DACCS? Are there any others that we should consider?
2. What are the constraints (beyond funding) to the potential size of a UK-based GGR industry? At what point do these constraints come into effect and impact the development of adequate capacity to meet the net zero ambition? Constraints could include requirements for inputs, e.g. sustainable biomass, and infrastructure and accounting requirements.

Market mechanisms and policy frameworks

3. What are the current barriers to deploying GGR technologies at scale in the UK?
4. Can these barriers be overcome in time through delivery of new government policy mechanisms? If yes, what policy do you consider could be applied, why and by when? If no, what other actions are necessary and by whom?
5. Are there existing policies that will need to be adjusted to enable the development and deployment of the different GGR technologies?
6. What principles should guide the design of a funding framework for GGR infrastructure to ensure fairness in paying for the costs of deploying and operating this infrastructure and address distributional impacts challenges?
7. What policy mechanisms could be used in the short term to catalyse the initial deployment of GGR technologies?
8. Is there evidence of lessons from other sectors or countries that can inform the development of the policy framework for GGR technologies in the UK?

Development and deployment

9. Considering the current level of development of relevant technologies, from an engineering and planning perspective, how long would it take to get these technologies to the stage of being able to be deployed? And to the stage for construction of plants?
10. Are there parts of the end-to-end GGR delivery chain that only government can provide, or will adequately designed market mechanisms be enough to unlock the delivery chain?
11. What comparative advantage might the UK have in developing and deploying GGR technologies or in any future global market for negative emissions?
12. What do you consider to be the regional impacts of deploying GGR technologies at scale? This should cover both positive and negative impacts.

How to respond

Please provide sources and references, examples, data and evidence to support your responses where possible. We encourage responses to be as succinct as possible and to be no longer than 20 pages in total (not including supplementary supporting evidence).

There is a close alignment between some of the questions in this call for evidence and those in the call for evidence issued by BEIS closing on 26th February. As the General Data Protection Regulation (GDPR) restricts the sharing of your returns and responses, we are open to receiving your submission to BEIS on relevant questions.

Responses should be emailed to: negativeemissions@nic.gov.uk and the deadline for the return of responses is **3rd March 2021**.

Evidence will be reviewed thereafter by the Commission. If further information or clarification is required, the Commission Secretariat will contact you.

The Commission is not planning to accept responses to the call for evidence in hard copy. Please contact the Commission by the email address above if this poses a problem for your response. Representative groups responding to this call for evidence are asked to give a summary of the people and organisations they represent and, where relevant, who else they have consulted in reaching their conclusions when they respond.

FoI and privacy statements

There may be occasions when the Commission will share the information you provide, including any personal data, with external analysts. This is for the purposes of call for evidence response analysis only. The Commission's privacy policy can be found [here](#). We may also publish any responses received to this call for evidence, excluding personal data. However, information provided in response to this call for evidence, including personal information, may be subject to publication or disclosure in accordance with the Freedom of Information Act 2000 (FOIA) or other relevant legislation.

If you want information that you provide to be treated as confidential please be aware that, under the FOIA, there is a statutory code of practice with which public authorities must comply and which deals, amongst other things, with obligations of confidentiality. In view of this, it would be helpful if you could explain to the Commission why you regard the information you have provided as confidential.

If the Commission receives a request for disclosure of the information, it will take full account of your explanation, but cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Commission. The Commission is subject to legal duties which may require the release of information under the Freedom of Information Act 2000 or any other applicable legislation or codes of practice governing access to information.

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