

How to increase private investment in carbon capture and storage networks

August 2026

Summary

The government faces a trilemma around its support of carbon capture and storage (CCS) infrastructure, centred on three big questions:

- **How to maximise success in futureproofing foundational UK industries** which are ‘hard to abate’ (ie where it is expensive or challenging to reduce or eliminate greenhouse gas emissions). **Policy needs to support the timely delivery and operational reliability of carbon storage capacity to ensure the future competitiveness of sectors like cement and chemicals where there are no viable alternatives.**
- **How to minimise public costs.** It will be important to protect the public from increased costs for CCS subsidies via energy bills and taxes, when the majority of people do not support taxpayer funded engineered carbon storage.¹
- **How to encourage more efficient emissions reductions** and prevent the prolonged use of fossil fuels. **Large, shared carbon storage networks are long lived assets and without foresight of the proportion of emissions that will be captured at sites, the infrastructure built could lock in ongoing emissions.**

The previous Conservative government published a CCUS vision paper, proposing public funding as an initial catalyst and derisking strategy to create a CCS sector “largely free of government support”.² This plan was the first of its kind in the world, setting out how the UK could not only use its geological storage opportunities for domestic abatement, but also charge other countries to store their carbon emissions.

In 2025, £21.7 billion was committed by the Labour government to fund the first tranche of CCS clusters, known as Track-1. The long term commercialisation strategy appears unchanged from the previous government’s plan, reliant on high and stable domestic carbon prices (and stable international prices, if storage capacity is exported).

Today, carbon prices are too low and volatile to incentivise long term private capital investment in this technology. The next tranche of funding (for Track-2) will need to be finalised by the 2027 spending review.

There is expectation from the oil and gas industry that subsidies are the only way to fund CCS, so now is a critical time to reassess the policy priorities and clarify its route to commercialisation.³

In this briefing, we outline a solution to balancing policy priorities, so carbon storage networks are built and largely free of government support, without deterring climate change mitigation. This idea, proposed by others too, is a ‘carbon takeback obligation’, or CTBO. We look at the role of CCS networks,

the cost of the status quo and what a fair business model for carbon transport and storage would look like.

Our conclusion is that lessons learnt from Track-1 clusters should inform any future large-scale CCS plans for the UK and any future funding for CCS must align with producer responsibility principles. The government should:

Before Track-2:

- **Maximise the capacity of the Track-1 clusters.** Before going ahead with Track-2, government must be able to demonstrate the technological success of Track-1 and that there is sufficient demand for carbon capture to meet their full storage capacity.
- **Rebalance policy support.** Review the value for money of Track-1 CCS projects, compared to other decarbonisation options, and prioritise government funding towards the best value for money. This should include policy and funding support for industrial electrification, at least equivalent to the support offered for CCS and hydrogen.
- **Apply producer responsibility principles.** The government rapidly needs to review alternative funding options for CCS and should not commit to any agreements that put the costs onto household energy bills instead of the fossil fuel producers. It should also set out a clear timeline for this review.

During Track-2:

- **Prioritise funding.** Direct any support for carbon capture towards applications where there are no better alternatives in the short and medium term, such as cement, some chemical production and engineered removals, rather than prioritising projects that prolong fossil fuel use such as power CCS and blue hydrogen production.

The role of carbon transport and storage networks and the cost of the status quo

Oil and gas companies will develop the UK's carbon storage networks

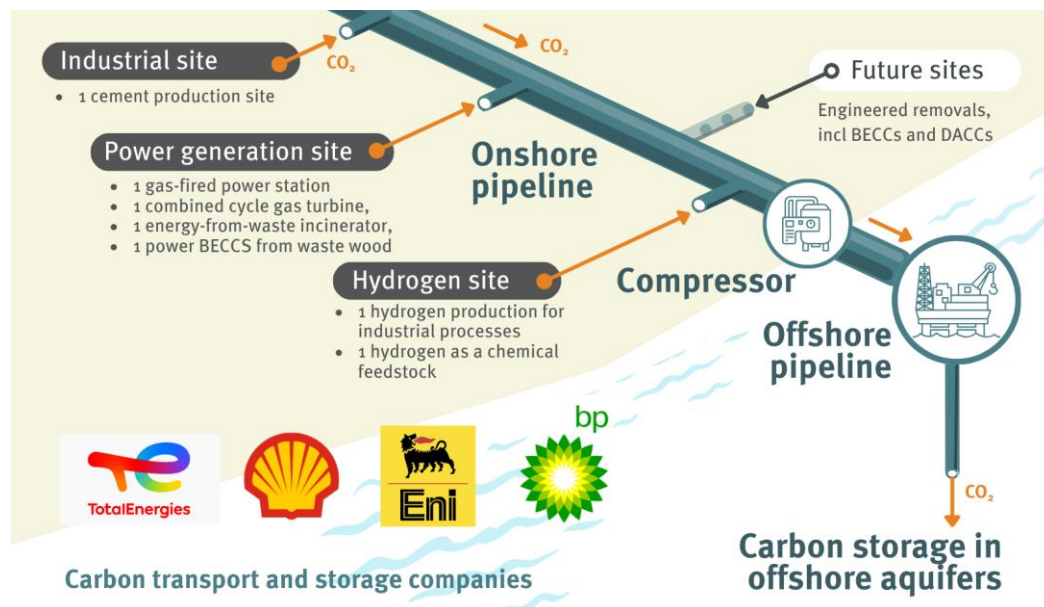
UK CCS will initially develop in clusters around industrial areas. These consist of:

- carbon capture sites, such as a cement plant;
- carbon transport networks of onshore and offshore pipelines;
- carbon storage infrastructure that will pump and store emissions in offshore saline aquifers or depleted gas fields.

Clusters are approved by the government in 'tracks'. Two clusters were approved under Track-1: in north east England and across north west England and north Wales, named the East Coast Cluster and Hynet. They are to be operational by 2028, and the government has committed £21.7 billion to support these clusters over 25 years.⁴

Oil and gas companies are developing their pipeline transport and storage infrastructure, taking carbon from the point of capture to permanent storage. Track-1 carbon storage networks are being developed by ENI, BP, Equinor and TotalEnergies (see appendix on page 15 for details).

An indicative carbon storage network based on the UK's Track-1 clusters



Oil and gas companies are the major contributors to the climate crisis and have profited hugely from the resources they have extracted in the process. We focus in this briefing on the need for transparent examination of the financial benefits they will gain from CCS subsidies. This is particularly the case for the carbon transport and storage networks, which are due to be operated by oil and gas companies.

CCS will be needed for some industries, but support has not been targeted

Uncertainties mean constraints

Carbon storage is both an uncertainty and a contingency on the pathway to net zero. The Climate Change Committee (CCC) expects CCS to cut emissions across a range of sectors and underpin carbon removal from the atmosphere by the seventh carbon budget period (2038-42).

But it also acknowledges considerable uncertainty, given CCS's high costs and delivery and capture rate risks. Therefore, the CCC suggests it is used as a contingency option.^{5, 6, 7}

This uncertainty underpins the need for realism: CCS is a necessary but limited component of UK decarbonisation strategy, so its role must be limited to those sectors where it is demonstrably the best or only option.

Foundational industries may need CCS

CCS is expected to be a valuable option for reducing emissions in some foundational industries which produce essential materials for the economy, such as cement. The most credible use cases for CCS are greenhouse gas removal (GGR) and those with high, unavoidable process emissions such as cement, lime and certain chemicals.^{8,9}

Only one of the three approved capture sites in line to receive government support is in these sectors: Padeswood cement works in North Wales. The other two are a gas-fired power station and energy-from-waste plant which have limited long term mitigation value.^{10, 11, 12}

The House of Commons Public Accounts Committee has criticised this approach, stating that little has been done to “ensure that government support for CCUS is directed to the sectors or locations where it will be essential for achieving net zero.” (Carbon Capture Utilisation and Storage – CCUS – is synonymous with CCS).

Funding for carbon storage networks relies heavily on public subsidy

Contracts cover billions in oil and gas company costs

The government has created multiple different business models to support CCS, as described in our previous briefing.¹³ In this briefing we focus specifically on the business model for carbon transport and storage networks.

Government contracts ensure all costs for carbon storage networks in Track-1 can be recovered by the oil and gas companies developing them, with an agreed profit margin. The ‘allowed revenue’, set by Ofgem, will cover the cost of developing, building and operating a network, while also providing the agreed rate of return.

This ‘regulated asset’ model is commonly used for large scale infrastructure, where it is an effective monopoly. UK water networks are also funded this way.

There are two subsidy routes for network costs:

- **indirect, by funding industrial capture sites to connect and use the transport and storage network;**
- **direct, by funding the difference when the above fees fall short of the allowed revenue.**

These two subsidy mechanisms mean that, for the first 25 years, the allowed revenues for Track-1 carbon storage networks will receive a significant amount of public and bill payer funding.¹⁴

Commercial sensitivity limits transparency around the extent of the subsidy likely, but our analysis suggests that indirect and direct subsidies could total £8 billion (see the appendix on page 15 for more details).

One way to reduce the allowed revenue subsidised, is to connect sites with a commercial incentive to pay for their carbon storage without subsidies. To widen the opportunity for this, the government is consulting on integrating carbon captured from outside the cluster regions, ie transported to the storage facility, via road, rail and shipping.¹⁵ This opens up the option for sites outside clusters, which have no other decarbonisation routes, to pay for the CCS facilities.

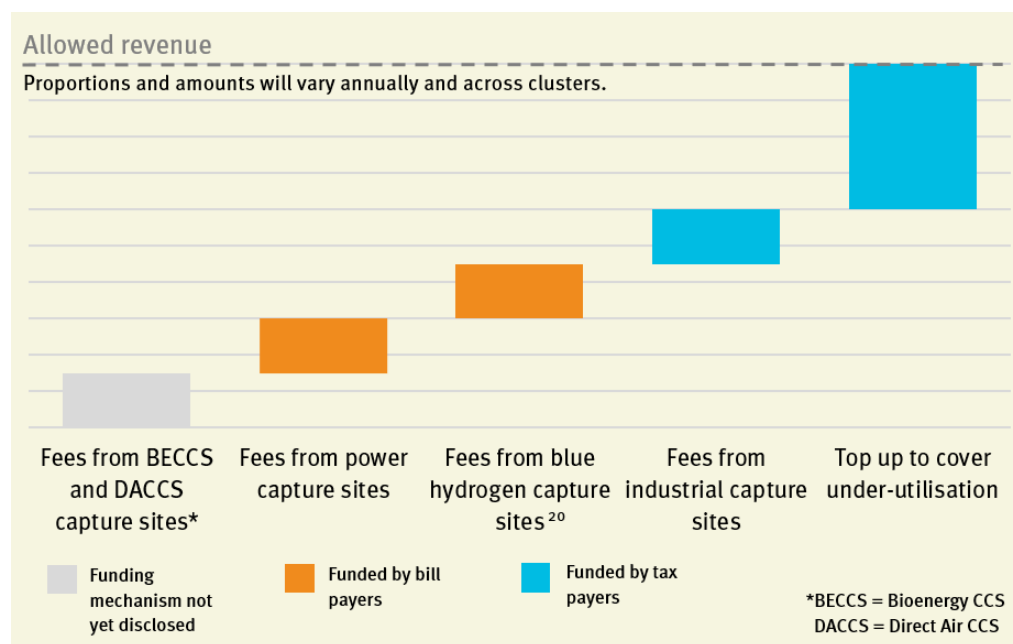
However, this solution is not straightforward. Unlike the Tracks framework, the government does not select which non-pipeline capture sites connect to the CCS networks. Because non-pipeline transport is more expensive than pipelines, in the absence of government policy frameworks to shape the market, participation is likely to skew towards well-capitalised sites (for example, data centres), rather than foundational industries with unavoidable process emissions.¹⁶ It could be compelling to encourage private money to flow towards CCS but, without careful selection of connecting projects, there is a risk of supporting projects that store avoidable emissions from lower priority processes which have other routes to decarbonise, such as by using renewables.

Public funding is taking on an unprecedented level of risk

UK CCS contracts are unique, with public money shouldering considerable risk. In addition to subsidising the allowed revenue, the contracts take on discontinuation and leakage risks which, by the government's estimates could cost an additional £6 billion.¹⁷ This includes circumstances where lack of demand for the infrastructure could lead to a stranded asset or there is no insurance available. The secretary of state is able to discontinue a company's contract, with the government liable to pay the company for its investments up to the value of the infrastructure, as well as a contract break fee.¹⁸ It could also be argued that £6 billion is conservative, given the uncertainties associated with long term geological storage and leakage.

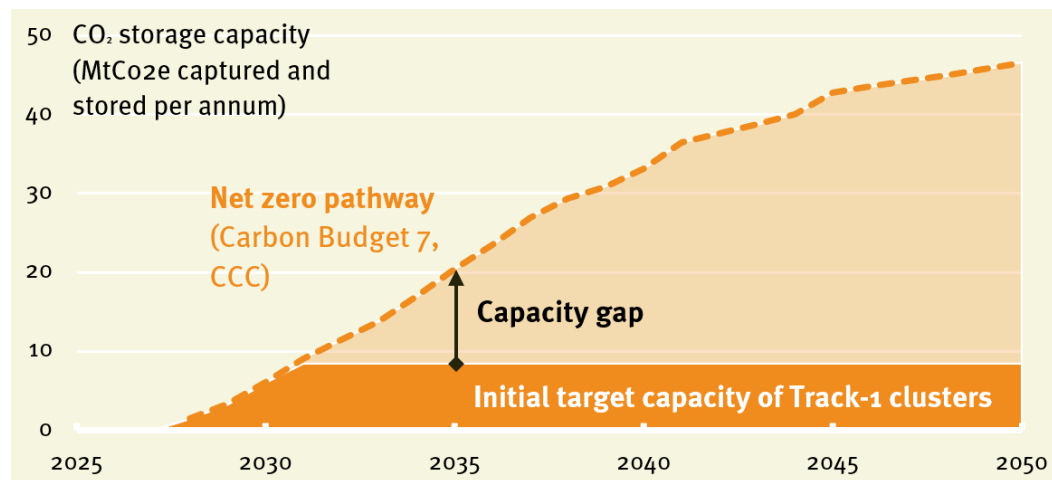
The UK deal is more generous than anywhere else in Europe, the US or Canada. No other government has absorbed the same level of risk. It has been applauded by the CCS sector as critical to allow it to develop.⁶ A CCS advocacy group, also called the CCS Europe called it "larger than anything else yet announced in Europe".¹⁹

How allowed revenue is paid for by government subsidies (illustrative)



Government has indicated that roughly 75 per cent of Track-1 subsidies will be funded by levies on consumer bills, with the rest funded through taxes. As funding mechanisms vary by capture site type, this is subject to change for future clusters.²¹

By 2035, despite public subsidy, Track-1 projects will store less than half of the annual capacity needed under the CCC's balanced pathway



The government will be under pressure to commit more long term funding to CCS

There is a significant investment gap

To meet carbon reduction targets, a significant investment gap remains. The government's previous ambition to store 20 to 30 million tonnes of CO₂ a year by 2030, is "no longer achievable", but the latest advice from the CCC indicates these volumes will be needed by 2040.²²

The £21.7 billion committed so far will not pay for even half of this capacity (likely to be just 8.5 million tonnes a year) and, under optimistic assumptions, at least a further £30 billion is required to reach the 2030 storage target.²³

Public funding is unpopular with taxpayers

It is deeply unpopular and unjust to put the cost of carbon storage on tax and bill payers. There is consistent evidence from multiple surveys that the UK public supports the principle that big polluters should bear the cost of their own pollution, whether framed as taxes, levies or direct accountability.^{24, 25, 26,}

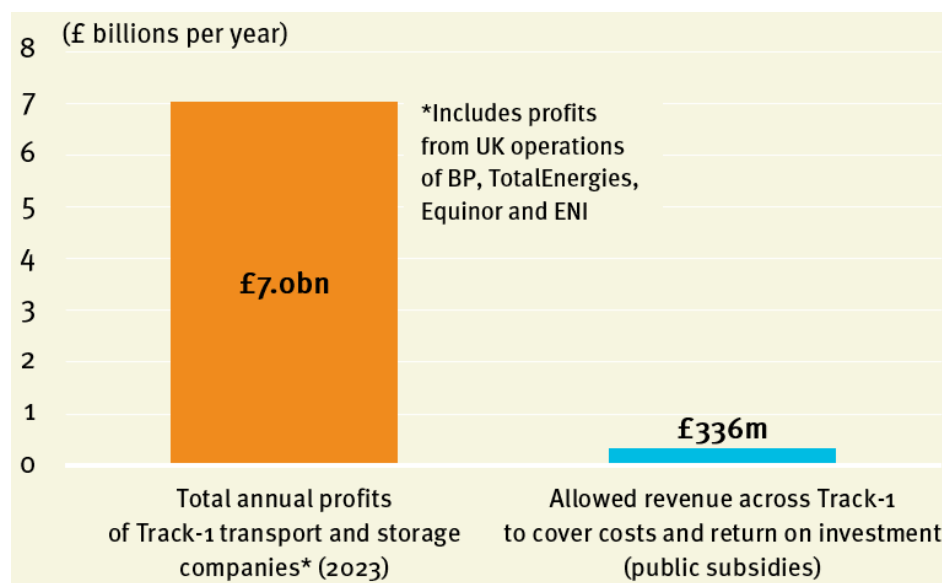
²⁷ This includes Reform UK voters.²⁸ There is also strong evidence that the public supports this principle in relation to funding engineered removals of CO₂.²⁹

Evidence suggests that support for any policy would be moderated based on the degree to which costs end up being passed onto consumers, particularly to energy users. However, the polluter pays principle is still viewed as fairer than alternatives such as funding through income tax, which is consistently unpopular.

The Public Accounts Committee and academics at Oxford University have discussed who should pay for CCS infrastructure. The committee warned against adding costs for "consumers who are already facing some of the highest energy bills in the world." While Oxford academics argued that "substantial subsidy regimes for CCS, particularly to companies that also

have a high ability-to-pay, such as oil and gas extractors with significant global profit margins, are increasingly hard to justify given competing and urgent demands for public investment.” ²³

Oil and gas companies building carbon networks have sufficient capital



UK carbon storage networks will be developed and operated by oil and gas companies. These include BP, ENI, Equinor and TotalEnergies. While their technical expertise in enhanced oil recovery is now indispensable to the development of carbon storage, their commercial incentives do not align with public interest.³⁰

As profit driven companies, they prioritise protecting existing business models and seek arrangements that minimise their own financial exposure, including through reliance on government subsidy for infrastructure development.³¹

Oil and gas companies benefit from subsidy without taking on risk

Following their strong advocacy, oil and gas companies have succeeded in convincing the government to cover the risks of building CCS infrastructure in the UK. They have also been guaranteed a “reasonable rate of return” but, when pressed, the government has not disclosed what this was.³²

For more than thirty years, the oil and gas sector has positioned itself as one of the most vocal advocates of CCS. In the UK these companies have recorded more meetings with the government on CCS policy than any other sector.³³

Despite their profits, and as serious climate impacts such as floods, heatwaves and storms intensify, the companies say it should be the public that carries the financial burden of developing carbon storage. However, this is contrary to what most voters believe, which is that the oil and gas companies that have driven climate change, and profited hugely from it, should not gain further financial advantage from the remedies to it.

Who should pay?

Three ways of assigning responsibility for pollution

User responsibility

This puts responsibility on the consumer (households and businesses), to pay the full societal cost of pollution caused by what they use, on the basis that they will adjust their behaviour efficiently.

- **Why it doesn't work:** consumers are not perfectly rational, and carbon costs are embedded in complex price mechanisms; if they are the ones responsible, the incentives are weak for producers to redesign their products or reduce emissions at source.
- **Why it is still used:** oil and gas companies have lobbied consistently to put responsibility for costs onto consumers, including popularising the idea of the personal carbon footprint.^{34, 35, 36}

Producer responsibility

This puts the responsibility on producers to prevent and or manage the pollution caused by the products they sell.

- **Why it works:** costs are spread across the value chain, rather than just put on consumers, which incentivises more action by producers; although it does not limit their ability to pass on the costs to consumers, it still provides a better incentive to reduce pollution.
- **Where it is used:** Extended Producer Responsibility is used in packaging and other waste policies.³⁷

The polluter pays principle

This is a long established principle which means that, where possible, costs of pollution should be borne by those causing it, rather than the person or community that suffers from the resulting environmental damage. Producer responsibility follows this principle.

- **Why it works:** by applying the principle, and internalising externalities into products, it promotes economic efficiency, of which carbon pricing policy is an example.³⁸
- **Where it is used:** the polluter pays principle is enshrined in law across the UK, with duties on policy makers to take it into account when making, revising or repealing policy.³⁹ It is also embedded in EU and UN environmental policies, but implementation and enforcement challenges remain.^{40,41}

Creating a fair business model for carbon storage

There's no good route to commercialisation

Carbon storage networks are 'megaprojects' and, as such, require long term intensive capital investment.⁴² These huge projects involve billion pound budgets, long construction timelines and co-ordination across many public and private actors. They are highly risky, with nine in ten exceeding their budgets and overrunning. Shortfalls in proposed benefits, such as carbon savings and increased voter support, are common.⁴³

Long term capital investment is essential because of development timelines and major upfront construction costs occur long before revenue flows begin.

Track-2 projects face a substantial revenue gap.⁴⁴ Beyond subsidies, currently the developers would have to rely on carbon pricing under the UK emissions trading scheme (ETS) to deliver returns. However, the ETS is not predictable enough, prices are currently too low and there is lack of confidence in its future role. This is because the ETS price is based on a complex set of evolving factors, including the political will to raise the price of carbon and expand the ETS to cover more sectors.⁴⁵ This makes it inherently volatile and difficult to forecast, which undermines investor confidence.⁴⁶

The main risk with a business case that leans too heavily on the ETS, is that carbon networks are not built at the speed needed, leaving some foundational industries without a decarbonisation pathway. They would then be exposed to rising ETS prices, caused by the lack of mitigation options, and with no way of avoiding these bills.

Additional supportive policies could reduce the need for subsidies – see below – and the government is taking steps to implement them. But significant political headwinds make substantial progress unlikely.

Policy to close the revenue gap

Policies	Examples of measures
Increase the price of carbon	Strengthen the ETS
Increase the number of sites that connect to a CCS network without subsidies	Enable non-pipeline transport ⁴⁷
Increase demand for low carbon products that are higher cost because of CCS	Public procurement mandates ⁴⁸
Increase demand for carbon removal credits	Implement sector mandates to purchase carbon removal credits ⁴⁹

A UK carbon storage obligation is needed

In 2024, the EU established carbon storage obligations for 44 oil and gas companies operating in its jurisdiction, which are “breaking the long-standing deadlock in CCS deployment.”⁵⁰ They were adopted as part of the EU's Green Deal Industrial Plan. The policy requires companies to develop carbon storage capacity. The obligation is allocated in proportion to each company's historical oil and gas production within the EU.

This provides long term clarity to develop the storage infrastructure needed, breaking the previous ‘chicken and egg’ dynamic. Capture projects are now willing to proceed because storage capacity is coming online, and storage developers are investing because there is credible, enforceable demand for their services.

However, the policy has been met with objections from oil and gas companies, which must now commit their own capital. Twelve of the 44 obligated companies have initiated legal actions. The companies argue the obligations are unrealistically high now that they are “colliding with commercial and technical realities.”⁵¹ However other assessments show that the obligations are realistic.⁵²

For EU authorities, the challenge will be to maintain their commitment in the face of legal threats and apply robust penalties. Member states are struggling to develop frameworks for the penalties fast enough to ensure early compliance with the obligation.⁵³

So far, there have been no indications that the policy will be amended, but there will be an opportunity in 2028 when the European Commission is due to review progress towards the storage targets.⁵⁴ For the UK, matching EU momentum should be important both for industrial strategy and to prevent ‘carbon leakage’ into the UK, ie the movement of polluting activities to areas with less strict climate policies.

A UK equivalent: a carbon takeback obligation (CTBO)

A ‘carbon takeback obligation’ (CTBO) is the main alternative to subsidies discussed in the UK. It would require oil and gas companies to store an increasing proportion of the emissions they are responsible for as a condition of their licence to operate. Government has recognised this and commissioned an options assessment on the CTBO, published in June 2025 and developed with academics and industry.⁵⁵

Obligations could be based on the embedded emissions in products sold by each company over a rolling reference period, for example using data from the preceding two years. Alternatively, they could be based on companies’ historical emissions data.

While this approach would be more complex to calculate, the EU has already shown that it is practical through the implementation of the Article 23 obligation which creates a storage obligation for fossil fuel companies based on their emissions between 2020 and 2023.⁵⁶

Using historical emissions - a fixed value - as the basis for setting company obligations provides greater investment certainty, supports CCS at times of lower fossil fuel demand and reduces, though does not eliminate, the risk that companies will shift their production to non-obligated markets.

Rather than relying solely on uncertain carbon prices, the CTBO creates a clear, predictable requirement. Under this requirement, if companies want to continue producing fossil fuels, they must take responsibility for ensuring that a share of the associated carbon emissions is permanently removed from the atmosphere and stored.

While this starts with a share of the emissions embedded in their products, for the net zero 2050 commitment, it should rise to reach all their associated

carbon emissions. It could also rise past 100 per cent to drive negative emissions as required by net zero pathways and is not unreasonable, given the past contribution of fossil fuel extraction and use to climate harm. But the share should start low and slowly rise, recognising that infrastructure development takes time and the sector is maturing.

Three important elements of a CTBO are:

- **A regulatory mandate**

It must be established through primary legislation or binding regulation, creating a mandatory legal obligation on fossil fuel producers and importers. (While establishing it using secondary legislation is possible, it would be challenging.)

- **Penalties**

The obligation must be backed by credible penalties to generate real demand for storage infrastructure. This includes clear compliance thresholds, financial penalties for non-compliance and enforcement mechanisms that maintain regulatory credibility.

- **Independently verified, permanent and safe storage**

Only durable, permanent storage should qualify, such as geological storage in saline aquifers. Temporary offsets or short lived removals should not qualify. All stored CO₂ must be subject to independent monitoring, reporting and verification to ensure environmental integrity and prevent greenwashing, leakage and double counting.

How a CTBO would work with the ETS

A CTBO and the ETS should work together, influencing the cost of fossil fuel products and supporting the phase-out of fossil fuels over time.

Without a functioning ETS, for example one with a high carbon price, in the early stages where the requirement on storage is low, a CTBO alone would not sufficiently incentivise non-obligated polluting sites to store their emissions in the storage developed. The ETS is important to ensure heavy fossil fuel users continue to shoulder the responsibility of their pollution even in the early years of a CTBO.^{57, 58}

Therefore, it is important that the CTBO is not seen as an alternative to the ETS, and implementing it should not diminish the need to continuously tighten the ETS emissions cap.

How should a CTBO be paid for?

Costs should be shifted upstream

Whatever funding mechanism is used, the costs of CCS will ultimately be borne somewhere in the economy. A CTBO would be a first step toward shifting responsibility upstream, away from tax and energy bill payers who are currently underwriting open-ended liabilities on CCS, and towards the companies that profit from selling polluting fossil fuels.

The major test of fairness for consumers is the extent to which they have a choice. Under the current system, households and businesses face rising energy bills, but often have limited ability to change their circumstances, because they are locked into fossil fuel dependent technologies.

A policy that internalises carbon costs would be fairer than the status quo, if paired with strong measures that expand choice and, indeed, could reduce the need for CCS by lowering demand for high carbon fuel sources. For instance, lowering the cost to consumers of switching to cleaner energy sources.

Costs should not be passed downstream to users

Oil and gas companies operating in the UK are generally price takers, limiting their ability to increase prices above international market levels. For instance, oil produced in the UK is sold into a globally traded market where prices are determined by international benchmarks.⁵⁹ This creates little room for the companies to raise their product prices without reducing their market share, and they are unlikely to pass the full cost onto consumers to avoid this.

A CTBO would be more likely to reduce producer margins and, where production becomes uneconomic, could reduce production levels rather than materially increase prices for consumers. A similar constraint applies to natural gas where UK production competes with imported gas.

While reduced oil and gas production would be a positive outcome from a climate perspective, producers have the financial capacity to absorb additional costs if they wish to maintain production. Given the substantial profits generated by the oil and gas sector (see the graph on page eight), it is reasonable to expect producers to bear the costs of addressing the emissions associated with their products. A CTBO therefore extends the principle of producer responsibility by ensuring that the environmental costs of fossil fuel production are borne by producers rather than by the government or consumers.

If policy makers are concerned about the impact on domestic producers, they could introduce a charge, equivalent to the costs of the CTBO, on imported oil and gas products. This would level the playing field for producers selling into the UK market. However, it makes it easier to pass costs on to consumers. With 30 per cent of households in fuel poverty in 2025, it will be important to protect consumers from rising energy bills rather than protect oil and gas companies' profits, but this trade off is for the government to resolve.⁶⁰

Electrification is much cheaper than CCS

The cheapest way for oil and gas companies to fulfil the CTBO would be providing capture for industrial sites which have other more cost-effective routes to decarbonisation, like electrification. However as this includes sites such as gas power stations, doing this could lock in fossil fuel production. It will therefore be important for government to retain some oversight of industrial decarbonisation priorities.

The scale of funding support for CCS is unbalanced, given wider industrial demands. Industrial electrification is projected to be a central pillar of emissions reduction and to save 33.4MtCO₂, while CCS for industry is estimated to save just 9.4MtCO₂ on the route to net zero by 2050.

Electrification is also expected to create operational savings for industries, which are balanced out by the increased costs associated with CCS.⁶¹ Foundational industries in the UK are struggling with high electricity costs, particularly in relation to their major international competitors.⁶² If public funding is limited, it would be preferable, from now on, to diversify the approach to industrial decarbonisation and support electrification for industry and ensure lower electricity prices to support it.

Recommendations

The government should rapidly review alternative funding options for CCS and not commit to any additional agreements that increase costs on tax payers and energy consumers. Future funding must also align with producer responsibility principles. The government should set out a clear timeline for this review.

It should also:

- **Maximise the capacity of the Track-1 clusters.** Before going ahead with Track-2 clusters, the government must demonstrate the technological success of Track-1 clusters and that there is sufficient demand for carbon capture to meet their full storage capacity.
- **Rebalance policy support.** Review the value for money of Track-1 CCS projects compared to other decarbonisation options and prioritise best value for money options for public funding. This should include policy and funding for industrial electrification, at least equivalent to the support offered for CCS and hydrogen.
- **Prioritise funding.** Direct support for CCS should be channelled towards applications with long term prospects where there are no better alternatives, such as in the cement and chemicals sectors, rather than prioritising those that prolong fossil fuel use, such as the power and blue hydrogen sectors.

For more information, contact:

Amira Jamal, policy adviser, Green Alliance

ajamal@green-alliance.org.uk

With thanks to co-author Sophie Whinney

Appendix

Oil and gas companies building and operating carbon storage networks (including Track-1 (confirmed) and Track-2 (expected) clusters)

Track	Cluster name (Consortium name)	Location	Companies (T&SCos)*
1	East Coast Cluster (Northern Endurance Partnership)	North East England	BP, Equinor and TotalEnergies
	HyNet (Liverpool Bay T&S)	North West England, North Wales	Eni
2	Acorn (unannounced)	North East Scotland	Storegga, Shell and Harbour Energy ⁶³
	Viking (unannounced)	East England	Harbour Energy, BP ⁶⁴

* Government contracts refer to carbon storage networks as Transport & Storage, or T&S, and these companies become T&SCos.

‘Allowed revenue’ of Track-1 carbon storage networks

Allowed revenue is the revenue which the consortiums, as shown in the table above, are entitled to. They receive it in price control periods – ie annually – after successful commissioning of the carbon storage network. The methodology for calculating allowed revenue is defined by the Economic Regulatory Regime.⁶⁵

Allowed revenue reimburses the company for the development, construction and operation of the network and provides a “a reasonable rate of return”. In addition, it covers asset depreciation over the operational period and a decommissioning allowance which must be set aside for this purpose.

Our calculations

The £8 billion figure we calculate as the CCS subsidies likely to be paid to oil and gas companies in allowed revenue should be understood as illustrative, rather than definitive, as commercial sensitivity prevents accurate calculation.

Our calculations follow the formulae published by the government in 2020 in its *An update on business models for carbon capture, usage and storage* report. Where input values were publicly available, they have been applied directly, but where data was not disclosed, proxy values were derived using values from comparable infrastructure projects in the oil and gas sector.

The estimate excludes tax payments, as they were assumed to be minimal. Performance based adjustments were also ignored as there was insufficient information available on their magnitude or how frequently they would apply.

In the absence of evidence to confirm otherwise, it’s likely that this allowed revenue will largely be subsidised in the early stages of carbon storage

network construction, when there are no non-subsidised network users to pay in.⁶⁶

Funding from the 'revenue support agreement' reduces as it is replaced by user fees. For each site that connects to the transport and storage network and pays fees, the revenue support reduces in tandem.

However, fees are still largely paid through subsidies, albeit indirectly, as Track-1 capture sites are also heavily subsidised. Public subsidy funds carbon transport and storage fees for industrial sites, and billpayers fund the fees for power sites. A decision is still being awaited as to whether bill payers will also fund the hydrogen production subsidies, through a levy on gas shippers.

The extent to which government and billpayer subsidies contribute to allowed revenue can only fall when non-subsidised capture sites connect and pay their own network fees.

Endnotes

- ¹ Carbon Balance Initiative and individual authors from CO2RE, Imperial College London, and the University of Oxford, 2024, [‘Who should pay?’: public preferences for carbon dioxide removal policy in the United Kingdom](#)
- ² Department for Energy Security & Net Zero (DESNZ), 2023, [Carbon capture, usage and storage: a vision to establish a competitive market](#)
- ³ InfluenceMap, 2025, [‘The UK oil and gas industry’s advocacy on carbon capture and storage’](#)
- ⁴ DESNZ, November 2025, ‘Carbon capture, usage and storage: [industrial carbon capture business models update](#)’
- ⁵ International Energy Agency, 2024, [CCUS Policies and Business Models](#), chapter 4, p61
- ⁶ Sustainable Markets Initiative undertaken by Baringa, 2026, [Unlocking private capital: scaling investment in the CCS sector](#), table 2: ‘Market-based risks’
- ⁷ Climate Change Committee (CCC), 2025, [The seventh carbon budget](#), chapter 6
- ⁸ E3G and Bellona, 2023, [Carbon capture and storage ladder – 2026 update](#)
- ⁹ High value petrochemicals have a targeted role in managing near term emissions, but long term decarbonisation requires a shift to non-fossil carbon feedstocks. For our full assessment of CCS use cases, see: H Plumpton, August 2025, briefing, [‘Is the government wasting money on CCS?’](#), Green Alliance.
- ¹⁰ DESNZ, September 2025, [‘Pioneering carbon capture projects ready for construction’](#)
- ¹¹ DESNZ, December 2024, [‘Contracts signed for UK’s first carbon capture projects in Teesside’](#)
- ¹² E3G and Bellona, 2023, op cit
- ¹³ Green Alliance, 2025, [‘Is the government wasting money on CCS?’](#)
- ¹⁴ DESNZ, 2023, [‘Carbon capture, usage and storage: an update on the business model for transport and storage - explanatory note and indicative heads of terms’](#), p14
- ¹⁵ DESNZ, February 2026, [‘Carbon capture, usage, and storage \(CCUS\): consultation on non-pipeline transport \(NPT\)’](#)
- ¹⁶ K Sievert et al, March 2025, [‘The impact of financing structures on the cost of carbon dioxide transport’](#), *Energy Economics*, volume 143
- ¹⁷ Statement by Sarah Jones, [‘Carbon capture, usage and storage, Track 1 - contingent liabilities’](#), Statement made on 13 November 2024, ‘Statement UIN HCWS211’. (£24.6 billion includes maximum exposure from four of the five contingent liabilities including: the Supplementary Compensation Agreement, Stranded Asset (discontinuation), Decommissioning Shortfall, the Discontinuation of Capture Project contracts. The Revenue Support Agreement is not included in this figure as it is accounted for in the Allowed Revenue estimates.)
- ¹⁸ DESNZ, June 2025, [‘Full business case for hynet cluster carbon capture, usage & storage \(CCUS\)’](#)
- ¹⁹ CCS Europe, October 2024, [‘CCS Europe reacts to the UK government plans to invest £22 billion in CCS projects’](#)
- ²⁰ In January 2025 DESNZ consulted on funding CCS for blue hydrogen production through the gas shipper obligation and accepted that it was likely this cost would be passed onto household gas bills, but has not published a final decision yet. DESNZ, January 2025, [‘Consultation: Funding mechanism for the Hydrogen Production Business Model: proposed design of the Gas Shipper Obligation’](#)
- ²¹ UK Parliament, February 2025, [‘Carbon capture, usage and storage: eighth report of session 2024–25’](#)

- ²² Committee of Public Accounts, House of Commons, February 2025, '[Carbon capture, usage and storage](#)', eighth report of session 2024–25 HC 351'
- ²³ Carbon Balance, Oxford Net Zero & the University of Oxford, 'Written evidence CCUS0027', committees.parliament.uk/writtenevidence/131665/pdf/
- ²⁴ Greenpeace International, June 2025, '[8 in 10 people support taxing oil and gas corporations to pay for climate damages, global survey finds](#)'
- ²⁵ Paid to Pollute, June 2021, '[Majority of UK believes polluters should pay, not us](#)'
- ²⁶ Survation, 2025, '[UK public backs criminal charges for polluting companies](#)'
- ²⁷ Friends of the Earth, 2025, '[Protection for low-income households key to net zero support](#)'
- ²⁸ Global Witness, 2025, '[Reform voters among majority in UK that want higher taxes on fossil fuel polluters](#)'
- ²⁹ Ipsos, 2024, '[Citizens' panel for an accessible and affordable household vision of net zero](#)'
- ³⁰ Enhanced oil recovery is the process of pumping carbon into underground oil fields to make the oil more buoyant and therefore easier to extract.
- ³¹ International Energy Agency, '[Fossil fuel subsidies: tracking the impact of government support](#)', accessed April 2026
- ³² In a House of Lords debate on 13 May 2024, Lord Jones pressed on “a reasonable return on investment,” asking whether there was a percentage in mind or whether the support could become a “blank cheque.” He got a response that mentioned ongoing commercial negotiations and did not cite a firm rate; '[Carbon Dioxide Transport and Storage Revenue Support \(Directions and Counterparty\) Regulations 2024](#)', volume 838
- ³³ InfluenceMap, 2025, op cit
- ³⁴ G Supran and N Oreskes, 2021, '[Rhetoric and frame analysis of ExxonMobil's climate change communications](#)', *One Earth*, volume 4, issue 5
- ³⁵ *The Wire*, February 2023, '[How big oil hijacked and weaponised the individual carbon calculator](#)'
- ³⁶ J M Turner, 2014, 'Counting carbon: the politics of carbon footprints and climate governance from the individual to the global', *Global environmental politics*
- ³⁷ Department for Environment, Food and Rural Affairs (Defra), July 2025, '[Extended producer responsibility for packaging](#)'
- ³⁸ Green Alliance, 2023, briefing, '[What is carbon pricing and does the UK need it?](#)'
- ³⁹ 'UK Environment Act 2021'; 'UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021'; 'Environment (Principles, Governance and biodiversity Targets) Wales) Act 2026'
- ⁴⁰ European Court of Auditors, 2021, '[The polluter pays principle: Inconsistent application across EU environmental policies and actions](#), Special report No 12
- ⁴¹ 'Rio Declaration on Environment and Development - A/CONF.151/26 (Vol I)' chapter I, annex I: 'UN Documents: Gathering a body of global agreements'
- ⁴² B Flyvbjerg, N Bruzelius and W Rothengatter, July 2014, *The megaprojects paradox*, pp 1–10, Cambridge University Press
- ⁴³ B Flyvbjerg (for the Project Management Institute), 2014, '[What you should know about megaprojects and why: an overview](#)'
- ⁴⁴ Sustainable Markets Initiative undertaken by Baringa, 2026, op cit
- ⁴⁵ Carbon Balance Initiative, Oxford Net Zero and the Carbon Capture and Storage Association (CCSA), January 2025, '[Markets & mandates: policy scenarios for UK CCS deployment & exploring the role of a carbon takeback obligation](#)', p 22
- ⁴⁶ Institute for Energy Economic and Financial Analysis, 2024, '[The runaway cost of uk carbon capture and storage subsidies](#)'
- ⁴⁷ DESNZ, February 2026, 'Consultation: [Carbon capture, usage, and storage \(CCUS\): consultation on non-pipeline transport \(NPT\)](#)'

- ⁴⁸ DESNZ, June 2025, 'Consultation: [Growing the market for low carbon industrial products: policy framework](#)'
- ⁴⁹ DESNZ, July 2026, '[Independent review on greenhouse gas removals: government response](#)'
- ⁵⁰ Article 23 Watch, March 2026, *Annual report: the first year of Article 23*
- ⁵¹ *Carbon Capture Journal*, October 2025, '[Report: EU carbon storage injection capacity targets face a significant shortfall](#)'
- ⁵² Carbon Balance Initiative et al, 2025, op cit, "Several obligated oil and gas producers are already well positioned to meet their pro-rata allocations based on existing project timelines."
- ⁵³ Article 23 Watch, April 2026, '[Designing penalties to ensure compliance with the EU CO₂ storage obligation](#)'
- ⁵⁴ *Carbon Capture Journal*, October 2025, op cit
- ⁵⁵ Carbon Balance Initiative, Oxford Net Zero and the Carbon Capture and Storage Association (CCSA), January 2025, op cit, p 30
- ⁵⁶ European Commission, May 2025, '[Commission identifies the EU oil and gas producers to provide new CO₂ storage solutions for hard-to-abate emissions in Europe](#)'
- ⁵⁷ B Fattouh, H Muslemani, A Maino and P Zakkour, 2024, *The role of carbon markets in enabling carbon capture and storage (CCS)*, The Oxford Institute for Energy Studies
- ⁵⁸ C Hickey et al, 2023, '[A review of commercialisation mechanisms for carbon dioxide removal](#)', *Frontiers Climate*, vol 4
- ⁵⁹ CMC Markets, '[What is Brent crude? A guide to the global oil benchmark](#)'
- ⁶⁰ UK Government, March 2026, '[Annual Fuel poverty statistics in England, 2026 \(2025 data\)](#)'
- ⁶¹ CCC, February 2025, op cit, p 93
- ⁶² Green Alliance, 2025, '[Plugging into industrial electrification](#)'
- ⁶³ Acorn Project, July 2021, '[Acorn project partners Storegga, Shell UK and Harbour Energy sign MOU with the owners of the Segal and FUKA gas terminals at St Fergus](#)'
- ⁶⁴ BP, January 2024, '[Viking CCS project awards front end engineering design contract](#)'
- ⁶⁵ DESNZ, June 2025, op cit, p 27
- ⁶⁶ DESNZ, 2023, op cit