

Achieving net zero: the role of CCS and next steps for policy



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GROUP** LEADERS FOR
A SUSTAINABLE
ECONOMY 

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1. CONTEXT:

Achieving net zero

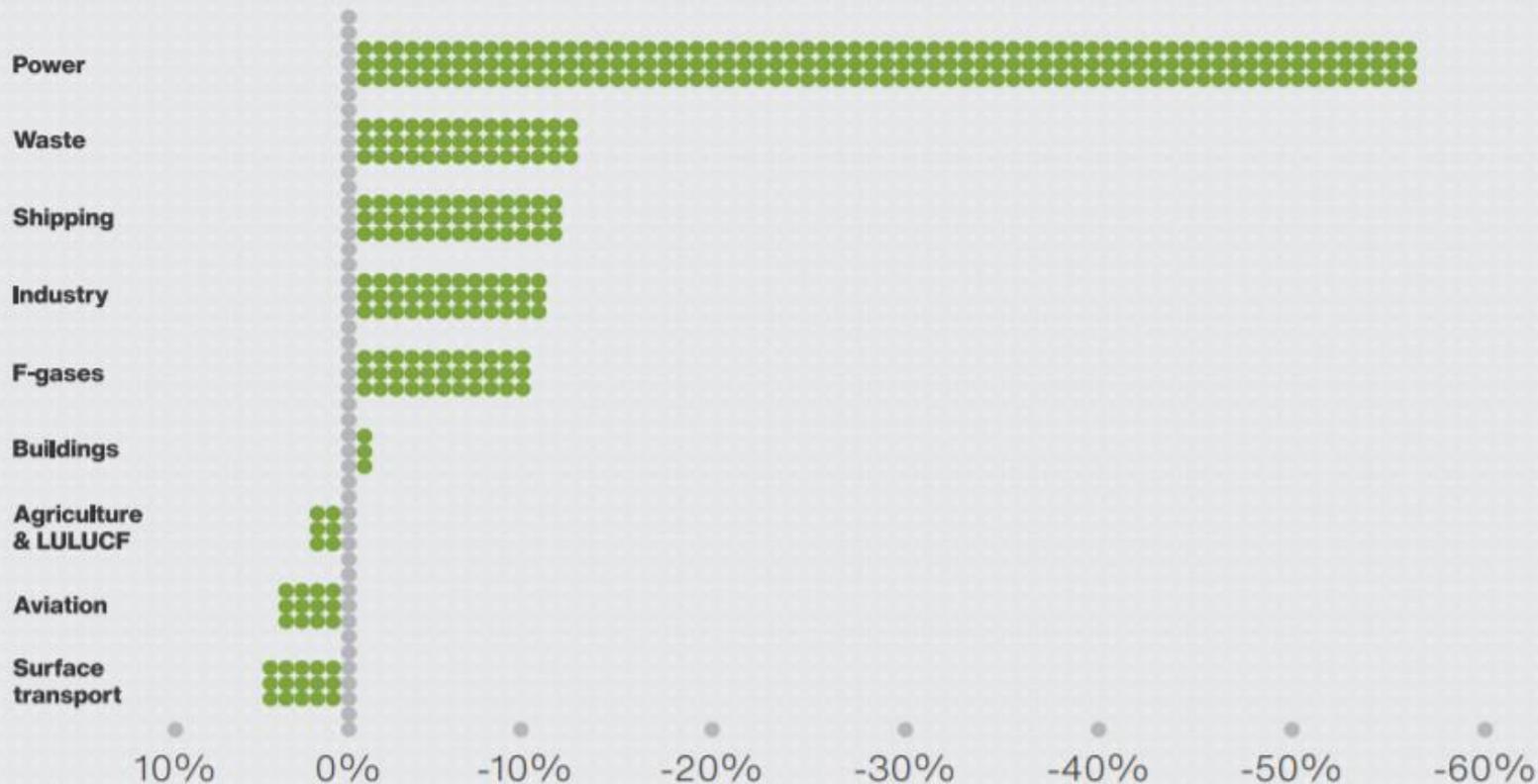
- The transition to a net zero economy holds important **opportunities**:
 - **Levelling up and job creation**: the clean energy transition can create ~400,000 jobs in the UK; 6,000 jobs could be created in Teesside by investing in CCS and CCS-equipped plants;
 - **Innovation and competitiveness** for UK businesses capturing a first mover advantage;
- But also **challenges**:
 - Sectors are on different pathways to net zero;
 - Certain sectors depend on technologies that are not fully mature to achieve net zero (e.g. manufacturing);
 - High costs associated with building new infrastructure (e.g. transport & storage pipelines) and retrofitting existing assets;



1. CONTEXT:

Changes in emissions per sector

CHANGE IN EMISSIONS 2013-2018



Source: Committee on Climate Change (July 2019)
Reducing UK emissions - 2019 progress report to Parliament

2. EXISTING POLICY COMMITMENTS

- Key strategies have been published recently, with important commitments and targets for getting to net zero;
- **Ten Point Plan** included commitments to:
 - Bring forward to **2030 the ban on the sale of new petrol & diesel cars**;
 - ambition to **capture 10Mt of CO2** a year by 2030, and **investing up to £1bn to support the establishment of CCUS** in four industrial clusters;
- **Industrial Decarbonisation Strategy** made the important commitment to cut industrial emissions by at least 2/3 by 2035, acknowledging the role of **innovation, product standards, public procurement and circular economy** in delivering this;
- **We now need to bring all these strands together**, backed by greater policy detail over the coming years;

3. A NET ZERO STRATEGY

- Government's upcoming **net zero strategy** should provide:
 - **Sectoral pathways**, with clear timetables for the introduction of key policies and market mechanisms;
 - Support for **innovation and skills investment**;

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**BUILDING A NET ZERO EMISSIONS
ECONOMY** NEXT STEPS FOR
GOVERNMENT AND BUSINESS



4. THE ROLE OF CCUS IN ACHIEVING NET ZERO

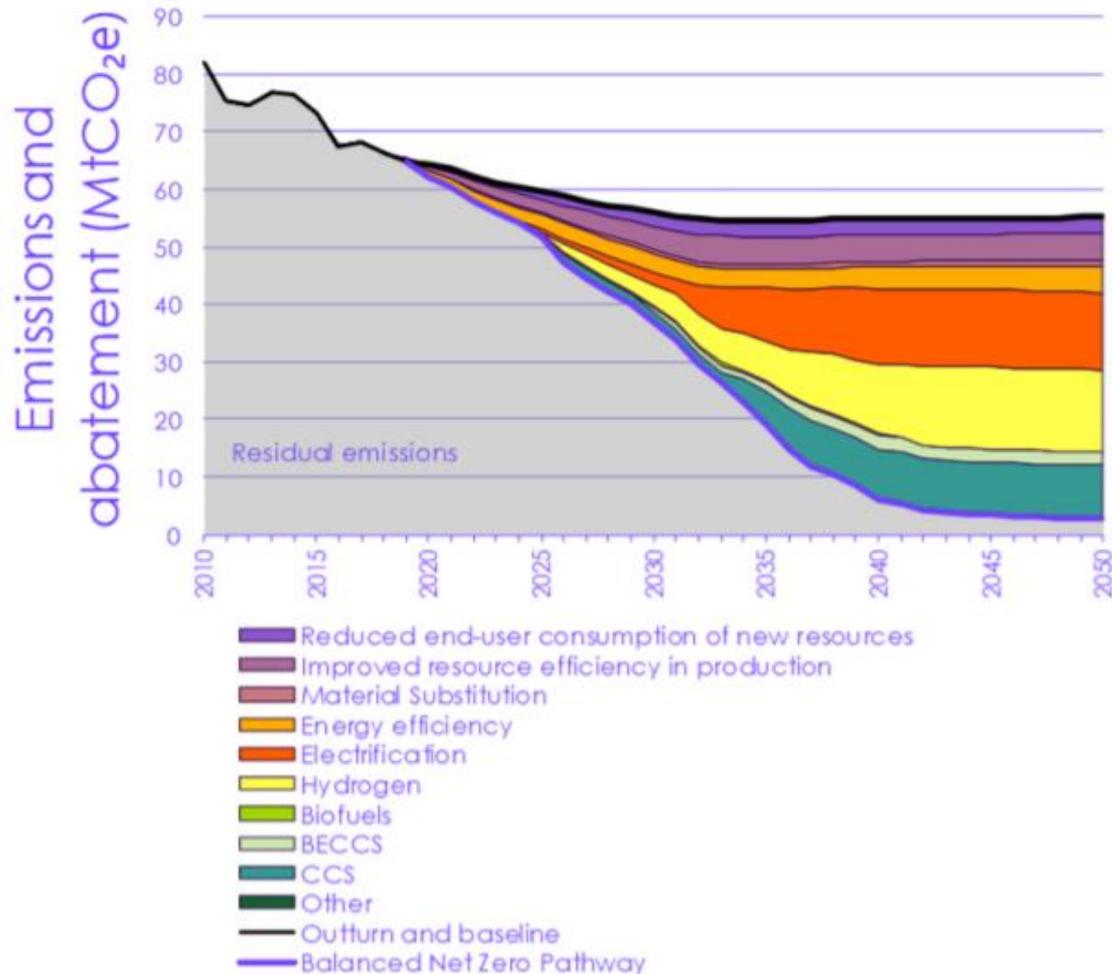
CCUS will play a key role by:

- Capturing and storing **residual carbon** from sectors that cannot achieve zero emissions;
- Offer savings for businesses investing in transport and storage by **avoiding exposure to rising carbon prices**;
- Supporting the development of **Negative Emissions Technologies (NETs)** and **blue hydrogen**;
- In dispersed industrial sites CCU can be essential for aggregates and concrete;



4. THE ROLE OF CCUS IN ACHIEVING NET ZERO

Figure 3.3.a Sources of abatement in the Balanced Net Zero Pathway for the manufacturing and construction sector



5. NEXT STEPS FOR POLICY

Delivering the industrial transition to net zero

- Cutting industrial emissions is not just about public investment:
 - Market mechanisms will be key in **leveraging private investment**;
 - Developing an ambitious **innovation policy** can have spill over benefits across the economy;
 - Developing business models for key technologies will be essential to cover ongoing **operational costs (OPEX)**;

5. NEXT STEPS FOR POLICY

A robust carbon pricing system

- Establishing the UK ETS is a welcome step and will provide more long-term certainty than a carbon tax. As 2050 approaches, the UK ETS can support the development of a market for NETs;
- It is now important to:
 - **Link the UK – EU ETSSs**, with benefits for liquidity and creating a level playing field for carbon pricing;
 - Establish a clear pathway for **reducing free allocations**;
 - Compensate the loss of free allocations with the introduction of a **Carbon Border Adjustment Mechanism (CBAM)**;
- Clarity on carbon pricing will be key to ensure that low carbon innovation is competitive on price and sustainable for businesses;

5. NEXT STEPS FOR POLICY

An ambitious innovation policy

- Innovation funds have often been **too small and fragmented**;
 - Integrating innovation funds and backing the up with clear strategies;
 - Simplifying access to innovation funds;
- There is a need to ensure **continuity in funding**, there is high risk in activity gaps – businesses can change their processes if they see other opportunities to invest elsewhere;
 - Former CCS funding competitions have been cancelled over cost concerns, impacting market confidence;
- Adopt a **learning by doing** approach to innovation, assumptions over costs and practicalities could vary depending on context and unnecessarily delay deployment;
 - Even unsuccessful technology trials can help develop best practice and governance principles to roll out new technologies, when accompanied by strong evaluation methodologies;

5. NEXT STEPS FOR POLICY

Supporting industrial competitiveness

- Supporting industrial competitiveness will be key to encourage companies to invest in key technologies that will not boost their productive efficiency in the short term but are essential for achieving net zero;
- In addition to carbon pricing, other mechanisms will help:
 - Developing **product standards** gradually driving down the permissible level of embodied carbon;
 - Using **public procurement** to boost demand for low carbon industrial products;
 - Offering tax credits or a clear source of revenue for stored carbon:
 - 45Q policy in the United States, which pays a credit of \$50 per tonne of carbon dioxide permanently sequestered.

Thank you

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