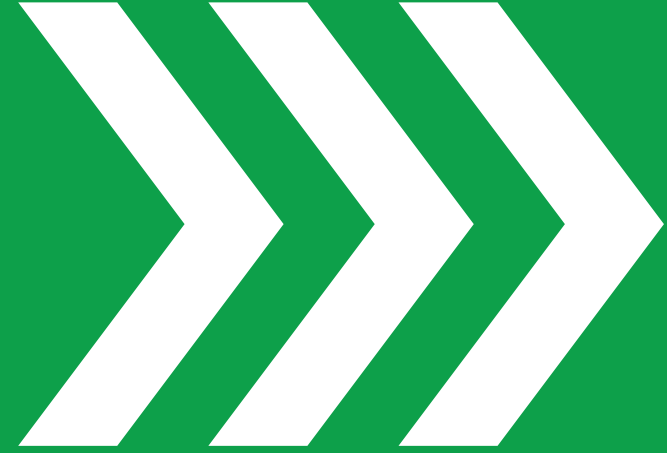




Department for
Energy Security
& Net Zero



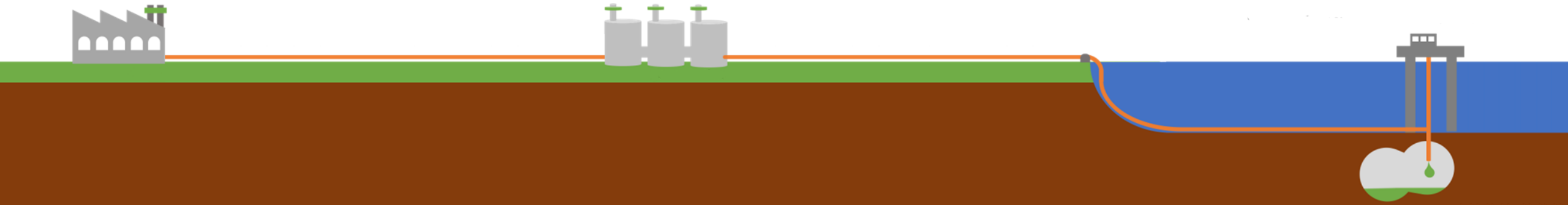
CCUS as part of the UK Energy Transition and Industrial Decarbonisation: strategic policy enablers and stages

Jodie Fox, Head of CCUS Track 1 Expansion

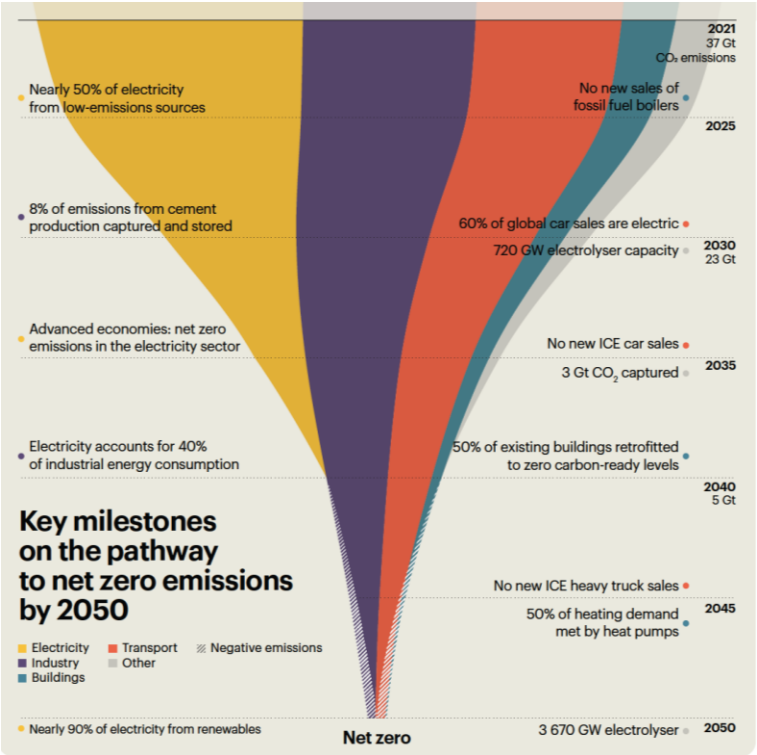
Westminster Energy Forum, 6 December 2023

UK Government's perspective on CCUS as part of the energy transition

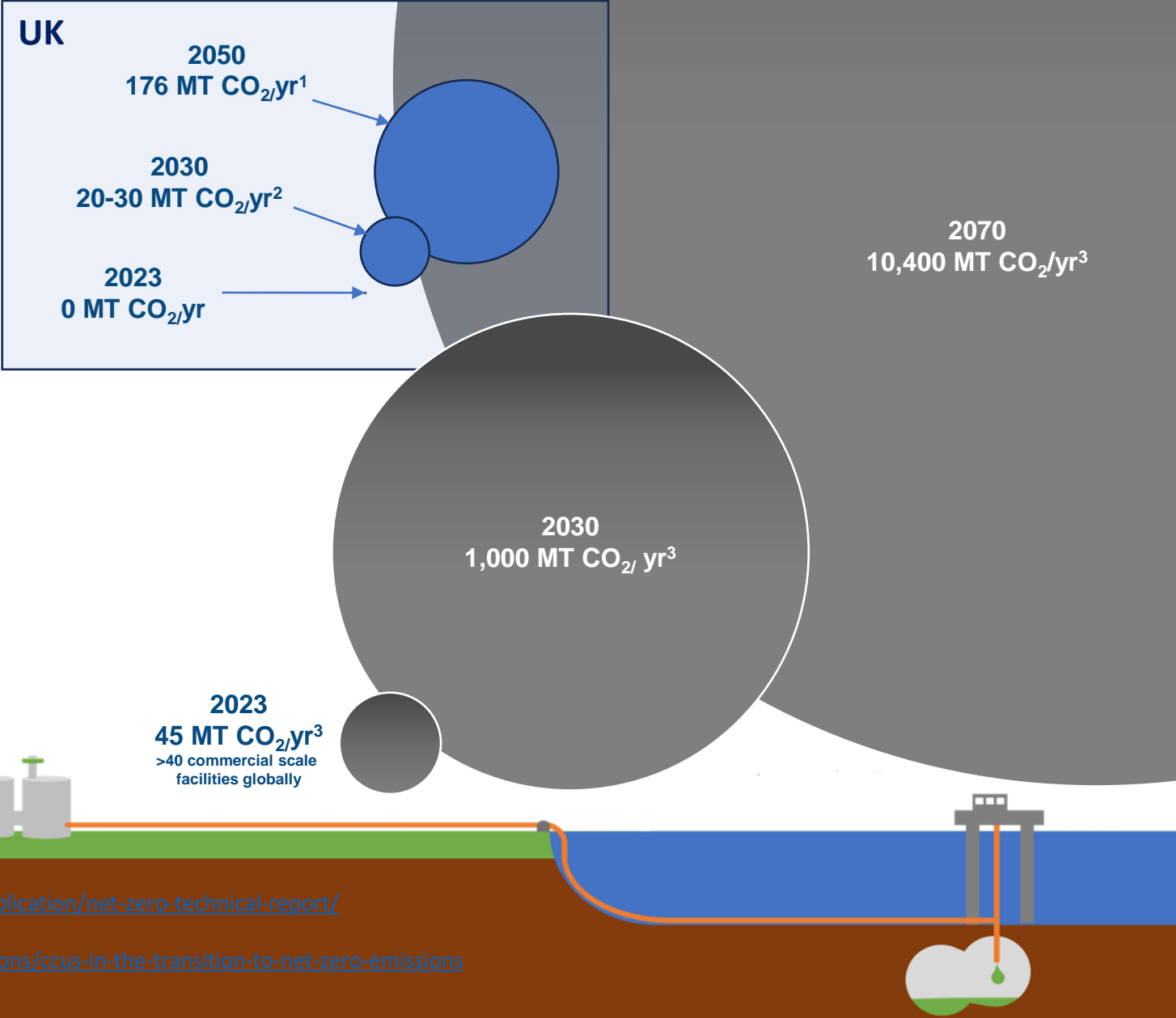
1. The need for CCUS
2. The UK's potential
3. UK Government's ambitions and approach to CCUS
4. Key policy considerations
5. What we've achieved
6. What we're doing next



How much CCUS will we need?



World Energy Outlook (IEA, 2022)



The UK has both the capability and potential to be a leader in CCUS

Our **2050 Net Zero Strategy** emphasised the importance of decarbonising industry and energy, generating hydrogen and negative emissions

All industrial clusters need to be decarbonised to achieve net zero.

The UK has potential to store more than **78 billion tonnes of carbon dioxide (CO₂)** in its continental shelf

Industrial CCUS clusters can be the starting point for a new **carbon capture industry** with a **sizeable export potential**

First Track-1 clusters announced as **HyNet** and **East Coast Cluster**.
Track 2 clusters **Acorn** and **Viking** to be operational by 2030



The UK government has clear ambitions for CCUS

By mid 2020s

Deploy at least 2 industrial clusters

Deploy at least one power CCUS plant and 3Mt of industrial CCUS

By 2030

Deploy 4 industrial clusters

Capture 20-30 MtCO₂ pa by 2030 including 6 MtCO₂ from industrial CCUS

Deploy up to 10GW of hydrogen production

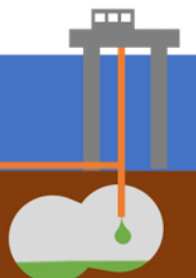
Deploy at least 5MtCO₂ pa of engineered greenhouse gas removals (GGRs) by 2030

50,000 jobs in CCUS

By 2035

Deliver a fully decarbonised power system

Legally binding target of 78% emissions reductions by 2035



UKG providing support across the CCUS value chain via Business Models

Industrial Carbon Capture

Contract for difference to incentivise deployment of carbon capture technology for industrial users who often have no viable alternatives available to achieve deep decarbonisation.

Power Generation with CCUS

The Dispatchable Power Agreement (DPA) will incentivise private finance to enable power CCUS to play a valuable mid-merit role in our generation mix.

Hydrogen Production with CCUS

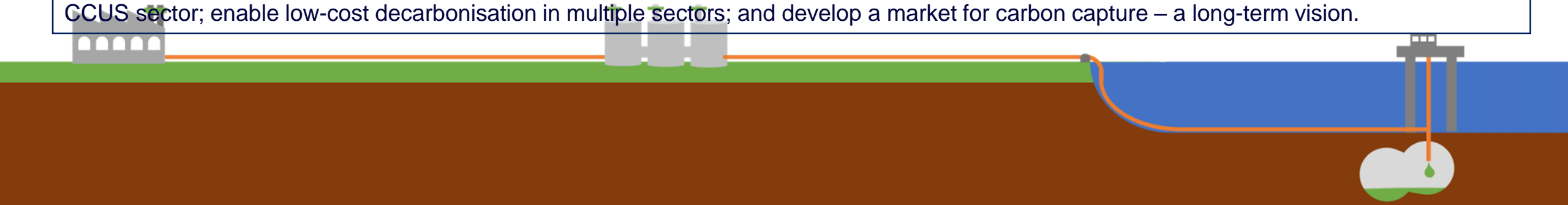
The Hydrogen Production Business Model will provide revenue support to producers to overcome the operating cost gap between low carbon hydrogen and high carbon counterfactual fuels.

Greenhouse Gas Removals – BECCS and DACCS

Business models are being developed to attract private investment in a portfolio of engineered GGR technologies including Direct Air Carbon Capture and Storage (DACCS).

Transmission and Storage Regulatory Investment Model (TRI)

Based on the successful regulated asset base model. It has three key objectives: to attract investment in the T&S network to establish a new CCUS sector; enable low-cost decarbonisation in multiple sectors; and develop a market for carbon capture – a long-term vision.



The UK's CCUS Clusters

Track-1

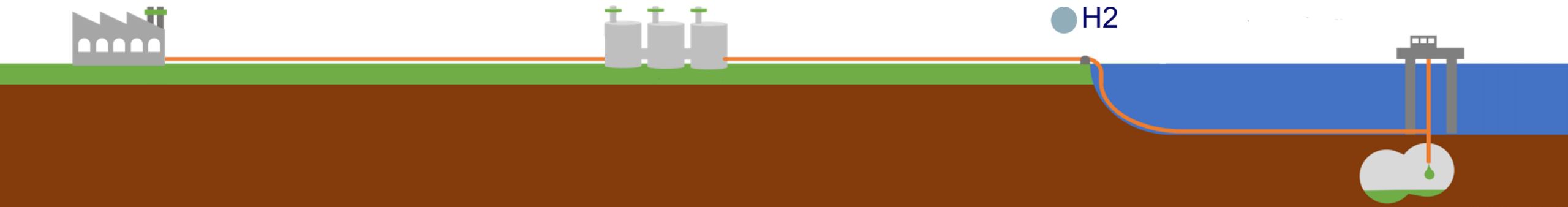
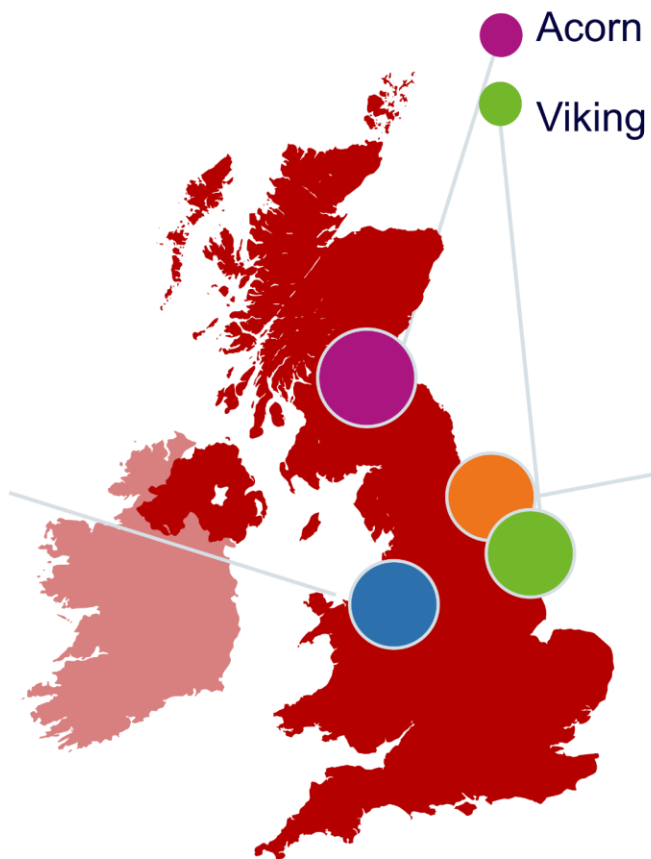
HyNet

- Hanson Padeswood Cement Works Carbon Capture and Storage Project
- Buxton Lime Net Zero
- Viridor Runcorn Industrial CCS
- Protos Energy Recovery Facility
- HyNet Hydrogen Production Plant (HPP1)

Track- 2

East Coast Cluster

- Net Zero Teesside Power
- bpH2Teesside
- BOC
- Power
- Waste Industrial Carbon Capture
- Industrial Carbon Capture
- H2



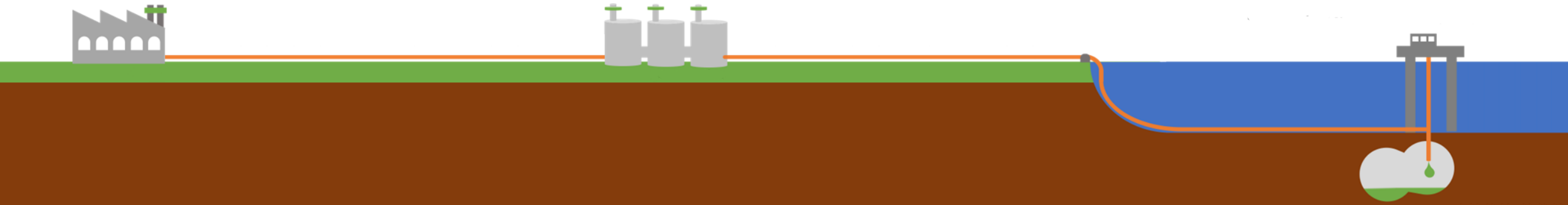
Key considerations when developing CCUS Policy in the UK

Optimisation

Value for
money

Managing
complexity

Moving to
Market-led



We have made significant progress on delivering CCUS in the UK

£20bn of funding announced to start sector

Legislation passed through Parliament

Eight Track 1 projects being negotiated

Expanding Track 1 and launched Track 2

CCUS Vision for 2030s being developed



Thank you & Questions

