The ADB Asia Clean Energy Forum: Opening remarks and the status of CCUS developments in the UK

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17th June 2022

Status of CCUS development in the UK: Objectives

- International CCUS opportunity
- UK CCUS Commitments – The UK's CCUS Programme
- What progress has been made so far? – 2035 Delivery Plan
- How are we funding CCUS in the UK?
- International Initiatives and Support

International CCUS Opportunities: A Global Context

Technically proven technology:

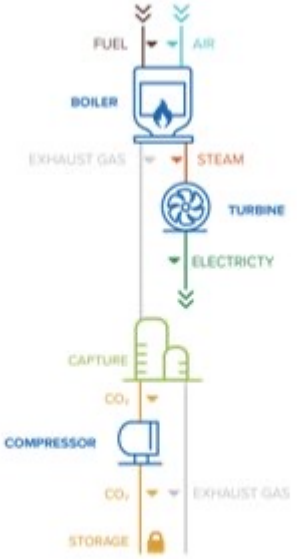
- **27 CCUS projects** in commercial operation worldwide, capturing ~36MtCO2 per year in 2021 (GCCSI, 2021).
- **71 CCS facilities** newly announced (GCCSI, 2021).

CCUS is essential for decarbonising industry in Asia-Pacific:

- The first commercial CCS project announced in both **Indonesia** and **Malaysia** (GCCSI, 2021).
- China, India and Indonesia in top ten countries most in need of CCUS deployment (GCCSI, 2021).

Climate mitigation potential:

- CCUS accounts for **15% of the global cumulative emissions reductions** needed to reach net-zero in 2070 (IEA, 2020)



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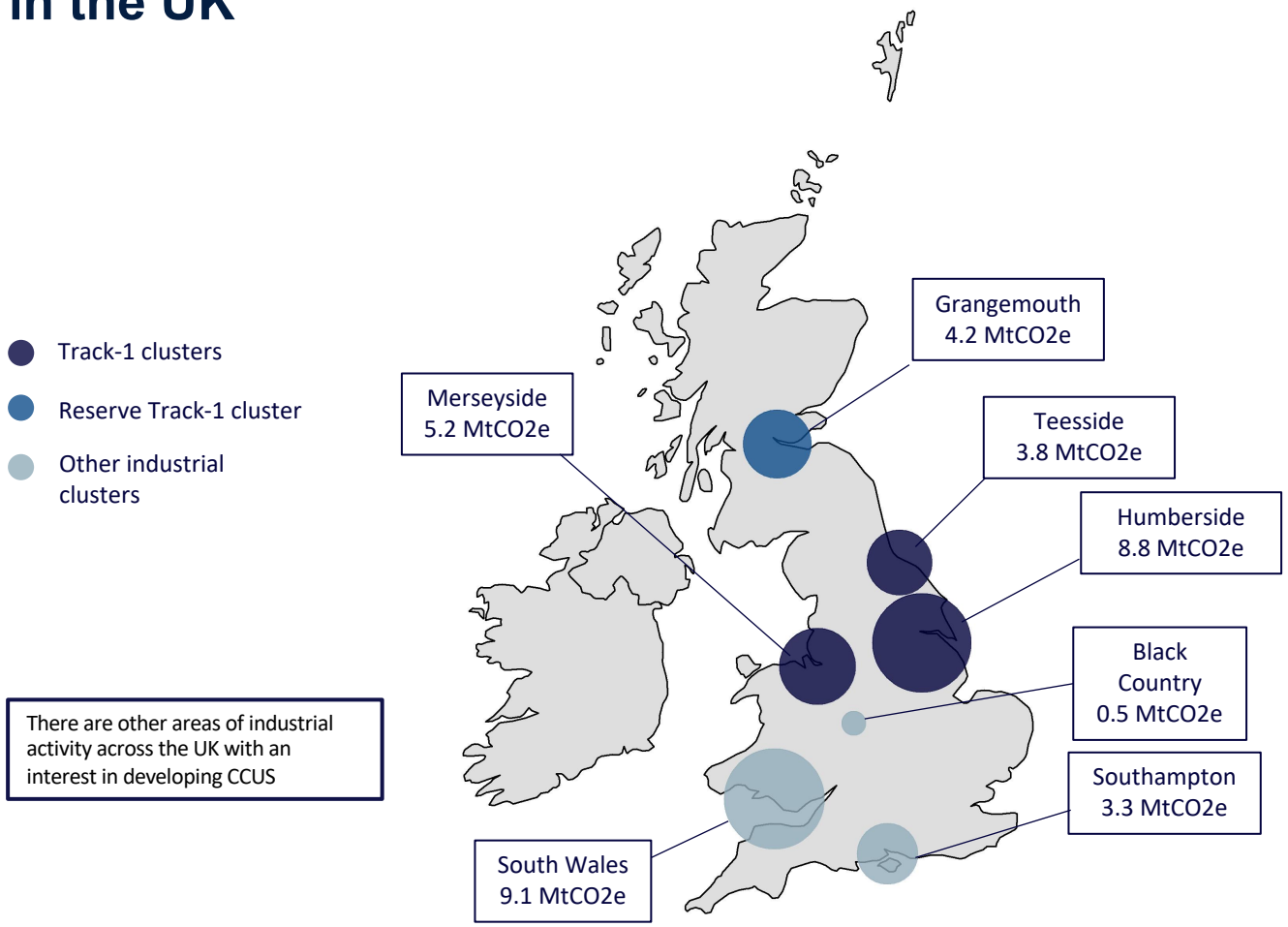
The opportunity for deployment of CCUS in the UK

- Our **2050 Net Zero Strategy** emphasised the importance of decarbonising industry using renewable technologies
- The UK has potential to store more than **78 billion tonnes of carbon dioxide (CO_2)** in its continental shelf which is one of the largest potential storage capacities in Europe.
- Industrial CCUS clusters* can be the starting point for a new **carbon capture industry** with a **sizeable export potential**, helping to create industrial 'SuperPlaces' in the UK



Map of major UK industrial cluster emissions from large point sources (2019). Source: NAEI 2019 data. Does not capture non-ETS emissions in a cluster.

At least two CO_2 capture projects with access to a transport and storage network

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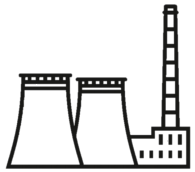
The UK's Domestic Carbon Capture Usage and Storage (CCUS) programme

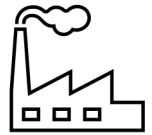
Commitment

At least 2 clusters by mid-2020s, and 4 by 2030
At least one CCUS power station by mid 2020s

Benefits by 2030

- 20-30 $MtCO_2$/yr captured
- 10 GW low carbon H_2 supported
- 50,000 jobs supported





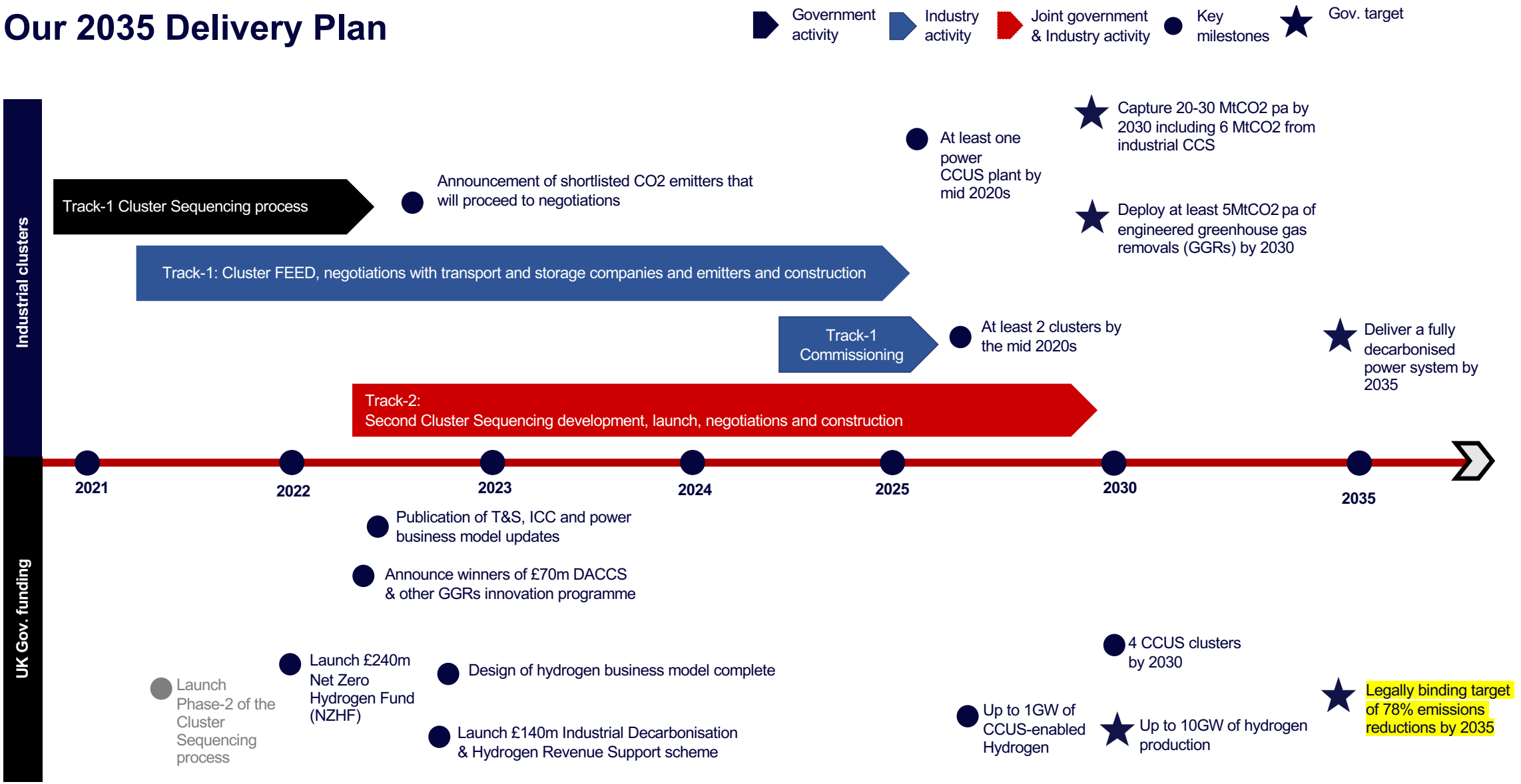
- Clusters and the Infrastructure Fund
- Transport and Storage
- Power CCUS
- Industrial Carbon Capture and Hydrogen

Funding, Business Models and Sequencing Process

Definitions

CCUS:	Carbon dioxide, CO_2, is removed from process emissions and used in industrial processes or sent for storage
CCUS cluster:	At least two CO_2 capture projects with access to a transport and storage network

Our 2035 Delivery Plan



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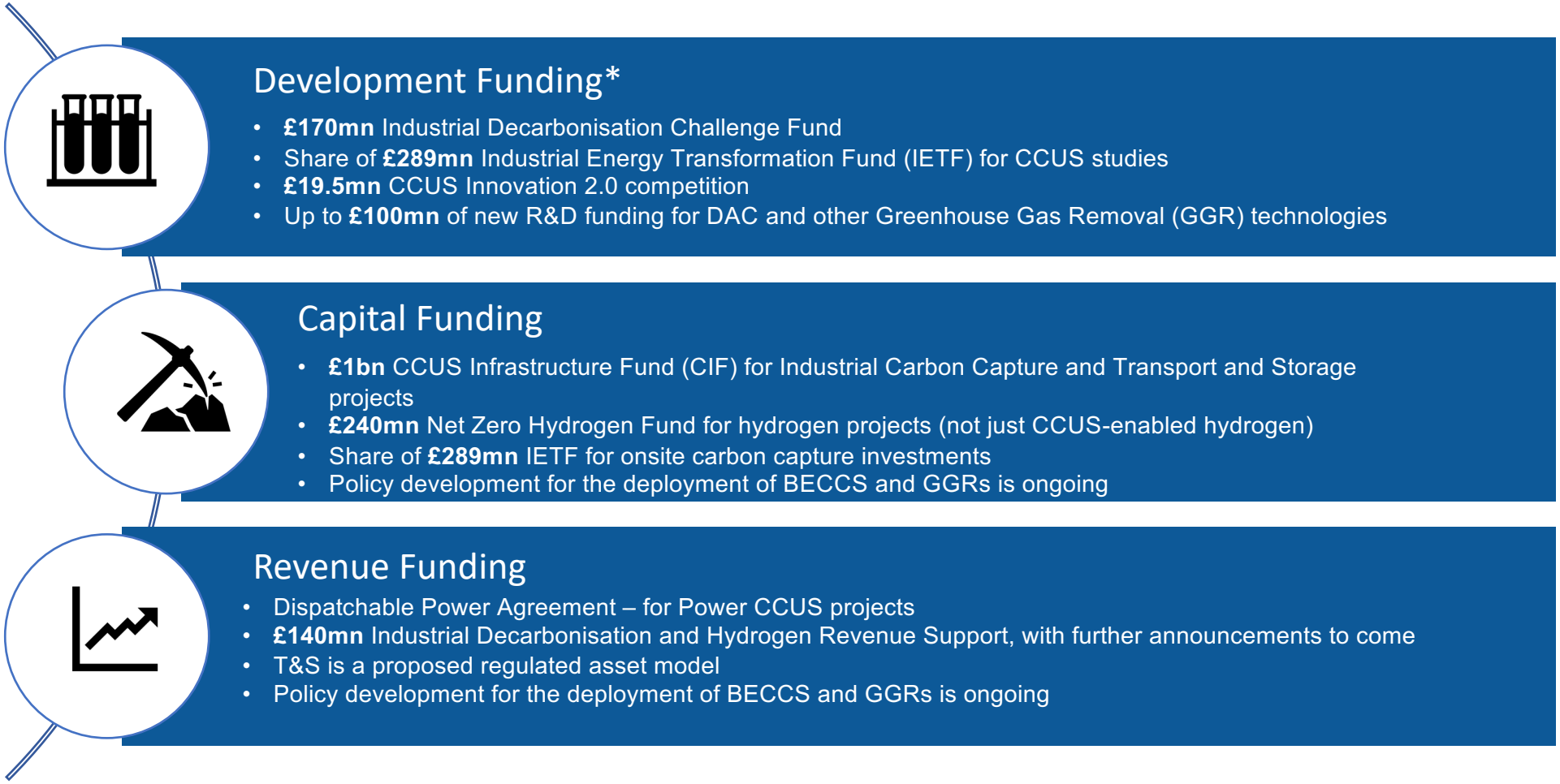
Funding and support mechanisms



Development Funding*

- **£170mn** Industrial Decarbonisation Challenge Fund
- Share of **£289mn** Industrial Energy Transformation Fund (IETF) for CCUS studies
- **£19.5mn** CCUS Innovation 2.0 competition
- Up to **£100mn** of new R&D funding for DAC and other Greenhouse Gas Removal (GGR) technologies

Capital Funding

- **£1bn** CCUS Infrastructure Fund (CIF) for Industrial Carbon Capture and Transport and Storage projects
- **£240mn** Net Zero Hydrogen Fund for hydrogen projects (not just CCUS-enabled hydrogen)
- Share of **£289mn** IETF for onsite carbon capture investments
- Policy development for the deployment of BECCS and GGRs is ongoing

Revenue Funding

- Dispatchable Power Agreement – for Power CCUS projects
- **£140mn** Industrial Decarbonisation and Hydrogen Revenue Support, with further announcements to come
- T&S is a proposed regulated asset model
- Policy development for the deployment of BECCS and GGRs is ongoing

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** - Development funding outlined here is not all for CCUS. There are varying eligibility criteria for each funding stream.*

International Initiatives and Support

CARBON CAPTURE, UTILIZATION & STORAGE
ACCELERATING CCUS TOGETHER
AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

International Climate Finance:
The UK **Official Development Assistance (aid)** supports climate mitigation/adaptation in ODA-eligible countries

Increase in UK international climate finance to £11.6bn over five years (to 2025/2026)

Areas of focus for this funding include:
- strengthening global peace, security and governance
- strengthening resilience and response to crises
- promoting global prosperity
- tackling extreme poverty, helping the world's most vulnerable

Accelerating CCS Technologies

International Fora:
- **Clean Energy Ministerial:** CCUS Initiative
- **Mission Innovation**
- **Carbon Sequestration Leadership Forum**
- "**ACT Programme**" - Accelerating CCS Technologies

Thank you!