

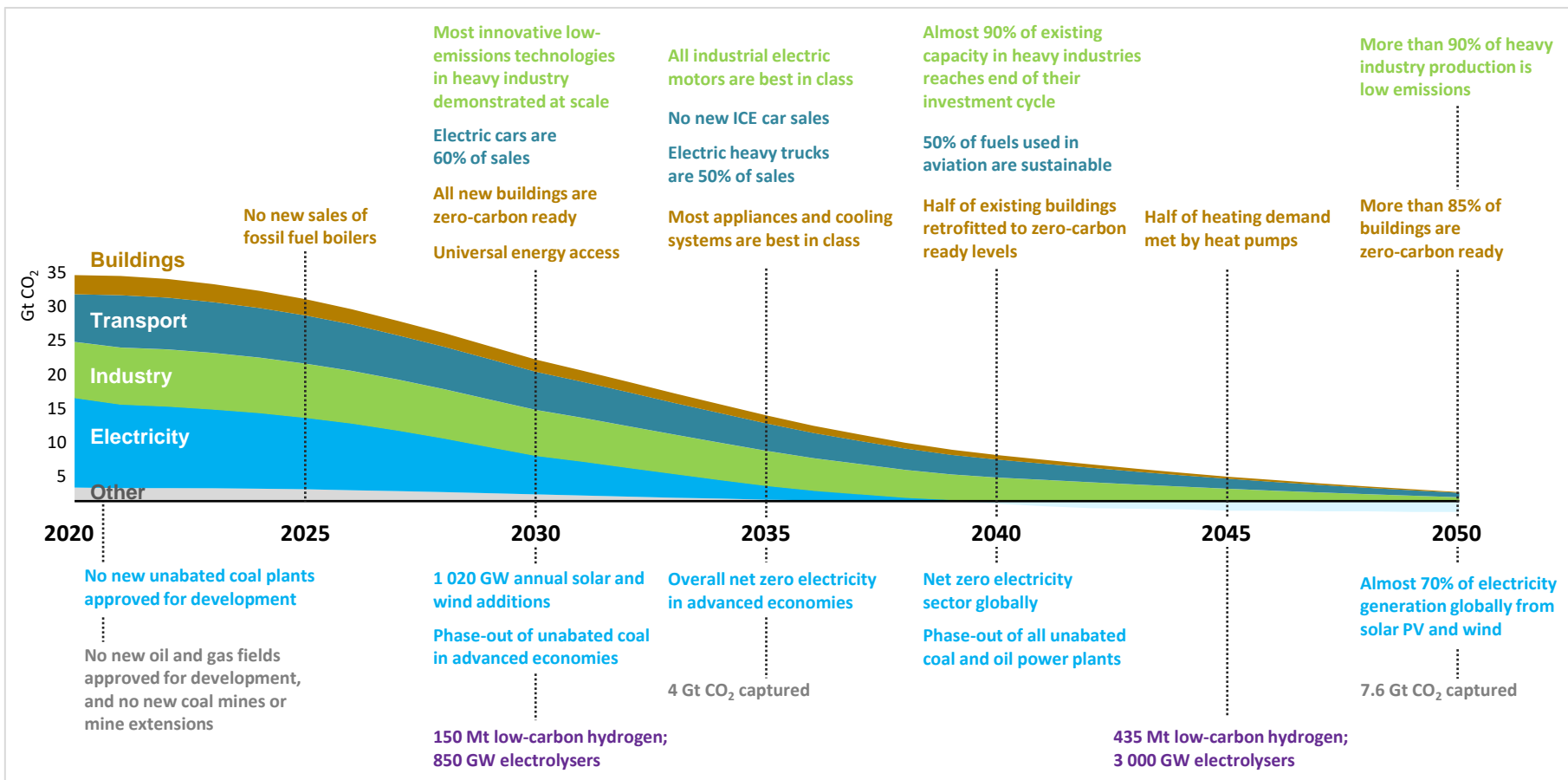


CCUS in clean energy transitions

Dr Sara Budinis, International Energy Agency

3rd CCUS & Hydrogen International Symposium - Toward carbon neutrality

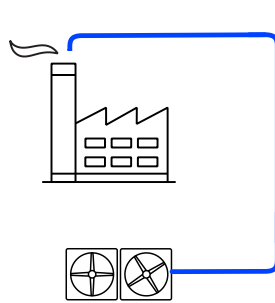
Set near-term milestones to get on track for long-term targets



Carbon capture, utilisation and storage: an overview

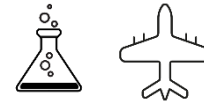
Capture

Capturing CO₂ from fossil or biomass-fuelled power stations, industrial facilities, or directly from the air.



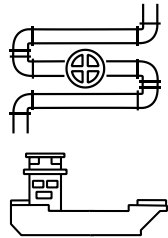
Use

Using captured CO₂ as an input or feedstock to create products or services.



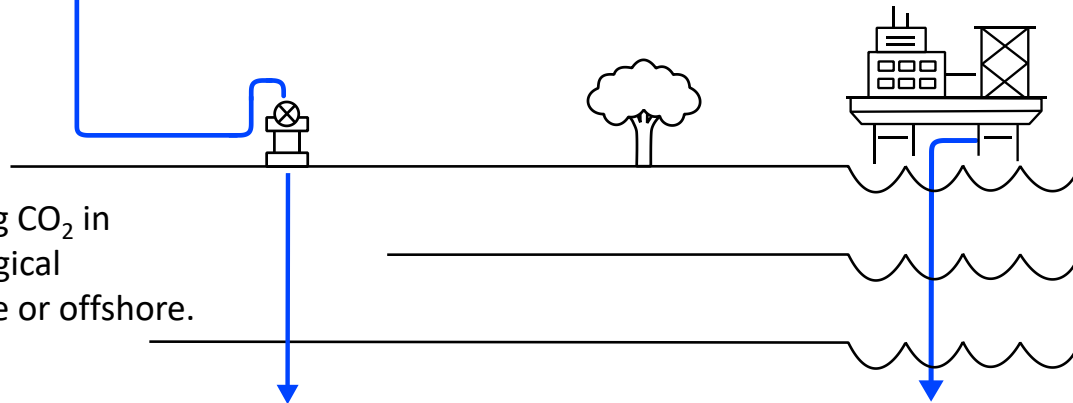
Transport

Moving compressed CO₂ by ship or pipeline from the point of capture to the point of use or storage.



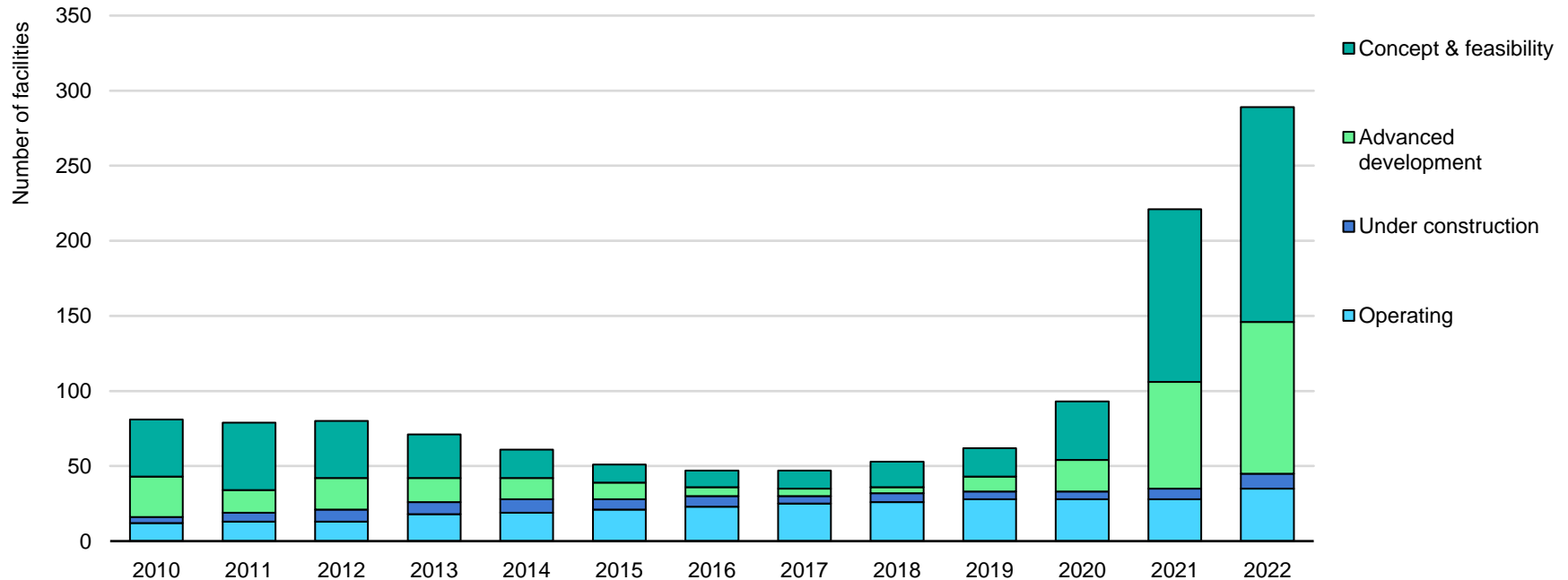
Storage

Permanently storing CO₂ in underground geological formations, onshore or offshore.



CCUS is experiencing unprecedented momentum

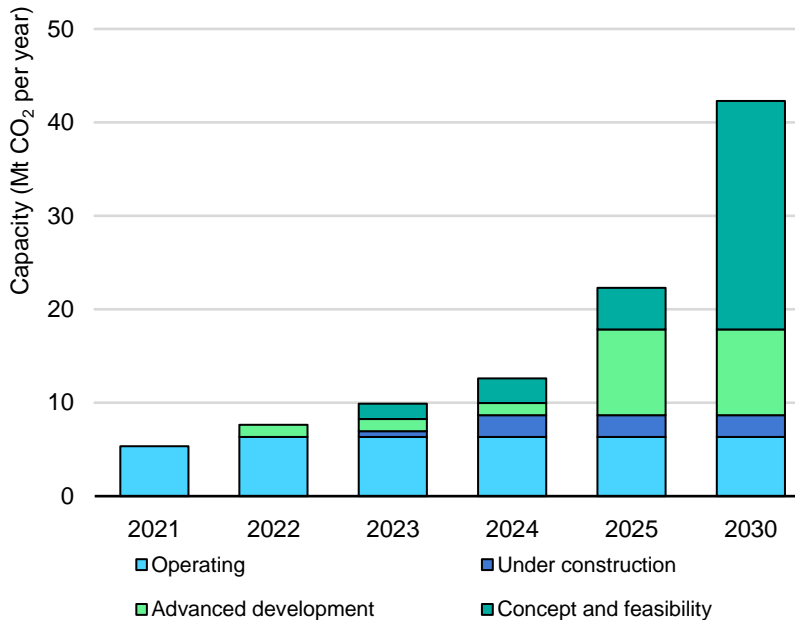
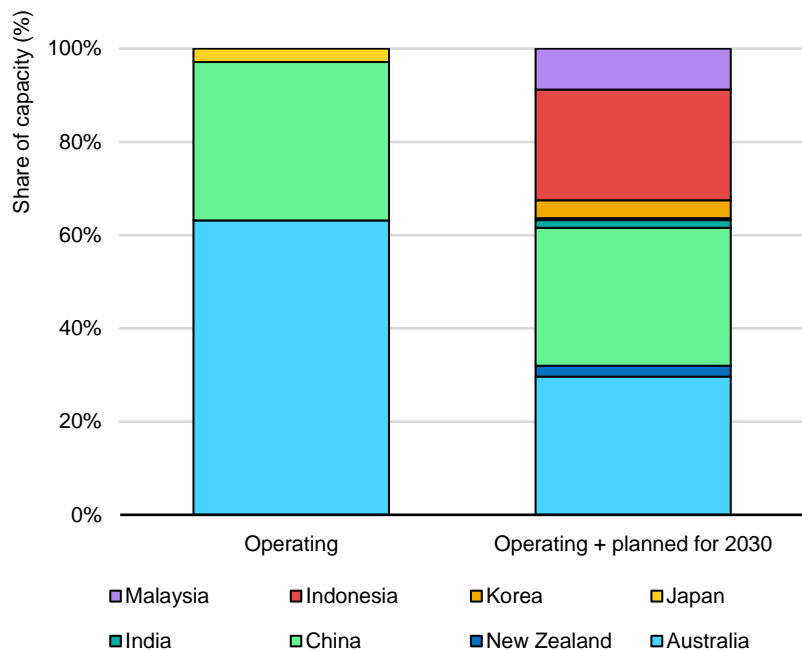
Global pipeline of commercial CCUS facilities operating and in development



Plans for around 300 projects are in various stages of development across the CCUS value chain, underpinned by net zero goals and an improved investment environment

The Asia-Pacific region plays an important role

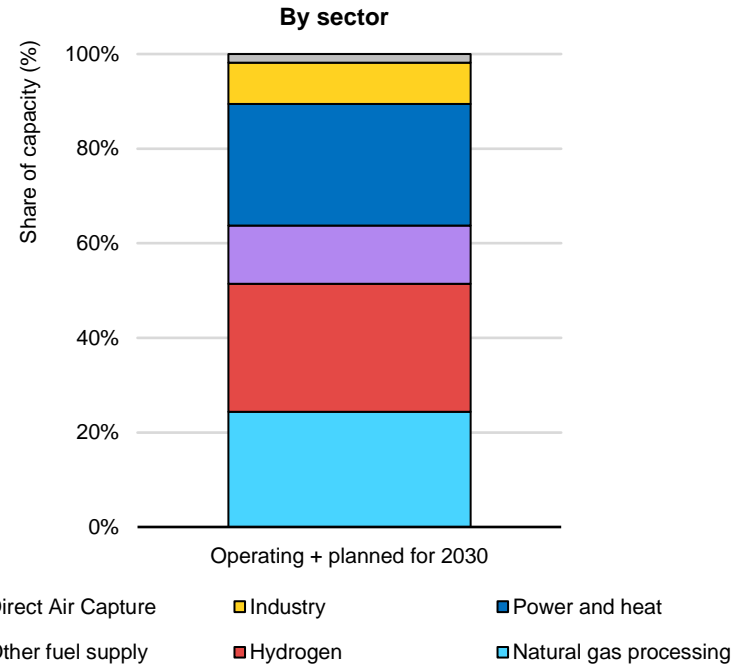
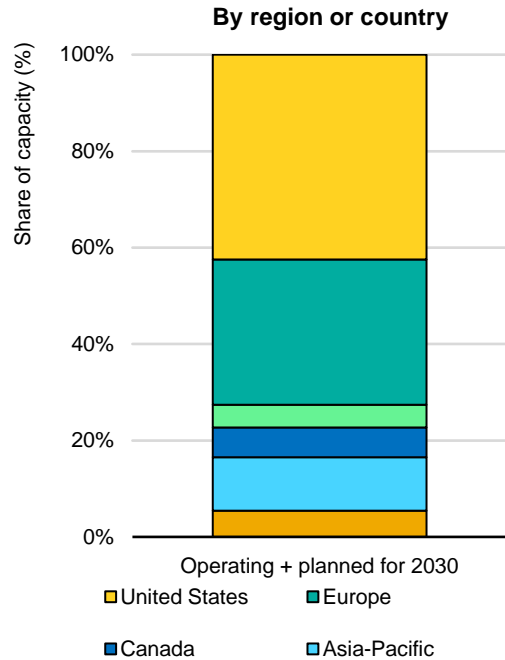
Pipeline of CCUS projects in the Asia Pacific region



CCUS projects are projected to grow and diversify across the region over the next decade

The CCUS project pipeline is diversifying across regions and sectors

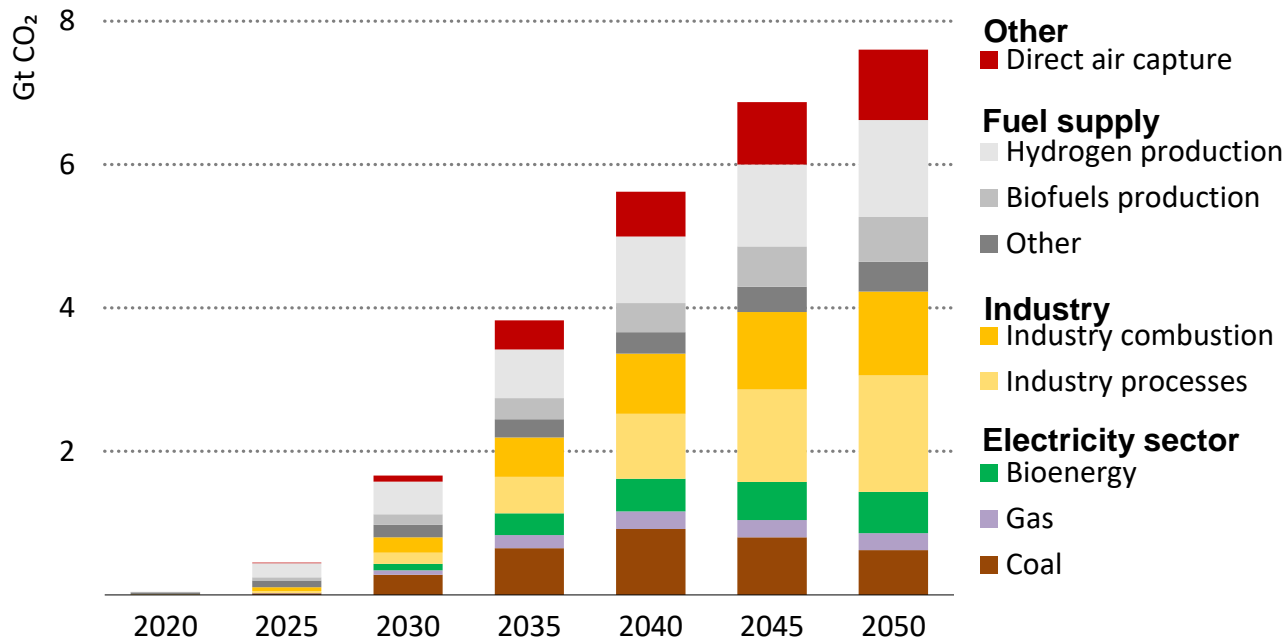
CCUS project pipeline



**Three-quarters of planned projects are in Europe and the United States.
Almost two-thirds are associated with lower-cost CO₂ capture opportunities in hydrogen and fuel transformation.**

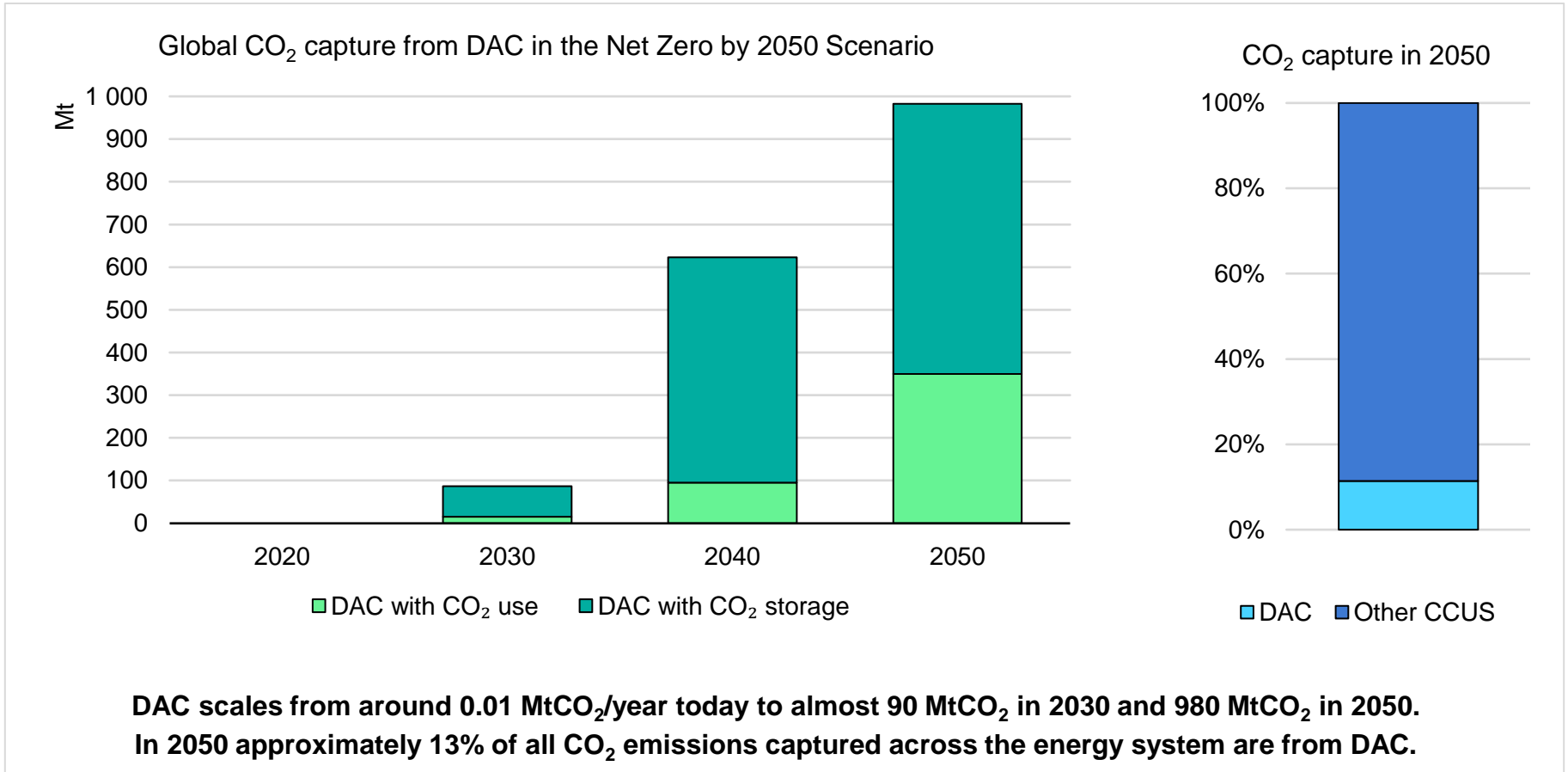
Global deployment needs to accelerate to reach net zero goals

Global CO₂ capture by source in the IEA Net Zero Emissions by 2050 scenario



**By 2050, 7.6 Gt of CO₂ is captured per year from a diverse range of sources
2.4 Gt CO₂ is captured from bioenergy use and DAC, of which 1.9 Gt CO₂ is permanently stored**

Capturing CO₂ from the air plays a growing role in net zero pathways



Four high-level priorities for governments and industry would accelerate the progress of CCUS:

1
Create the conditions for investment

2
Target the development of industrial clusters with shared CO₂ infrastructure

3
Identify and develop CO₂ storage

4
Boost innovation for key technologies

iea