Can CCS deliver on mitigation needs identified by the IPCC?

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The IEA works around the world to support an accelerated clean energy transition that is

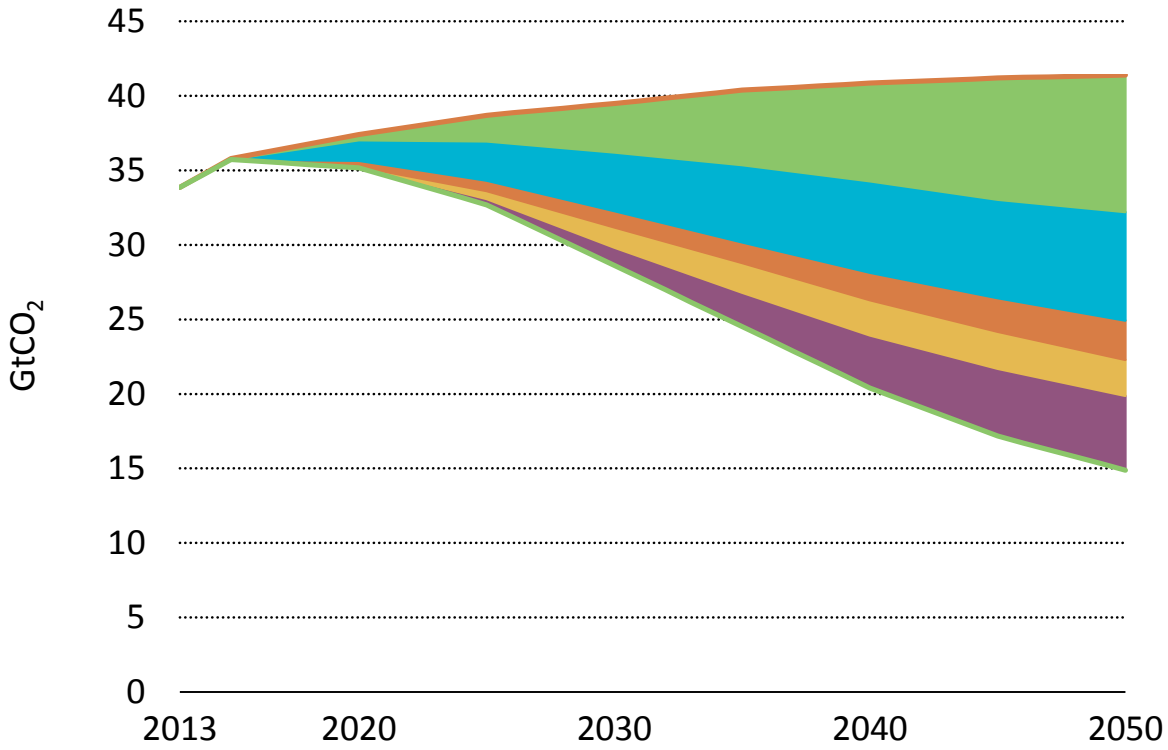
enabled by real-world SOLUTIONS

supported by ANALYSIS

and built on DATA

Sizing the scale of the challenge…
… and its solutions …

Contribution of technology area to global cumulative CO_2 reductions



The carbon intensity of the global economy can be cut by two-thirds through a diversified energy technology mix

… looking at a multitude of sustainable energy options

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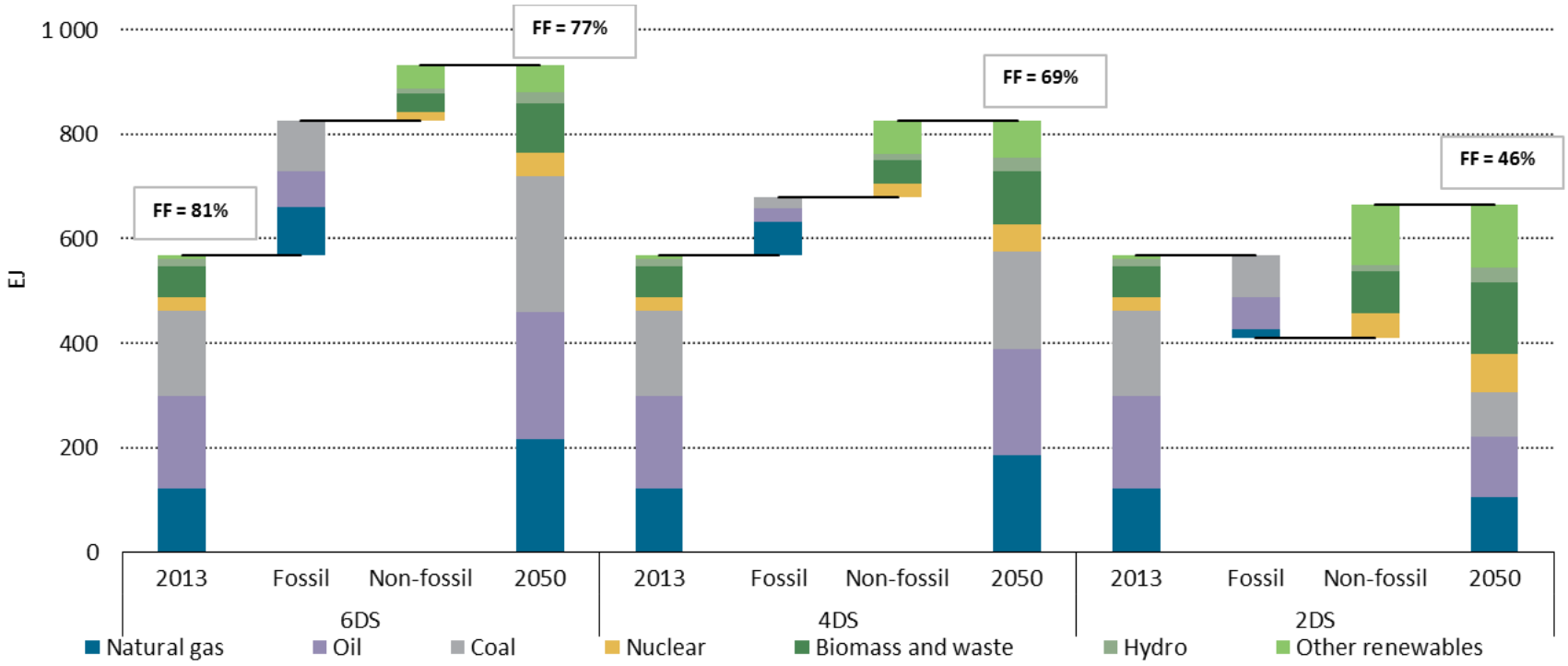
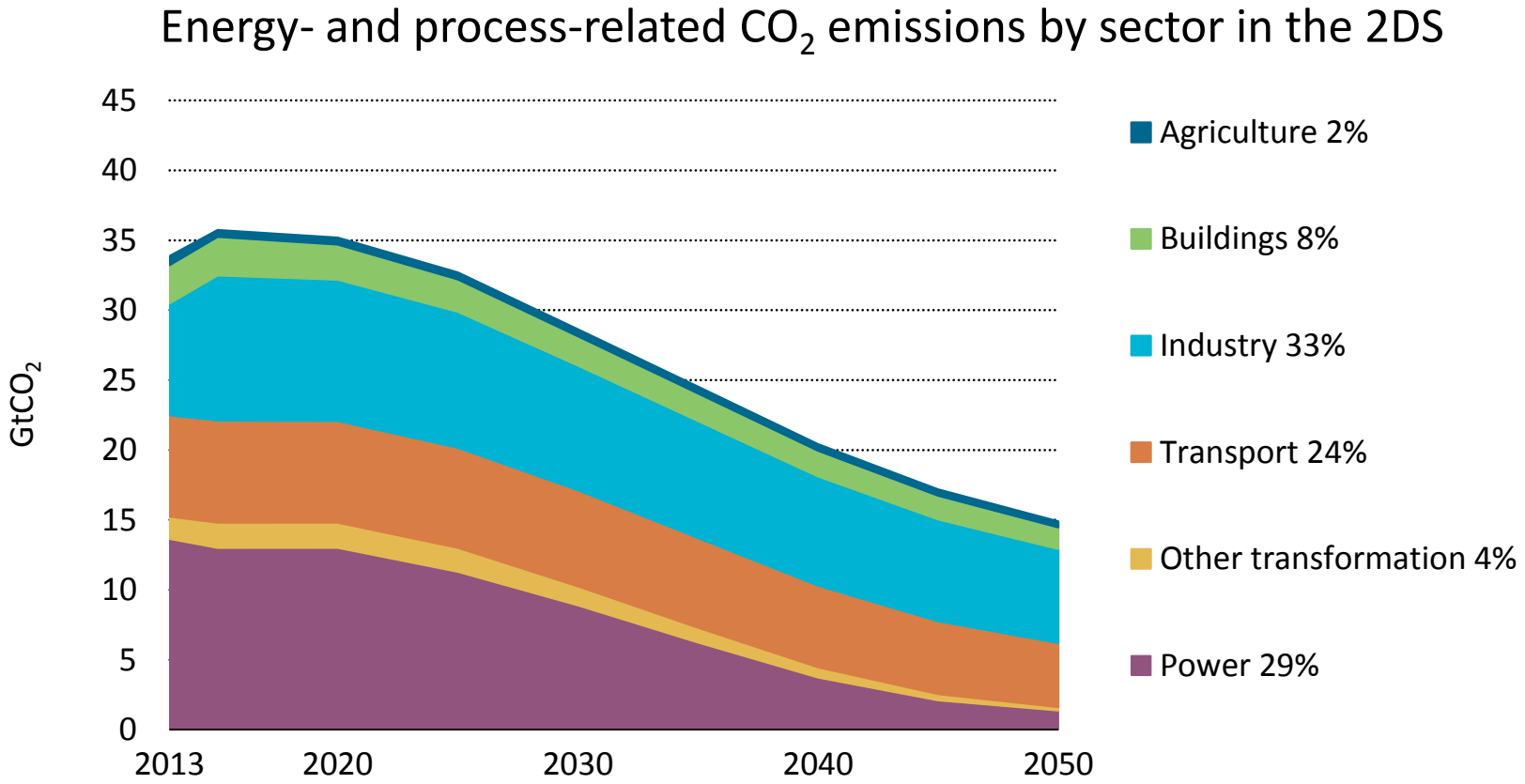
Global primary energy use by fuel, 2013-2050



Source: ETP2016

Fossil fuels remain an important part of global energy supply in the 2DS with a 46% share in 2050

But the challenge increases to get from 2 degrees to "well below" 2 degrees



Industry and transport account for 75% of the remaining emissions in the 2DS in 2050.

Is CCS essential for meeting our climate goals ?

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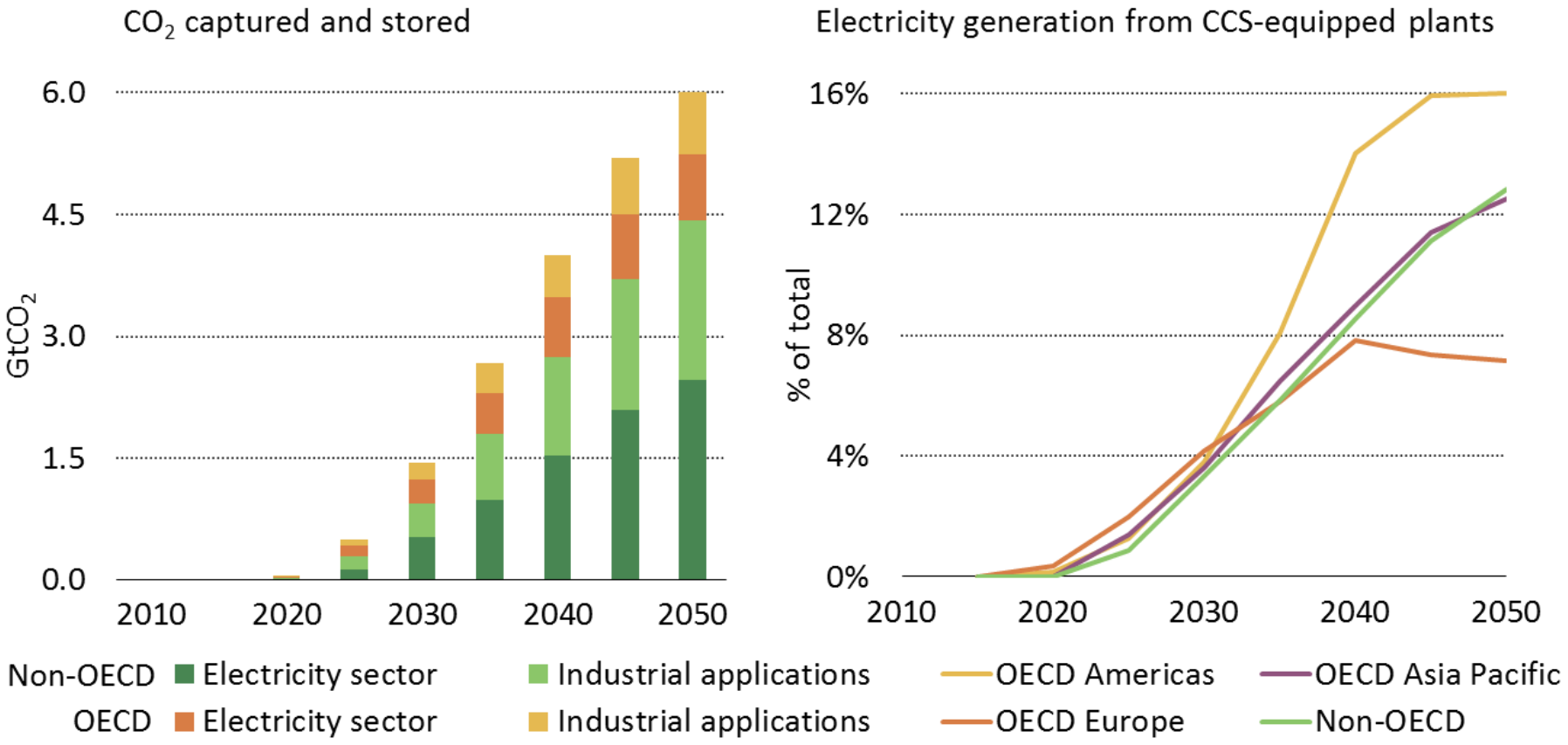
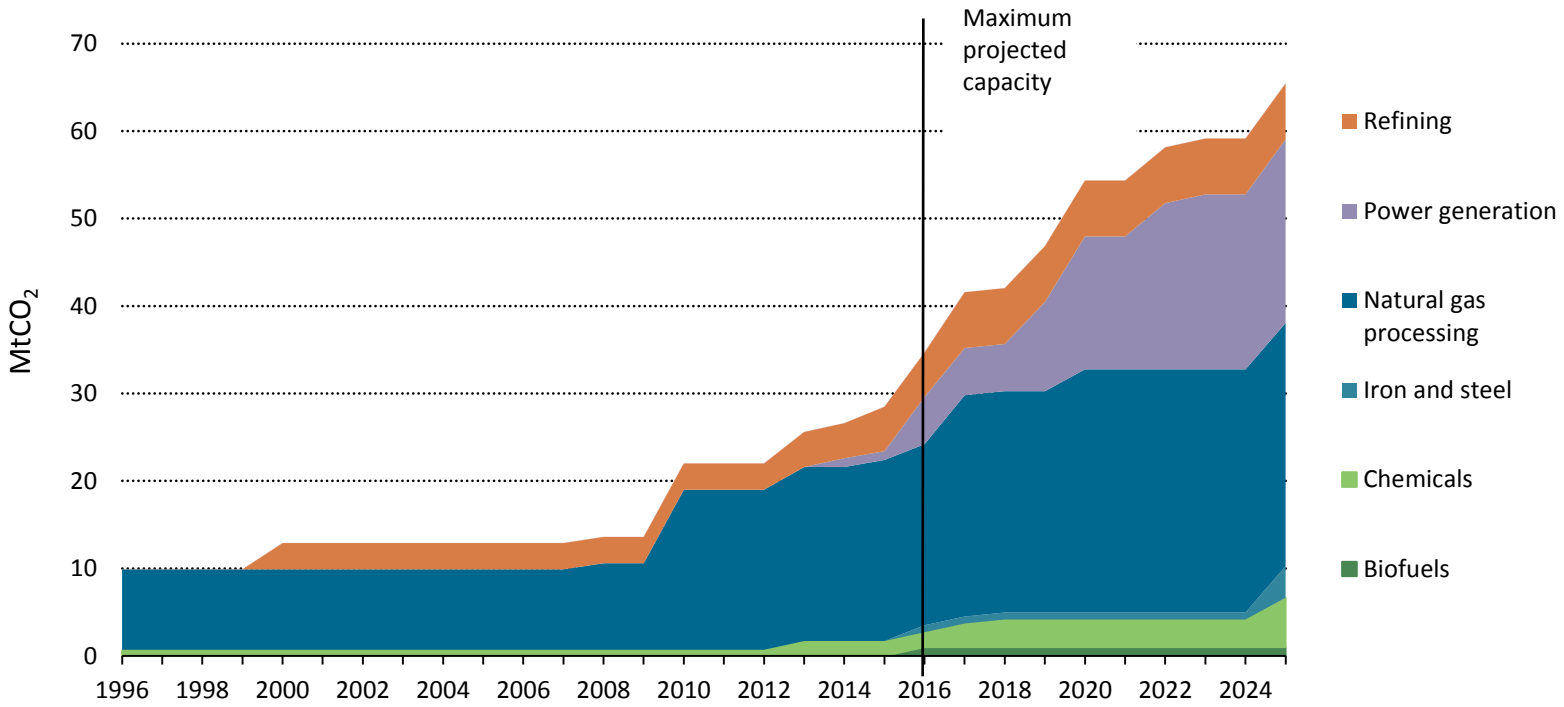
- Most energy system models reviewed by the IPCC can't meet emissions targets without CCS; for those that can, the median increase in mitigation cost is 138%.
- Fossil fuels will continue to make up a significant share in the energy mix → CCS is key to meet 2DS target
- CCS is indispensable in achieving deep emission reductions in the industrial sector
- CCS in combination with biomass is one of the few ways to achieve negative CO_2 emissions

CCS in the 2DS



CCS is important in both electricity and industry; over two-thirds of total CO_2 captured and stored is in non-OECD countries

Status and progress of large scale CO_2 capture



The maximum capture capacity from all projects in the pipeline is ~65 MtCO2 a year – the 2DS calls for 500 MtCO2 a year to be stored by 2025.

Can CCS deliver on mitigation needs identified by IPCC? *Yes*, but…

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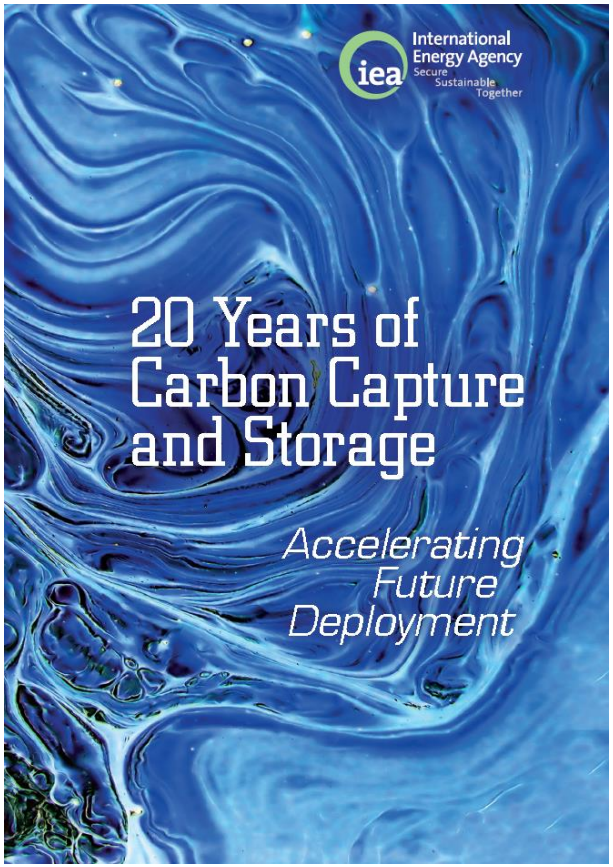
- **Investment** is needed **now**, given the extent of CCS needed in the coming decades and the lead times for storage development

- Implicit and explicit CO_2 prices are too low to drive CCS investment – governments will need to lead with **specific, targeted incentives**

- Investment in **transport and storage infrastructure** can enable CO_2 capture to be more easily and affordably applied to industrial and small scale sources.

New IEA publication



Released tomorrow 15 November 2016

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Thank You

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Explore the data behind *ETP*

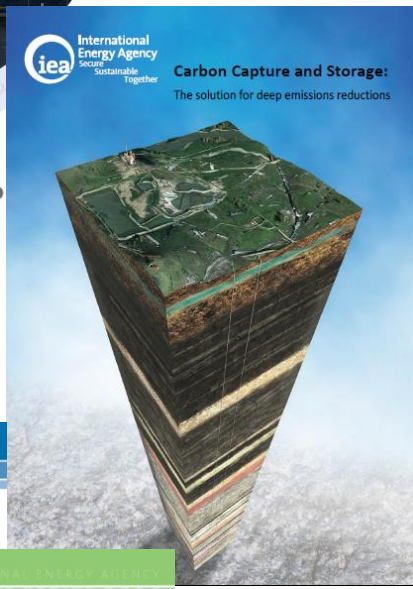
Technology Roadmap
Carbon capture and storage

INTERNATIONAL ENERGY AGENCY
INSIGHTS SERIES 2015

Storing CO_2 through Enhanced Oil Recovery

INTERNATIONAL ENERGY AGENCY
WORKSHOP REPORT 2015

Combining for profit



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