



Can Carbon Capture and Storage Decarbonise Industries in Developed and Developing Countries?

Tim Dixon, IEAGHG

6th December 2018

UNFCCC Side Event

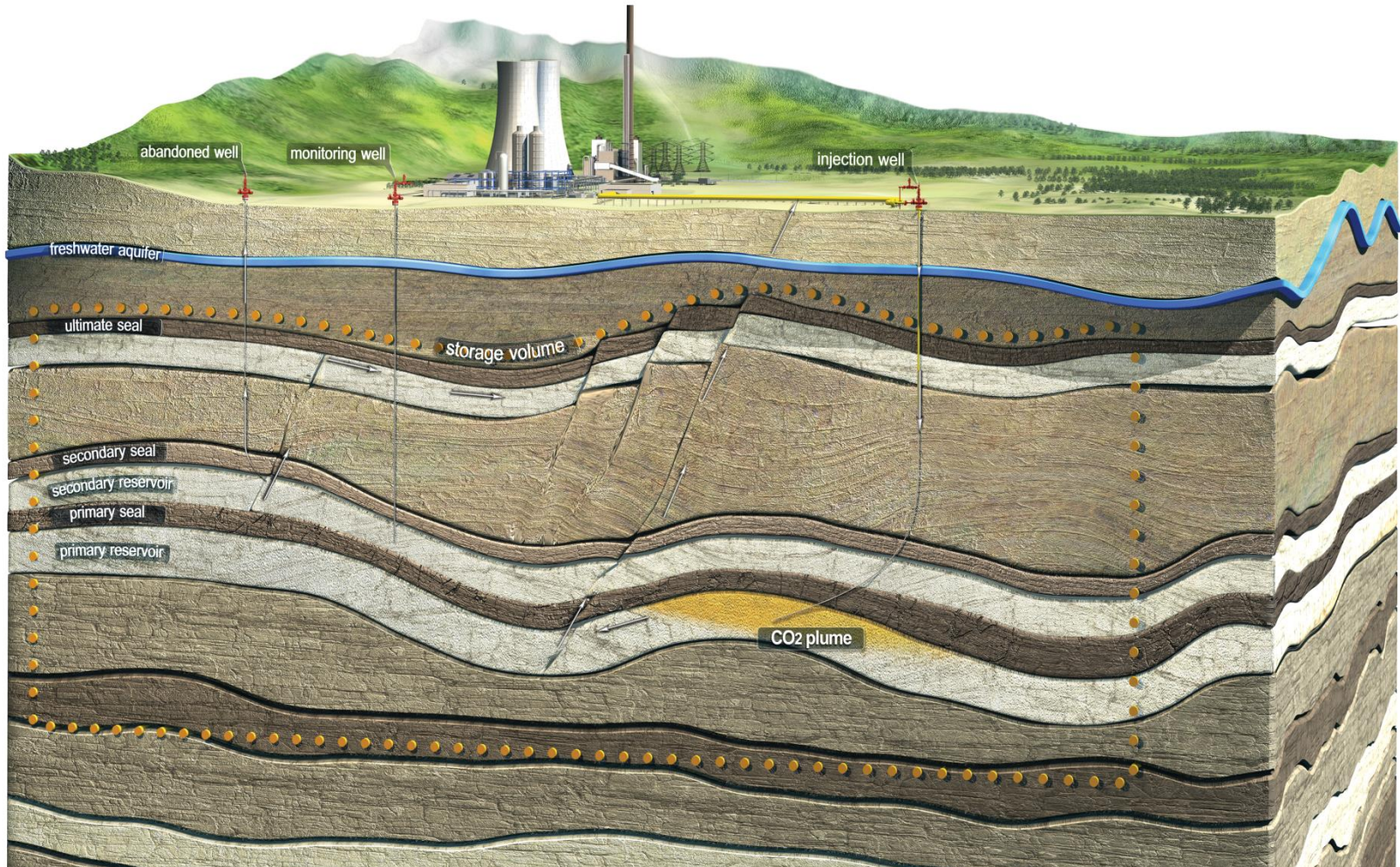
COP-24, Katowice

BELLONA



Carbon Capture &
Storage Association

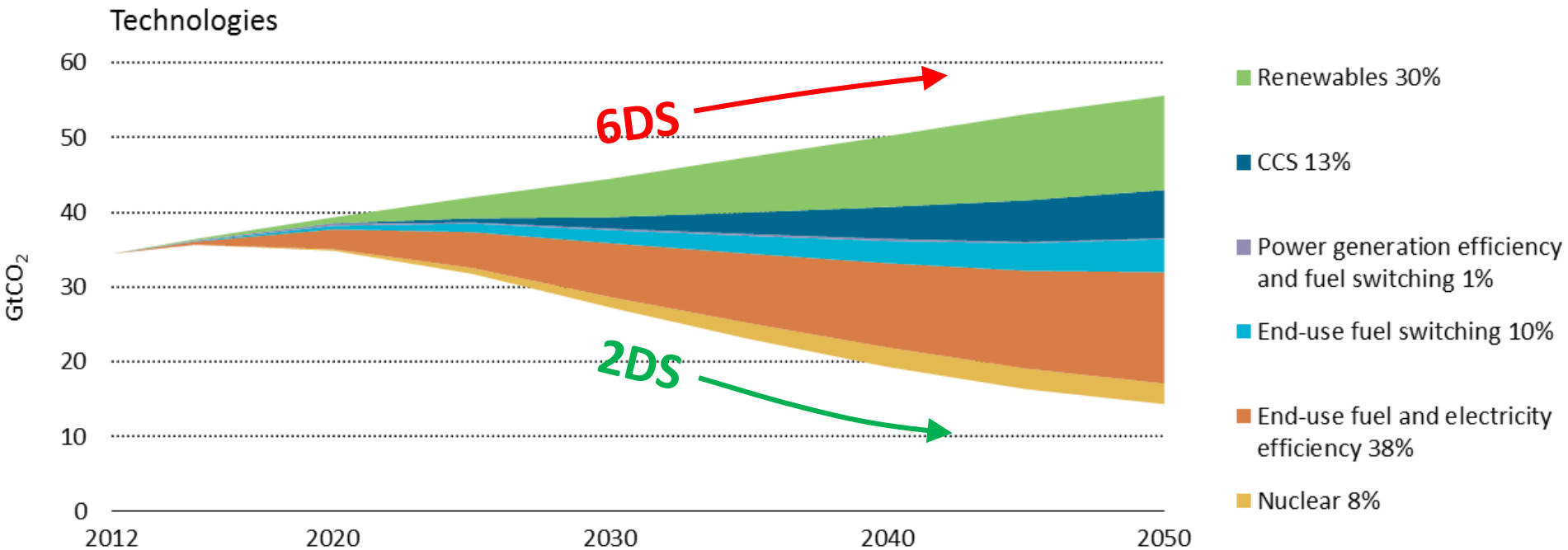
What is CCS?



Source: DNV

A portfolio of technologies is required to get from here to there

ETP 2015







Percentages represent cumulative contributions to emissions reduction relative to 6DS

IPCC AR5 – Role of different low-carbon energy technologies

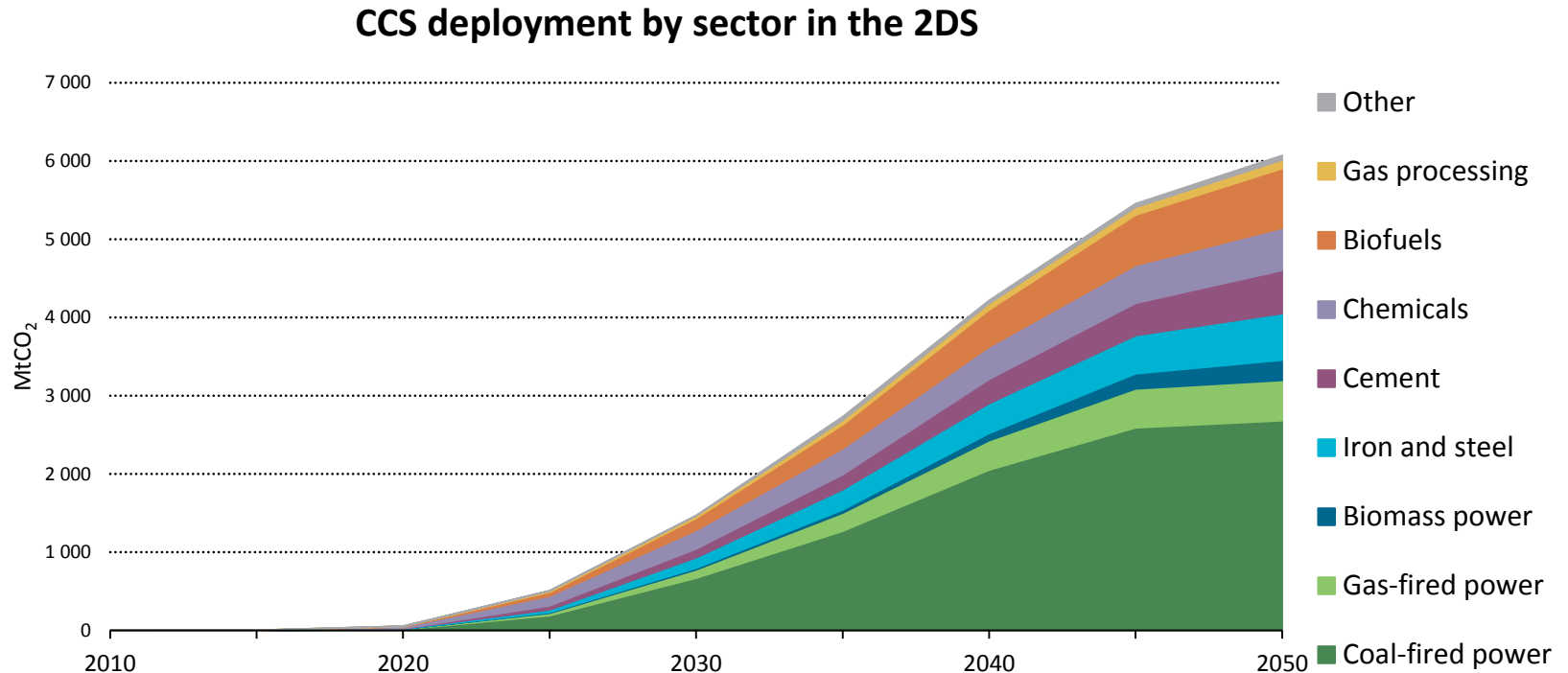


Mitigation cost increases in scenarios with limited availability of technologies ^d

[% increase in total discounted ^a mitigation costs (2015–2100) relative to default technology assumptions]

2100 concentrations (ppm CO ₂ -eq)	no CCS	nuclear phase out	limited solar/wind	limited bioenergy
450 (430 to 480)	138% (29 to 297%) 	7% (4 to 18%) 	6% (2 to 29%) 	64% (44 to 78%) 

IEA: 94Gt CO₂ captured and stored in 2DS



- From 50Mt in 2020 to 6Gt in 2050
- A total of 94Gt captured and stored through 2050
 - 52Gt → 56% power
 - 29Gt → 31% process industries
 - 13Gt → 14% gas processing and biofuel production



ETP 2017

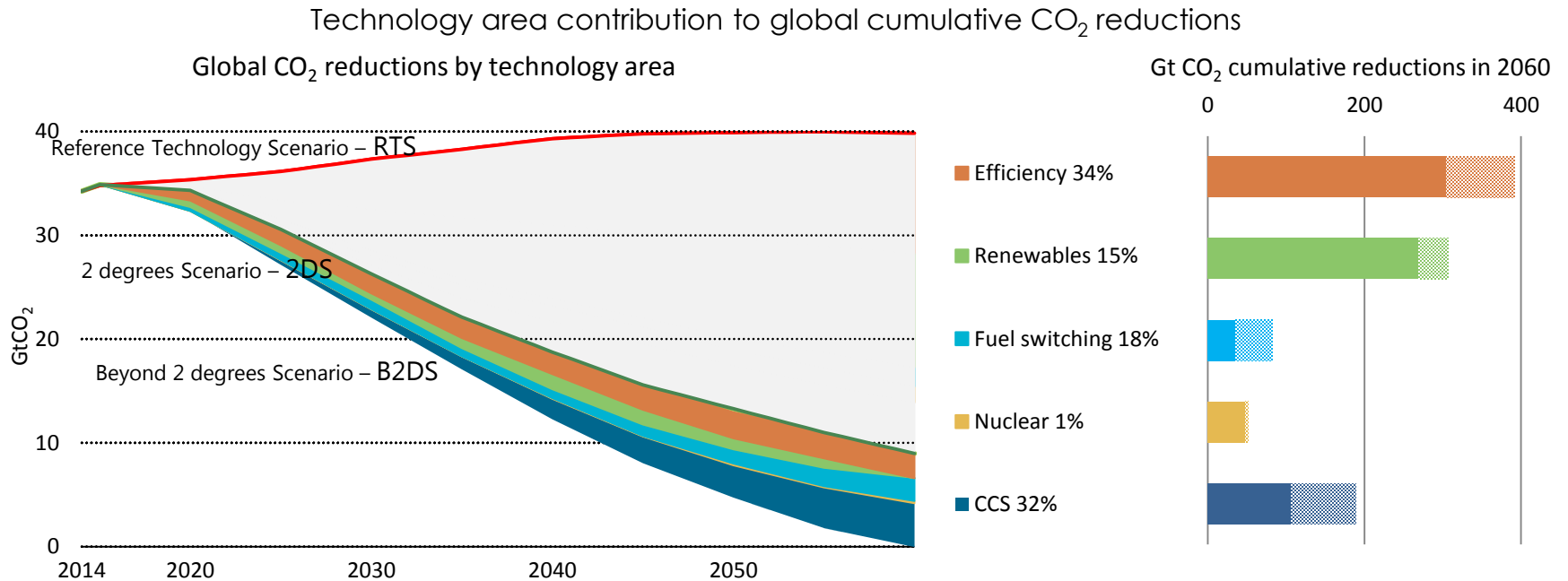
The role of CCS in achieving global climate ambitions

Samantha McCulloch

June 2017

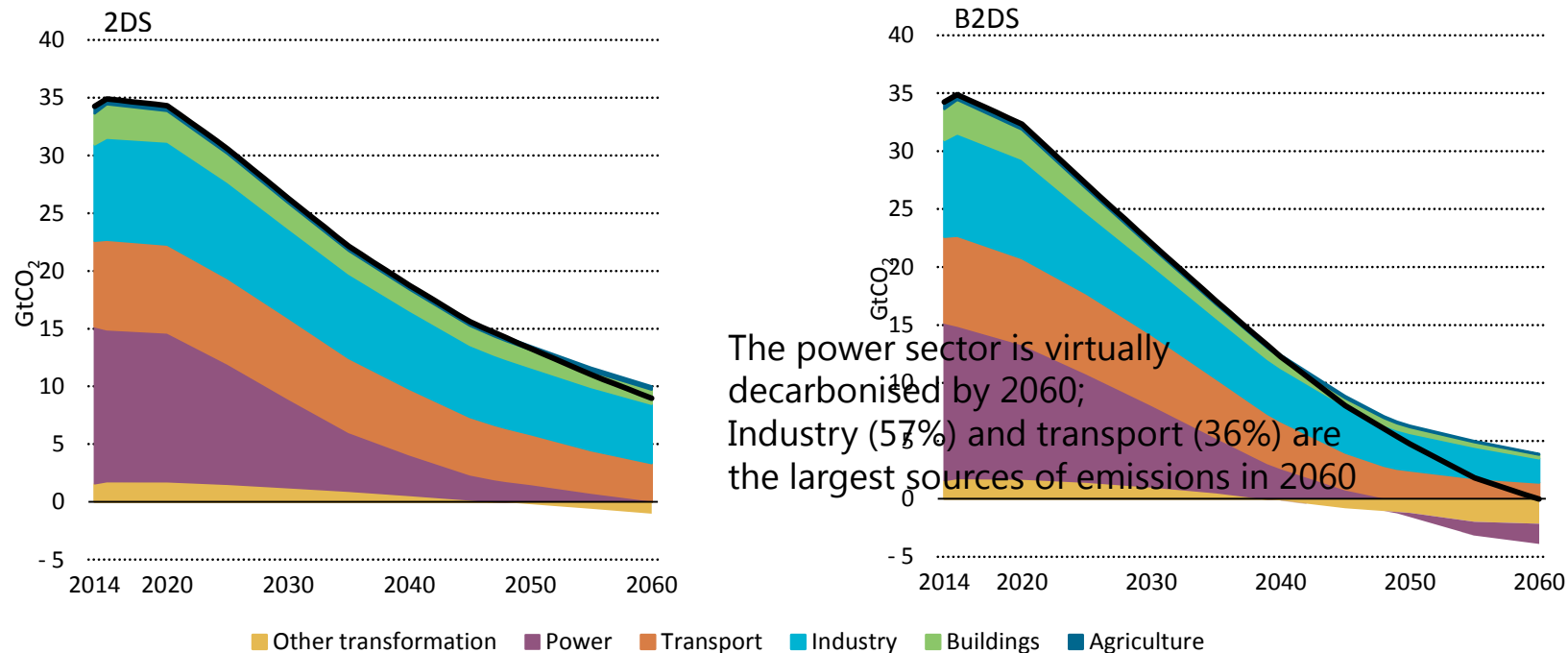


CCS plays a leading role in the energy transformation



**Pushing energy technology to achieve carbon neutrality by 2060
could meet the mid-point of the range of ambitions expressed in Paris**

Remaining CO₂ emissions in the 2DS and B2DS



The remaining CO₂ emissions in industry and power must be targeted for the B2DS
Negative emissions are necessary to achieve net-zero emissions in 2060



IPCC 1.5 Special Report

- Impacts and pathways to achieving 1.5C by 2100, in context of increasing global response, sustainable development and poverty



<https://www.ipcc.ch/report/sr15/>



Climate Action Now

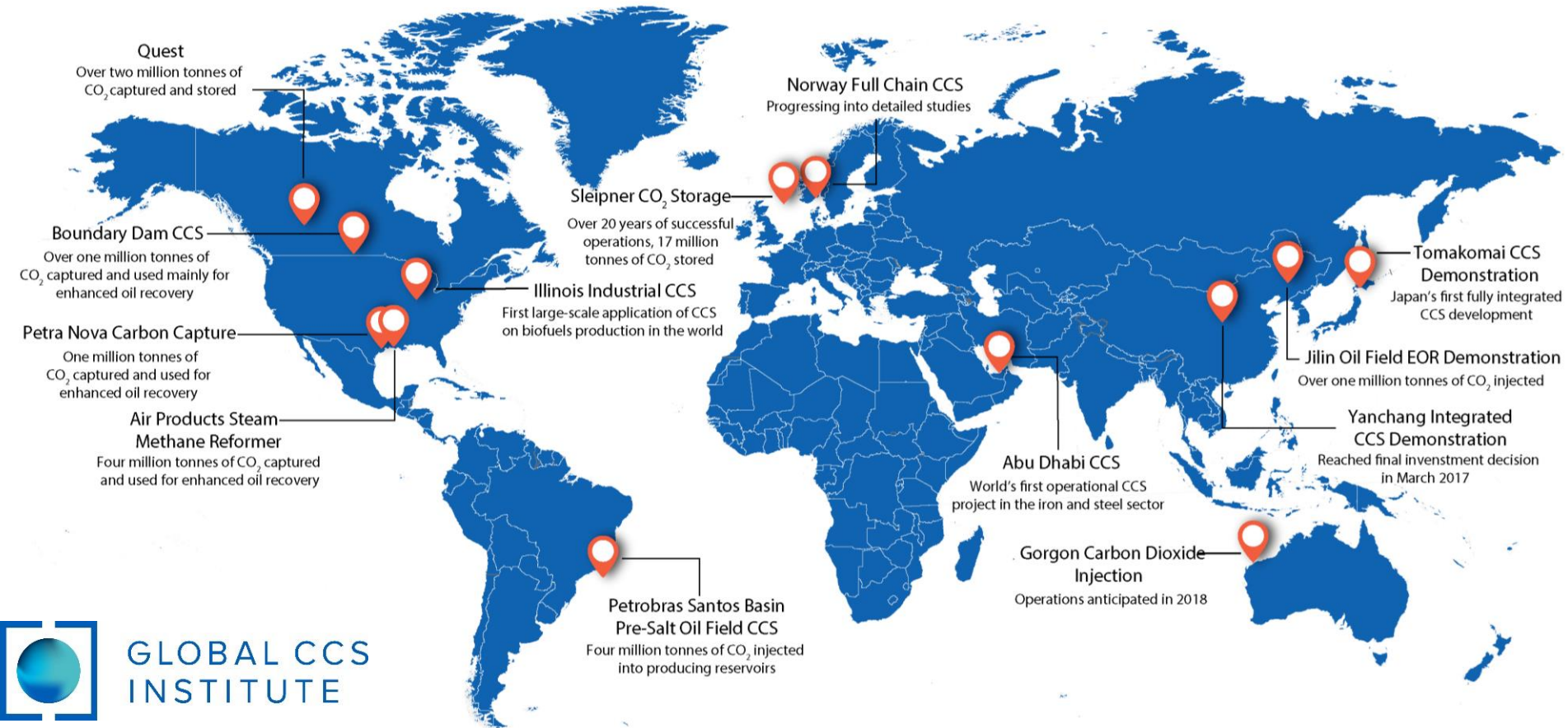
Summary
for Policymakers
2015



United Nations
Climate Change Secretariat

- **‘Climate Action Now’
UNFCCC - 18 Nov 2015**
- High level summary of policy actions with high mitigation potential at **2020**
- Builds on Technical Expert Meetings (TEMs)
- Includes CCUS as one of the six priority areas
- Significance of Boundary Dam CCUS project
- Solutions through international cooperation - IEAGHG

Key CCS Facility Developments Globally



GLOBAL CCS
INSTITUTE

2017

Can CCS Decarbonise Industries?



- **Chair and CCS introduction** – Tim Dixon IEAGHG
- **IPCC 1.5 - Climate and Energy Scene-setting** - Thelma Krug IPCC
- CCS for Industry Panel - Facilitator – Jonas Helseth, Bellona and EU ZEP
- **CCS and Cement Industry** - Manuela Ojan, Public Affairs & Sustainable Construction, Heidelberg Cement
- **Cement, Poland, learnings from BD3.** - Mike Monea ICKC
- **‘A Just Transition for Industry’** – Brian Kohler, IndustriALL
- **Role of CCS in net zero emissions for industry** – Jonas Helseth, Bellona and EU ZEP
- Panel discussion

CCS for Developing Countries Panel - Facilitator – Katherine Romanak, Univ of Texas

- **Demonstrating storage/Assistance for developing countries** – Katherine Romanak Univ of Texas
- **Trinidad and Tobago’s perspective on CCS** – Professor Andrew Jupiter, University of the West Indies
- **Sustainable Development Goals and CCS** – Tim Dixon IEAGHG
- Panel discussion with audience
- **Outcomes of the Global CCUS Summit and UK’s support to emerging economies** –
- The Rt Hon Mark Field MP, UK Foreign & Commonwealth Office



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