



THE UNIVERSITY OF
TEXAS
AT AUSTIN

New Large-scale Carbon Capture and Storage (CCS) Projects Operating in the Americas

Tim Dixon, IEA Greenhouse Gas R&D Programme

9th December 2014

UNFCCC Side Event

COP-20, Lima, Peru

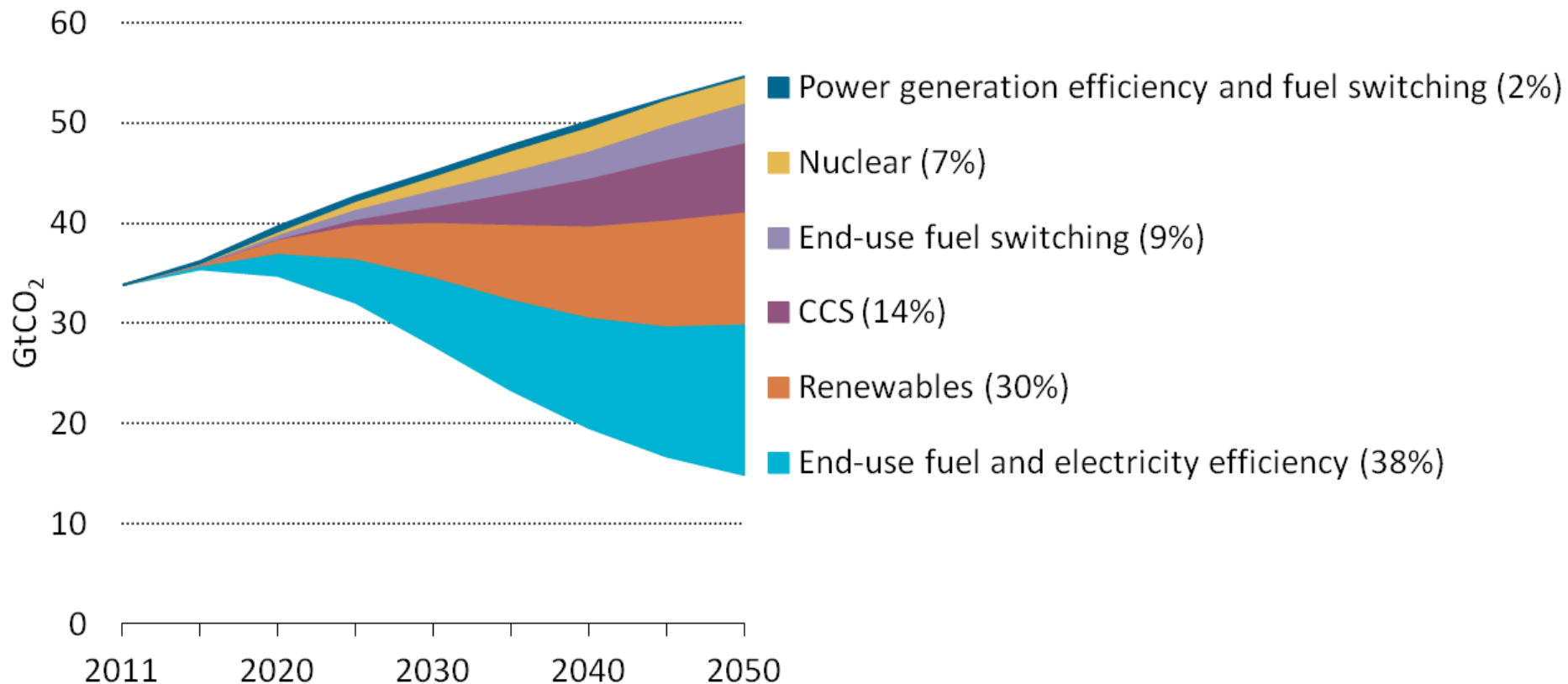
www.ieaghg.org



Carbon Capture &
Storage Association



A transformation of supply and use is needed



Carbon capture and storage (CCS) contributes 14% of total emissions reductions through 2050 relative to the 6DS



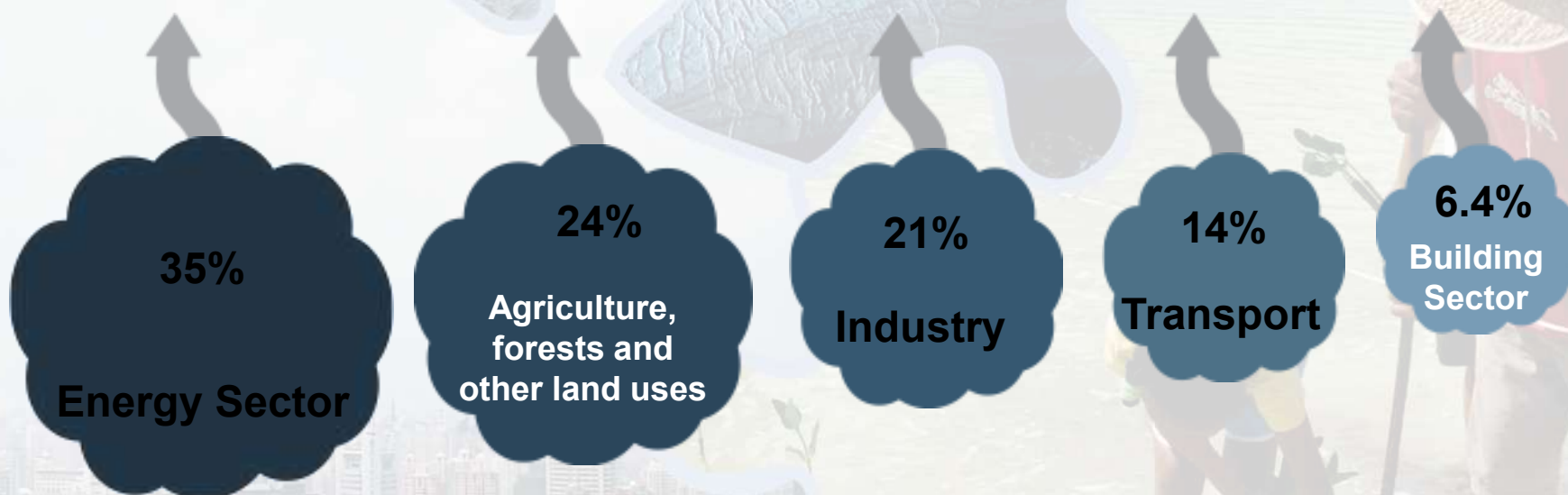
IPCC Fifth Assessment Report Synthesis Report

2nd November 2014
Copenhagen

IPCC AR5 Synthesis Report

Sources of emissions

Energy production remains the primary driver of GHG emissions



2010 GHG emissions

AR5 WGIII SPM

Mitigation Measures



More efficient use of energy



Greater use of low-carbon and no-carbon energy

- Many of these technologies exist today



Improved carbon sinks

- Reduced deforestation and improved forest management and planting of new forests
- Bio-energy with carbon capture and storage



Lifestyle and behavioural changes

AR5 WGIII SPM

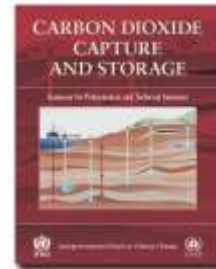
**IPCC AR5
SYR
Table 3.2
(2014)**

	Increase in total discounted mitigation costs in scenarios with limited availability of technologies			
	[% increase in total discounted mitigation costs (2015–2100) relative to default technology assumptions]			
2100 Concentration (ppm CO ₂ eq)	No CCS	Nuclear phase out	Limited Solar / Wind	Limited Bio-energy
450 (430–480)	138 (29–297) [N: 4]	7 (4–18) [N: 8]	6 (2–29) [N: 8]	64 (44–78) [N: 8]
500 (480–530)				
550 (530–580)	39 (18–78) [N: 11]	13 (2–23) [N: 10]	8 (5–15) [N: 10]	18 (4–66) [N: 12]
580–650				

CCS in UNFCCC



➤ 2005 - IPCC SR on CCS



➤ 2005– 2011 CCS in CDM?

➤ 2011 – CCS CDM Abu Dhabi workshop



➤ 2011 - COP-17 CCS in CDM



➤ 2014 - ADP – TEM on CCS – project focussed



➤ 2014 - COP-20 – CCS Projects Side Event



CCS Projects in the Americas



- *Mike Monea, SaskPower, Canada* *SaskPower CCS*
- *Paulo Negrais Seabra, Petrobras, Brazil* *Petrobras' Offshore CO₂ Management*
- *Vanessa Nuñez López and Katherine Romanak, University of Texas, USA* *USA Large-scale Onshore Projects / Global Offshore Demonstration Project*



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