

Global progress towards CCS deployment – getting storage right is essential

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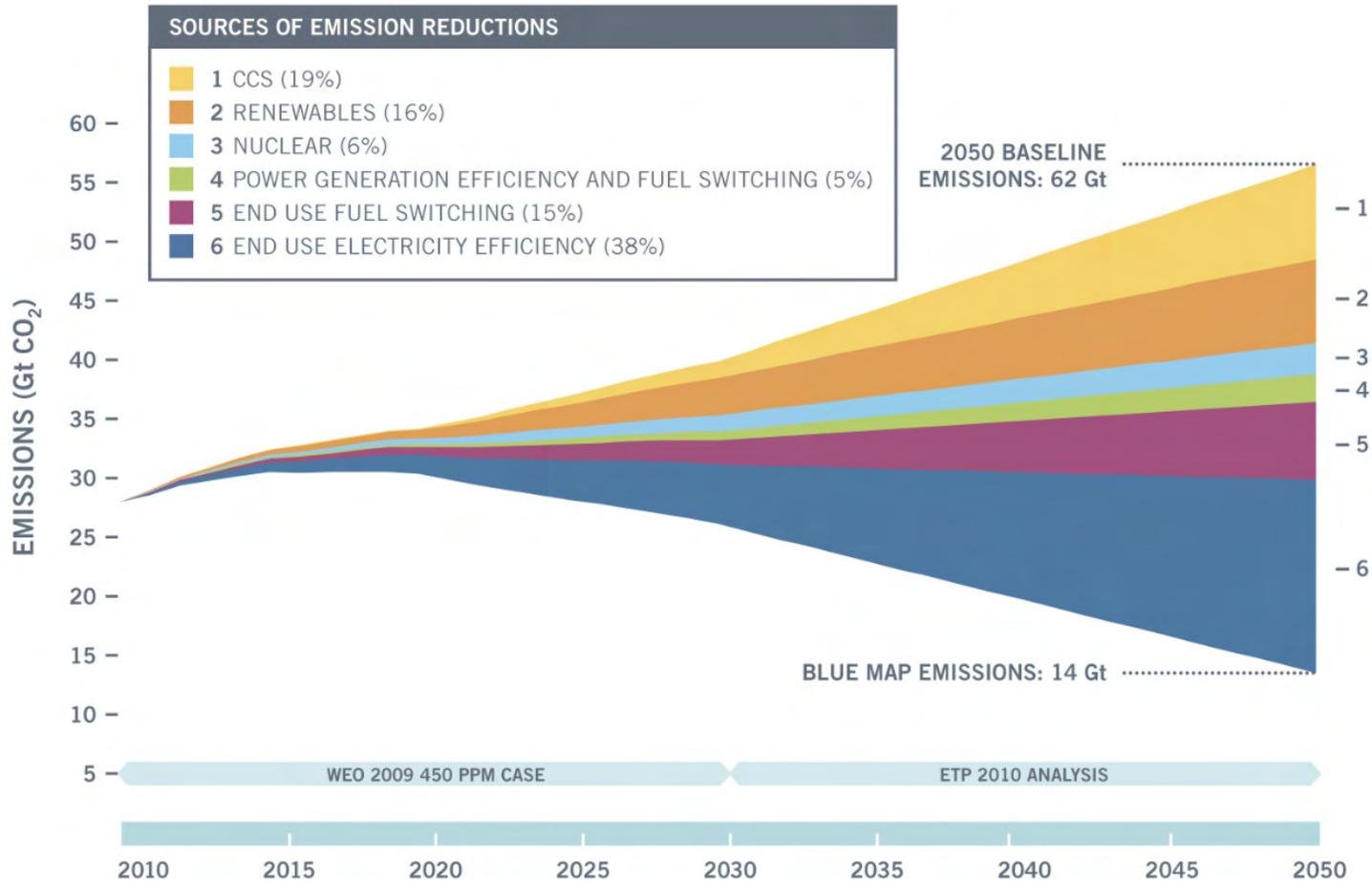
13- 14 April 2011

CO₂ Capture and Storage – Response to Climate Change. Regional workshop for the Baltic Sea Region and C&E European Countries,

WWW.GLOBALCCSINSTITUTE.COM

THE IEA BLUE MAP SCENARIO

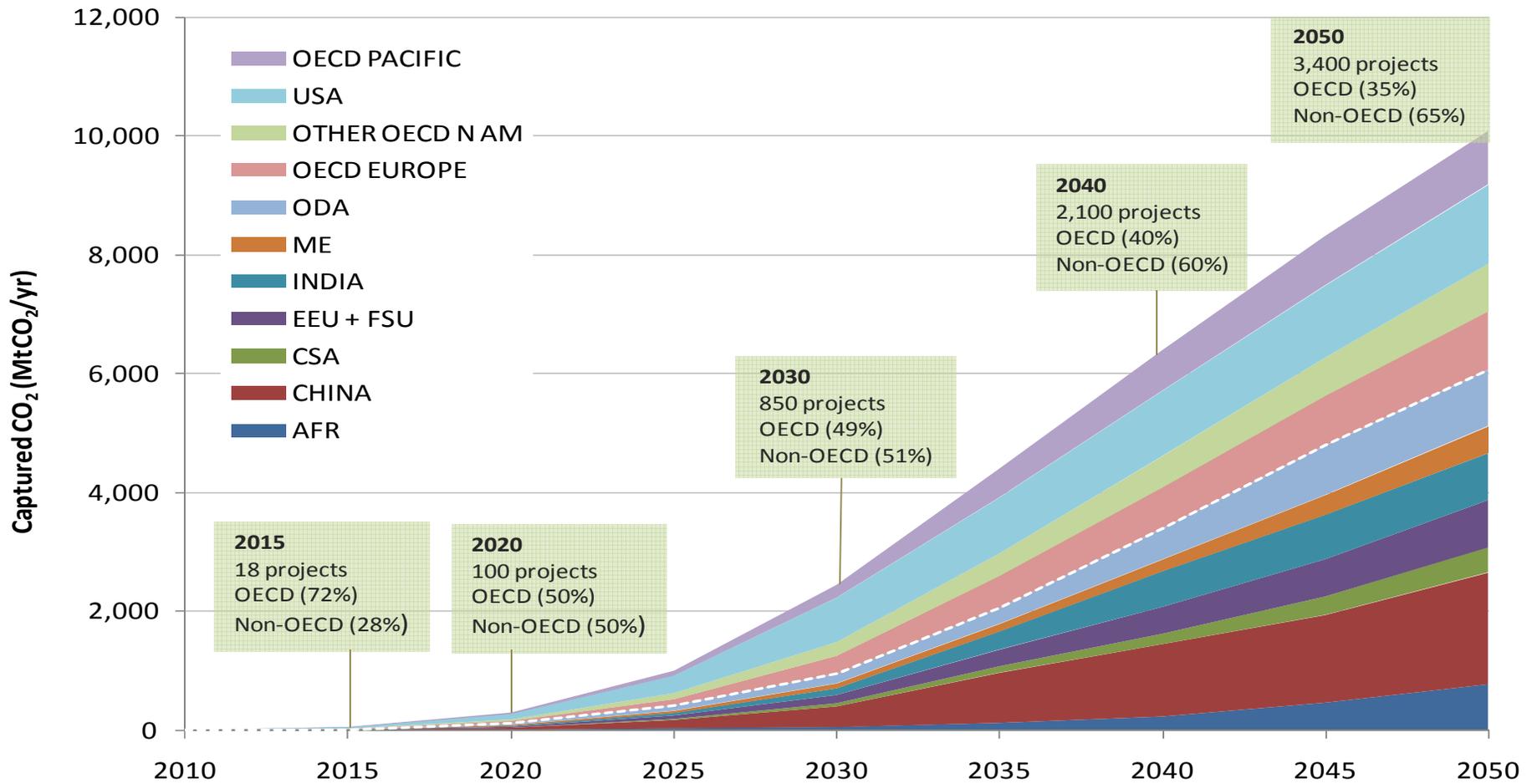
GLOBALLY, CCS PROVIDES ~20 per cent OF CO₂ MITIGATION BY 2050



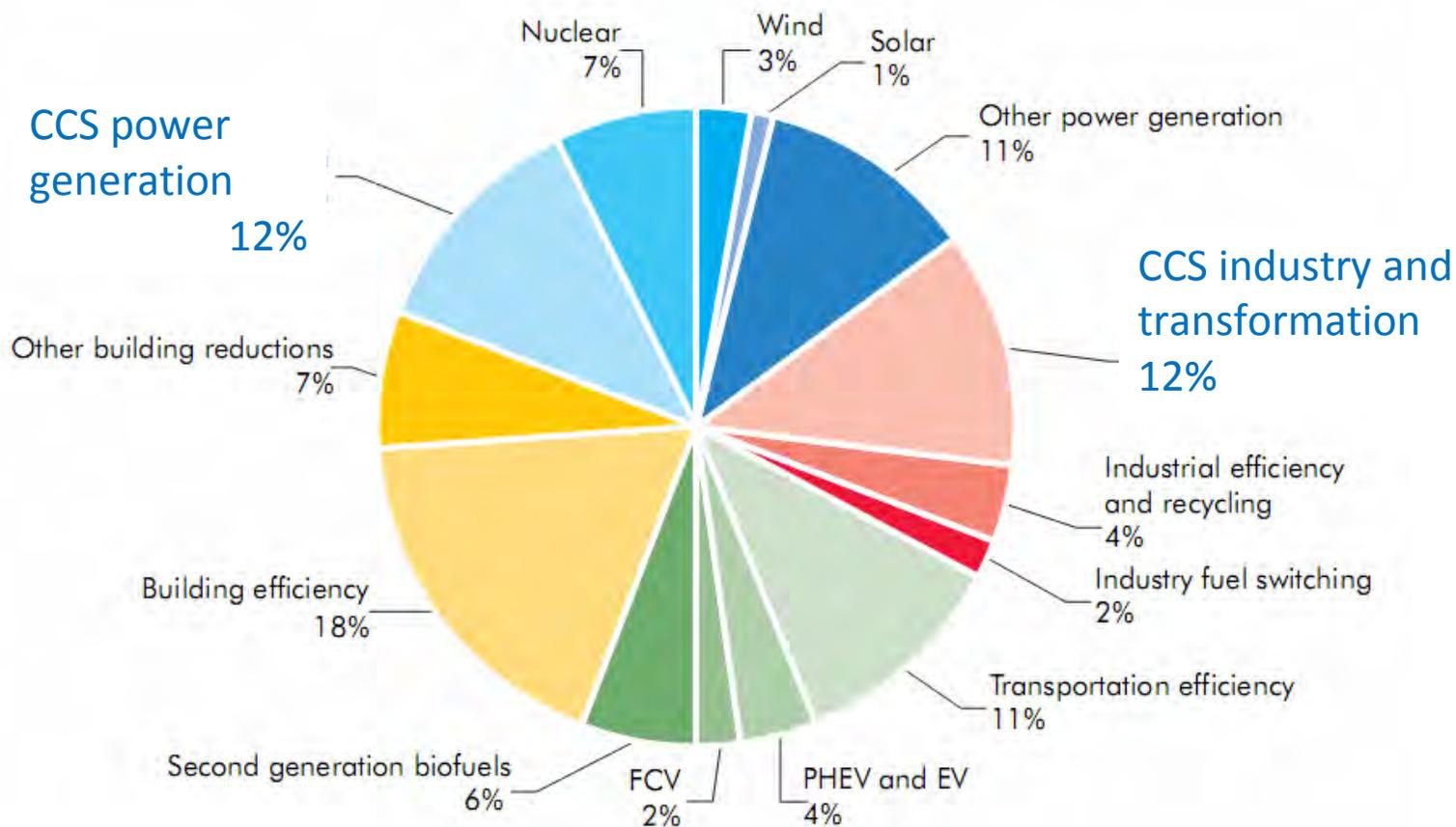
Source: IEA Energy Technology Perspectives (2010) Scenarios and Strategies to 2050.

ACCELERATING PROJECT DEVELOPMENT

An IEA view - Based on CCS Roadmap



WITHIN OECD EUROPE, CCS PROVIDES ~24 per cent OF THE SOLUTION AND NOT JUST IN THE POWER SECTOR



Source: IEA

OVERARCHING OBJECTIVE

“To accelerate the broad deployment of commercial CCS”



Knowledge
Sharing

THE GLOBAL CCS INSTITUTE : A KNOWLEDGE SHARING ORGANISATION

To accelerate the development and deployment of CCS globally so that CCS plays a significant role in reducing GHG emissions

1. ASSISTING PROJECTS

- Bridging between demonstration efforts
- Developing project-specific solutions for early movers

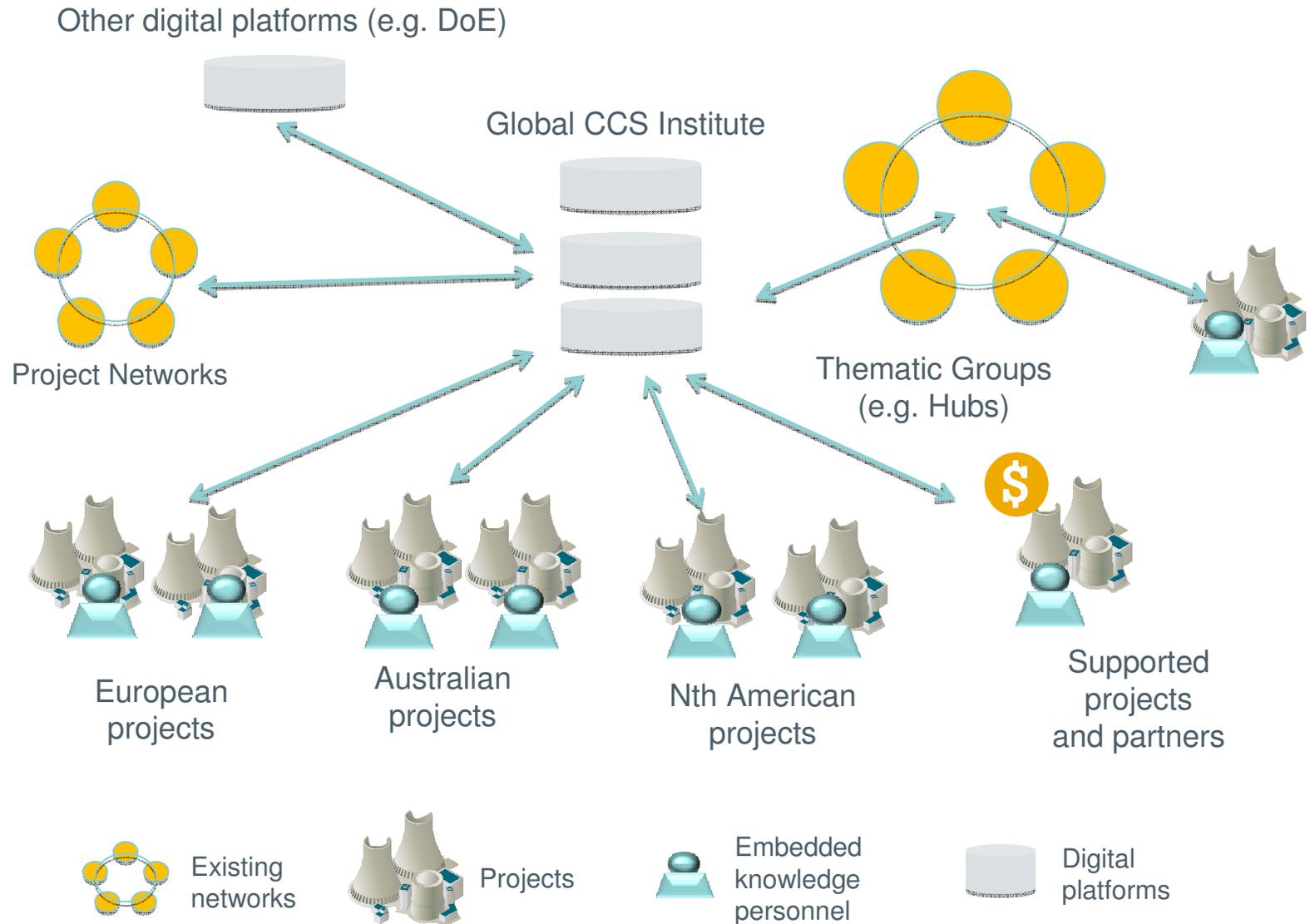
2. SHARING KNOWLEDGE

- Sharing real experiences, filling knowledge gaps and building capabilities

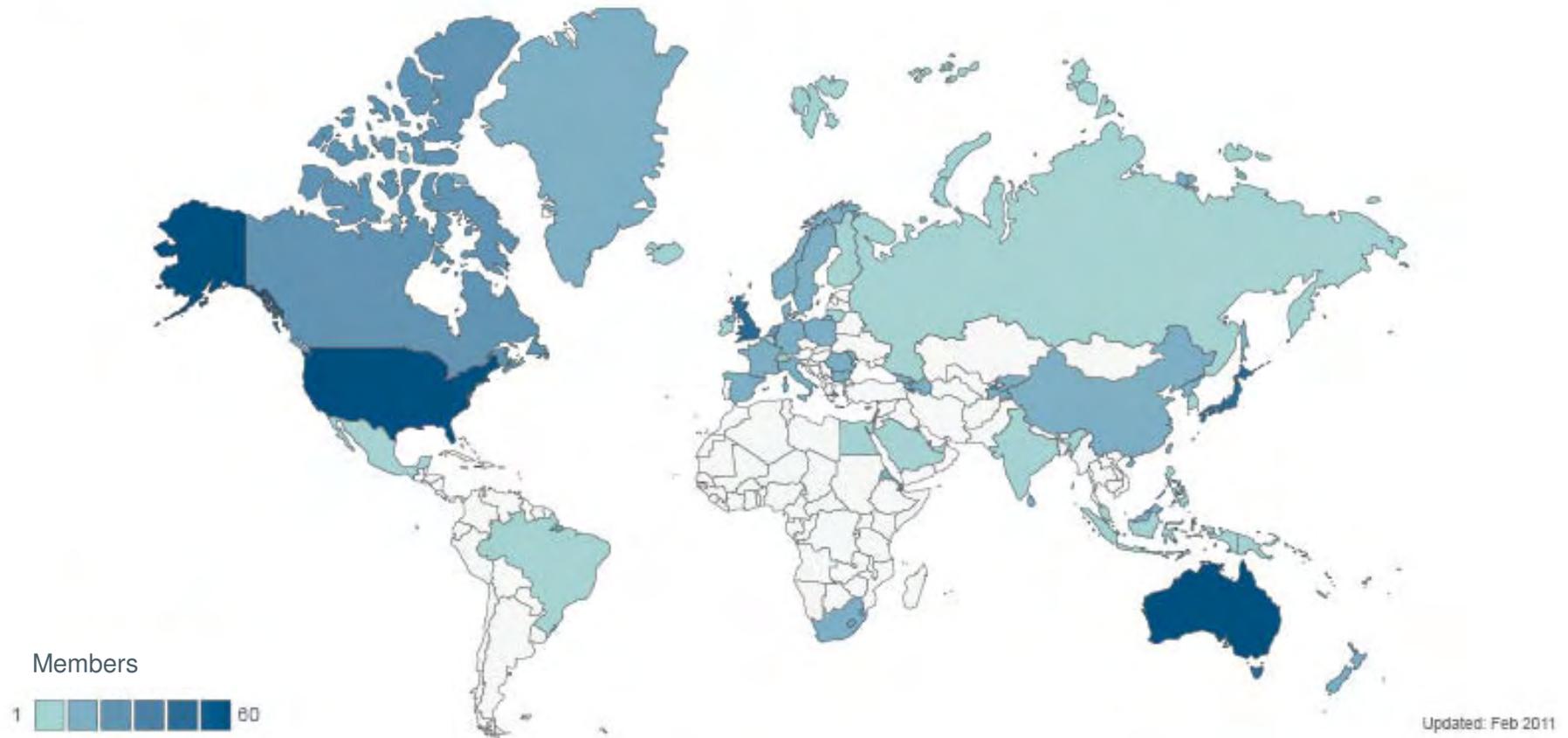
3. FACT-BASED ADVOCACY

- Increasing awareness of CCS
- Informing and influencing policy
- Advancing financing solutions and risk regimes

DRIVING KNOWLEDGE CREATION THROUGH FUNDING, RESOURCES AND CONNECTING EXISTING NETWORKS GLOBALLY



GLOBAL CCS INSTITUTE MEMBERS



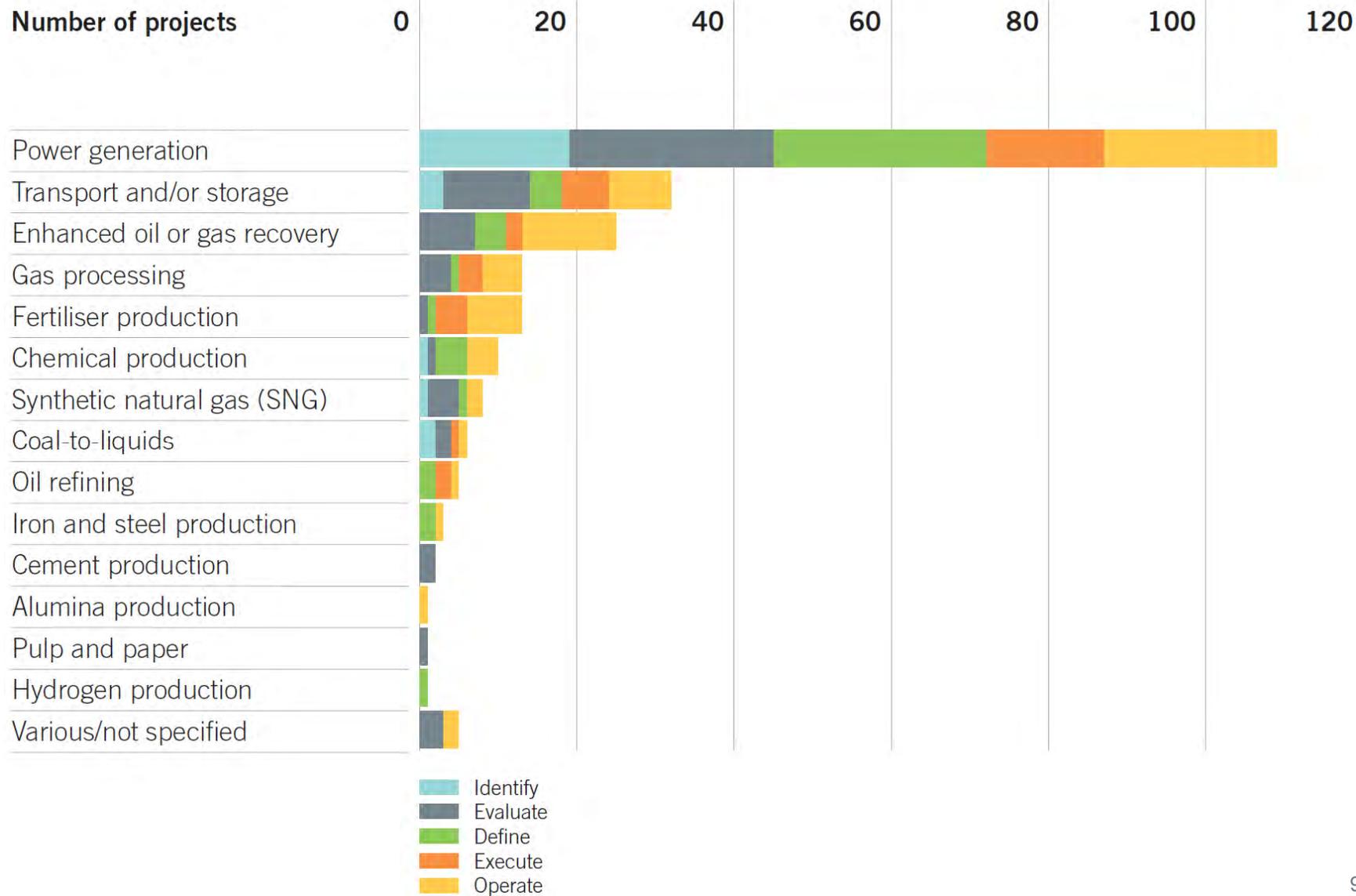
The Institute's Membership accounts for over 85 per cent of the world's carbon dioxide emissions from energy and industrial sources.

OVERARCHING OBJECTIVE

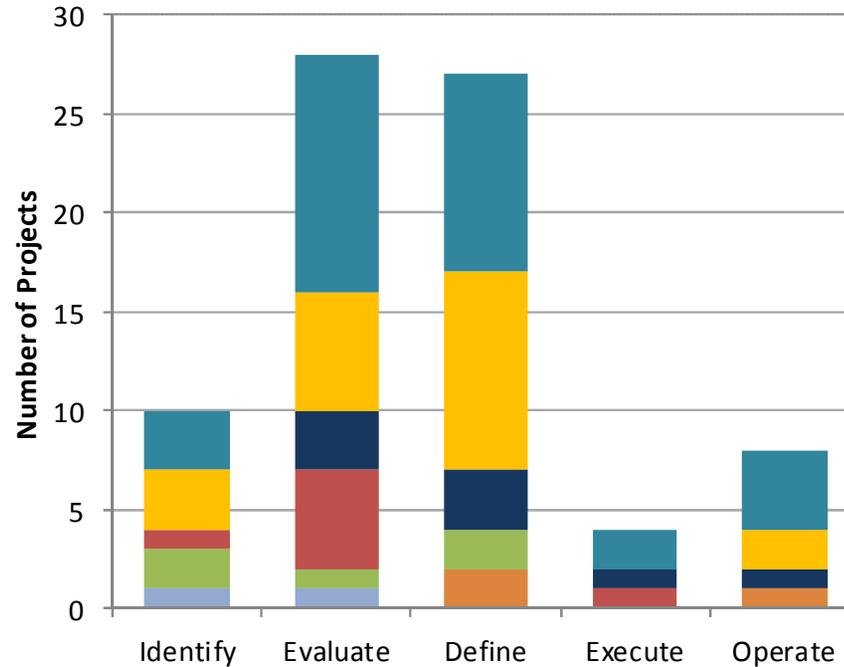
“To accelerate the broad deployment of commercial CCS”

Large-scale
Integrated
Project
update

234 ACTIVE AND PLANNED PROJECTS: BY SECTOR AND LIFECYCLE STAGE



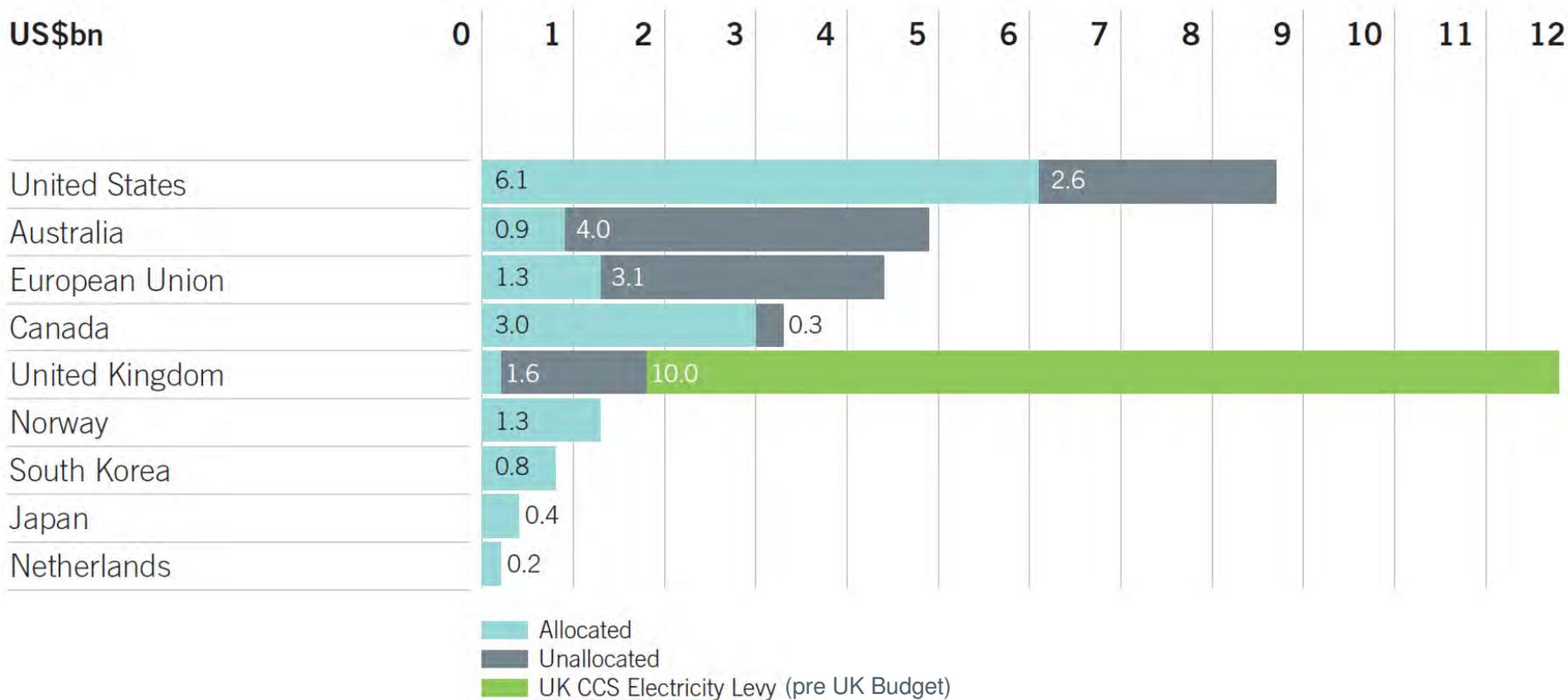
LSIPS BY ASSET LIFECYCLE



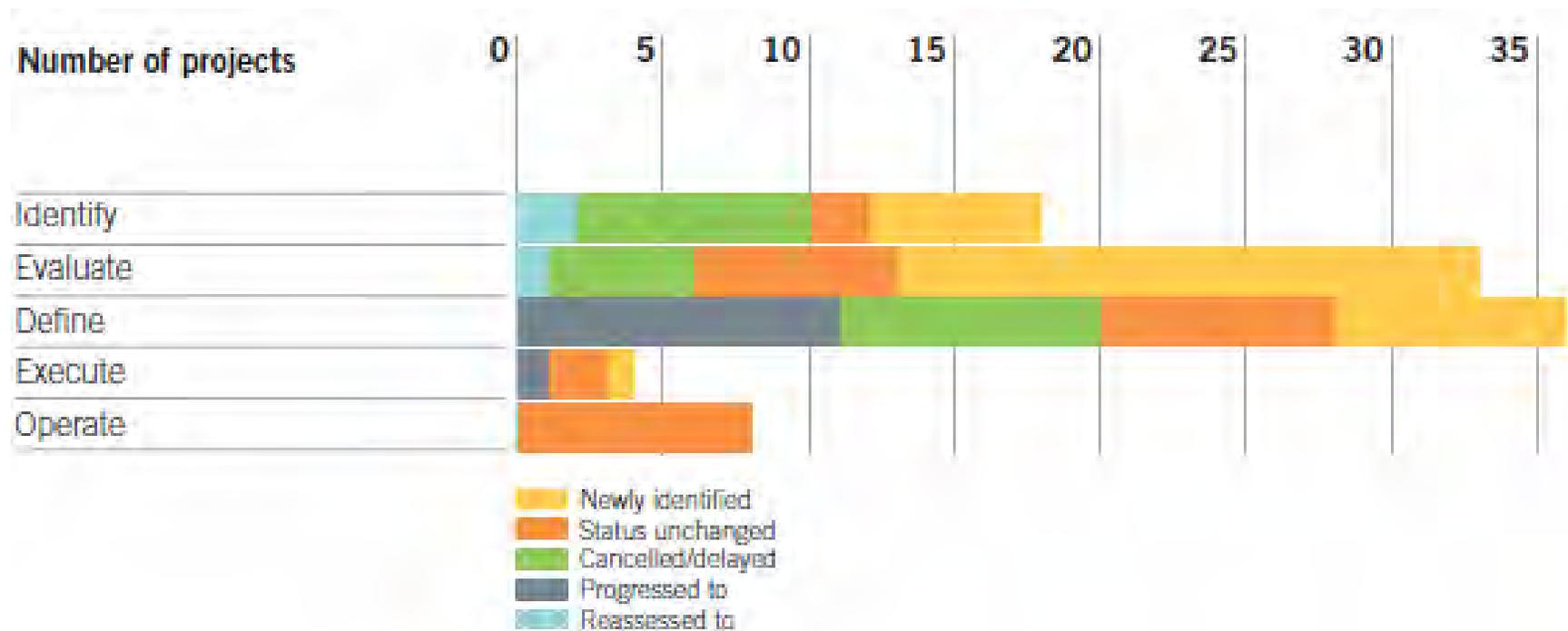
	Identify	Evaluate	Define	Execute	Operate
USA	3	12	10	2	4
Europe	3	6	10		2
Canada		3	3	1	1
Australia and New Zealand	1	5		1	
China	2	1	2		
Middle East and Africa			2		1
Asia (excl. China)	1	1			

Total 2010	10	28	27	4	8	77
Total 2009	19	20	15	2	8	64

PUBLIC FUNDING COMMITMENTS TO CCS BY COUNTRY

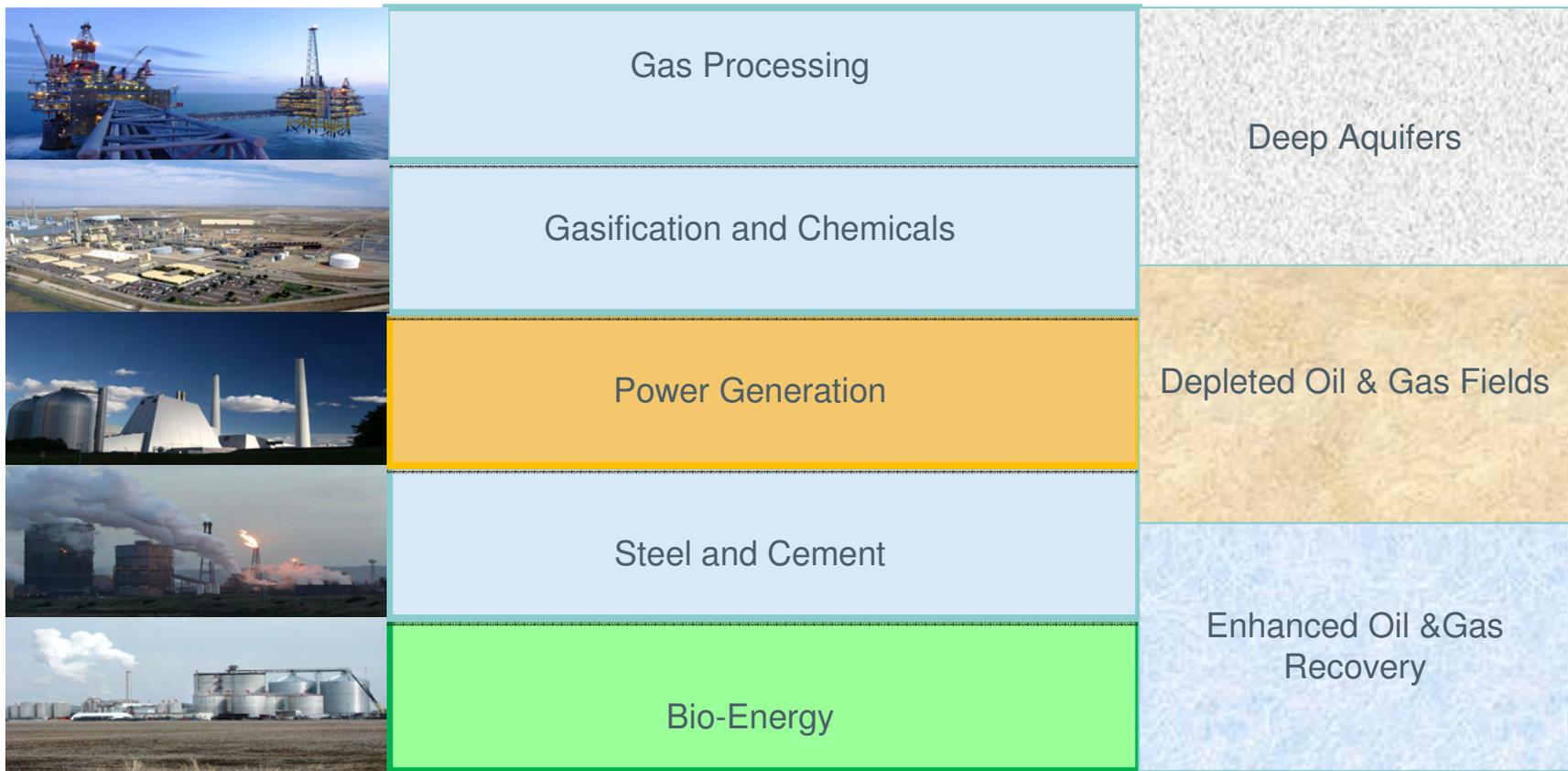


CHANGE IN LSIP PROJECT STATUS FROM 2009 TO 2010



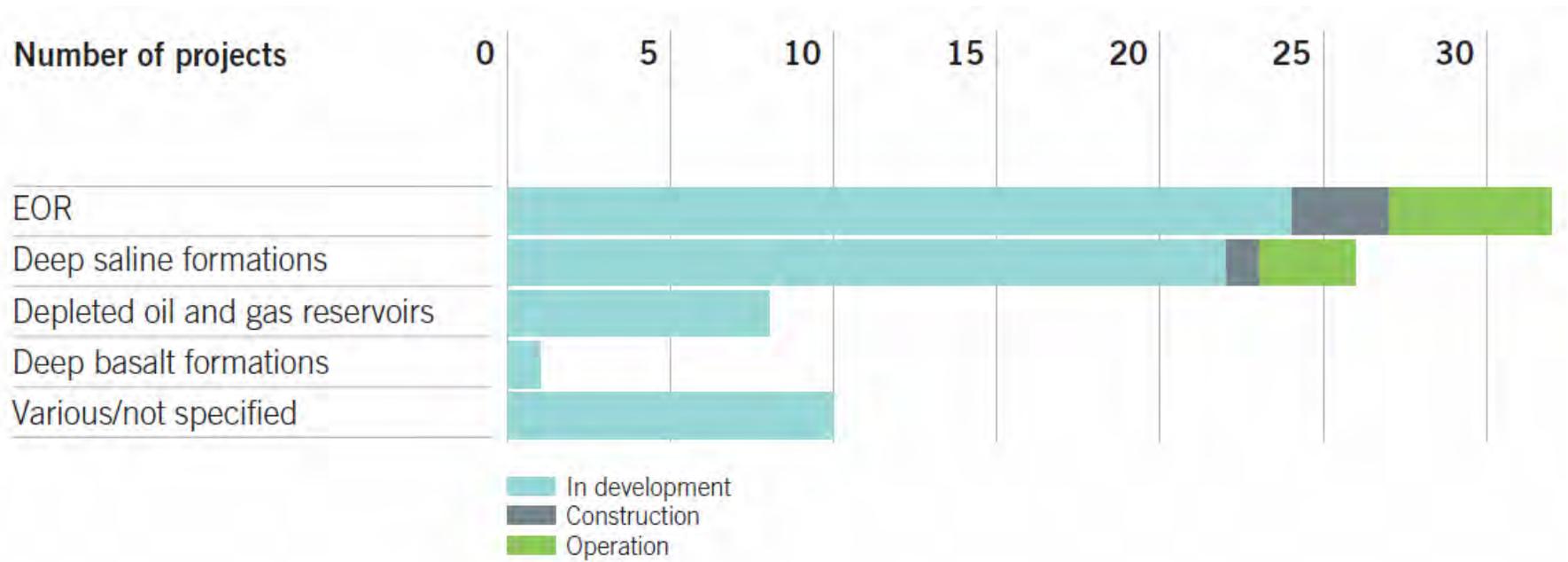
SCOPE – INDUSTRIAL SCALE* INTEGRATED CCS PROJECTS

- ALL SOURCE, TRANSPORT AND GEOLOGICAL STORAGE COMBINATIONS
- FOCUS ON PROJECTS PLANNED FOR OPERATION BEFORE 2020
- DEVELOPMENT PERIOD FROM CONCEPT TO INTEGRATED OPERATION



* G8 scale criteria > 1Mtpa CO2 stored (>0.5 Mtpa CO2 stored for gas-fired power)

LSIPS BY STORAGE TYPE



GLOBAL STATUS: LESSONS LEARNED - STORAGE

- **CCS is primarily a policy/commercial issue, not a technical issue**
 - More work required on policy and regulatory regimes
- **Onshore storage faces significant public acceptance issues and this is often underestimated:**
 - More work required on public participation and acceptance
- **Storage characterisation takes time and money but should be a priority**
 - CCS projects require to start with storage site characterisation.



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