

# Global CCS Institute: Accelerating CCS Deployment

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CAGS Technical Workshop,  
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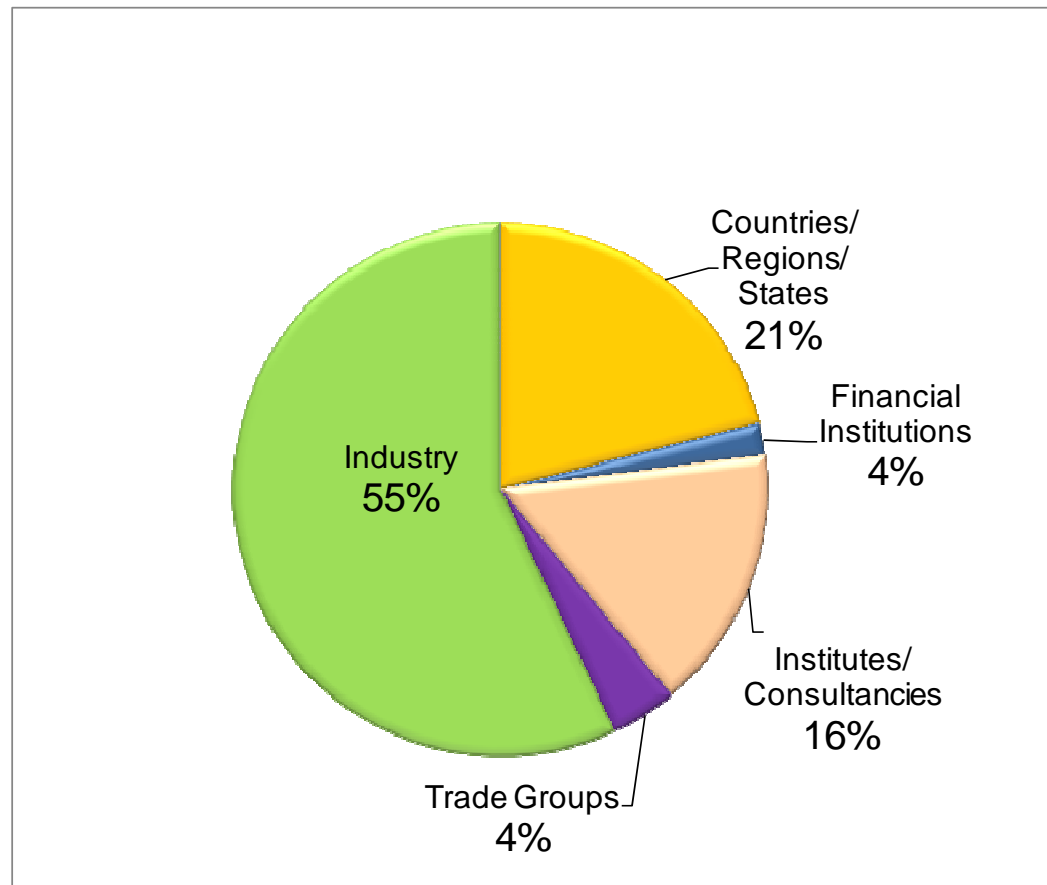
# THE GLOBAL CCS INSTITUTE

- Announced by the Australian Government in September 2008
- Formally launched in April 2009
- Independent non profit entity in July 2009
- AUD\$100 million annual funding – Aust Govt.
- Governance – Board of directors, IAP, TAC

# MANDATE AND OBJECTIVES

- Pivotal role in facilitating the development and deployment of commercial-scale CCS projects
- Initial aim of 20+ fully integrated industrial scale demonstration projects announced and operational prior to 2020 –G8 recommendation
- Advice on the technologies across the CCS landscape
- Expert insight on the costs, benefits, operational and legislative requirements that set the conditions for commercial deployment
- Work collaboratively to build confidence in CCS and drive international momentum

# PUBLIC-PRIVATE PARTNERSHIP MEMBERSHIP COMPOSITION



**China** is a Foundation Member of the Global CCS Institute

**China Huaneng Group** is also a Foundation Member

**Participating Organisations as of 5 November 2009: 163**

**Formal Legal Members: 111**

# THE WORK PLAN

## LEADING THE WAY WITH VITAL PROJECTS

- Projects
  - Two major reports completed:
    1. Strategic Analysis of the Global Status of CCS
    2. Ideal Project Portfolio and Rationale for Support
- Knowledge Sharing
- Community and Capacity Building
- Public Awareness
- Other Work Programs
  - CCS Ready

# STRATEGIC ANALYSIS OF THE GLOBAL STATUS OF CCS

Comprehensive audit of the world's CCS activities to determine:

- Project status
- Economics/costs
- Impact of the global financial crisis
- Policy and regulatory frameworks
- R&D efforts
- Commercial and non-commercial gaps CCS deployment



# KEY FINDINGS

G8 Objective is challenging but achievable

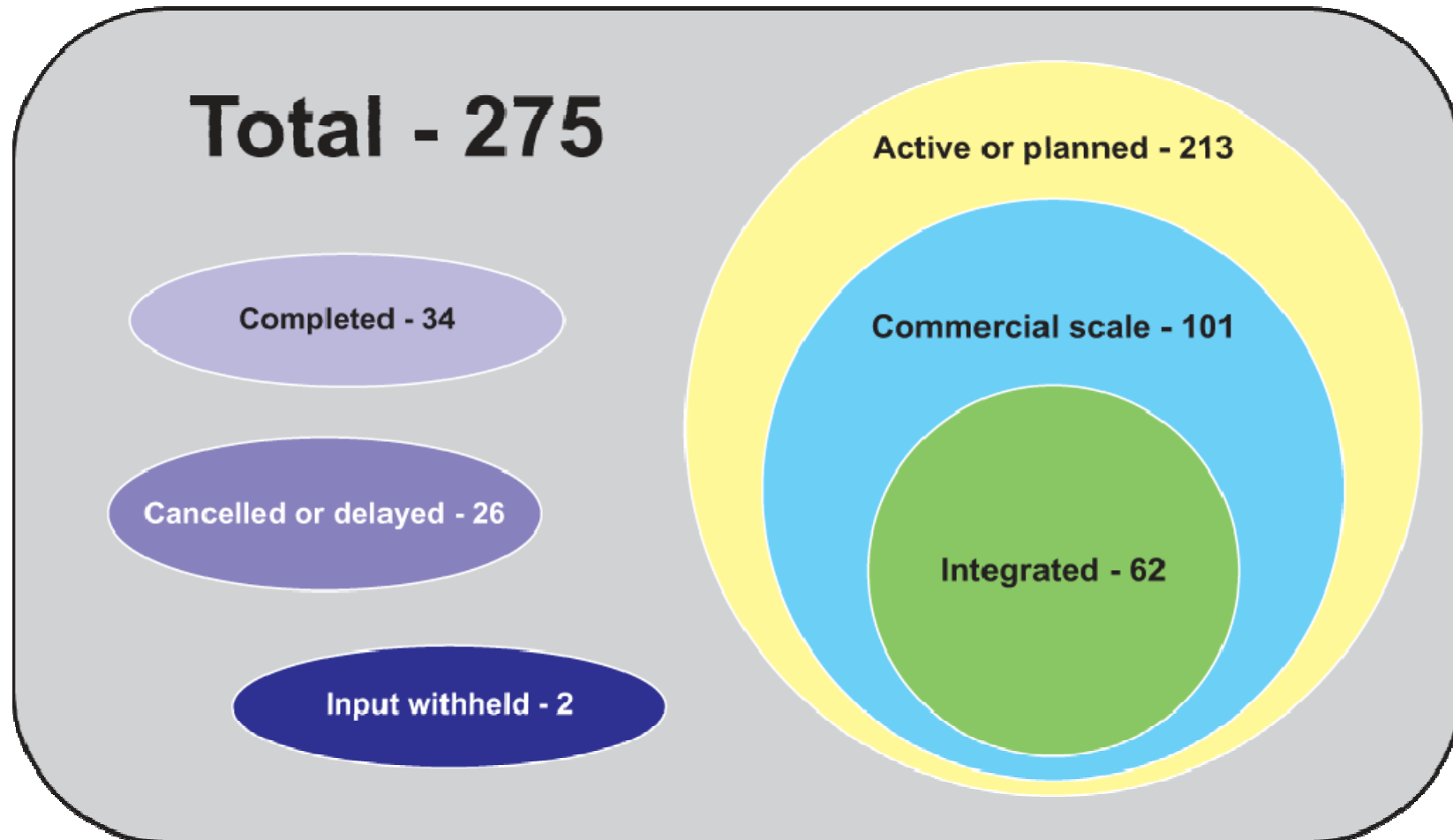
The business case for CCS has not been established yet  
(FOAK CCS plants expensive)

Capture and compression is the greatest cost in the CCS  
chain

Storage is smaller in cost but contains the greatest  
uncertainty and risk

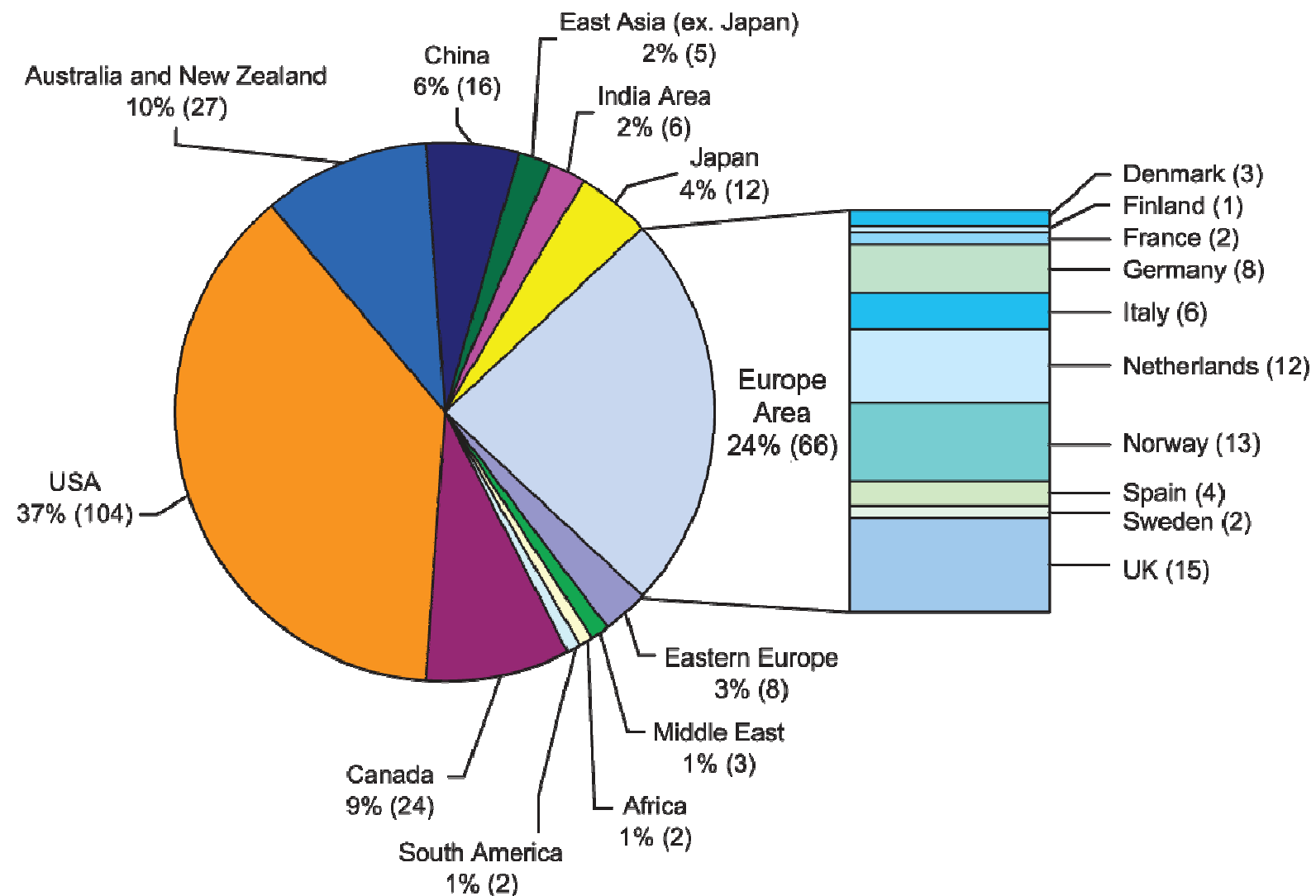
Need to shift projects from the early definition phase to  
execution and operation

# 275 PROJECTS IDENTIFIED WORLDWIDE

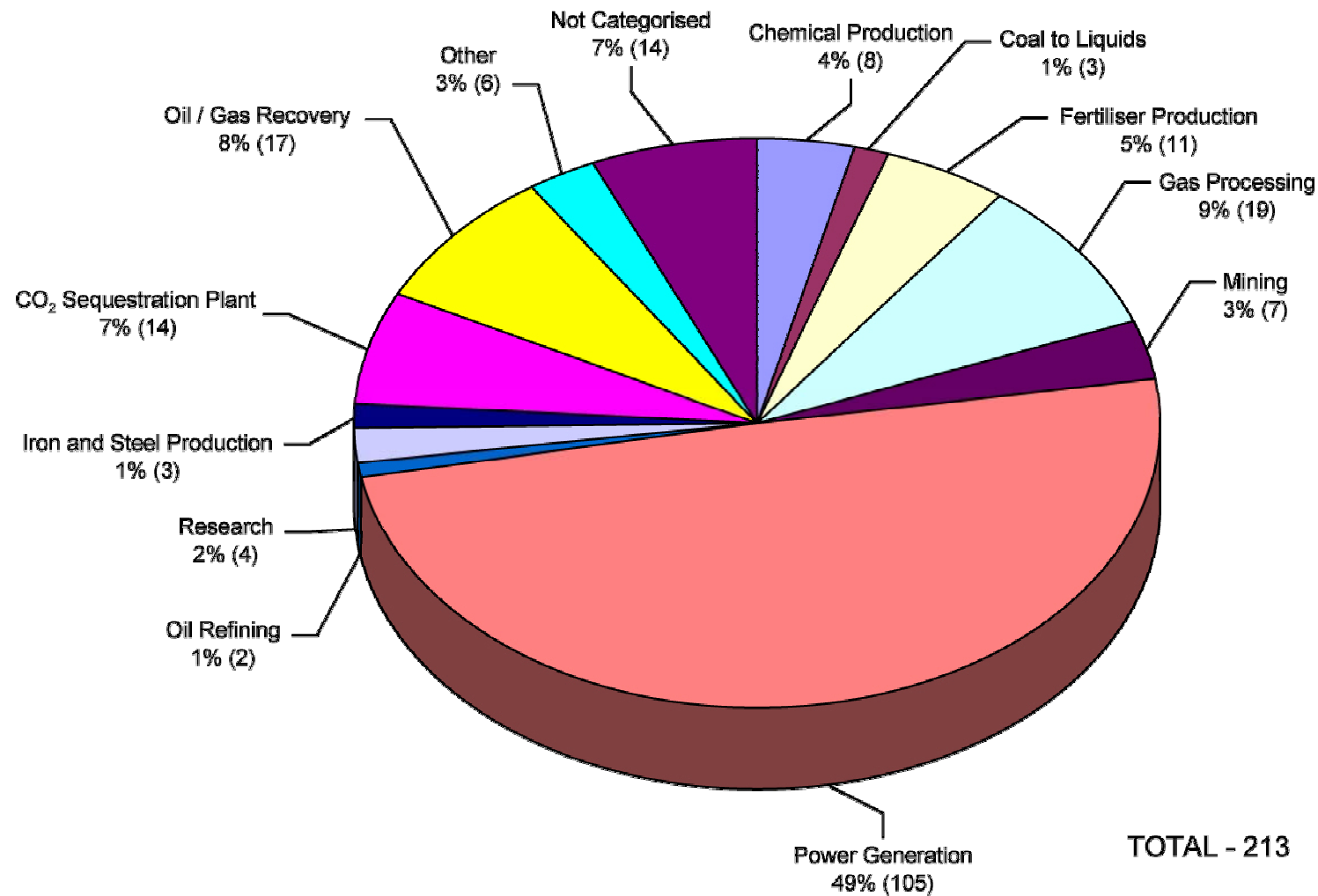




# CCS PROJECTS BY REGION



# ACTIVE OR PLANNED PROJECTS BY FACILITY



# IDEAL PORTFOLIO OF CCS PROJECTS

	Industry and Capture	Transport	Storage
26 projects overall	<b><u>Power Generation</u></b>		
	Pre-combustion 4	Point to point pipeline onshore 1	Structured deep saline aquifers 1
	Oxy-combustion 6	Point to point pipeline offshore 1	Unstructured deep saline aquifers 1
	Post-combustion 7		Depleted oil field 1
	<b><u>Iron &amp; Steel</u></b> 3	Backbone pipeline – cluster 1	Depleted gas field 1
	<b><u>Cement</u></b> 3	Long distance ship – port-to-offshore site or port-to-port 1	Oil field for EOR 1
	<b><u>Other Industries</u></b> 3	Cross-border pipeline 1	Gas field for EGR 1
		Including 5 solutions	Including 6 configurations
	Minimum of 26 projects	+ Diversification principles to populate projects beyond this number	

Different combinations needed for confidence

# CCS IN CHINA

- China is active in developing CCS technologies
- 16 active or planned CCS projects
- Large stationary sources
- Track record of executing and accelerating industrial projects
- Regulatory focus on the development of demonstration projects under international cooperation initiatives and the development of technical standards for the safe application of CCS.

# GLOBAL CCS INSTITUTE INITIATIVES IN CHINA

Working collaboratively with major international CCS players in consultation with key Chinese agencies.

## Partnerships

- ADB CCS Fund (AUD \$21.5 million)
  - Strategic Analysis and Capacity Strengthening (US \$1.25 million)
  - Analysis of Key Policy Issues and Barriers (US \$350,000)
- World Bank CCS Trust Fund (AUD \$2.4 million)
- CSLF Capacity Building Program (AUD \$1.2 million)
- IEA collaboration (€10.4 million)
- APEC: Capacity Building Workshops

## Other activities include:

- Global CCS Institute - International Energy Forum CCS Symposium
- CCS Ready

# CCS PROJECT STRATEGY:

Call for project applications:

- AUD\$50 million annually
- Funding rounds and rolling applications



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