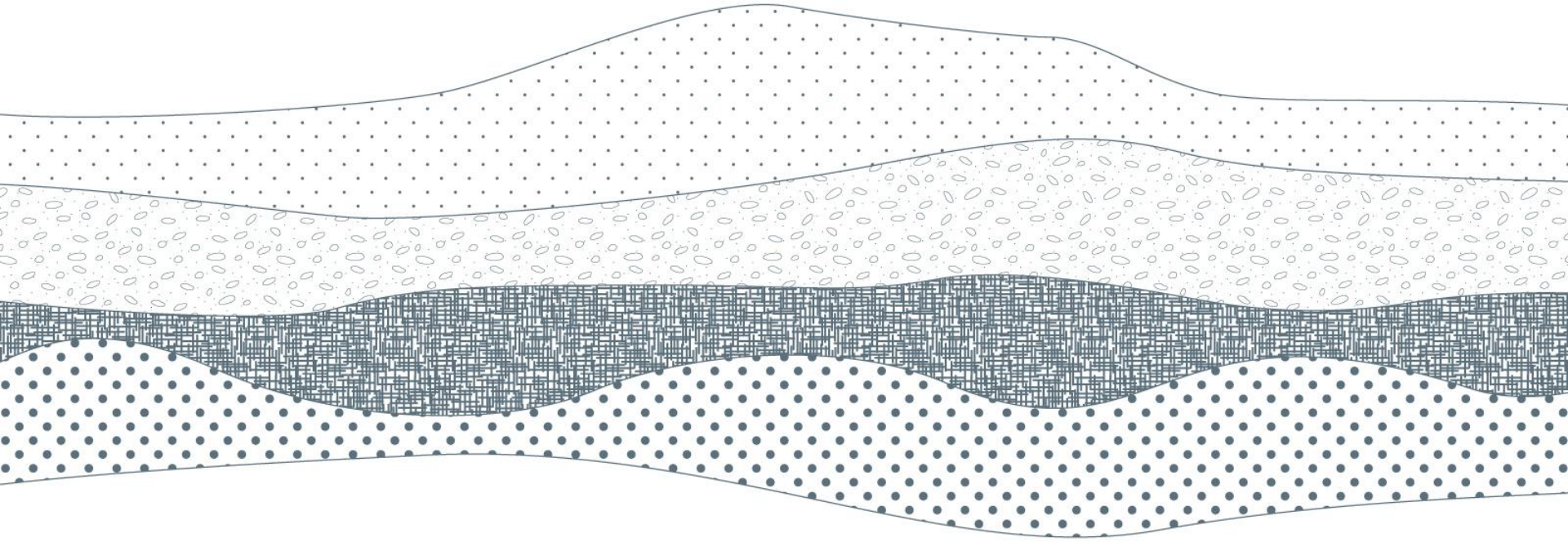




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THE STATUS OF CCS

Ian Hayhow

Briefing for United States Energy Association: 25 October 2011:

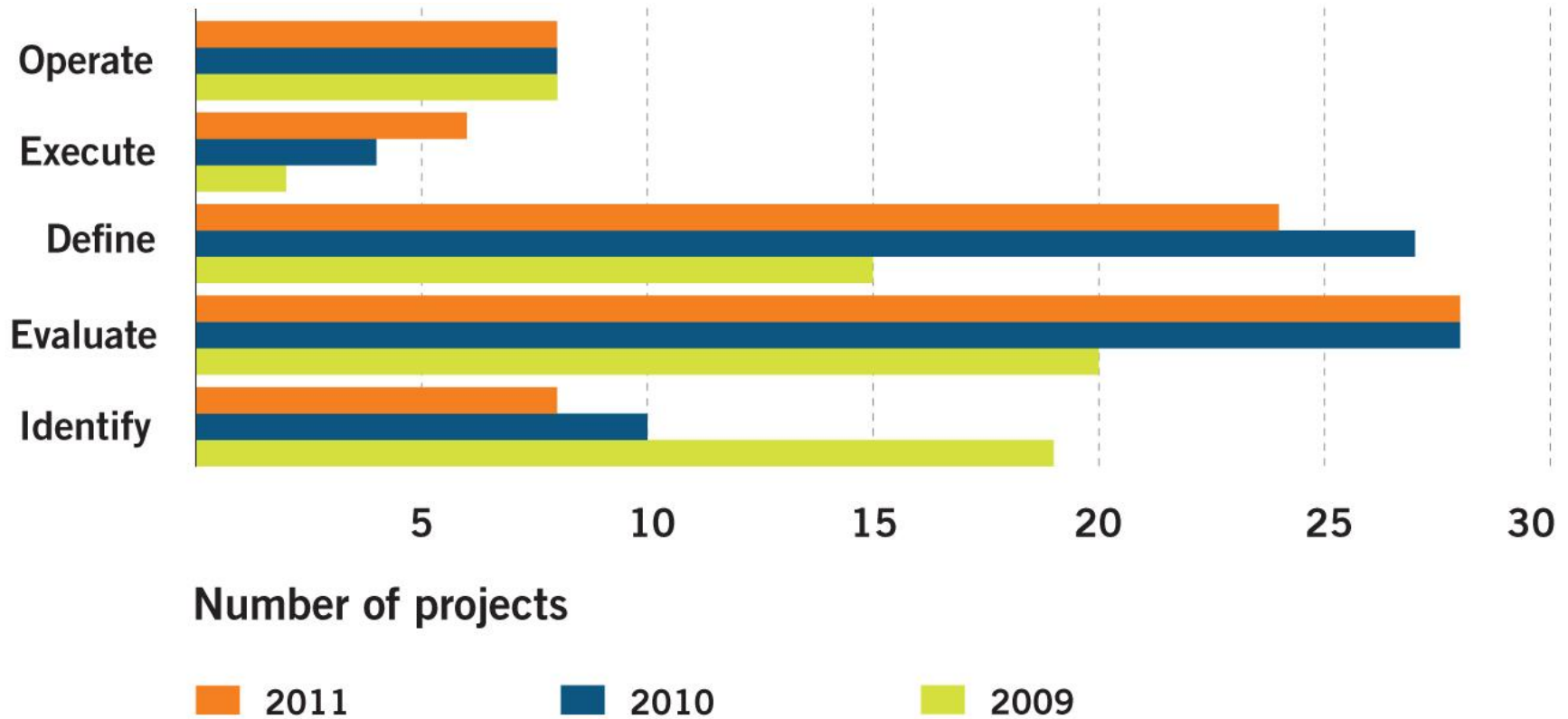
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RELEASED 4 OCTOBER

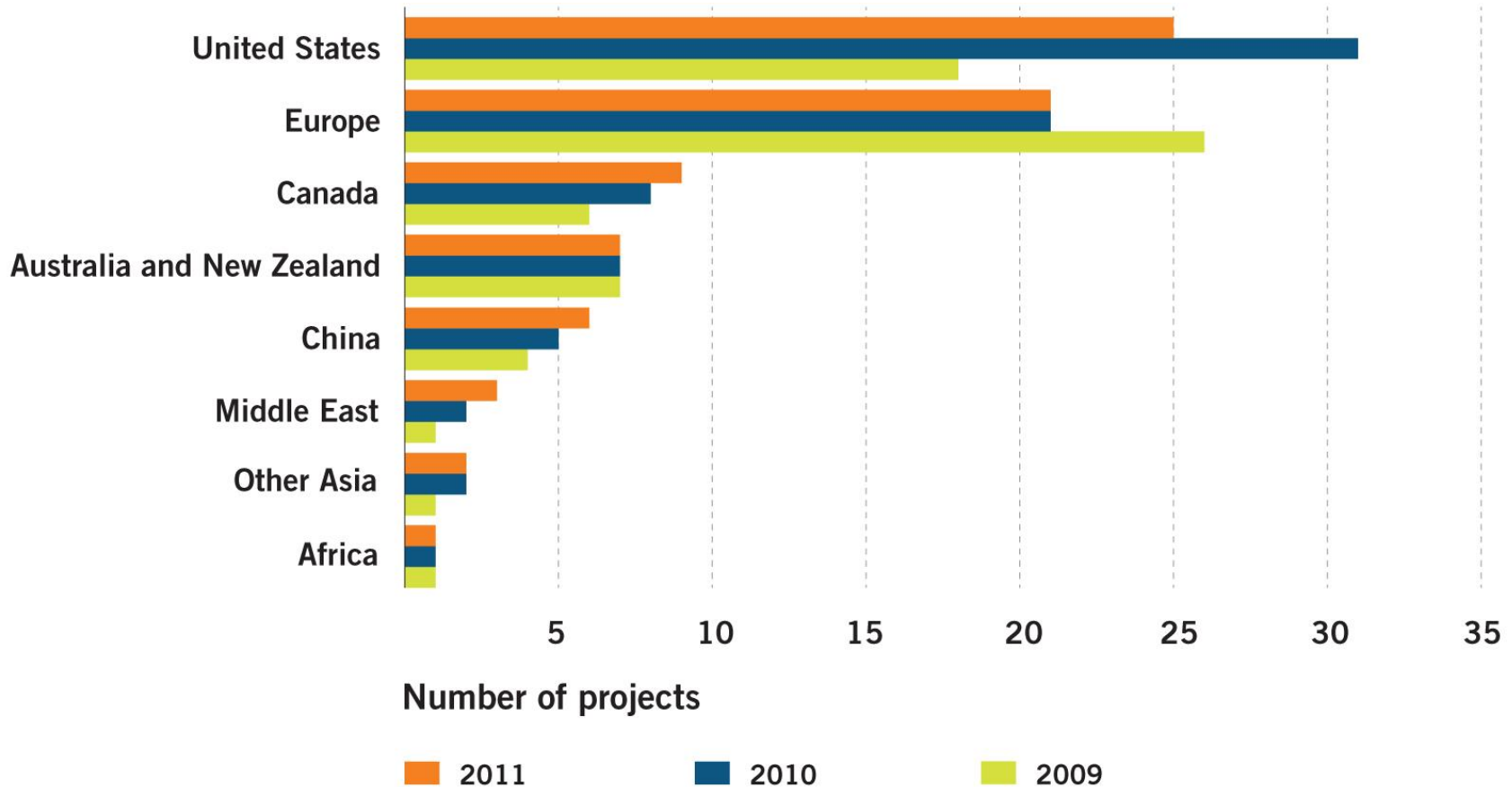
*The Global Status of
CCS: 2011* report.



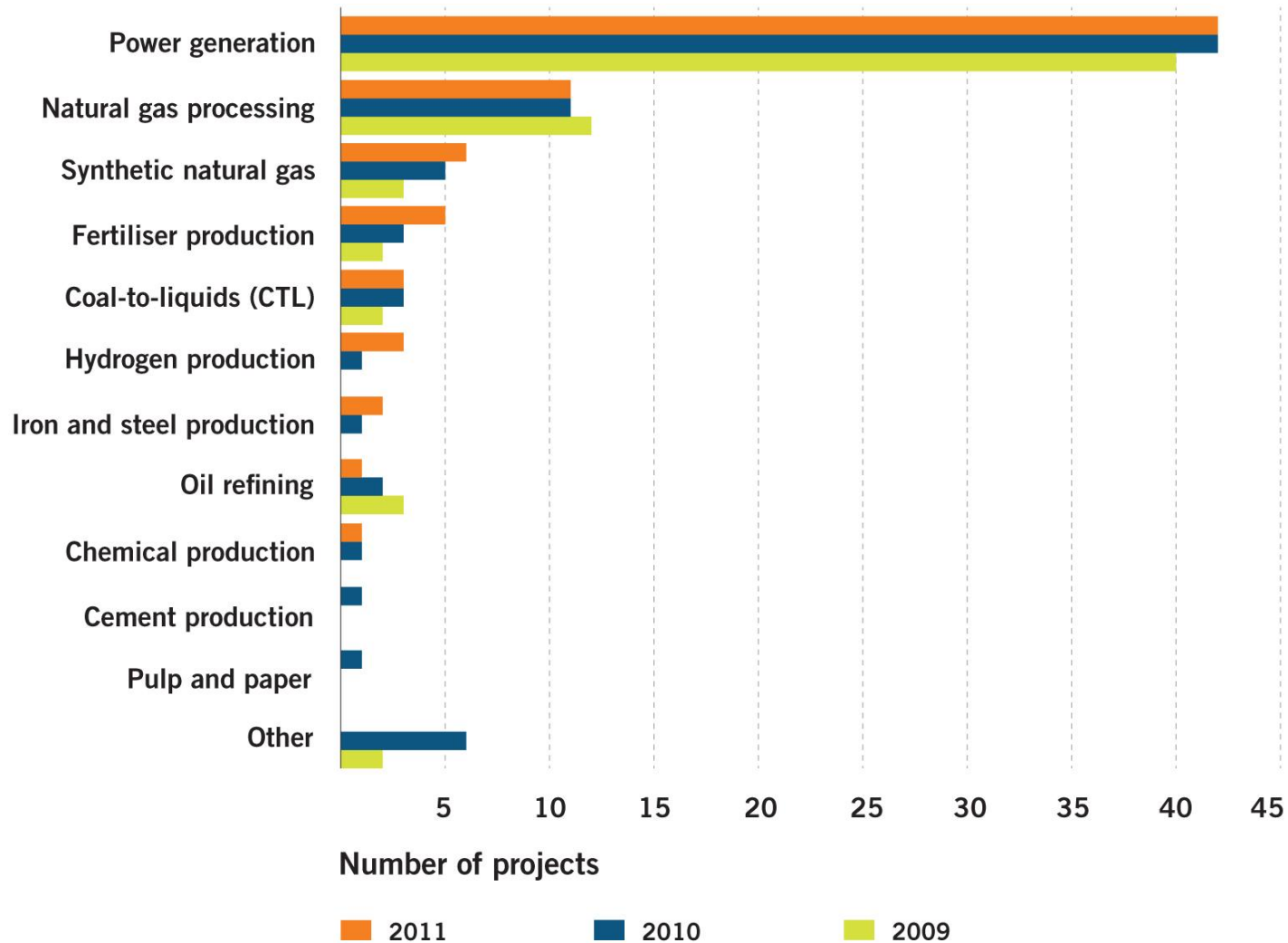
MEASURED PROGRESS OF LARGE-SCALE INTEGRATED PROJECTS SINCE 2009



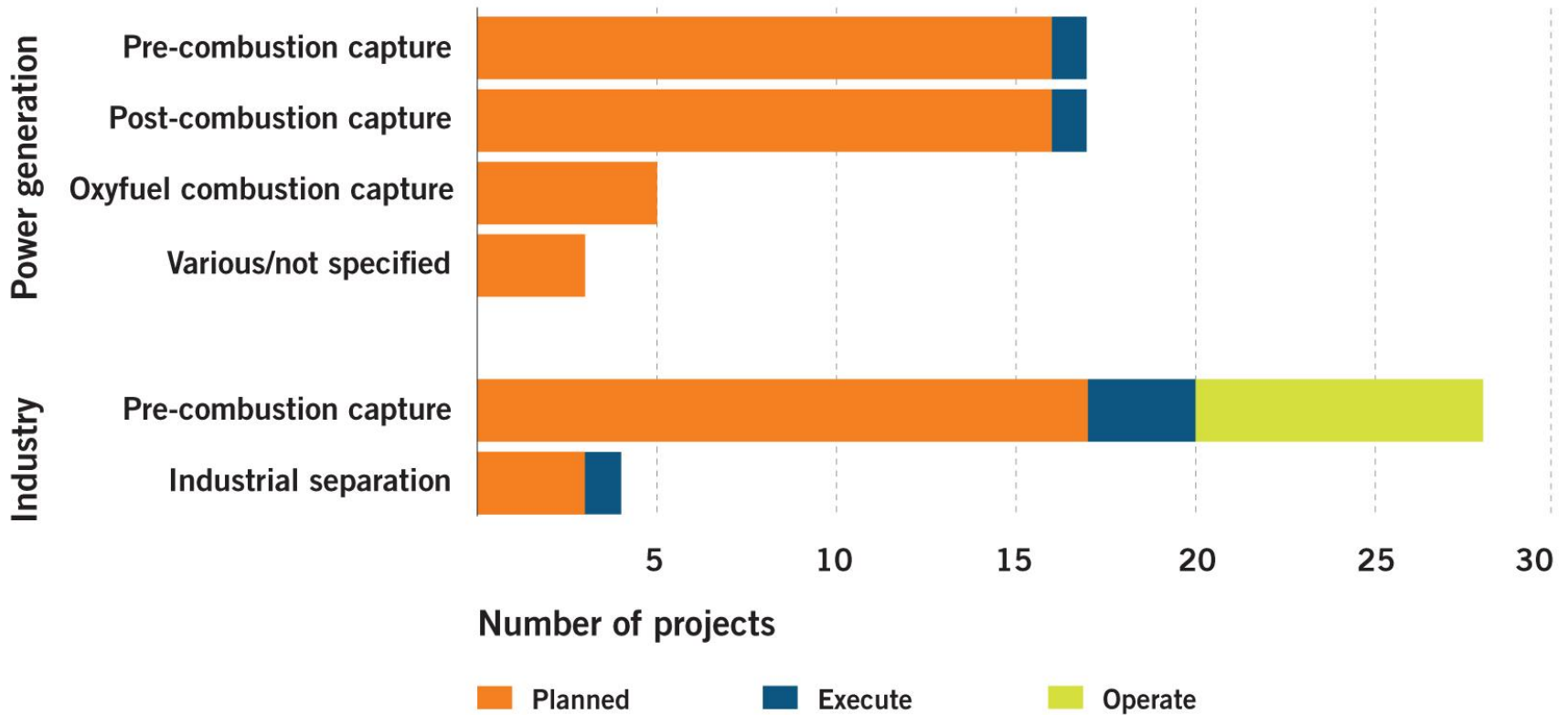
PROJECT NUMBERS CONCENTRATED IN THE UNITED STATES AND EUROPE



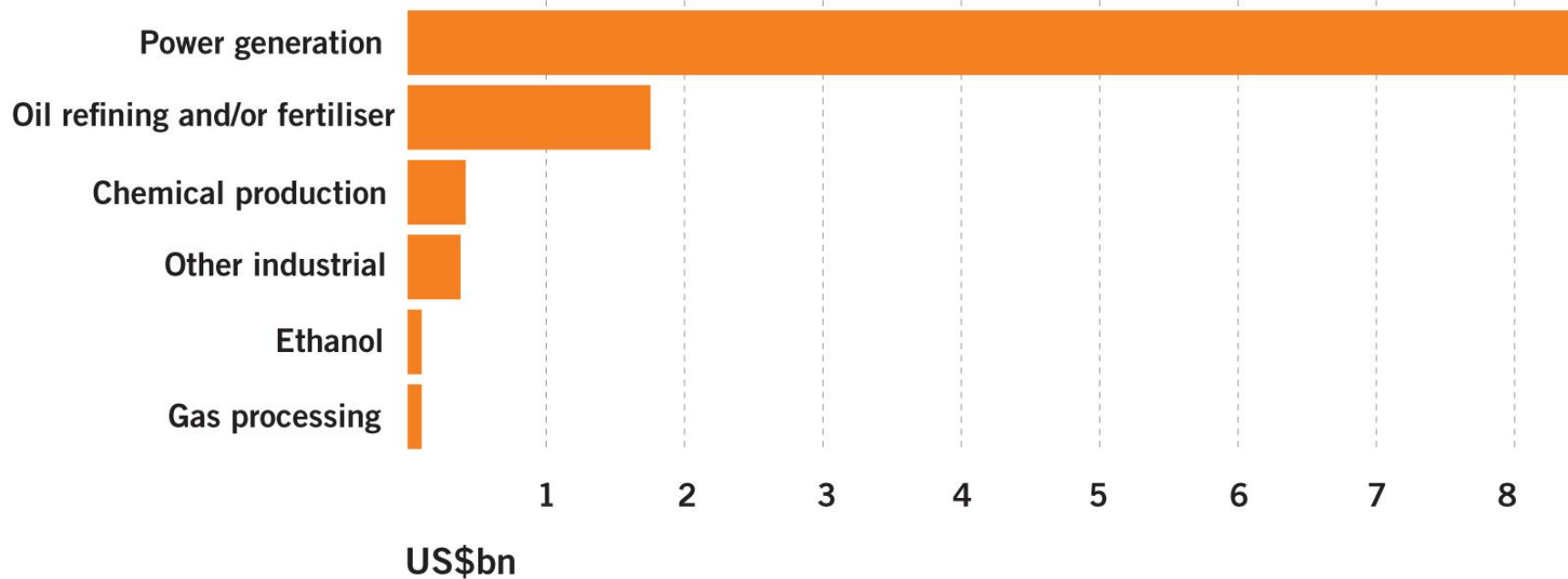
CONCENTRATION ON POWER GENERATION



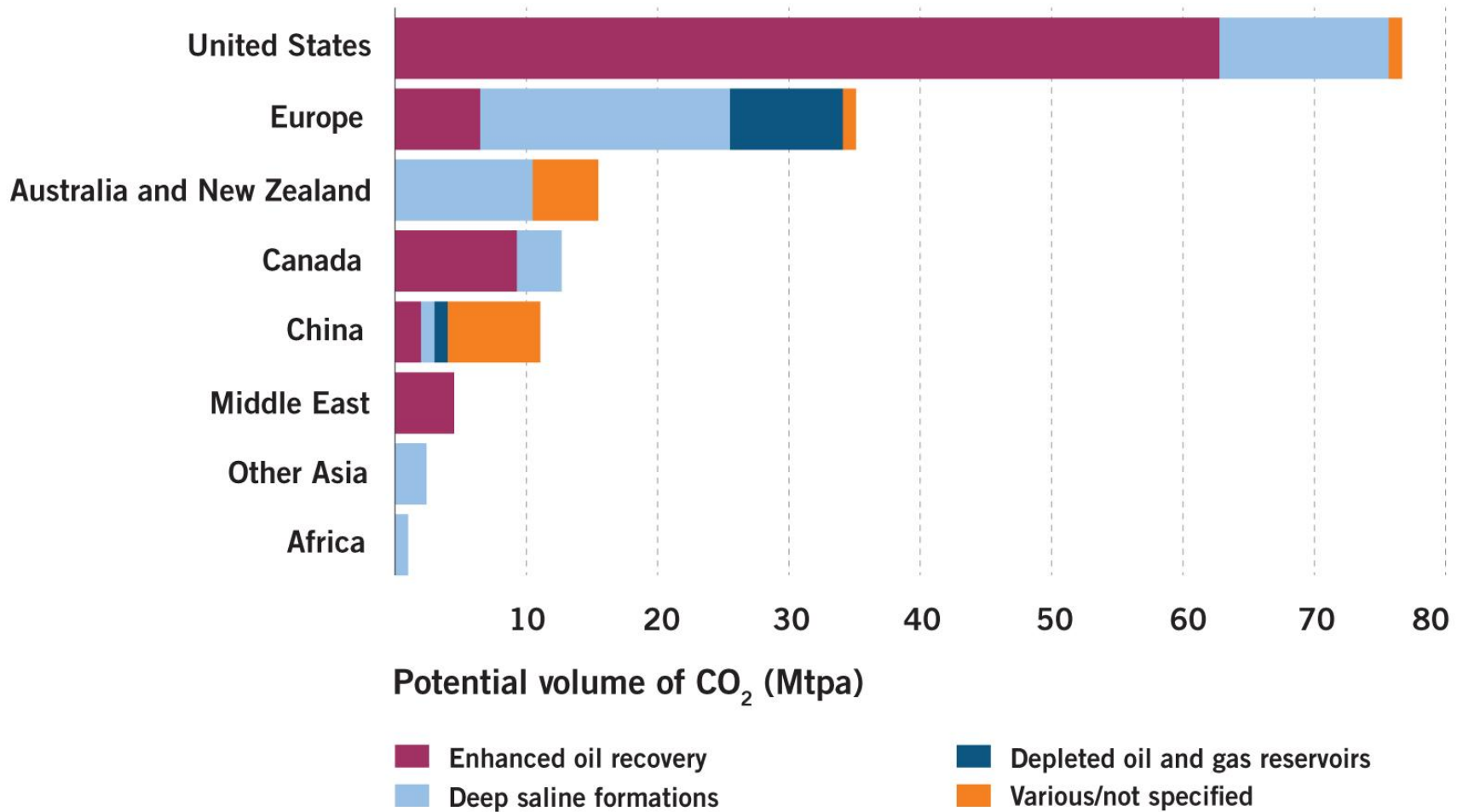
PROJECTS ARE SPREAD ACROSS TECHNOLOGIES



ALLOCATED GOVERNMENT FUNDING IS MOSTLY TO POWER



REGIONAL BIAS TOWARDS STORAGE SELECTION



ECONOMIC CONDITIONS

- The EU and the United States introduced stimulus packages
- Canada and Australia announced specific CCS support

BUT

- Severe (and prolonged) global economic downturn
- Carbon prices remain low on the ETS
- Little progress on international climate change treaty

2011 PROJECTS SURVEY: REGULATORY QUESTION RESPONSES

- Question: Do the current regulatory requirements facilitate an investment decision within your organisation?
 - While many projects across regions responded that their project was authorised under project-specific or pre-existing legislation, others raised some issues.

Issues raised by more than one region

- Incomplete in nature or delay to regulation
- Uncertainty surrounding long-term liability
- Uncertainty surrounding the regulation of CO₂
- General site-specific regulatory issues

REGULATORY STATUS - NORTH AMERICA

- In the United States
 - The EPA has developed regulations under the SWDA and the UIC programs
 - State initiatives are fragmented
- In Canada
 - Alberta is undertaking a major review of CCS regulations
 - Saskatchewan will adapt existing regulations

PUBLIC ENGAGEMENT STRATEGIES ARE BEING PUT IN PLACE

- There has been an increase in the sophistication and quality of tools and resources to assist CCS stakeholders (for example):
 - Public Engagement Self Assessment Tool; and
 - Social Site Characterisation Report
- A large source of material is available on the Institute knowledge platform

KEY MESSAGES FROM THE STATUS REPORT

- Early mover projects are found in industrial applications and with EOR for storage.
- Two power projects are now under construction with aid of government funding and EOR revenue.
- A number of projects will in the next ~12 months decide on whether to progress to a FID but making the business case is proving difficult and time consuming.
- Storage assessments in deep saline formations can have long lead times – need to integrate carefully with capture planning
- Greater collaboration and transparency between government and industry is needed.
- Public engagement is a key part of project development

CCS AND THE CDM

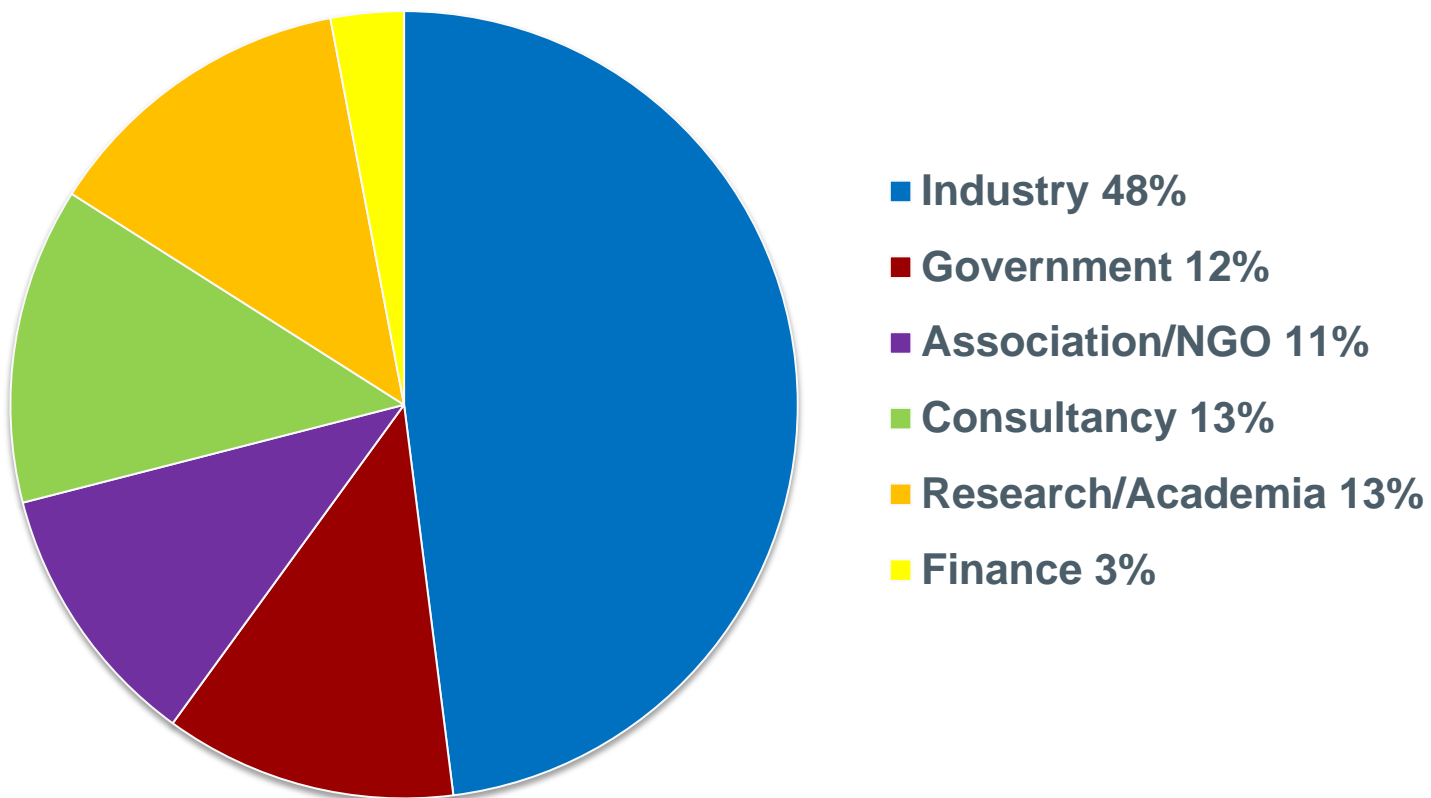
- A contentious issue since IPCC Special Report
- COP 16 (Cancun) a major step forward
- Issues better defined
 - Site selection/MMV/modelling
 - Project boundaries
 - Accounting
 - Trans-boundary issues
 - Risk and safety
 - Leakage
 - Liability / transfer / compensation

CCS AND THE CDM

- The Institute's submission to the UNFCCC – SBSTA split the issues into two categories:

Technically Resolved	Need more work
Site selection	MMV
Project boundaries	Modelling
Leakage pathways	Risk of leakage
	Accounting
	Trans-boundary
Environmental Impacts	Liability
Safety	Compensation

MEMBERSHIP - SEPTEMBER 2011



INSTITUTE FOCUS

SHARING KNOWLEDGE

- collecting information to create a central repository for CCS information; and
- creating and sharing information to fill knowledge gaps and build capacity.

FACT-BASED ADVOCACY

- to inform and influence domestic and international low carbon policies; and
- raising awareness of the benefits of CCS and its role within a portfolio of low carbon technologies.

ASSISTING PROJECTS

- bridging knowledge gaps between demonstration efforts; and
- developing project-specific solutions particularly amongst early movers.

SHARING KNOWLEDGE

- A primary role for the Institute
- Not just data
- Enhance engagement
- Need to establish networks

FACT-BASED ADVOCACY

- Inform domestic and international low carbon policies
- CDM is a key area
- Based on real evidence
- Affects outcomes
- The Status Report is an important tool

ASSISTING PROJECTS

- Current Project Support Program – nearing completion
- Future Projects Approach
 - Limited financial resources available
 - Focus on filling of strategic gaps
 - Focus on targeted reports
 - Focus on a number of tools to gain access to knowledge

CONCLUSIONS

- A number of advanced projects to reach key decision points in next ~12 months
- Much still needs to be done for global CCS Demonstration at scale
- Growing Institute membership
- Institute has defined three focus areas
- Revised Institute Head Funding Agreement with the Commonwealth government concluded



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