

GLOBAL CCS INSTITUTE UPDATE

CSLF Technical Group – October 2018

ALEX ZAPANTIS

General Manager, Commercial



GLOBAL CCS
INSTITUTE

A NEW STRATEGY – A YEAR OF CHANGE

Public sector culture

Commercial culture

Technical

Thought leadership

Tell members...

Ask members...

Government funded

Membership/consultancy fees

Risk averse

Risk management

Conservative

Bold



new functional structure * new staff * new skills * new
business management processes * new offices * new
work programme

OUR VISION

CCS is an integral part of a low emission future

OUR MISSION

To accelerate the deployment and commercial viability of CCS globally

OUR STRATEGIC IMPERATIVES

We're a Member led organisation

We're a sensible, but bold, risk taker

We're agile and we embrace change

We're financially sustainable

We expand and leverage the CCS community

Our focus is on valued and impactful work

OUR IDENTITY

We're recognised and sought out as the premier CCS body



ADVOCACY → POLICY → INVESTMENT → DEPLOYMENT



New ambassadors

2017 ASIA PACIFIC CCS FORUM

New messages



cannot be met without carbon capture and storage

ADVOCACY → POLICY → INVESTMENT → DEPLOYMENT



CCS - more than just climate mitigation

Published on June 28, 2018 [Edit article](#) | [View stats](#)



Alex Zapantis
General Manager Commercial at Global CCS Institute
3 articles

260 17 1 3

From myth to mandatory

Earlier this week I gave a key note speech at the China Australia Geological Storage of CO2 Symposium (CAGS) in Perth, where I was asked to speak on the opportunities and risks for carbon capture and storage (CCS).

This is a topic I have been thinking about, in various capacities since 2006. I must say,



China: The CCS "Hot Spot"

Published on August 10, 2018



Antonios Papaspiropoulos ✓ Following
Global Lead - Advocacy and Communications at Global CCS Institute
24 articles

10 1 0

If you follow my blogs, it will come as no surprise that I have a soft spot for China and its dedication to cleaning up its climate act.

The Government has demonstrated a "walk the talk" commitment to decarbonise major industry and whether you look at it as a domestic "air quality" issue or an international climate change one, it's a win/win.

New engagements



New channels



ADVOCACY → POLICY → INVESTMENT → DEPLOYMENT

- Review and comment on IPCC SR15
- Drafted CCS submission to UNFCCC Talanoa Dialogue - and invited to participate in telling the CCS story to a special Talanoa Dialogues group in Bonn
- Organised launch of CCS Report by University College London (UCL) at Royal Society in London;
- Drafted and submitted input to the EU Strategy long-term greenhouse gas emissions reductions: “CCS: A Vital Technology for a Net-Zero Future”;
- Drafted and submitted input to the BEIS Committee CCUS Inquiry
- Organised exclusive media dinner for leading environmental commentators at COP23 in Bonn;
- Organised exclusive media interviews with Reuters, Bloomberg, the Financial Times, The Australian and the Australian Financial Review (amongst others)
- Participation in newly formed CCUS coalition in Brussels;
- Secured CCS event at the 2019 World Economic Forum in Davos (January);
- Attended Global Climate Action Summit in San Francisco, the UN Global Compact Meeting during UNGA, the Oil and Gas Climate Initiative (OGCI) stakeholder dialogue in New York;
- Secured event partnership (and speaking slot) at Chatham House’s conference Energy Transition.
- Institute speech at CEMBUREAU General Assembly and EU Parliament;
- UK CCUS Cost Challenge Taskforce
 - CEO on Council
 - Participation in workgroups
- Submission to Australian Senate Committee Consideration of CEFC amendments
 - and a appear before committee to give evidence



THOUGHT LEADERSHIP



Report on incentivizing investment in CCS in development, report on liability and risk scheduled for 19Q2...plus Global Status of CCS Report scheduled for December 2018



CONSULTANCY

Consultancy revenue won over the past year:
~AUD1.2M

- Legal & Regulatory Frameworks for Long Term Liability Relevant to Offshore CO₂ Geological Storage (Phase 1 and Phase 2)
- Special Report on CCS
- Concept Study of Business Models: Opportunities in Clean Hydrogen, Brown Coal Utilisation and Enhanced Oil Recovery
- Examination of the Interaction between CCS and Environmental, Social and Governance Assessments (Phase 1 and Phase 2)
- CO₂ Shipping: A Report Produced for the Institute of Energy Economics, Japan
- An Assessment of CO₂-EOR Carbon Accounting and Crediting
- Overview of Australian Greenhouse Gas Accounting Rules for CCUS

Plus secretariat & advisory services to an ongoing research project.



AUGUST 2018 CONSULTANCY

CO₂ SHIPPING: A REPORT PRODUCED FOR THE INSTITUTE OF ENERGY ECONOMICS, JAPAN

HARRY LIU
Advisor – CCS Projects

IAN HAVERCROFT
Senior Consultant – Legal and Regulatory

ALEX ZAPANTIS
General Manager – Commercial

JOHN SCOWCROFT
Executive Advisor – Europe



CONSULTANCY

Near Term Pipeline

- Create and service CCS Network
- Prefeasibility Study for PCC on a GT
- Climate mitigation value of CO₂EOR
- Clean Hydrogen Strategy Development
- CCS Education – Curriculum Development and Delivery Support
- Understand Policy Enablers of Current Commercial Scale CCS Facilities
- International Program to Promote and Disseminate Research Findings (re CCS in power production)
- CCS Roadmaps (x 2)
- Classification of storage basins
- ...plus more...



NEW MEMBER SERVICES: CO₂RE CCS DATABASE



Policy Indicator (PI)

CCS Policy Indicator (CCS-PI) records an individual nation's CCS policy development. The Indicator tracks a broad spectrum of policies ranging from direct support for CCS to broader implicit climate change and emission reduction policies. The resulting Indicator score represents a comprehensive model for tracking progress and opportunities for the development of policies to support CCS deployment. Policy summaries are based on public records only.

Region

All

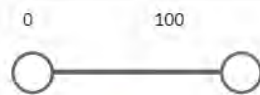
Country

All

Year

2018

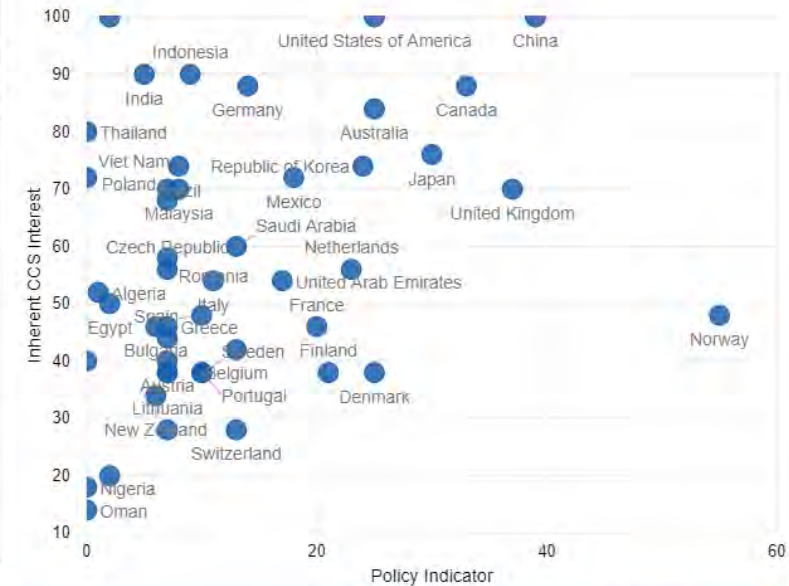
Indicator Score Range



Indicator Score



Policy Indicator score (out of 100) by country



Region	Country	PI Score	Summary	References
EUROPE	Norway	55	Norway is the highest-ranking country in the 2018 CCS Pi and it falls into the Upper Tier. Its position is due to a combination of comprehensive climate change mitigation policies that contribute to the deployment of CCS in the country, as well as the direct government and industry support and commitment to the deployment of CCS. Norway has one of the highest carbon prices in the worlds, which amounts to \$71.84 per ton of CO ₂ (as of 2013) for oil and natural gas extraction, which played an essential role in feasibility of the Sleipner large-scale carbon capture and offshore storage facility. The significant price on CO ₂ emissions served as one of the main motivations to capture and permanently store CO ₂ instead of venting it into the atmosphere. Additionally,	http://blogs.ubc.ca/amandaj/2014/03/12/the-carl https://www.gassnova.no/en/technology-centre/ https://www.globalccsinstitute.com/projects/proje



NEW MEMBER SERVICES: CO₂RE CCS DATABASE



Facilities Database

Extensive, up to date database of CCS facilities. Large-scale integrated CCS facilities comprise the capture, transport, and storage of CO₂ at a scale of at least 800,000 tonnes of CO₂ annually for a coal-based power plant, or at least 400,000 tonnes of CO₂ annually for other emissions-intensive industrial facilities (including natural gas-based power generation). Other facilities and initiatives identified in the database are recognised for their advancement of CCS technology and deployment. For more information [contact us](#).

Facility Category

● Large-scale CCS facilities
 ● Other initiatives
 ● Pilot and demonstration CCS facilities
 ● Test centers
 ● Utilisation Facilities

Region

All

Country

All

Category

All



Facility Name	Facility Category	Facility Status	Country	Operation Date	Facility Industry	Capture Capacity	Summary
Chongqing Hechuan Shuanghuai Power Plant CO ₂ Capture Industrial Demonstration Project	Utilisation Facilities	Operating	China	2010	Power Generation		other energy-intensive industry. The post-combustion CO ₂ capture plant in Chongqing city, China, was funded by the China Power Investment Corporation. It was officially put into operation in 2010. It captures 10,000 tonnes of CO ₂ per annum from the flue gas stream of the coal-fired Shuanghuai power station. The captured CO ₂ is liquefied and used as an industrial gas for welding; hydrogen cooled generator replacement, etc.
CNPC Jilin Oil Field CO ₂ EOR	Large-scale CCS facilities	Operating	China	2018	Natural Gas Processing	0.60 - 0.60	This facility injects CO ₂ for enhanced oil recovery (EOR) in low permeability reservoirs of the Jilin oil field in northeast China. The CO ₂ is captured from a nearby natural gas processing plant at the Changling gas field, and transported by pipeline. After 12 years of pilot and demonstration tests, the commercial operation, as Phase III, began in 2018, reaching 600,000 tonnes CO ₂ per annum. Cumulative CO ₂ injection of 1.12 million tonnes for pilot and demonstration scale operation was reached in the 2017.



NEW MEMBER SERVICES: CO₂RE CCS DATABASE



Region	Country	National resource estimates (GtCO ₂)	Prospective basins	References and Storage Notes
EUROPE	Romania	21-53	Pannonian; Transylvanian Depression; Moldavian Platform; East-South Carpathians	Aquifer Storage Units - User CO ₂ Storage Capacity CO ₂ Stop 2014
ASIA PACIFIC	Australia	220-700	Bowen; Surat; Gippsland; Cooper; Bonaparte; Carnarvon; Browse	Carbon Storage Taskforce 2009
AFRICA	Mozambique	2-228	Mozambique; Rovuma	Carneiro et al. 2014 ; Solomon et al. 2014
ASIA PACIFIC	Philippines	23	Luzon; Northwest Palawan; Cagayan	ADB 2013
NORTH AMERICA	United States of America	2360-21200	Anadarko and Southern Oklahoma, Gulf of Mexico; Illinois; Permian; San Joaquin; Williston	US DOE / NETL 2015
EUROPE	Netherlands	2-4	North Sea	Aquifer Storage Units - User Entered CO ₂ Storage Capacity and Hydrocarbon Daughter Units



WORKING WITH MEMBERS

- Drafted and launched UK CCUS Cost Challenge Taskforce Report “Delivering Clean Growth” for the UK Government;
- Organised Institute-led CCS Forums in:
 - Rotterdam
 - Washington DC
 - Shanghai
 - Oslo
 - London
 - Melbourne
 - Bratislava
 - Tallinn;
- Organised two CCS “Safaris” in Norway hosted with our member Gassnova;
- Organised CCS in industry conferences in China with member companies BHP and Bao Steel
- Organised launch of Yanchang CCS Facility in Xi’an with Chinese Government;
- Co-hosted CCS side events with Government of China at COP23
-plus...



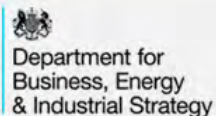
WORKING WITH MEMBERS

Accelerating CCUS:

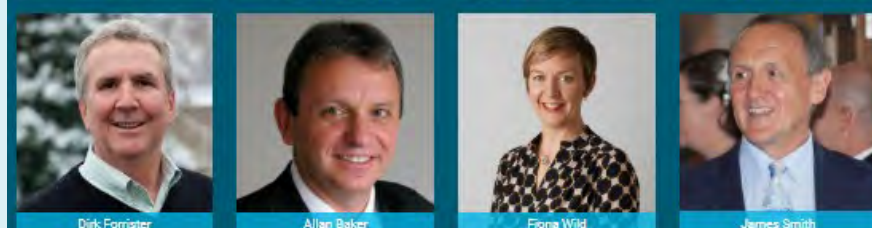
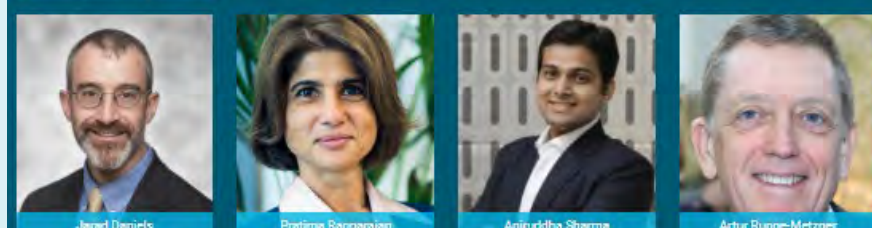
A Global Conference
to Progress CCUS

29 November 2018

EDINBURGH, SCOTLAND, UNITED KINGDOM



Accelerating CCUS globally event



We have only just begun

Success is not guaranteed

We're off to a great start!



GLOBAL CCS
INSTITUTE