



Monitoring for Geological Storage of CO₂ Workshop

Melbourne
7 to 10 May, 2013

About CAGS

The China Australia Geological Storage of CO₂ (CAGS) Project is a bilateral project that focuses on increasing China and Australia's capacity and capability in the area of geological storage of CO₂. The project combines research with capacity building and training programs. CAGS was initially developed under the Asia Pacific Partnership through the Cleaner Fossil Energy Task Force. The second phase of CAGS is being funded through the Australia-China Joint Coordination Group on Clean Coal Technology. CAGS aims to complement and collaborate with other geological storage programs in China.

Project outcomes include:

- Enhancing the technical knowledge base in China and Australia in the area of geological storage of CO₂;
- Aiding CO₂ storage research in China through research projects and researcher exchange opportunities;
- Increasing awareness about CCS in China among researchers, industry, and policymakers;
- Strengthening China-Australia ties for future collaboration in CCS, as well as ties with other international partners, and between individual organisations;
- Improving government, academic and industry networking and collaboration.

Aims of this workshop

This first technical workshop under the second phase of CAGS program aims to:

- Facilitate the building of networks of researchers, government and industry within China and between China, Australia and international agencies to advance development and understanding of geological storage of CO₂ ;
- Promote exploration and discussion of technical issues associated with the monitoring and verification of geological storage.

We are aiming to make this workshop quite informal to promote discussion and networking. Workshop participants are invited to consider the program and discussion topics prior to arrival and are encouraged to contribute to robust discussion during the workshop.



China Australia Geological Storage of CO₂
中澳二氧化碳地质封存



Program

Tuesday 7 May 2013

Welcome Dinner

- 17:40 Please meet in hotel foyer (to walk across the Yarra River to the restaurant in Southbank)
- 18:00-20:00 Dinner at Blue Train Café (alcoholic drinks on own account)
- MR5 Mid-Level, Southgate Landing, Southbank
(03) 9696 0111



China Australia Geological Storage of CO₂
中澳二氧化碳地质封存



Wednesday 8 May 2013: Workshop Day One

Session 1: Introduction

Registration	
Welcome and introduction to workshop	Andrew Barrett <i>GA</i>
Welcome and introduction	Shen Jianzhong <i>MoST</i>
China-Australia capacity building program on the geological storage of carbon dioxide (CAGS)	Sizhen Peng <i>ACCA21</i>

Session 2: Perspectives and Status

Update on Australia's CCS Policy and Engagement with China	Sean Hannan <i>RET</i>
The global status of CCS	Klaas van Alphan <i>GCCSI</i>
Carbon Capture and Storage at Geoscience Australia	Andrew Barrett <i>GA</i>

Session 3: Research and Company Projects

The EIA suggestions for CO ₂ storage	Lan-cui Liu & Dong Cao <i>Chinese Academy for Environmental Planning</i>
CCS-EOR risk control and monitor technology of wellhole in Jilin oilfield	Deping Zhang <i>PetroChina</i>
Interpretation of downhole pressure, temperature and chemistry data for monitoring CO ₂ injection in the CO ₂ CRC Otway Project	Jonathan Ennis-King <i>CO₂CRC</i>

Session 4: Discussion on today's presentations



Thursday 9 May 2013: Workshop Day Two

Session 5: Remote Sensing and Physical Properties

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|-------|--|--------------------------|
| 9:00 | Safeguard CO ₂ storage site with optical satellite remote sensing | Linlin Ge <i>UNSW</i> |
| 9:30 | Safeguard CO ₂ storage site with radar satellite remote sensing | Linlin Ge <i>UNSW</i> |
| 10:00 | Major geological properties of sedimentary basin and related technical challenges for CO ₂ aquifer storage in China | Ning Wei <i>IRSM CAS</i> |

10:30 Morning tea

Session 6: Monitoring

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| 11:00 | Monitoring for CO ₂ impacts on groundwater | Andrew Feitz <i>GA</i> |
| 11:30 | CO ₂ geological sequestration monitoring research progress of Ordos demonstration | Hui Zhang <i>Center for Hydrogeology and Environmental Geology, CGS</i> |
| 12:00 | Quantifying surface CO ₂ leaks | Andrew Feitz <i>GA</i> |

12:30 Lunch at hotel Straits Café

Session 7:

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|-------|---|---|
| 13:30 | Research on the controlling conditions of supercritical CO ₂ injection | Danqing Liu
<i>China University of Geosciences (Wuhan)</i> |
| 14:00 | Prudent development of CO ₂ -EWR – realizing the potential of China's CCUS and energy security | Qi Li <i>IRSM CAS</i> |
| 14:30 | Exhausted brine extraction and completed CO ₂ storage in Jiangnan Basin, China | Yilian Li, <i>China University of Geosciences</i> |

15:00 Afternoon tea

Session 8: Discussion and Wrap-up

15:30-
16:30

Workshop Dinner

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| 17:45 | Please meet in hotel foyer (to walk over to the restaurant) |
| 18:00-18:30 | Dinner at Red Spice Road (alcoholic drinks on own account)
31-37 Artemis Lane QV
Melbourne VIC 3000
(03) 8660 6300 |



Friday 10 May 2013: Site Visit

Breakfast at hotel Straits Café (open 6:00)

6:50	Please meet in hotel foyer
7:00-10:30	Bus journey to Otway Project
10:30 -12:30	Tour of Otway Project
<i>13:00 Lunch at Boggy Creek Pub</i>	
14:00-15:00	Tour of Iona Gas Plant
15:00-20:00	Bus journey back to Melbourne via Great Ocean Road

Important information:

CLOTHING: Long sleeve shirts, long trousers or overalls made from natural fibres, safety shoes or boots.

DRUGS & ALCOHOL:

Non-prescribed drugs and alcohol are prohibited at all times. Persons under the influence of either drugs or alcohol are not permitted on site. If you are on prescribed medication that can affect your work, your site contact must be informed.

Saturday 11 May 2013

Breakfast at hotel Straits Café (open 6:00)

7:30	Bus pickup from hotel foyer to airport (for 10:30am flight passengers)
10:00	Hotel checkout



List of Participants

Name	Position/Area	Organisation
Sizhen Peng	Deputy Director General	ACCA21
Jianzhong Shen	Director	Ministry of Science and Technology
Li Jia	Senior Engineer	ACCA21
Xiaojia He	Associate Professor	ACCA21
Dong Cao	Professor	Chinese Academy for Environmental Planning
Lancui Liu	Associate Professor	Chinese Academy for Environmental Planning
Xiaochun Li	Professor	Institute of Rock and Soil Mechanics, Chinese Academy of Sciences
Qi Li	Professor	Institute of Rock and Soil Mechanics, Chinese Academy of Sciences
Ning Wei	Associate Professor	Institute of Rock and Soil Mechanics, Chinese Academy of Sciences
Yilian Li	Professor	China University of Geosciences
Danqing Liu	Postgraduate	China University of Geosciences
Guodong Yang	Doctoral Student	China University of Geosciences
Xuanmin Wu	Deputy Director General	Center for Hydrogeology and Environmental Geology, China Geological Survey
Hui Zhang	Research Assistant	Center for Hydrogeology and Environmental Geology, China Geological Survey
Deping Zhang	Engineer	Oil Production Technology Research Institute, PetroChina Jilin Oilfield Company
Yi Zhang	Associate Professor	School of Energy and Power Engineering, Dalian University of Technology
Andrew Barrett	Group Leader, Energy Advice	Geoscience Australia
Liling Huang	CAGS Project Manager	Geoscience Australia
Jessica Gurney	Assistant Director, Program Support	Geoscience Australia
Klaas van Alphan	Senior Advisor, Projects, Financial and Commercial	Global CCS Institute
Sean Hannan	International CCS	Department of Resources, Energy and Tourism
Jonathan Ennis-King	Senior Research Scientist	CO2CRC/CSIRO
Linlin Ge	Associate Professor	University of New South Wales
Andrew Feitz	Section Leader, Greenhouse Gas Monitoring	Geoscience Australia



Useful Information

Hotel Details

Rendezvous Grand Hotel Melbourne
328 Flinders Street Melbourne VIC 3000
(03) 9250 1888
<http://www.rendezvoushotels.com/melbourne/default-en.html>

Use of mini-bars in room at own expense

Meals

All meals (except dinner Wed 8 May) will be provided during the workshop
Breakfasts are included for hotel guests at Strait Café (open from 6:00 to 10:00)

Climate

It is autumn in Melbourne. Expected maximum temperatures are around 20°C and nightly minimums are around 10°C. Please bring suitable clothing including wet-weather protection. Weather at the Otway site can be a few degrees cooler.

Telephone

Calling China	0011 86 + (area code) + #
Melbourne region code	(03)
Telephone calls made from hotel at own expense	

Useful Numbers

Liling Huang	CAGS Project Manager	0423 137 588
Andrew Barrett	Group Leader, Energy Advice, GA	0437 975 732
Jessica Gurney	Project Support	0430 514 782
Taxi		132 227 (13CABS) 131 008
Rendezvous Hotel		(03) 9250 1888
Chinese Embassy		(02) 6273 4780
Police, Fire and Ambulance		000

Melbourne Tourist Information

City of Melbourne Official Tourism Website
<http://www.thatsmelbourne.com.au/Pages/Home.aspx>

Please also see the Chinese Melbourne information leaflet.s

