



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



2011 CAGS Workshop

CO₂ Storage and Enhanced Oil Recovery

July 11-15, 2011
Changchun, China

Hosts : Department of Social Development, Ministry of Science and Technology, P. R. China
The Administrative Center for China's Agenda 21
Department of Resources, Energy and Tourism, Australia
Geoscience Australia

Organizer: China University of Petroleum, Beijing
Jilin Province Science & Technology Department



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- Organizers:** China University of Petroleum, Beijing
Jilin Province Science & Technology Department
- Subject:** CO₂ storage and enhanced oil recovery
- Aims:** Communicating CO₂ storage and enhanced oil recovery, environmental impact of CO₂ geological storage and its latest monitoring technique development and trend; and promoting the international cooperation between China and Australia.
- Conference Topics:**
1. Overview of CCS: Challenge and Opportunity
 2. CO₂ Storage Potential, Site Characterization and Selection
 3. CO₂ Storage in Oil Reservoir and Enhanced Oil Recovery
 4. Risk, Safety and Monitoring for CO₂ Storage
 5. Demonstration, Law and Regulations for CO₂ Geo-storage
- Date:** July 11-15, 2011
- Location:** Changchun, Jilin, China



Program

July 11	08:00-18:00	Registration	
	18:00-20:00	Dinner	
July 12	Opening Ceremony		
	Time: 08:30-09:30		
	Location: No.5 meeting room, the 4 th floor of the Xinmin Hotel		
	Chair: Deputy Director Zhang Jiutian (ACCA21)		
	08:30-09:15	Sun Chengyong (Counsellor) Pen Sizhen (Deputy Director) Zhao Hui (Deputy Director) Rick Causebrook (GA) Nicole Jackson (RET)	
	09:15-09:30	Photograph and Tea Break	
	Session 1: Overview of CCS: Challenge and Opportunity		
	Time: 08:00-12:30		
	Location: No.5 meeting room, the 4 th floor of the Xinmin Hotel		
	Chair: Mr. Rick Causebrook & Prof. Peng Bo		
	09:30-10:00	The global status of CCUS	Ernie Perkins (Global CCS Institute)
	10:00-10:30	Middle term report of CO ₂ geological storage site selection method and criteria	Diao Yujie (China Geological Survey)
	10:30-11:00	Australian CCS policy and implementation	Niki Jackson (RET)
	11:00-11:30	Strategy of Shenhua Low-carbon technology and Updating of Shenhua CCS Demonstration Project	Wang Heming (Shenhua Group)
11:30-12:00	Addressing the challenges: current research into CCS	Neil Wildgust (IEA GHG)	
12:00-12:30	CO ₂ storage in sala-aquifer in China	Pang Zhonghe (Institute of Geology and Geophysics, CAS)	
12:30-13:30	Lunch		
Session 2: CO₂ Storage Potential, Site Characterization and Selection			
Time: 14:00-18:00			
Location: No.5 meeting room, the 4 th floor of the Xinmin Hotel			
Chair: Ms Niki Jackson & Prof. Zhou Di			



	14:00-14:30	Latest developments in CCS and geological storage in Australia	Rick Causebrook (GA)
	14:30-15:00	A discussion on theory of CO ₂ geological sequestration	Zeng Rongshu (Institute of Geology and Geophysics, CAS)
	15:00-15:30	Geomechanical issues of CO ₂ storage for performance and risk management	Li Qi (Institute of Rock and Soil Mechanics, CAS)
	15:30-16:00	Simulation of CO ₂ -ECBM and influences on coal structure of CO ₂ storage	Chen Run (CUMT)
	16:00-16:30	Tea Break	
	Chair: Mr. Jonathan Pearce & Prof. Zeng Rongshu		
	16:30-17:00	The national centre for CCS	Sarah Mackintosh (BGS)
	17:00-17:30	Technical method of CO ₂ geological storage sites selection in deep saline aquifers	Zhang Senqi (Center for Hydrogeology and Environmental Geology, China Geological Survey)
	17:30-18:00	CO ₂ storage potential and source-sink matching for Guangdong, Southern China	Zhou Di (South China Sea Institute of Oceanology, CAS)
	18:30-19:30	Dinner	
July 13	Session 3: CO₂ Storage in Oil Reservoir and Enhanced Oil Recovery		
	Time: 08:00-12:00		
	Location: No.5 meeting room, the 4 th floor of the Xinmin Hotel		
	Chair: Dr Neil Wildgust & Prof. Pang Zhonghe		
	08:00-08:30	CO ₂ storage in oil reservoir and enhanced oil recovery	Peng Bo (CUP)
	08:30-09:00	Lab-scale thermo-physical studies of CO ₂ geological storage: Density of CO ₂ -Brine/decane system	Zhang Yi (Dalian University of Technology)
09:00-09:30	Wetting of water on surface of rock with CO ₂ water reaction	Li Mingyuan (CUP)	
09:30-10:00	CO ₂ storage capacity study through dynamic simulation on Caswell Fan, Upper Campanian, Browse Basin, Australia	Wang Liuqi (GA)	
	10:00-10:30	Tea Break	



Chair: Mr. Matthew Gerstenberger & Prof. Li Mingyuan		
10:30-11:00	Implementation of CCS underground engineering in Ordos basin	Zha Yongjin (DRI)
11:00-11:30	Geochemical monitoring during CO ₂ EOR – applications to CCS MMV	Ernest Perkins (Global CCS Institute)
11:30-12:00	Research and application of CO ₂ flooding technology in low permeability reservoir in Shengli Oilfield	Lv Guangzhong (SLECC)
12:00-13:00	Lunch	
Session 4: Risk, Safety and Monitoring for CO₂ Storage		
Time: 14:00-18:30		
Location: No.5 meeting room, the 4 th floor of the Xinmin Hotel		
Chair: Ernest Henry Perkins & Prof. Li Xiaochun		
14:00-14:30	Reactive transport modeling for CO ₂ geological sequestration	Xu Tianfu (Jilin University)
14:30-15:00	What is the worst-case? understanding potential impacts from leakage: current European research	Jonathan Pearce (BGS)
15:00-15:30	A general purpose research simulator (GPRS) for numerical simulation on CO ₂ sequestration	Gong Bin (Peking University)
15:30-16:00	Thinking about environment and supervising of CO ₂ geological storage	Liu Lancui (Chinese Academy for Environmental Planning)
16:00-16:30	Tea Break	
Chair: Ms Sarah Mackintosh & Prof. Xu Tianfu		
16:30-17:00	Risk assessment in CCS	Matthew Gerstenberger (GNS Science)
17:00-17:30	Long-term stability predication and control for storage of CO ₂	Wang Yonghong (Beijing Jiaotong University)
17:30-18:00	Investigations on supercritical CO ₂ migration during injection, sequestration and leakage processes	Xu Ruina (Tsinghua University)



	18:00-18:30	CO ₂ capture with membrane technology	Ren Jizhong (Dalian Institute of Chemical physics, CAS)
	18:30-19:30	Dinner	
	Session 5: Demonstration Project, Law and Regulations		
	Time: 08:00-12:30		
	Location: No.5 meeting room, the 4 th floor of the Xinmin Hotel		
	Chair: Wang Liuqi & Prof. Zhang Jian		
July 14	08:00-08:30	Identifying prior integrated CCS systems for demonstration in China	Li Xiaochun (Institute of Rock and Soil Mechanics, CAS)
	08:30-09:00	Social issues in CCS-working with the community	Anni Bartlett (CO2CRC)
	09:00-09:30	Research on assessment system about safety and environmental protection of CCS-EOR	Yun Jian (CNPC Research Institute of Safety & Environment Technology)
	09:30-10:00	The financing mechanism of CCS	Yin Le (The Climate Group)
	10:00-10:30	Tea Break	
	Chair: Ms Anni Bartlett & Vice President Wang Heming		
	10:30-11:00	Update on Otway project	Rick Causebrook (GA)
	11:00-11:30	CCUS technology and projects of Sinopec	Zhang Jian (SLECC)
	11:30-12:00	Lessons learned: IEAGHG Weyburn-Midale CO ₂ monitoring & storage research project	Neil Wildgust (IEAGHG)
	12:00-12:30	Closing Remarks by GA and ACCA21	
	12:30-13:30	Lunch	
	Visit for CCS-EOR Project in Jilin Oil field		
	14:00-17:00	Travel to Jilin Oil Field	
	July 15	8:30-11:30	Pilot Site Visiting
11:30-13:30		Lunch	
14:00-17:00		Travel to Changchun Airport	
After 17:00		Fly Back to Beijing	



Participant List

Chinese participants

Name	Organization	Position
Peng Sizheng	ACCA21	Deputy Director
Zhang Jiutian	ACCA21	Deputy Director
Jia Li	ACCA21	Senior engineer
Peng Bo	China University of Petroleum, Beijing	Professor
Li Mingyuan	China University of Petroleum, Beijing	Professor
Zhang Sengqi	Center for Hydrogeology and Environmental Geology, CGS	Senior Engineer
Diao Yujie	Center for Hydrogeology and Environmental Geology, CGS	PhD
Zeng Rongshu	Institute of Geology and Geophysics, Chinese Academy of Sciences	Professor
Pang Zhonghe	Institute of Geology and Geophysics, Chinese Academy of Sciences	Researcher
Li Xiaochun	Institute of Rock and Soil Mechanics, Chinese Academy of Sciences	Professor
Li Qi	Institute of Rock and Soil Mechanics, Chinese Academy of Sciences	Researcher
Wei Ning	Institute of Rock and Soil Mechanics, Chinese Academy of Sciences	Associate researcher
Zhou Di	South China Sea Institute of Oceanology, CAS	Professor
Li Pengchun	South China Sea Institute of Oceanology, CAS	Associate researcher
Wang Jialin	CNPC Research Institute of Safety & Environment Technology	Director
Geng Haiyan	CNPC Research Institute of Safety & Environment Technology	Engineer
Yun Jian	CNPC Research Institute of Safety & Environment Technology	PhD
Zha Yongjing	DRI	Senior Engineer
Bi Wenxin	DRI	Engineer
Hu Fengtao	The Ministry of Science and Technology of Sinopec	Deputy Director
Zhang Jian	SLECC	Professor
Lv Guangzhong	SLECC	Professor
Liu Haili	SLECC	Engineer
Liu Yinghong	CONNRC research institute of new energy research center	Professor
Wang Heming	China Shenhua Coal to Liquid and Chemical Company Limited	Senior Engineer
Wang Yongsheng	China Shenhua Coal to Liquid and Chemical Company Limited	Researcher
Liu Lancui	Chinese Academy for Environmental Planning	Ph.D
Zhang Yi	Dalian University of Technology	Associate professor
Peng Qiao	Dalian University of Technology	Associate professor



Gong Bin	Beijing University Institute of Technology	STA Fellow
Xu Ruina	Tsinghua University	Associate Professor
Gao Cheng	Tsinghua University	Ph.D
Ren Jizhong	Dalian institute of chemical physics, Chinese academy of sciences	Researcher
Xu Tianfu	Jilin University	Professor
Wang Fugang	Jilin University	Professor
Tian Hailong	Jilin University	Professor
Xiao Jianxin	China University of Geosciences, Beijing	Professor
Zhang Wenjun	China University of Mining and Technology	Professor
Chen Run	China University of Mining and Technology	PhD
Wang Yonghong	Beijing Jiaotong University	Professor
Yin Le	The Climate Group	Regional Manager
Yan Jisheng	China united coalbed methane (CBM) company	Senior Engineer
Chen Hongkun	the Planning Institute of Sinopec Corp	Senior Engineer
Mao Hengsong	Jiangsu Hanlong Environment Technology CO LTD	CEO
Ren Haoran	China University of Petroleum, Huadong	Professor
Hao Jingjing	China University of Petroleum, Beijing	Meeting Assistant
Xu Yi	China University of Petroleum, Beijing	Meeting Assistant

Australian and International Participants

Name	Organization	Position
Nicole Jackson	Department of Resources, Energy and Tourism	Assistant Manager, CCS International Section
Rick Causebrook	Geoscience Australia	Project Leader, international CCS and Greenhouse Gas
Jessica Gurney	Geoscience Australia	Project Manager
Liuqi Wang	Geoscience Australia	Reservoir Modeler
Sarah Mackintosh	The National Centre for Carbon Capture and Storage (NCCCS)	Programme Manager
Ernest Perkins	Global CCS Institute	Senior Adviser – Storage
Jonathan Pearce	British Geological Survey	
Neil Wildgust	IEAGHG	Project Manager – Geological Storage
Matthew Gerstenberger	GNS Science	Risk Analyst
Anne Bartlett	Cooperative Research Centre for Greenhouse Gas Technologies (CO2CRC)	Education and Training Manager