



June 2017

## CAGS Phase 3 Updates

Welcome! The China Australia Geological Storage of CO<sub>2</sub> (CAGS) was first established in 2008 and is now in its third phase, commencing in January 2016 and will continue until June 2018. The project is led by Geoscience Australia (GA) and China's Ministry of Science and Technology (MOST) through the Administrative Centre for China's Agenda 21 (ACCA21).

In the past six months, we have made great progresses on three research projects and established an exchange program sponsoring research exchanges in China and Australia.

If you would like to learn more about CAGS, please visit our website [www.cagsinfo.net](http://www.cagsinfo.net).

### RESEARCH PROJECTS

The three research projects funded by CAGS are progressing on track.

#### Research Project 1

##### Integrated Monitoring Research of CO<sub>2</sub>-EOR Demonstration Project at Yanchang Oilfield

The aim of the project is to develop a comprehensive monitoring system and identify important monitoring indicators for CCUS projects in China. The researchers have completed the following tasks in the past six months:

- A comprehensive monitoring system was designed for the Yanchang Oilfield CCUS demonstration project; and
- A U-tube monitoring device was installed and tested at the Yanchang CCUS Block. First samples were also collected.

The researchers are currently working on the last task of the project, which is to design a

comprehensive monitoring and data management system for the Yanchang project.



#### Research Project 2

##### Pre-feasibility Study on Xinjiang Guanghui Fuyun Coal to Gas CCUS Pilot Project

The aim of the project is to prepare a pre-feasibility study of 100,000 t/a CCUS demonstration project in Xinjiang. This study will provide research and development suggestions, deployment roadmap and policy recommendations to CCUS policy makers.

The researchers have completed the following tasks:

- Data collected on CO<sub>2</sub> capture technology and transportation;
- Suitable CO<sub>2</sub>-EOR sites were analysed and selected in the Zhundong Oilfield; and
- A preliminary analysis of the selected CO<sub>2</sub>-EOR site was conducted.

As the project is entering its last stage, the researchers are working on completing the remaining tasks:

- A feasibility study of CO<sub>2</sub> transportation and risk assessment methods;
- Assessment of CO<sub>2</sub>-EOR environment, safety and social risks; and
- Developing an integrated system analysis and drafting policy recommendations.

### Research Project 3

#### Evaluation of CO<sub>2</sub> Geological Utilization and Storage Potential in Junggar Basin and Early Demonstration Opportunity in Eastern Junggar

This project focuses on a comprehensive study of enhanced oil recovery (EOR) and enhanced water recovery (EWR) in the Junggar Basin in Xinjiang.

The project team have completed the following tasks:

- Preliminary investigation and evaluation into CO<sub>2</sub> emission sources was completed in Junggar basin;
- Potential CGUS target areas in the Junggar basin was assessed;
- Initial typical site characterization for CO<sub>2</sub>-EWR in East Junggar was completed; and
- Geographic data was collected and an initial CO<sub>2</sub>-EWR technical economic model built.

The researchers are currently working on:

- Selecting one or more suitable target sites;
- Carrying out geophysical exploration to verify the geological conditions; and
- Proposing CO<sub>2</sub>-EWR and storage in deep saline aquifers in eastern Junggar based on source-sink matching



### CAPACITY BUILDING ACTIVITIES

This program includes study tours, technical workshops and training schools. A Chinese study tour and an Australian study tour were completed in the mid of 2016.

The next capacity building activity, a technical workshop (26-28 June) and training school (29 June-1 July), will be held in Urumqi, China. Chinese and international speakers from Australia, US, Germany and Ireland will give presentations focusing on CCUS policy, research and project progress around the world.

The training school will cover the basics of CCUS, targeting postgraduate students and early-career researchers and policy makers.

Presentations will be made available from the CAGS website after the workshop and school.

### SCIENTIFIC EXCHANGES

The CAGS scientific exchange program offers a mechanism for Australian and Chinese researchers working in the field of geological storage of CO<sub>2</sub> to collaborate, and through knowledge sharing and joint activities.

The twelve successful applicants include seven from China and five from Australia. They will share their experience through CAGS website.

The first exchange program has commenced in May 2017. Dr Zhejun Pan, Principal Research Scientist at CSIRO, is currently working with Dr Qi Li at IRSM to research on improved EWR modelling and comparison between Australian and China.

### UPCOMING EVENT

26-28 June 2017: CCS Workshop, Urumqi, China

29 June-1 July 2017: CCS School, Urumqi, China