



## MEETING SUMMARY

Technology Opportunities and Gaps Task Force Meeting  
Perth, Australia  
24 October 2012

Prepared by the CSLF Secretariat

### LIST OF PARTICIPANTS

**Chairman:** Richard Aldous (Australia)

#### **CSLF Delegates**

Australia: Clinton Foster  
European Commission: Jeroen Schuppers  
Japan: Ryozo Tanaka  
Korea: Young Cheol Park, Chong Kul Ryu  
Netherlands: Paul Ramsak  
Norway: Trygve Riis  
South Africa: Tony SurrIDGE  
Saudi Arabia: Ahmed Aleidan  
United Kingdom: Philip Sharman  
United States: Darren Mollot

**CSLF Secretariat:** John Panek, Richard Lynch

#### **Observers**

Australia: Roy Anderson, Chris Consoli, Claire Richards  
Global CCS Institute: Peter Grubnic  
India: Preeti Malhotra

### 1. Welcome and Summary of Task Force Mandate

Richard Aldous of Australia, the Chair of this Task Force, welcomed the meeting attendees and provided a short summary about the Task Force and its mandate. “Technical Gaps Closure” was one of the twelve actions in the new Technical Group Action Plan, and this Task Force was formed to address that action. At the previous meeting of the Task Force, in June 2012 in Bergen, Dr. Aldous had stated that the Task Force is focusing on five technology areas of interest:

- CO<sub>2</sub> Capture (including solvents, adsorbents, membranes, cryogenics, and related technology areas)
- CO<sub>2</sub> Storage (including characterization of storage reservoirs, monitoring / verification, technical management of storage reservoirs, mitigation, and related technology areas)

- CO<sub>2</sub> Transport (including pipeline design/structure, storage economics, and network economics)
- Measurement, Monitoring, and Verification of Storage (including sub-seabed MMV, atmospheric monitoring, induced seismicity, and near-surface pressure events)
- Technology and Skills (including education)

The proposed work of the Task Force will be to undertake a comprehensive view of the key technologies in play around carbon capture and storage (CCS) and carbon capture, utilization and storage (CCUS) with a view to identify scientific and technology gaps and opportunities which have potential to significantly impact on CCS/CCUS demonstration and deployment. Reports from the Task Force are expected to be inputs to future versions of the CSLF Technology Roadmap.

Dr. Aldous stated that membership of the Task Force was open to all CSLF member countries and interested parties. Current membership in this task force consists of Australia (as Chair), Korea, Norway, and the United States.

## **2. Task Force Plan of Action**

Dr. Aldous stated that the Task Force, for its Phase 1 activities, will review relevant work and reports of other organizations in order to create a high-level list of apparent gaps and opportunities. A spreadsheet will be developed that summarizes these gaps and opportunities. Phase 2 activities will include a high level analysis of selected gaps and opportunities, followed by a review from a panel of experts. The use of technology readiness level methodologies for analysis is an option. A draft of the Task Force's Phase 1 report is expected in time for the next Technical Group meeting, in the 2<sup>nd</sup> quarter of 2013. This report will identify the most important gaps and opportunities, and will include a set of recommendations.

Ensuing discussion centered on the types of technologies to be examined, and the advisability of using technology readiness level analysis for doing so. Philip Sharman stated that technology readiness level analysis only looks at half the picture – the level of knowledge for these technologies is equally important. Darren Mollot mentioned that use of technology readiness level analysis could be controversial because technology vendors might disagree with any conclusions. Mr. Sharman suggested that the Task Force center on technologies that can make an impact on efficiency, cost, and energy penalty – many of these are 2<sup>nd</sup> and 3<sup>rd</sup> generation technologies.

Dr. Aldous reported that the Task Force's immediate next step would be to verify the structure of the Phase 1 spreadsheet and determine where data exists that can be used as spreadsheet input. As a first step, Dr. Aldous will open discussions with the IEA Greenhouse Gas R&D Programme (IEA GHG) and the Global CCS Institute.

## **3. Closing Comments / Adjourn**

Dr. Aldous thanked meeting attendees for their input and advice, and adjourned the meeting.