



DRAFT

MEETING SUMMARY

Projects Interaction and Review Team (PIRT) Meeting

Perth, Australia

24 October 2012

Prepared by the CSLF Secretariat

LIST OF ATTENDEES

Chairman

Clinton Foster (Australia)

CSLF Delegates

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|----------------------|---------------------------------|
| Australia: | Richard Aldous |
| Canada: | Stefan Bachu, Eddy Chui |
| European Commission: | Jeroen Schuppers |
| France: | Didier Bonijoly |
| Italy: | Giuseppe Girardi |
| Japan: | Ryozo Tanaka |
| Korea: | Young Cheol Park, Chong Kul Ryu |
| Netherlands: | Paul Ramsak |
| Norway: | Trygve Riis |
| Saudi Arabia: | Ahmed Aleidan |
| South Africa: | Tony SurrIDGE |
| United Kingdom: | Philip Sharman |
| United States: | George Guthrie, Darren Mollot |

CSLF Secretariat

John Panek, Richard Lynch

Project Sponsors

| | |
|-------------------------|--------------------|
| CarbonNet Project: | Maureen Clifford |
| South West Hub Project: | Dominique Van Gent |

Observers

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|-----------------------|--------------------------------|
| Australia: | Chris Consoli, Claire Richards |
| Global CCS Institute: | Peter Grubnic |
| United States: | James Wood |

1. Welcome and Summary of Previous PIRT Meeting

PIRT Chairman Clinton Foster of Australia welcomed participants to the 18th meeting of the PIRT and provided a brief summary of the June 2012 PIRT meeting in Bergen, Norway. The PIRT reached consensus at the Bergen meeting on the following:

- Recommended that the Illinois Basin – Decatur Project, the Illinois Industrial Carbon Capture and Storage Project, and the Air Products CO₂ Capture from Hydrogen Facility Project be approved by the Technical Group;
- Recommended that the Technical Group not proceed with a 2012 minor revision to the CSLF Technology Roadmap (TRM);
- Recommended to the Technical Group that the 2013 TRM timeline extend only to the year 2020;
- Recommended to the Technical Group that a new Steering Committee / Editorial Board, chaired by the Technical Group Chairman, be formed to oversee and shepherd the process of completing the 2013 TRM;
- Recommended to the Technical Group that the 2013 Technical Workshop be “Monitoring” themed; and
- Deferred consideration of the simplified Gaps Checklist for use by projects seeking CSLF recognition.

The Technical Group subsequently accepted all of the PIRT’s recommendations.

2. Adoption of Meeting Agenda

The meeting Agenda was adopted with no changes.

3. Introduction of Meeting Attendees

PIRT meeting attendees introduced themselves. In all, thirteen CSLF Members were represented at the meeting.

4. Approval of Meeting Summary from Bergen PIRT Meeting

The Meeting Summary from the June 2012 PIRT meeting in Bergen was approved as final with no changes.

5. Review of Action Items from Bergen Meeting

John Panek of the CSLF Secretariat reported that both action items from the Bergen meeting have been completed.

6. Report from CSLF Secretariat

John Panek stated that the Secretariat has been informed that the CSLF-recognized “Demonstration of an Oxyfuel Combustion System” project has been completed and that a final report is available at the United Kingdom’s Department of Energy and Climate Change website (<http://www.decc.gov.uk/publications>). Mr. Panek also reported that the “Projects” page of the CSLF website (<http://www.cslforum.org/projects/>) has been updated to include an interactive map, and that transition of TRM country-specific information to a new section of the CSLF website is underway.

7. Update of Projects Recommended for CSLF Recognition at Bergen Meeting

Darren Mollot provided a brief update on the three projects that had been recommended for CSLF recognition by the Technical Group at the Bergen meeting.

The Illinois Basin – Decatur Project, located in central Illinois in the United States, is the first large-scale land-based CCS project, which will store CO₂ captured from an industrial ethanol fermentation facility into a deep saline formation (the Mount Simon Sandstone). The project has been injecting approximately 1,000 tons of CO₂ per day since November 2011, with total CO₂ storage expected to reach 1 million tons by about November 2014. After that milestone has been reached, the injection well will be sealed and the reservoir monitored using geophysical techniques.

The Illinois Industrial Carbon Capture and Storage Project is another large-scale land-based CCS project, which will collect up to 3,000 tons per day of CO₂ from the ethanol production plant in Decatur and store it in the Mt. Simon Sandstone formation. Unlike the Illinois Basin – Decatur Project, which focuses on research aspects of large-scale CCS, this project is intended to be an industrial commercialization project.

The Air Products CO₂ Capture from Hydrogen Facility Project, located in southeastern Texas in the United States, is a large-scale commercial project that will demonstrate a state-of-the-art system to concentrate CO₂ from two steam methane reformer (SMR) hydrogen production plants, and purify the CO₂ to make it suitable for sequestration by injection into the existing West Hastings Field oil reservoir as part of an ongoing CO₂-EOR project. The commercial goal of the project is to recover and purify approximately 1 million tonnes per year of CO₂ for pipeline transport to Texas oilfields for use in enhanced oil recovery (EOR). The technical goal is to capture at least 75% of the CO₂ from a treated industrial gas stream that would otherwise be emitted to the atmosphere.

Dr. Foster thanked Dr. Mollot for his presentation and noted that these projects are being presented to the Policy Group for CSLF recognition at the upcoming Joint Meeting of the CSLF Policy and Technical Groups.

8. Review and Approval of Projects Nominated for CSLF Recognition

The following two projects had been nominated for CSLF recognition:

- South West Hub Geosequestration Project (nominated by Australia, the United States, and Canada)
- CarbonNet Project (nominated by Australia and the United States)

Presentations on each of these projects were made by representatives of the project sponsors.

South West Hub Geosequestration Project (nominated by Australia, United States, and Canada)

Dominique Van Gent, Coordinator of Carbon Strategy for the State Government of Western Australia's Department of Mines and Petroleum, gave a presentation about the South West Hub Project. This project will implement a large-scale "CO₂ Hub" for multi-user capture, transport, utilization, and storage of CO₂ in southwestern Australia near the city of Perth. The project is one of Australia's "Flagship" projects for large-scale demonstration of CCS and CCUS technologies. Several industrial and utility point sources of CO₂ will be connected via a pipeline to a site where the CO₂ can be stored deep underground in the Triassic Lesueur Sandstone formation. The project initially plans to sequester 2.4 million tonnes of CO₂ per year and has the potential for capturing approximately 6.5 million tonnes of CO₂ per year. A separate and unique feature of the project is that an additional approximately one quarter million tonnes of CO₂ per year will be permanently chemically stored in bauxite residue as part of an environmentally beneficial amelioration program. The project will also include reservoir characterization

and, once storage is underway, measurement, monitoring and verification (MMV) technologies.

After brief discussion, there was consensus by the PIRT to recommend approval of the South West Hub Geosequestration Project by the Technical Group.

CarbonNet Project (nominated by Australia and United States)

Maureen Clifford, Communications & Stakeholder Engagement Manager for the State Government of Victoria's Energy & Earth Resources Group at the Department of Primary Industries, gave a presentation about the CarbonNet Project. This project will implement a large-scale multi-user CO₂ capture, transport, and storage network in southeastern Australia in the Latrobe Valley. The project is another of Australia's "Flagship" projects for large-scale demonstration of CCS technologies. Multiple industrial and utility point sources of CO₂ will be connected via a pipeline to a site where the CO₂ can be stored in depleted oil and gas fields in the offshore Gippsland Basin. The project initially plans to sequester approximately 1 to 5 million tonnes of CO₂ per year, with the potential to increase capacity significantly over time. The project will also include reservoir characterization and, once storage is underway, measurement, monitoring and verification (MMV) technologies.

After brief discussion, there was consensus by the PIRT to recommend approval of the CarbonNet Project by the Technical Group.

9. Discussion of Ministerial Concept Paper

There was agreement to skip this item. John Panek stated that this would be an agenda item at the next day's full Technical Group meeting.

10. Updated CSLF Gaps Analysis Checklist for Project Submission Form

Clinton Foster reported that the simplified CSLF Gaps Checklist had been overwhelmingly approved by PIRT delegates via email prior to this PIRT meeting, and thanked the delegates for their prompt responses. The revised Checklist is now just a single page in length. Dr. Foster stated that comments received during the email approval process have been incorporated. There was agreement to recommend that the Technical Group adopt the revised Checklist.

11. New Business

There was no new business.

12. Adjourn

Dr. Foster thanked the attendees for their participation and adjourned the meeting.

Summary of Consensus Reached

- The PIRT recommends approval by the Technical Group for the South West Hub Geosequestration Project and the CarbonNet Project.
- The PIRT recommends that the Technical Group adopt the simplified Gaps Checklist.