



Report on the Task Force on Utilization Options for CO₂: Phase 2 Report

Mark Ackiewicz
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Purpose of Task Force

Identify/study the most economically promising CO₂ utilization options that have the potential to yield a meaningful, net reduction of CO₂ emissions, or facilitate the development and/or deployment of other CCS technologies.



Origin of the Task Force

- **At the CSLF Ministerial Meeting in Beijing, P.R. China, in September 2011, the CSLF Charter was amended to include CO₂ utilization technologies.**
- **At the same meeting, the Utilization Options for CO₂ Task Force was created. Focused on non-EOR options.**
- **A draft charter was developed December 2011.**
- **First meeting of task force occurred June 2012 in Bergen, Norway.**



Progress to Date

- At the CSLF Meeting in Perth, Australia, October 2012, a Phase 1 report was completed which summarized existing information regarding CO₂ utilization options and discussed the state of each relevant technology and application.
- The objective of this Phase 2 report is to provide a more thorough discussion of the most attractive CO₂ utilization options based upon economic promise and CO₂ reduction potential. This report will review the current and future economic viability, potential for co-production and RD&D needs.



Options and Report Structure

Options Under Evaluation for Phase 2 Report

Resource Recovery

CO₂-EGR

CO₂ for shale gas/oil recovery

Non-Consumptive

Urea

Algal Fuels

Greenhouse Utilization

CO₂-Assisted Geothermal

Consumptive

Aggregate, SCM



General Structure of Each Chapter in Report

- Metrics
- Current State of Technology
- Economics of Technology – current and potential
- Active/Planned International Projects
- Regulatory Requirements
- Technology Advancement needs/gaps, RD&D needs
- Potential for co-production



Draft Report Outline and Status

1. Executive Summary – **In progress**
2. Introduction (Task Force mandate, scope and objective of the report; history of CO₂ Utilization) – **Complete**
3. CO₂-Enhanced Gas Recovery – **Complete**
4. CO₂-Fracturing for Hydrocarbon Recovery (shale gas and shale oil) - **Complete**
5. Urea – **Complete**
6. Algal Fuels – **Complete**
7. Greenhouse Utilization – **Complete**
8. Aggregate, SCM – **Complete**
9. CO₂-Assisted Geothermal – **In progress**
10. Summary and Conclusions, including recommendations - **In progress**



Proposed Timeline

- **Mid-June 2013**: Task Force finalizes draft report, submit to CSLF Secretariat for circulation to Technical Group delegates
- **Late-June 2013**: Recommendations from task force report submitted to CSLF Secretariat for inclusion in roadmap and ministerial report by July 1, 2013.
- **Mid-August 2013**: Technical Group Member Countries' comments due to draft report (one set of comments per country)
- **October 1, 2013**: Finalize report and submit it to the Secretariat for distribution prior to November Ministerial meeting.



Task Force Membership

- **Mark Ackiewicz (United States, Chair)**
- **Clinton Foster (Australia)**
- **Didier Bonijoly (France)**
- **Paul Ramsak (Netherlands)**
- **Ahmed Al-Eidan (Saudi Arabia)**
- **Tony Surridge (South Africa)**
- **Philip Sharman (United Kingdom)**



Comments?