



TECHNICAL GROUP

Draft Technical Group Action Plan

Barbara N. McKee
Tel: 1 301 903 3820
Fax: 1 301 903 1591
CSLFSecretariat@hq.doe.gov



DRAFT TECHNICAL GROUP ACTION PLAN

Note by the Secretariat

Background

The Secretariat, under the direction of the Technical Group Executive Committee, has developed a draft Action Plan for the Technical Group that covers the years 2011-2016. Twelve different proposed areas of activity have been identified. No relative priorities and scheduling have been assigned yet, pending review by the Technical Group.

Action Requested

Technical Group delegates are requested to carefully review the draft Action Plan prior to the Technical Group meeting. At the meeting, delegates will be asked for their judgment on relative priorities, resourcing, and scheduling for each of the proposed areas of activity.

CSLF Technical Group Action Plan, 2011-2016

Action Plan 1: Technology Gaps Closure

- Lead:** Task Force to Assess Progress on Technical Issues Affecting CCS
- Action:** The Technical Group will identify and monitor key CCS technology gaps and related issues and recommend any R&D and demonstration activities that address these gaps and issues.
- Outcome:** Identification of all key technology gaps/issues and determination of the effectiveness of ongoing CCS RD&D for addressing these gaps/issues.
- Milestones:** Review of CCS technology gaps and related issues *Yearly*
Update of CSLF Technology Roadmap (Module 3) *Yearly/Biannually*
Thematic reports on the status of CCS technology gaps/issues *TBD 2012-2016*

Action Plan 2: Best-Practice Knowledge Sharing

- Lead:** Projects Interaction and Review Team
- Action:** The Technical Group will facilitate the sharing of knowledge, information, and lessons learned from CSLF-recognized projects and other CCS RD&D. (*note: This activity could also be linked with the Capacity Building Task Force.*)
- Outcome:** Development of interactive references for assisting next-generation commercial CCS projects, which will include links with other CCS entities.
- Milestones:** Thematic interactive projects “lessons learned” workshops *TBD 2012-2016*
Update of CSLF Technology Roadmap (Modules 1, 2, and 4) *Yearly*
Thematic reports on lessons learned *TBD 2012-2016*
Development of interactive “lessons learned” references * *TBD 2015-2016*

* jointly with Communications Task Force

Action Plan 3: Energy Penalty Reduction

- Lead:** Technical Group / New Task Force or Working Group
- Action:** The Technical Group will identify technological progress and any new research needs for reducing the energy penalty for CCS, both for traditional CO₂ capture processes and new breakthrough technologies.
- Outcome:** Identification of opportunities for process improvements and increased efficiency from experiences of “early mover” projects.
- Milestones:** Workshop to document knowledge and experiences of “early mover” projects *TBD 2013*
Report on successful trends and breakthroughs *TBD 2014*

Action Plan 4: CCS with Industrial Emissions Sources

Lead: Technical Group / New Task Force or Working Group

Action: The Technical Group will document the progress and application of CCS for industrial emissions sources and will identify and recommend demonstration opportunities for CSLF Members.

Outcome: Identification of opportunities for CCS with industrial sources. Identification and attempted resolution of technology-related issues (including integration) unique to this type of application.

Milestones: Technology workshops on CCS for industrial sources. *TBD 2013-2016*
Outreach activities for CO₂-intensive industries *TBD 2012-2016*
Reports on progress and issues unique to CCS with industrial sources *TBD 2013-2016*

Action Plan 5: CO₂ Compression and Transport

Lead: Technical Group / New or Existing Task Force or Working Group

Action: The Technical Group will review technologies and assess pipeline standards for CO₂ transport, in particular in relation to impurities in the CO₂ stream. Issues such as thermodynamics, fluid dynamics, and materials of construction, will be considered. Alternatives to pipelines, such as ship transport, will also be assessed.

Outcomes: Identification of optimum technical CO₂ transport strategies, both for pipeline and non-pipeline alternatives. Assessment of purity issues as they apply to CO₂ transport. Identification of optimal compression options and alternatives.

Milestones: CO₂ transport workshop *TBD 2014*
Interim Report *TBD 2015*
Final Report *TBD 2016*

Action Plan 6: Storage and Monitoring for Commercial Projects

Lead: Technical Group / New or Existing Task Force or Working Group

Action: The Technical Group will identify, review, and recommend standards for CO₂ storage and monitoring.

Outcome: Recommendations of standards for storage and monitoring of injected CO₂. The application of such standards should inform CO₂ crediting mechanisms.

Milestones: Interim Report *TBD 2015*
Final Report *TBD 2016*

Action Plan 7: Technical Challenges for Conversion of CO₂ EOR to CCS

- Lead:** Technical Group / New Task Force or Working Group
- Action:** The Technical Group will determine technical and economic aspects that can affect moving from enhanced oil recovery (EOR) to carbon storage.
- Outcomes:** Identification and recommendation of permitting, monitoring, and reporting requirements for CO₂ EOR applications that apply for CO₂ credits.
- Milestones:** Interim Report **TBD 2014**
Final Report **TBD 2015**

Action Plan 8: Competition of CCS with Other Resources

- Lead:** Technical Group / New Task Force or Working Group
- Action:** The Technical Group will examine criteria for assessing competing development priorities between CCS (particularly CO₂ storage) and other economic resources. (*note: This could be undertaken as a Joint Policy and Technical Group activity.*)
- Outcomes:** Identification and recommendation of criteria for determining relative economic viability of CO₂ storage sites.
- Milestones:** Interim Report **TBD 2014**
Final Report **TBD 2015**

Action Plan 9: Life Cycle Assessment and Environmental Footprint of CCS

- Lead:** Technical Group / New Task Force or Working Group
- Action:** The Technical Group will identify and review methodologies for Life Cycle Assessment (LCA) for CCS, including life cycle inventory analysis, life cycle impact assessment, and interpretation of results.
- Outcomes:** Identification and recommendation of criteria for determining the full range of environmental effects for CCS technologies.
- Milestones:** CCS LCA technical workshops **TBD 2014-2015**
Interim Report **TBD 2015**
Final Report **TBD 2016**

Action Plan 10: Risk and Liability

- Lead:** Risk Assessment Task Force (or participation in new joint Policy-Technical Task Force)
- Action:** The Technical Group will identify and assess links between technology-related risks and liability.
- Outcome:** Development of proposed guidelines for addressing long-term technology-related risks with respect to potential liabilities.
- Milestones:** Risk and liability workshops **TBD 2013-2014**
Thematic report with proposed guidelines **TBD 2015**

Action Plan 11: Carbon-neutral and Carbon-negative CCS

Lead: Technical Group / New Task Force or Working Group

Action: The Technical Group will investigate technical challenges in use of CCS with power plants that utilize biomass (either pure or co-fired), to determine a pathway toward carbon-neutral or carbon-negative functionality.

Outcomes: Identification of issues and challenges for use of CCS with biomass-fueled power plants.

Milestones: Biomass CCS technical workshop **TBD 2013**
Interim Report **TBD 2014**
Final Report **TBD 2015**

Action Plan 12: CO₂ Utilization Options

Lead: Technical Group / New Task Force or Working Group

Action: The Technical Group will investigate CO₂ utilization options.

Outcomes: Identification of most economically attractive CO₂ utilization options.

Milestones: Interim Report **TBD 2013**
Final Report **TBD 2014**