



CO₂ Utilization Options Task Force

Team Members:

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CO₂ Utilization Options Task Force

Purpose

The purpose of the CO₂ Utilization Options Task Force is to 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.



CO₂ Utilization Options Task Force



Milestones: Phase I

- **Developed initial list of CO₂ utilization options for initial evaluation.**
- **Conducted literature review and draft report for review and comment by task force.**
- **Final Phase I Report to CSLF Technical Group/Policy Group.**

Due Date/Lead

June 2012
CCUS task force

July 2012
CCUS task force

October 2012
CCUS task force

CO₂ Uses



Hydrocarbon Recovery

- CO₂-EGR
- CO₂-ECBM
- CO₂-EGHR
- Oil shale recovery
- CO₂-fracturing

Non-consumptive

- Fuels & chemicals
- Desalination
- Slurry transport
- Beneficiation
- Working/HT fluid
- Extractant
- Inerting Agent
- Fire Suppression
- Food/Products
- Refrigerant

Consumptive

- Soil amendment/fertilizer
- Synthetic cementitious materials, building materials
- Chemicals
- Polycarbonates / polymers

Tentative List of Promising CO₂ Utilization Pathways

Resource Recovery

Application	Utilization (MMT/y CO ₂)	Benefit
CO ₂ -EGR	3,200 to 7,800 MMT/y	
Shale gas recovery	340 to 3,320 MMT/y CO ₂	
CO ₂ fracturing	0.4 T CO ₂ /well for vertical well completions	

Non-Consumptive

Fuels and Chemicals	Utilization (MMT/y CO ₂)	Benefit (\$/MMT CO ₂)
Urea	109	\$183/MMT CO ₂
Algal Fuels	22	-\$255 to - \$1,115/MMT CO ₂
Green house		

Consumptive

Application	Utilization (MMT/y CO ₂)	Benefit (\$/ton CO ₂)*
Aggregate, SCM	12 to 1,500	\$14 to \$100
CO ₂ Assisted Geothermal		

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Deliverables

Phase II Report - report methodology, details and schedule TBD

- **Phase II report will provide a more thorough discussion of the most attractive CO₂ utilization options, based on economic promise and CO₂ reduction potential.**
- **An assessment of current and potential economic viability,**
- **CO₂ reduction potential at various price points,**
- **The potential for co-production, and**
- **A discussion of RD&D needs.**