Managing Large Scale CCS: A Supplier Industry’s Perspective

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The False Paradox: Growth vs. the Environment?

- Unreliable, expensive, polluting energy destroys growth
- Reliable, affordable, clean energy brings growth
- Government policies must deliver change
- Industry must innovate and embrace risk
Carbon Capture and Storage (CCS) – Tested, safe and deployable

**CO₂ Capture**
- Mature technologies
- Upscale and cost reduction

**CO₂ Transport**
- Deployed in North America for Enhanced Oil Recovery (EOR)

**CO₂ Storage**
- 15 years safe storage in the Sleipner offshore field, Norway.
Carbon Capture and Storage is indispensable to curb climate change but not enough.

Source: IEA, Energy Technology Perspectives (2008a).
Aker

Technology Licensing / tailor-made / open partnerships

Offshore competence

Onshore competence

The preferred partner

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A global supplier of CO₂ capture technology

- Fossil fuels are necessary to meet energy demand
- Aker Clean Carbon brings technology from petroleum to the environment
- Aker Clean Carbon’s step by step business approach:
  
  Develop  –  Test  –  Improve  –  Deploy

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<td>Tiller test pilot</td>
<td>Sleipner field</td>
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The preferred partner

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CO₂ Technology Centre Mongstad – TCM
Flexible amine plant – construction complete June 2011

- Aker has designed and built the world’s most advanced CO₂ amine capture plant
- TCM will reduce cost and risk of carbon capture from CO₂ emission sources
- Funded by Norway and supported by industrial partners Statoil, Shell, Sasol and Aker

Mongstad, Norway
Carbon Capture Geopolitics

- Carbon capture reduces energy import dependency
- Carbon capture must be globally deployed to succeed
- International cooperation will realise carbon capture:

  “There is an ambitious growth path for CCS from 2010 to 2050 where CCS development will start in the industrialized countries but is expected to rapidly shift to developing regions after 2020.”
  - IEA

The challenge to policy makers:
- UN Conference on Climate Change in Durban must send a clear message to the world:

  “Emitting CO₂ will no longer be free”
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