

Managing Large Scale CCS: A Supplier Industry's Perspective

IEA WPFF - MOST CCUS Workshop
Beijing, 19 September 2011

Liv Monica B. Stubholt
CEO, Aker Clean Carbon – A technology company for CO₂ capture

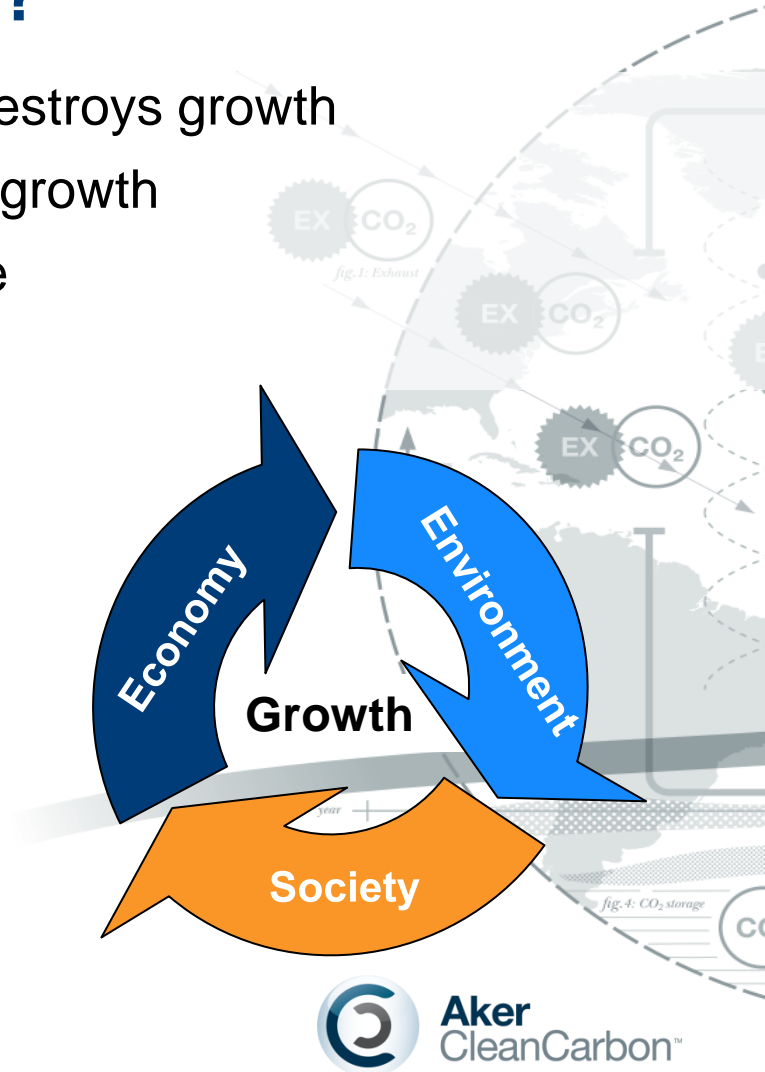
The logo for Aker Clean Carbon, featuring a stylized blue 'C' inside a light blue circle, followed by the text 'Aker CleanCarbon™' in a sans-serif font.

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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



The preferred partner



Carbon Capture and Storage (CCS)

– Tested, safe and deployable

CO₂ Capture

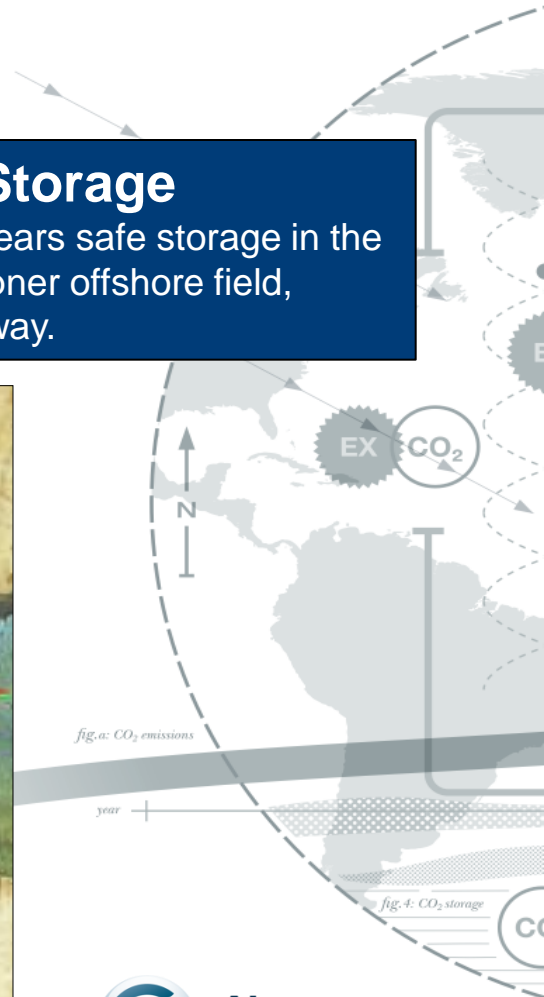
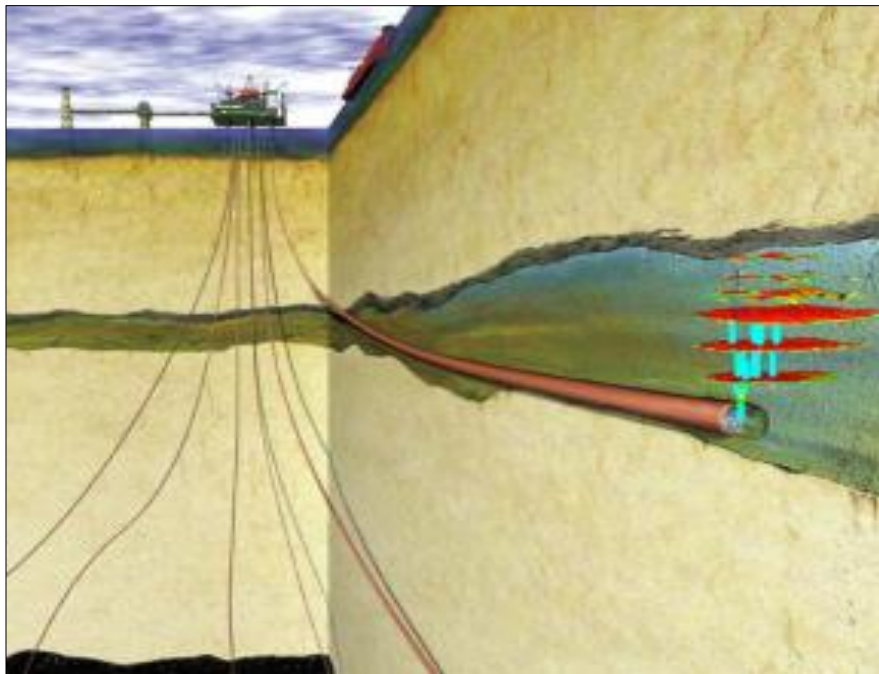
- Mature technologies
- Upscale and cost reduction

CO₂ Transport

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

CO₂ Storage

- 15 years safe storage in the Sleipner offshore field, Norway.

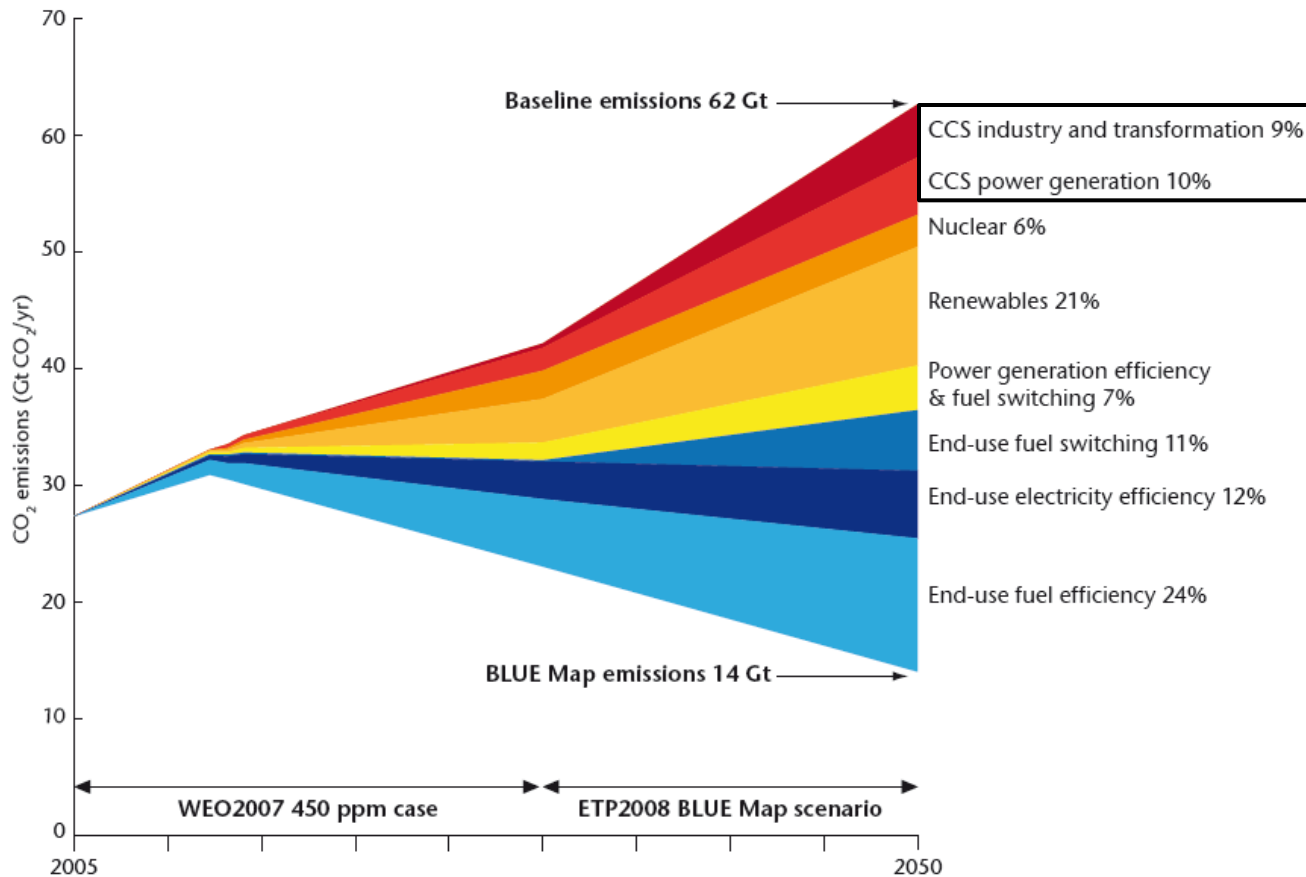


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Carbon Capture and Storage is indispensable to curb climate change but not enough



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

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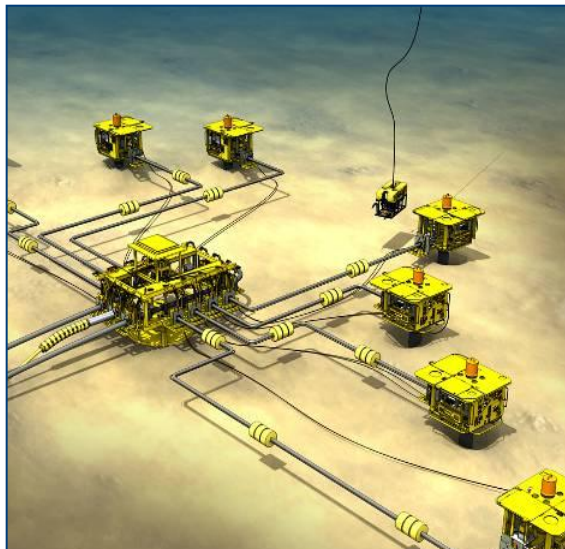


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Technology
Licensing / tailor-made /
open partnerships

Offshore competence

Onshore competence



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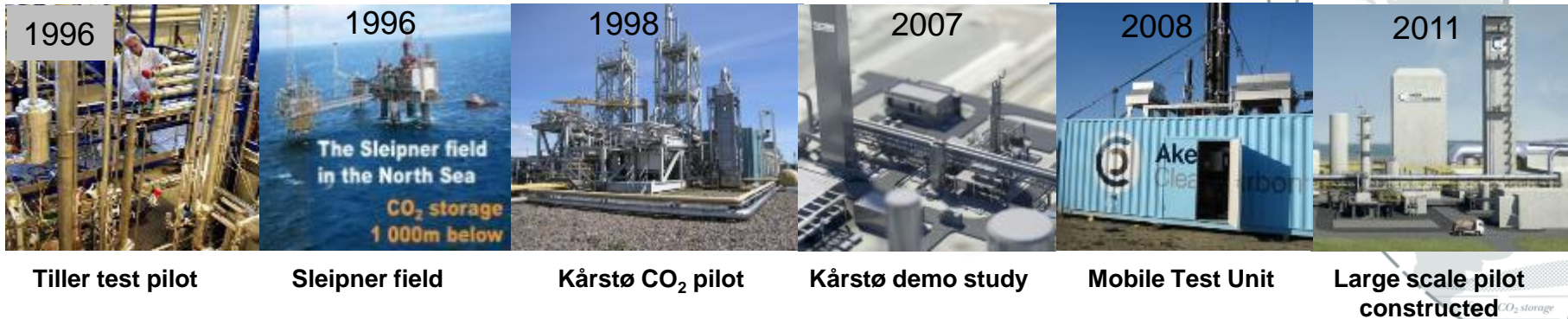


Aker Clean Carbon

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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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



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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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