

# Breakout session on CO<sub>2</sub> Storage and EOR



#### CO<sub>2</sub> Storage Data Consortium

- Sharing of reference data
- Explored technical solutions for data sharing
- Presentation at GHGT
- Secure international co-funding invite other nations
- Expand beyond subsurface?



## LLNL-Norway cooperation

- Balancing monitoring program effectiveness and cost
- Pressure buildup toolkit developed and tested on Snøhvit data set
- Well integrity atlas
  - Risk assessment of legacy wells



# Upscaling CO<sub>2</sub> Foam EOR for Mobility control

- Lab to field pilot
- Promising results from lab experiments
  - Do we understand the fundamental processes?
- Foam injection in field pilots this fall/winter



### Norwegian full scale project

- CCS proven but difficult to get to commerciality (no strong business case)
- What business models go beyond "one source; one sink?"
  - North Sea as storage hub?
- Areas in offshore environment that need further attention include:
  - Pressure relief systems
  - Pipeline design
  - Subsea systems
  - Well design and integrity
  - Cost effective reservoir characterization
  - Overburden monitoring



# Status offshore CO<sub>2</sub> EOR development

- Climit funded projects
  - Aker Solution project on Subsea CO<sub>2</sub> Separation initiated
  - Inflow Control systems for CO<sub>2</sub> shut off tested successfully at Weyburn



#### Illinois-Norway cooperation

Detailed analysis of microseismic data from Illinois Basin – Decatur Project

- Combining active and passive seismic data to potentially improve imaging
- What can be learned about fluid and pressure front tracking; fault reactivation?



# CSLF Task Force on Offshore CO<sub>2</sub> EOR

- Report currently in final review
- To be published late October on CSLF website



#### Potential New Collaboration

- Norway led CO<sub>2</sub> foam EOR research at the two field pilots, West Texas
  - Potential collaboration with Southwest Regional Partnership
  - Contribute to monitoring program
- US led Kemper County storage site (CarbonSAFE)
  - Potential collaboration on microseismic analysis and CO<sub>2</sub> storage modeling and monitoring
- 2<sup>nd</sup> International Workshop on Offshore geological storage
  - Tools for assessing infrastructure
  - Qualify subsea systems for CO<sub>2</sub>
  - Monitoring
  - Business models for CO<sub>2</sub> EOR
  - Transport of CO<sub>2</sub>



#### Discussion - summary

- Offshore CO<sub>2</sub> storage pilot in US
  - GoM, shallow water, near shore to cost effectively evaluate deep water CO<sub>2</sub> storage or EOR recovery processes?
- Interest in carbon footprint of CO<sub>2</sub>-EOR. Could build from existing US LCA studies.
- Need for cost efficient monitoring