

# INTERNATIONAL CCS COOPERATION



GASSNOVA

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# CCS SINCE 1996

- Gro Harlem Brundtland – UN report on sustainable development 1983
- Sleipner CO2 storage 1996
- Snohvitt CO2 storage 2005
- Continuous political support for development of CCS

## R&R support & international cooperation

- CLIMIT R&D programme 2005 (€ 20+ mill pa)
- Norwegian Grants, EEA obligation
- International capture Test Centre at Mongstad (TCM)
- US-Norway Collaboration (also bilateral projects with Germany and Netherlands)
- EU RTD Framework Programmes (currently ACT & ERA-NET 'Road')
- Norwegian Embassy 'network' (China, South Africa, Portugal and more)

**CLIMIT**

## Key cooperation topics

- Offshore storage/onshore R&D
- Development of applicable capture technology/TCM
- CCS on industry
- CCUS/CO2 EOR interesting but future unclear



# OUTLOOK 2020

- **Norwegian Parliament – broad political agreement aiming for full-scale CCS demo project by 2020**
- **Feasibility study completed summer 2016:**
  - Three industries evaluated for capture
  - Ship transportation analysed
  - Offshore geological storage identified
- **Full-scale project status**
  - Concept & FEED phase now open for bids
  - May go all the way to Build & Operate
  - Operational by approximately 2022



# SLEIPNER: SALINE AQUIFER CO<sub>2</sub> STORAGE SINCE 1996



## Lessons learned from Sleipner and Snöhvit:

CO<sub>2</sub> storage works; provides learning & builds confidence

Norwegian offshore CO<sub>2</sub> tax is efficient unlike the ETS

Same operator along CCS value chain

Well established regulations – low risk