

We hereby provide information from our institution/department/industry to be included in the list of CCS-institution/industry to be published on the ACT-homepage (www.act-ccs.eu).

1. Name of Institution:

Norwegian Geotechnical Institute

2. Abbreviation:

NGI

3. Department:

Offshore Energy

4. Speciality (ies) field within CCS:

NGI is a multidisciplinary research institute and during the last 15 years, NGI has been applying the related competences to various research and commercial/consulting projects within CCS, both nationally and internationally. The main focus has been geomechanics, geophysics and rock physics aspects related to CO₂ research (characterization and monitoring). NGI has developed world class lab infrastructure for CCS research over the last years through participation in the FME SUCCESS (2010-2017), and a series of RCN KPN project under CLIMIT program. NGI has broad experience with geophysical and geomechanical data interpretation from Sleipner, Snøhvit, In Salah, Longyearbyen and Decatur, where NGI has participated in multidisciplinary teams addressing storage integrity, monitoring and risk reduction.

In the ACT initiative, NGI aims to combine experience within CCS research, with the high level of expertise and experience from 50 years of general services and fit to purpose streamlined solutions for Oil and Gas industry and target innovative solutions for CCS including site characterization, development of demo projects and implementation of new solutions for risk mitigation in future storage sites.

NGI is specialized in the areas listed below.

- Geomechanical analysis and testing (for characterization of reservoir, cap rock/seal, fault, fractures, overburden)
- Quantitative seismic interpretation for reservoir, cap rock, and overburden characterization
- Geophysical monitoring by integration of 4D seismic, microseismic, gravity, EM, combined with geomechanical and injection data
- Laboratory testing for CO₂ related rock mechanics and rock physics
- Numerical analysis for coupled multiphase-flow and geomechanics (in both field and small scales)

- Subsurface mechanical characterization and monitoring workflows
- In situ pore pressure estimation and measurement
- Instrumentation and sensors (chemical and acoustic sensor development, acquisition, data analysis; seabed and downhole; seabed sonar)
- Environmental monitoring, evaluation and remediation
- Risk analysis (geomechanical/environmental risks)
- Seabed system/facility/infra-structure related foundation and monitoring (offshore geotechnics)

5. Web-page:

<http://www.ngi.no/en/>
<http://www.ngi.no/en/Markets-and-Services/Oil-gas-and-energy/>
<http://www.ngi.no/en/Areas-of-research-and-development/Petroleum-geomechanics/>
<http://www.ngi.no/en/Areas-of-research-and-development/Petroleum-geophysics/>
<http://www.ngi.no/en/Areas-of-research-and-development/Instrumentation-piezometer/>
<http://www.ngi.no/en/Areas-of-research-and-development/Environmental-technology/>
<http://www.ngi.no/en/Areas-of-research-and-development/Risk-assessment/>
<http://www.ngi.no/en/Areas-of-research-and-development/Offshore-foundation-engineering/>
<http://www.ngi.no/en/Areas-of-research-and-development/Offshore-foundation-engineering2/>

6. Other info:

NGI has been involved in many CCS research projects, with respect to geomechanics and geophysics, e.g.

- Ramore (<http://www.mn.uio.no/geo/forskning/prosjekter/ssc-ramore/>)
- CO2 seal ([http://www.climit.no/no/prosjektene/utviklingsprosjekt-\(gassnova\)/200002](http://www.climit.no/no/prosjektene/utviklingsprosjekt-(gassnova)/200002))
- FME SUCCESS (<http://www.fme-success.no>)
- PROTECT (<https://uni.no/nb/uni-cipr/reservoir-simulation/protection-of-caprock-integrity-for-large-scale-co2-storage-protect/>)
- IMPACT (<http://org.uib.no/cipr/Project/IMPACT/>)
- LYB (<http://co2-ccs.unis.no/default.htm>)
- Decatur (<http://sequestration.org/mgscprojects/deepsalinestorage.html>)
- COPASS ([http://www.climit.no/no/prosjektene/forskerprosjekt-\(forskingsr%C3%A5det\)/244049](http://www.climit.no/no/prosjektene/forskerprosjekt-(forskingsr%C3%A5det)/244049))
- Matmora-II (<http://www.sintef.no/Projectweb/MatMorA/>)
- CCS LEAD (GASSNOVA Demo, 2016-)

7. Contact person:

Name: Lars Grande

Position: Head, Department of Petroleum Geomechanics and Geophysics

Address: Sognsveien 72, 0855, Oslo, Norway

e-mail: lag@ngi.no

Phone: +47 930 33 017

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Signature: 