

GE Energy

Innovating business through knowledge: How GE finds solutions for tomorrow's challenges

Oslo
December 14 2010

Martin Degen
GE Wind Energy
Strategic Commercial Development Leader
Nordic Region



imagination at work

We are GE

We are a global infrastructure, finance, and media company taking on the world's toughest challenges.



GE Capital
\$51B / 32%



GE Technology Infrastructure
\$42B / 27%



GE Consumer & Industrial
\$10B / 6%



GE Energy Infrastructure
\$37B / 24%

2009 revenue \$157 billion and profit \$11.2 billion

300,000 employees across 100 countries

GE Energy in Norway

GE Footprint

- 2300 GE Employees in Norway
- 850 GE Energy... Growing 10%+
 - 400 Mfg & Services
 - 370 Engineers
 - 80 Project Mgmt & Sourcing
- Thermal Fleet ... ~3.5GW offshore
 - ~150 GE Aero Gas Turbines
 - ~135 GE O&G NP Compressors
 - ~130 GE VG Service Wells
- Wind Fleet ... ~35MW onshore
 - 11 GE direct drive turbines (former Scanwind)
 - 1 x 1.5MW Cold Weather test unit, Tromsø

GE Wind, Verdal
GE Oil & Gas, Trondheim



GE Oil & Gas,
Energy Services, Kollsnes
Optimization & Control,
Bergen



GE Oil & Gas,
Stavanger

GE Energy Nordic HQ
GE Oil & Gas
Oslo

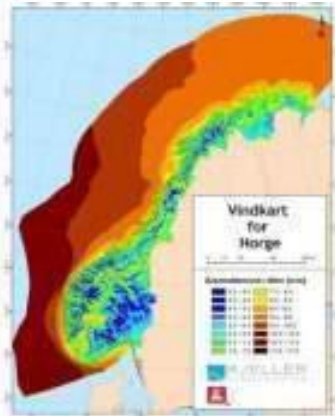


GE Wind,
Karlstad

Strong Presence ... Growing ... Green Jobs

Offshore Technology in Norway

The Resource



The Technology



The GE Offshore Solution



Integrating ~ 40 years of O&G know how into Offshore wind



imagination at work

Research and education – Norway

Offshore wind



Trondheim
NOWITECH
8 year offshore R&D program (38 MEUR) – 50% funded by governm.



Trondheim
SINTEF/Marintek
-1900 empl. - 6000 projects
- 2000 customers - Largest in Scandinavia.



Trondheim
Norwegian University of Science and Technology
--2000 ongoing R&D projects - 100 laboratories - 20.000 students



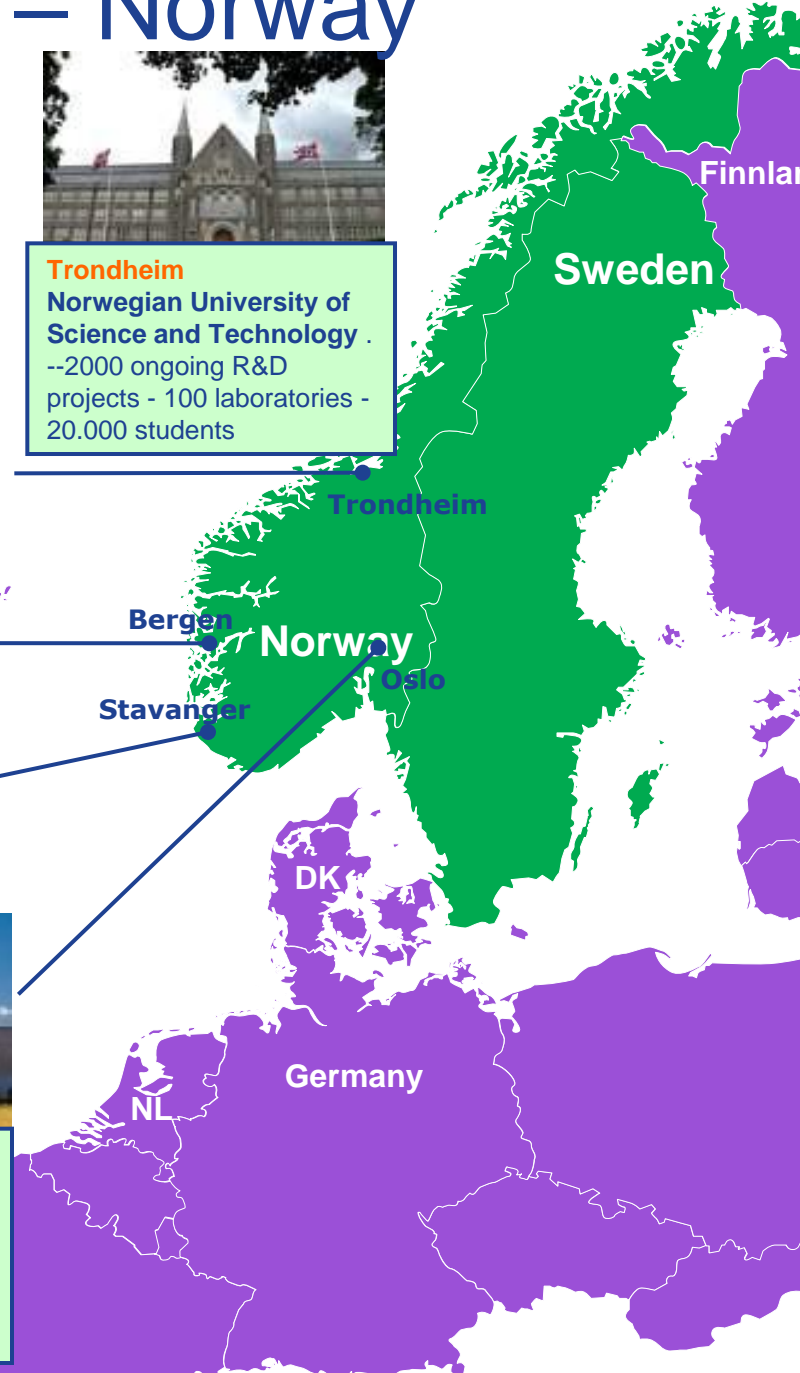
Bergen
NORCOWE
8 year offshore R&D program (38 MEUR) – 50% funded by governm.



Stavanger
IRIS/University of Stavanger
226 employees. Institute with research within oil, gas, bio energy, renewable energy and BD

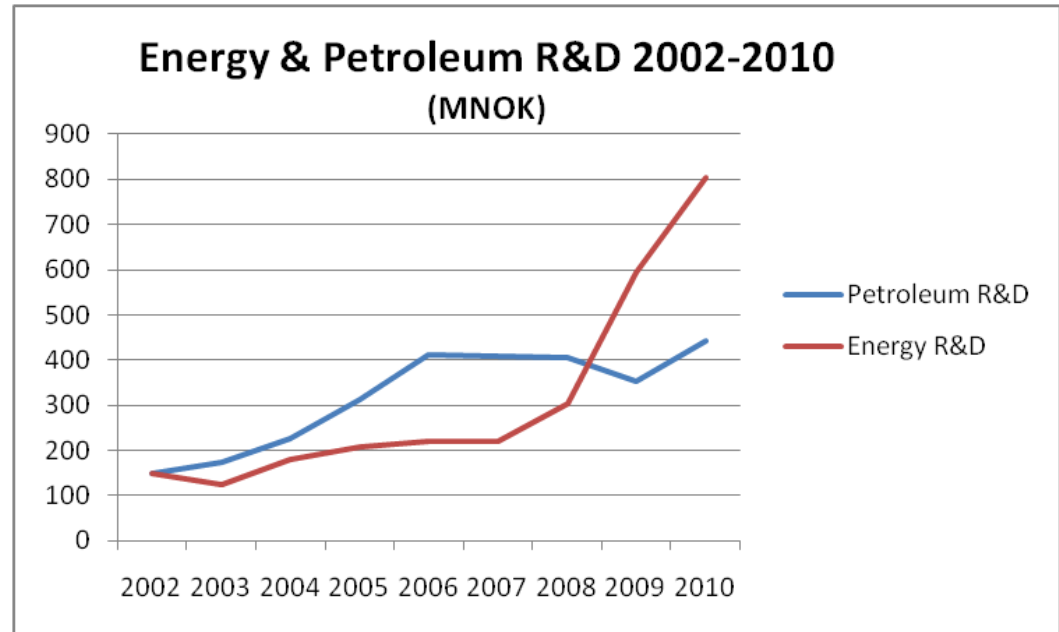


Oslo/Kjeller
IFE/Kjeller Vindteknikk
Simulation turbines, wind loads, generator, ctrl.sys - Blade design – Wind park simulations, analysis and planning



Norwegian Public Instruments

- NRC (RENERGI/Skattefunn)
"Multilateral Research"
- Enova
- Nowitech
- Demo Rogaland
- Other Projects TBA



Norwegian Challenges: Market / Green Certificates

GE Offshore Wind in Norway ... 600 MNOK Investment ... 100+ Green Jobs

Offshore Technology Center in Oslo

- Balance of Plant: Combining GE's leading wind turbine technology and Norway's world-class offshore know-how
- Collaboration with Research Centres & Customers

Manufacturing, Assembly and Testing at Verdal

- Grow and enhance Verdal operations for advanced demonstration unit manufacturing
- Services base

Offshore Technology Demonstration

- Host for testing and demonstration of GE's new 4.0 MW Offshore Wind Turbine



GE + ScanWind + Norway ... A Winning Combination

Thank you

ecomaginationSM

