



OLJE- OG ENERGIDEPARTEMENTET

Ministry of Petroleum and Energy

Japan-Norway Energy Seminar Tokyo 22 April 2005

NORWEGIAN ENERGY POLICIES

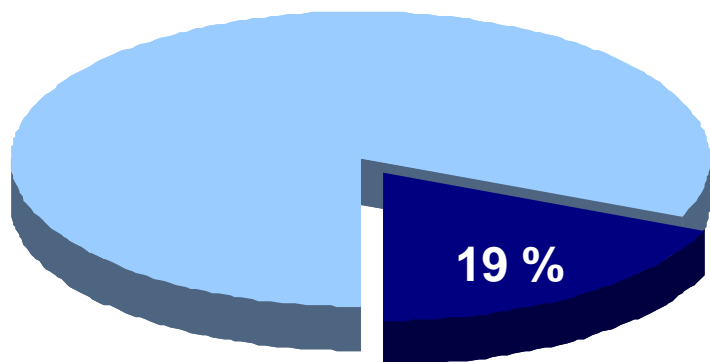
H. E. Oluf Ulseth, State Secretary

Norway

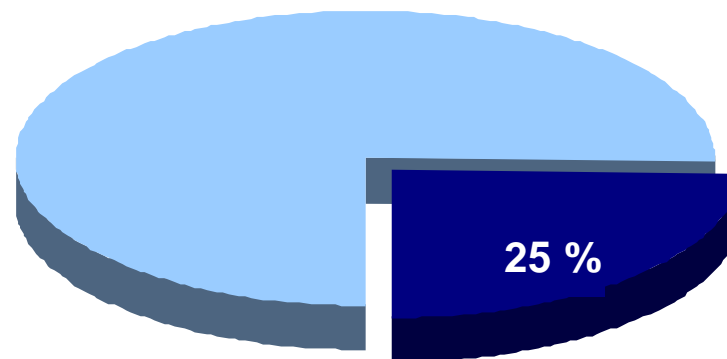
- 4,5 mill people
- 325 000 sq. km – 14 persons/sq. km
- (Japan 377 000 sq. km – 337 persons/sq. km)
- North-western part of Europe
- GDP is ca. 36 000 USD/capita (PPP)
- European Economic Area



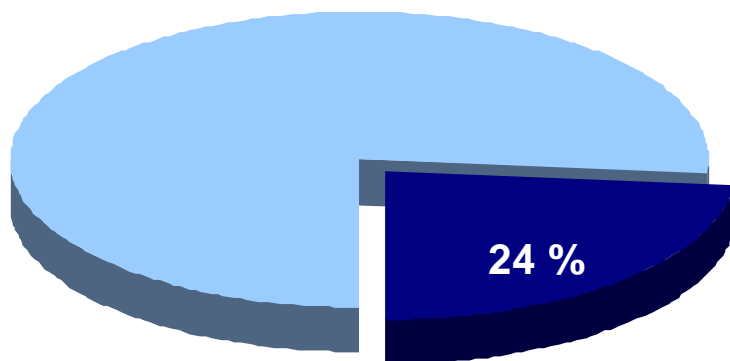
The Largest Industry in Norway (2003)



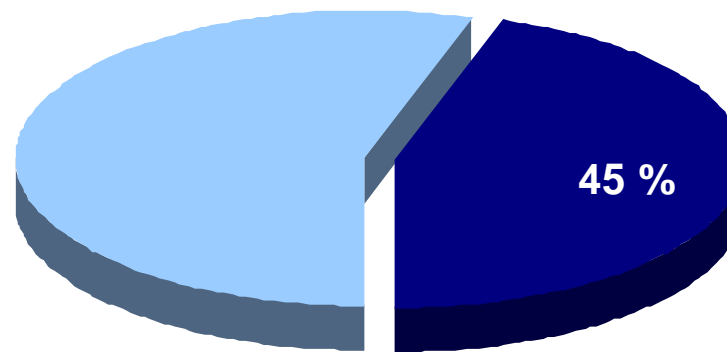
The petroleum sector's share of GDP



The petroleum sector's share of State revenues



The petroleum sector's share of total investment

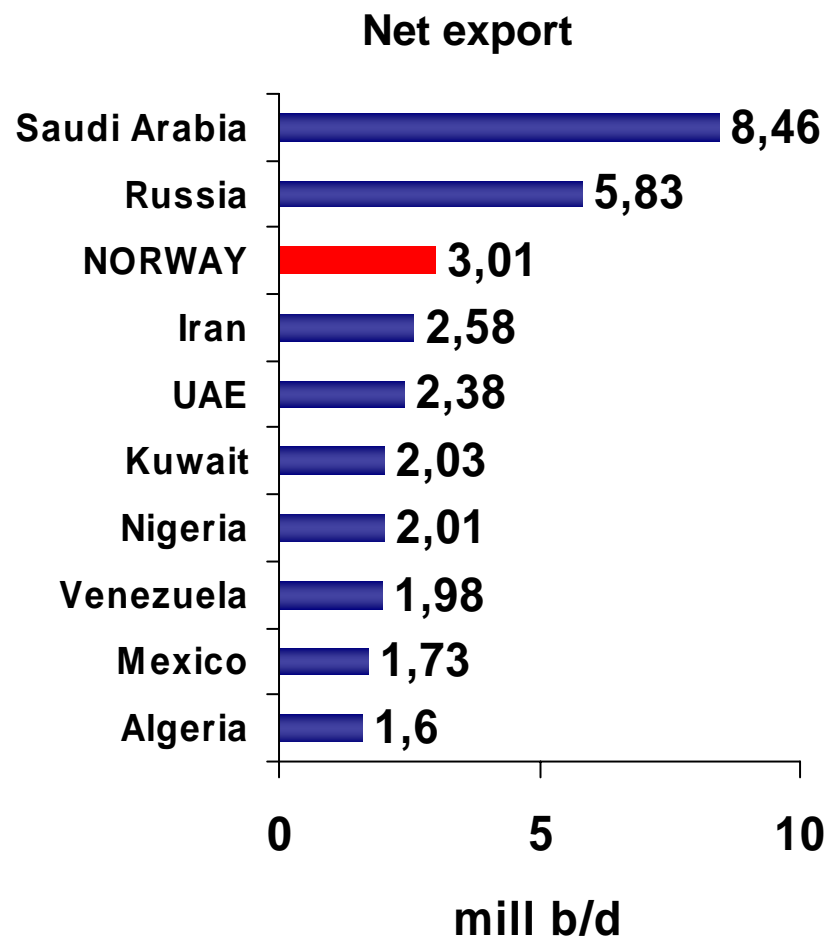
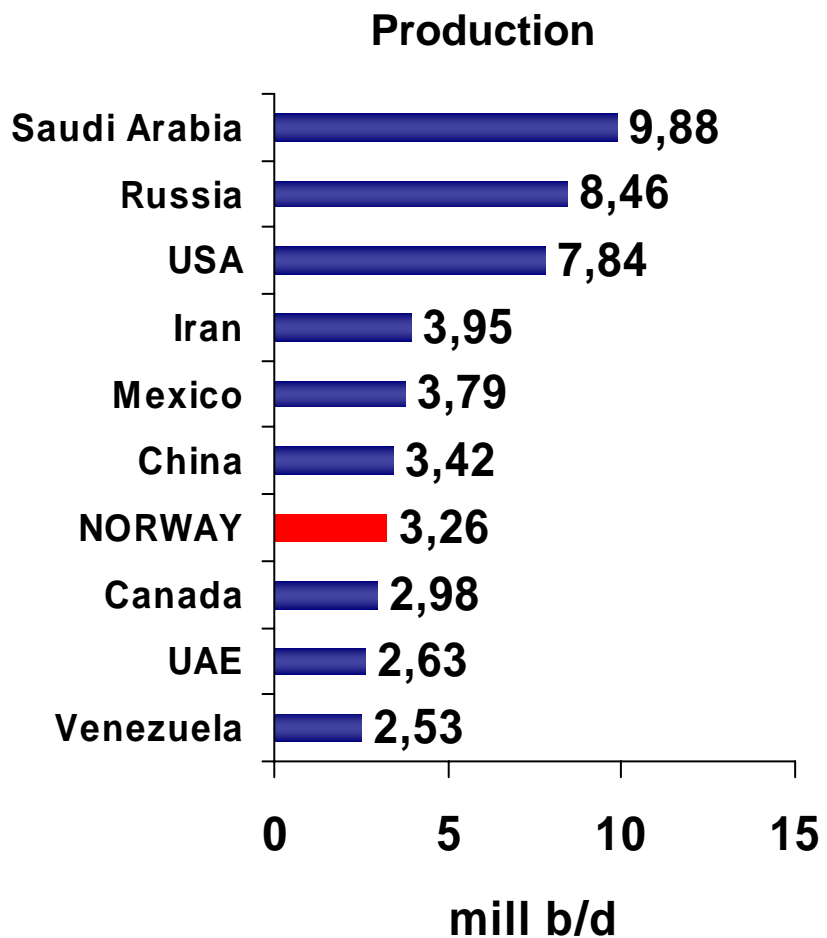


The petroleum sector's share of total exports

The petroleum sector's direct share of total employment was 1,2 percent in 2003

Source: Statistics Norway

Production and Net Export of Liquids* 2003

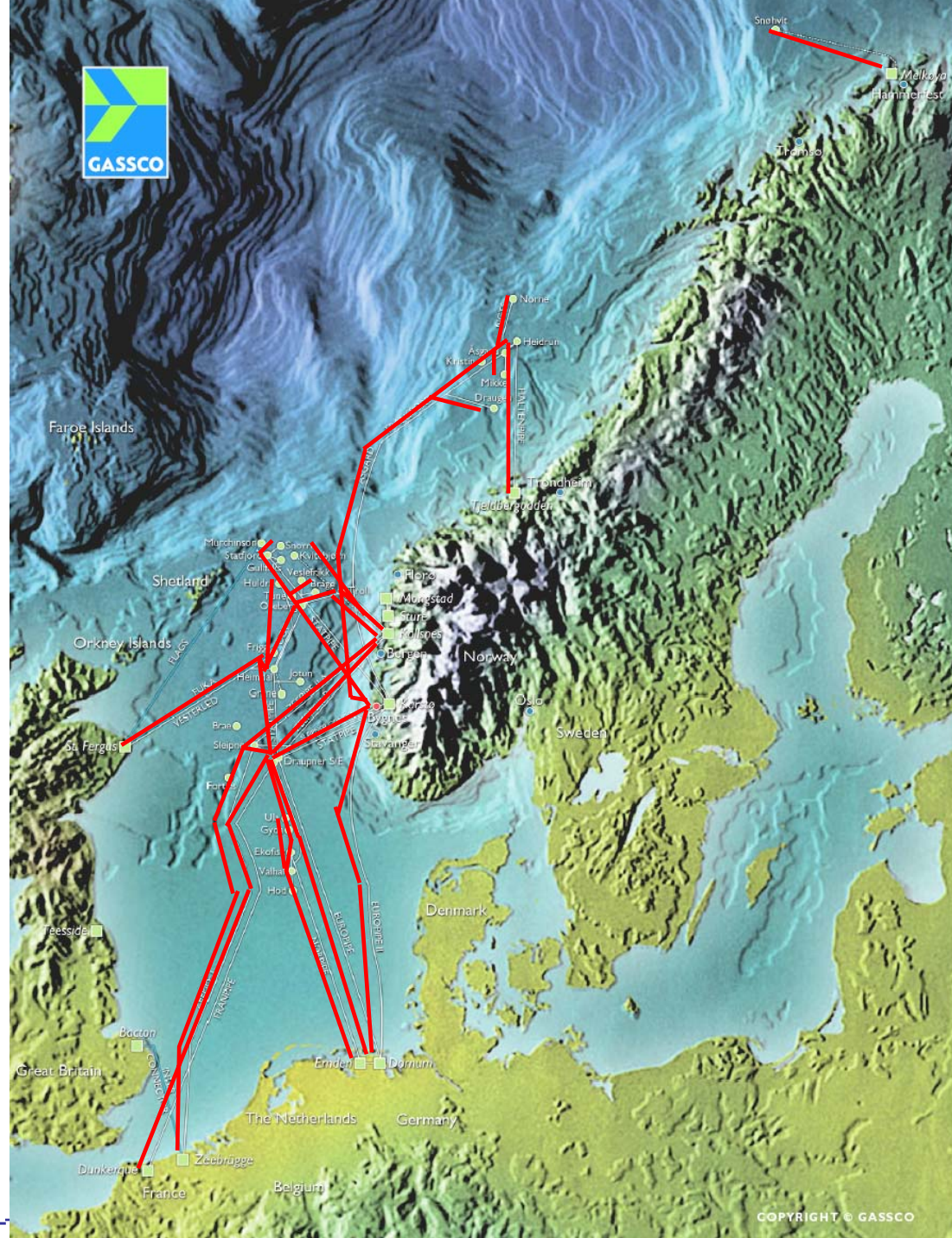


(Source: Petroleum Economics Ltd)

* includes both crude oil and NGL

The Norwegian Gas Sector

- 50 fields producing gas
- More than 6000 km of large offshore pipelines
- Export 2004: 76 bcm/year
- Export 2010: 120 bcm/year
- Supplies about 14% of European gas consumption



Snøhvit LNG

- Recoverable reserves:
 - 6,7 TCF gas
 - 133 MMbbls condensate
- Production start: 2006
- Investment costs: 6 bill. USD
- Gas production 5,7 bcm/year
 - Destinations: USA and Europe
- Statoil – main gas marketer



Norwegian LNG Technology

Aker Kværner Offshore LNG terminals

→ Northern Baja California.

ChevronTexaco

→ North Adriatic Sea.

ExxonMobil



The Kværner group developed LNG carriers with spherical tanks in the early 1970s.

This design now dominates the market, accounting for about 50 percent of the world fleet.

Source: Statoil/AkerKværner
www.mpe.dep.no

Norwegian LNG Technology

GraviFloat LNG – LNG receiving and regasification terminal



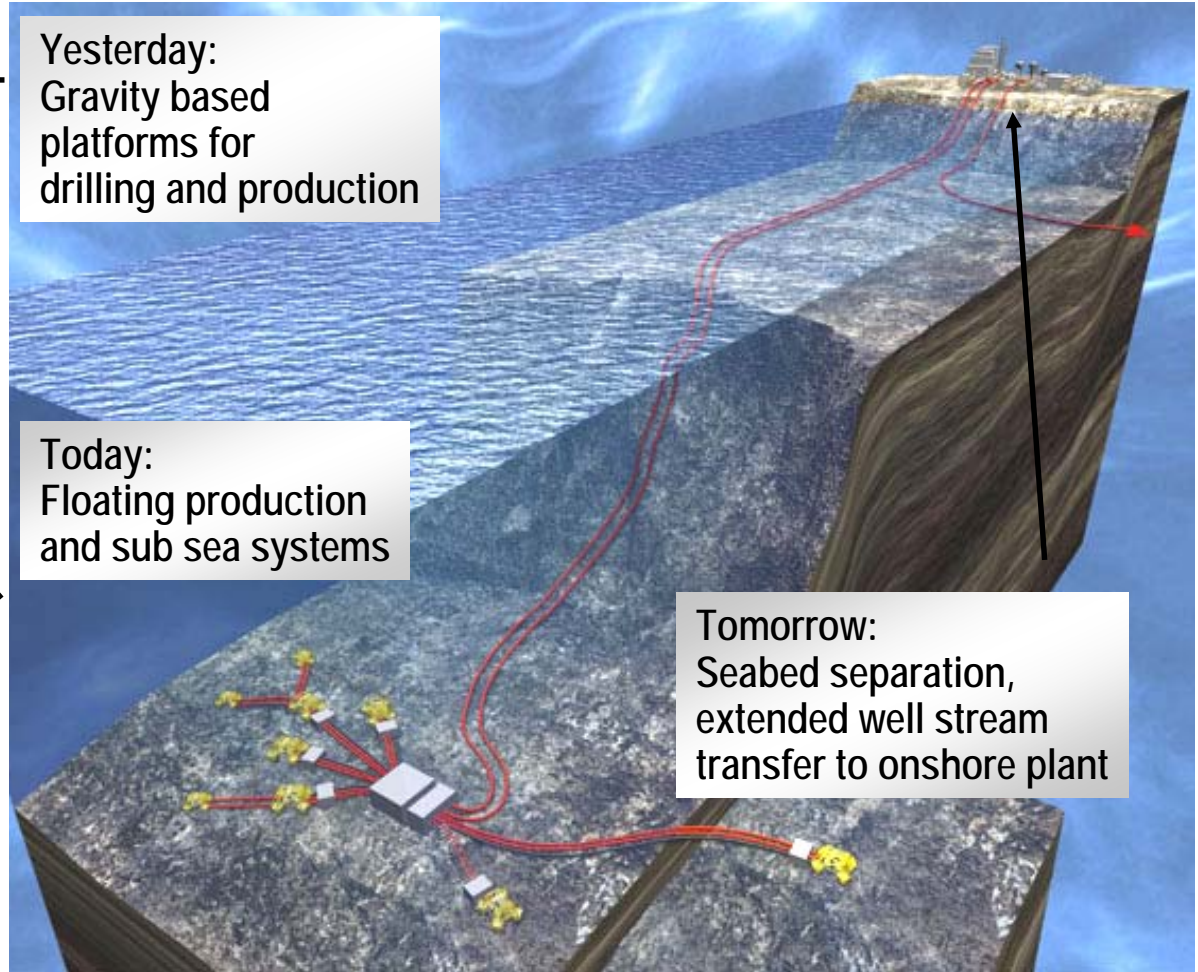
Technology – Past, Present and Future



Yesterday:
Gravity based
platforms for
drilling and production



Today:
Floating production
and sub sea systems



Tomorrow:
Seabed separation,
extended well stream
transfer to onshore plant

Hydropower

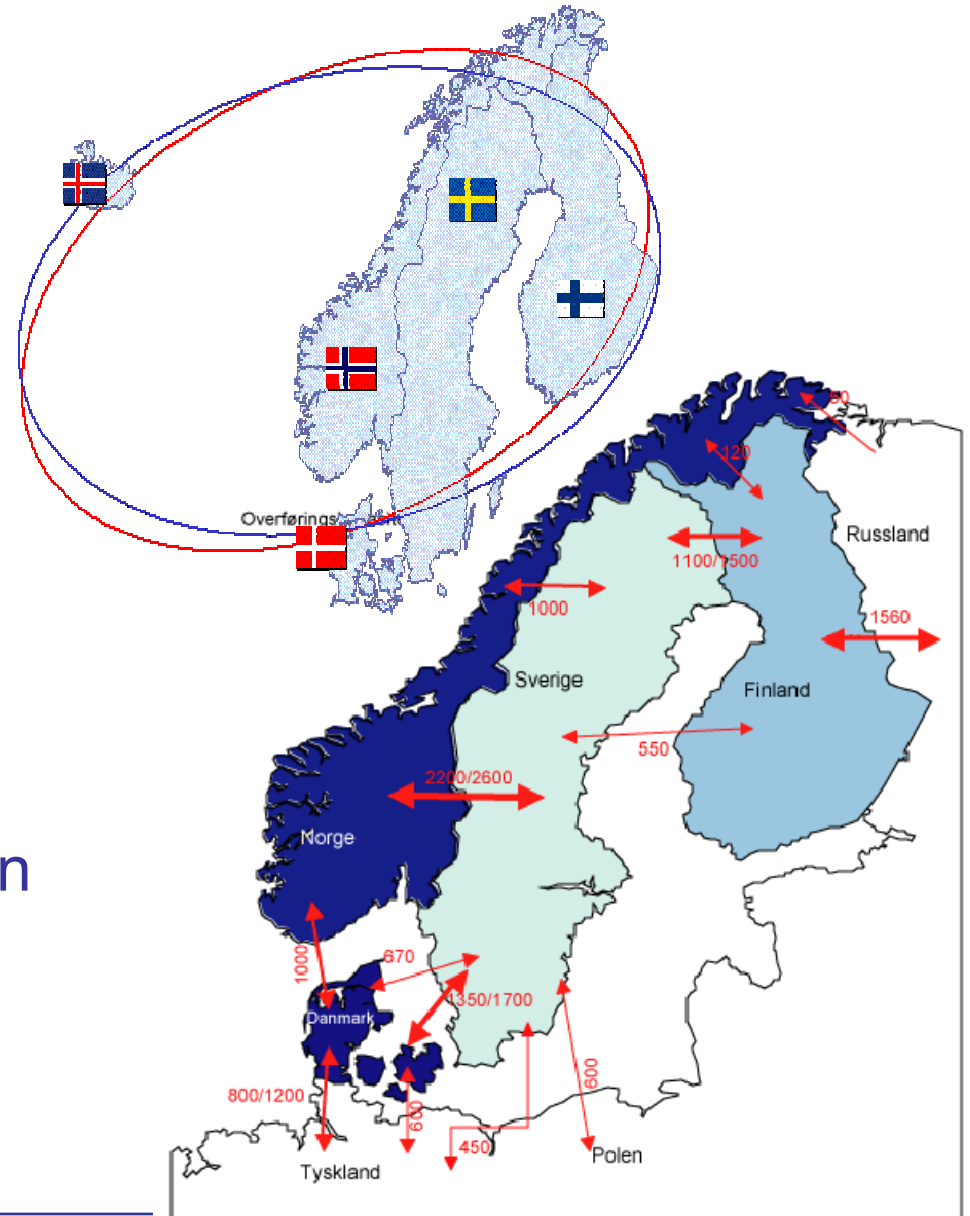
- 6th largest hydropower producer in the world
- Average production capacity: 119 TWh/year
- Installed capacity: 27 300 MW
- Largest land-based industry



Photo: Statkraft SF

A Nordic Power Market

- Provides an effective coordination of generation from hydropower, nuclear and coal
- Gives adequate market signals to sustain a necessary level of investments
- Secures well functioning transmission capacity within Norway and between and the Nordic countries



Gas-fired power plants

- Potential growth area for domestic energy production
- Gassnova: Government Agency to promote R&D in CO₂-capture



Other technologies for sustainable energy

Existing

- Hydrogen
- Wind
- Bio energy

Potential

- Salt
- Tidal/wave
- Solar



Norway – your partner in energy

- Norway's supply and service industry is strong and with international competence and ambitions in the oil and gas sector
- Norway has important experiences of LNG developments in environmentally difficult areas
- Norway is part of a highly advanced Nordic power market
- Norway has broad engineering and construction experience within the hydro power sector

