

# Perspectives in Norwegian Energy Politics – Future Challenges

**State Secretary Oluf Ulseth  
Ministry of Petroleum and Energy**

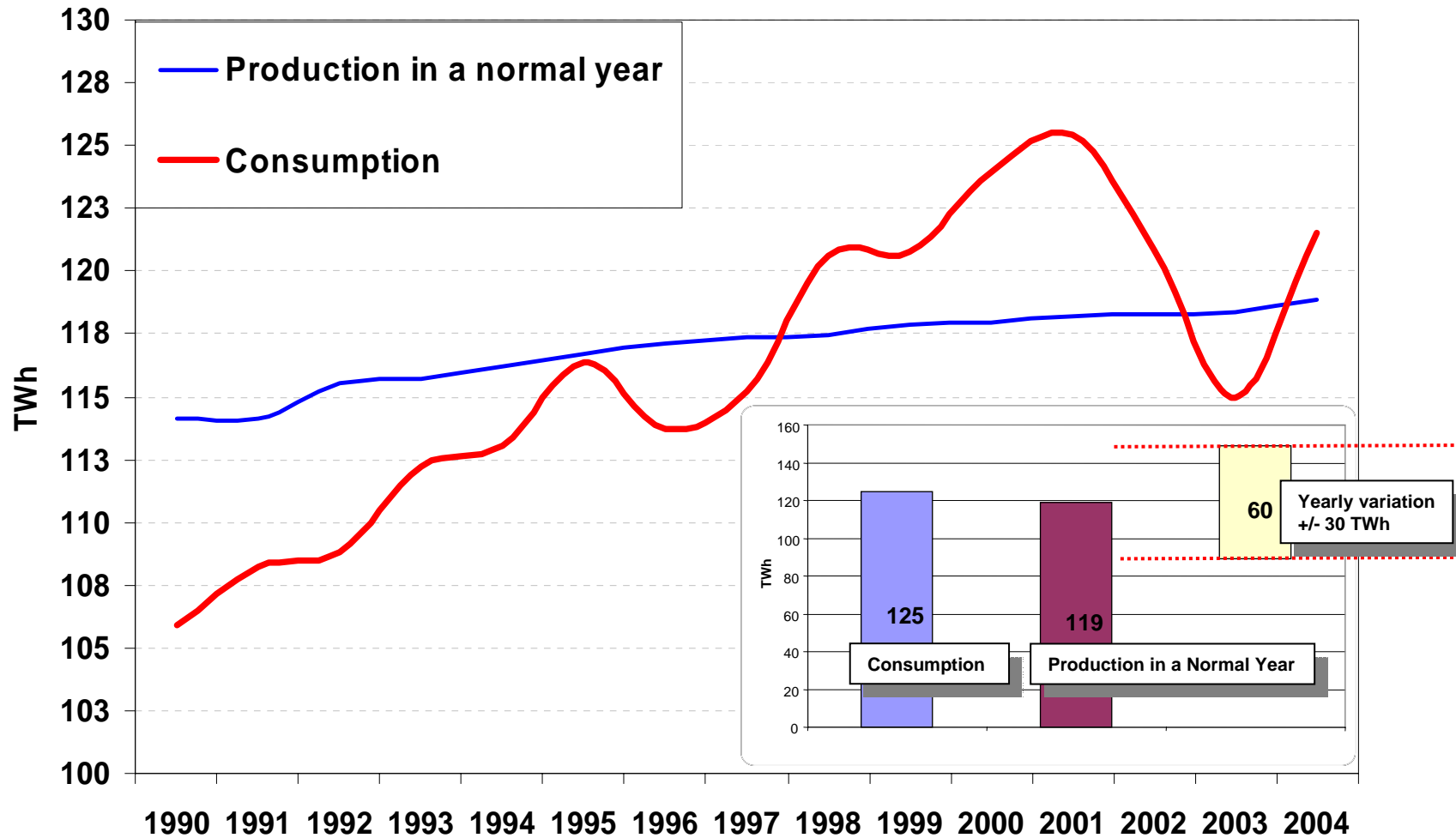
**First Securities´ Nordic Energy Summit  
Oslo 17 August 2005**



# Power

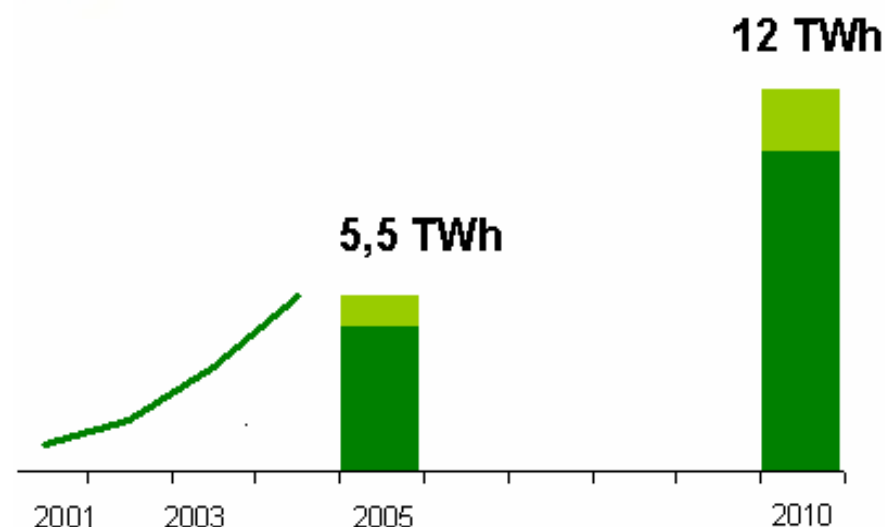


# Increased need for power production..



## .. followed by high ambitions for renewables

- Enovas is to achieve 12 TWh in improved energy efficiency and increased use of renewables by 2010
- The operational goal of 5,5 TWh by the end of 2005 is already achieved
- A market for green certificates will promote investments in renewable energy further and create opportunities for the Norwegian power sector



**Targets and results for Enova**

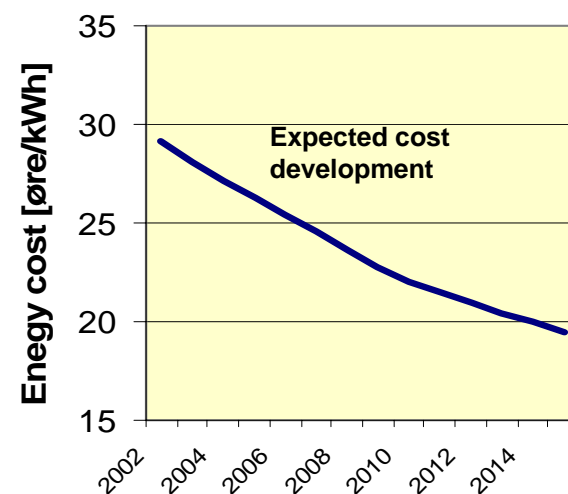
# Large interest in small scale hydro power

- Hydro power will in the years to come continue to be our main source of energy
- Continue to facilitate investments in hydro power
- The Government has given licenses to a number of new hydro power projects, especially small scale hydro power plants



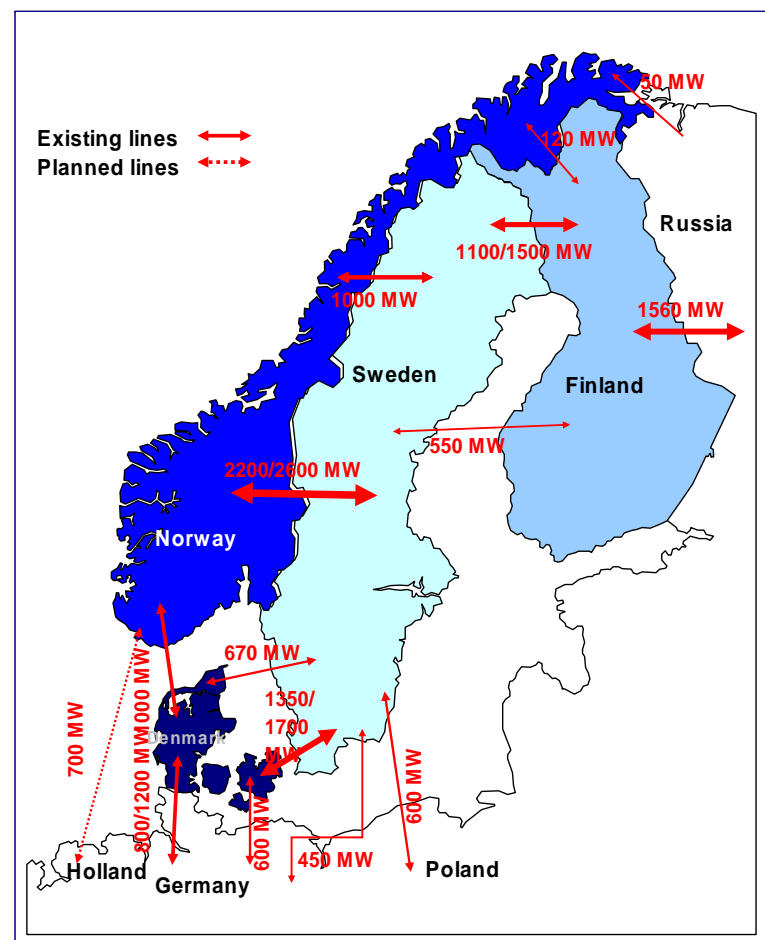
# Further investments in wind power

- Norway has favorable wind conditions
- A combination of hydro and wind power gives an efficient use of resources, due to the flexibility of hydro production
- Potential for further cost reductions



# A well functioning Nordic market..

- A well functioning Nordic market is the foundation for Norway's energy policy
- Dependent on exchange both within the Nordic area and with continental Europe
  - Nor-Ned cable
- Nordic energy ministers meeting on Greenland:
  - Vision of a common power market for consumers
  - Common understanding of need to increase production
  - Agreement of next steps to improve Nordic market (grid investments, bottleneck pricing)



## .. supported by EU initiatives

- **Norwegian green paper on the organization of power companies**
  - Strengthened demands regarding separation of grid operation and production and supply of electricity
  - The green paper prepares for a functional unbundling of vertically integrated businesses with more than 20 000 grid customers, but also opens for a limit at 10 000
- **Goal: A more effective power market**
  - A more independent grid operation
  - Reduce the possibility of cross-subsidization
- The hearing period is three months with a deadline for submissions on October 17th 2005.





## .. with some structural challenges

- Current regime of different regulation for public and private ownership in the hydropower industry reduces Norwegian power industry competitiveness
- The current legislation is in the ESA's opinion in conflict with the EEA agreement
- Wide public hearing on Commission for Reversion (NOU 2004:26 Hjemfall) and the Ministry has received more than 400 statements
- The Ministry is now preparing new legislation



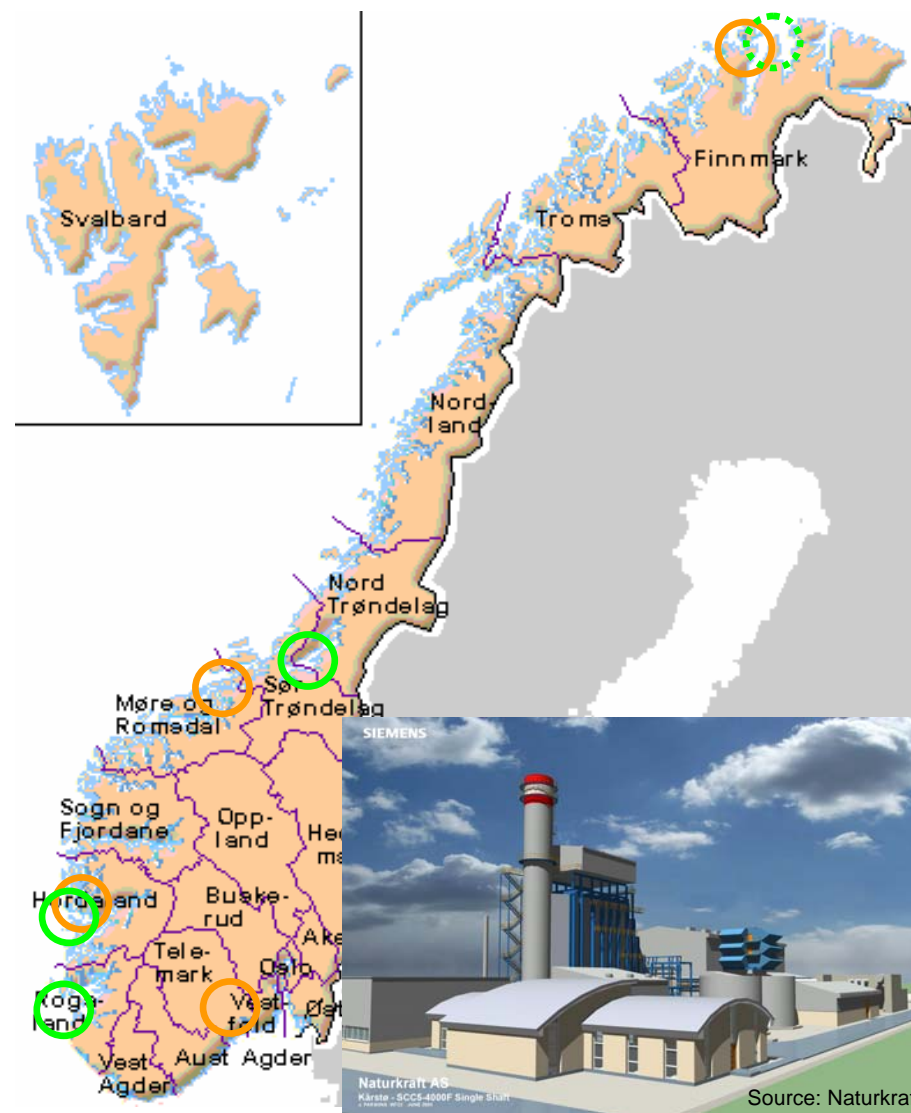
# Increased domestic use of natural gas..

- Gassco is coordinating a process with industries in Grenland and Trøndelag about pipelines for supplying natural gas.
- The company is due to submit a report to the Ministry of Petroleum and Energy by January 1st 2006.
- New signals from the industry foster increased optimism



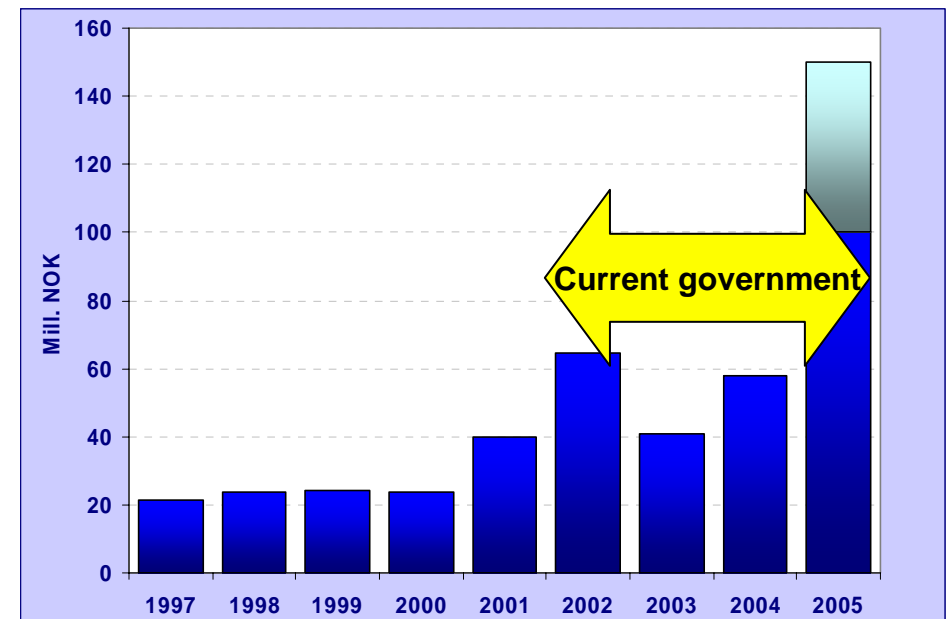
## .. with gas-fired power plants

- 4 licenses given, corresponding to a yearly production of 16 TWh
- Investment decision made by Naturkraft for the plant at Kårstø, and new signals from Skogn (IMN)
- Application received for plants at Tjeldbergodden, Hammerfest and Mongstad – notification for Grenland
- Gas fired power plants are covered by the Norwegian quota system for CO<sub>2</sub> in the period 2005-2007



# CO<sub>2</sub> capture and storage

- Gassnova, a public facility promoting innovative, sustainable and cost effective gas technologies established January 1st 2005
- Financed through the returns on NOK 2 billion fund
- Administer NOK 150 millions in 2005 in co-operation with the Norwegian Research Council



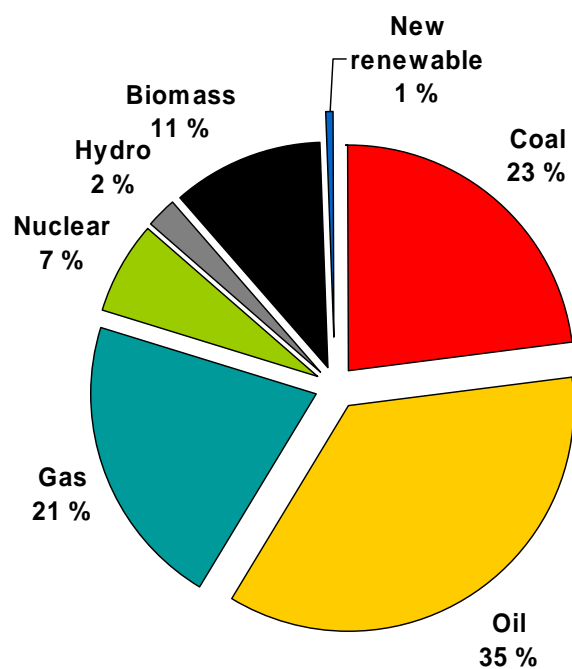
*Allocated funds to R&D on CO<sub>2</sub> capture and storage*



# Oil and gas

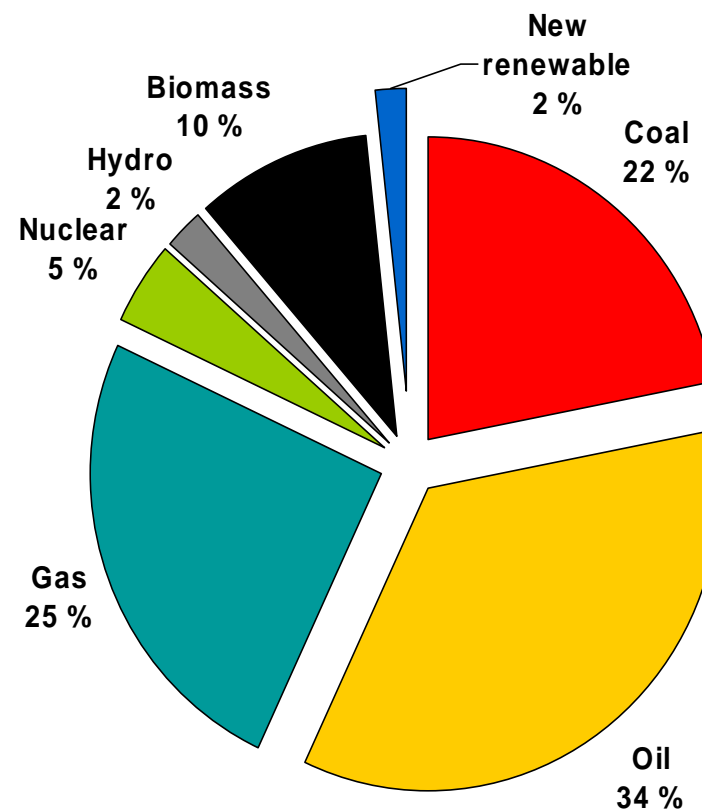
# Strong growth in demand..

## Energy development 2002-2030



2002

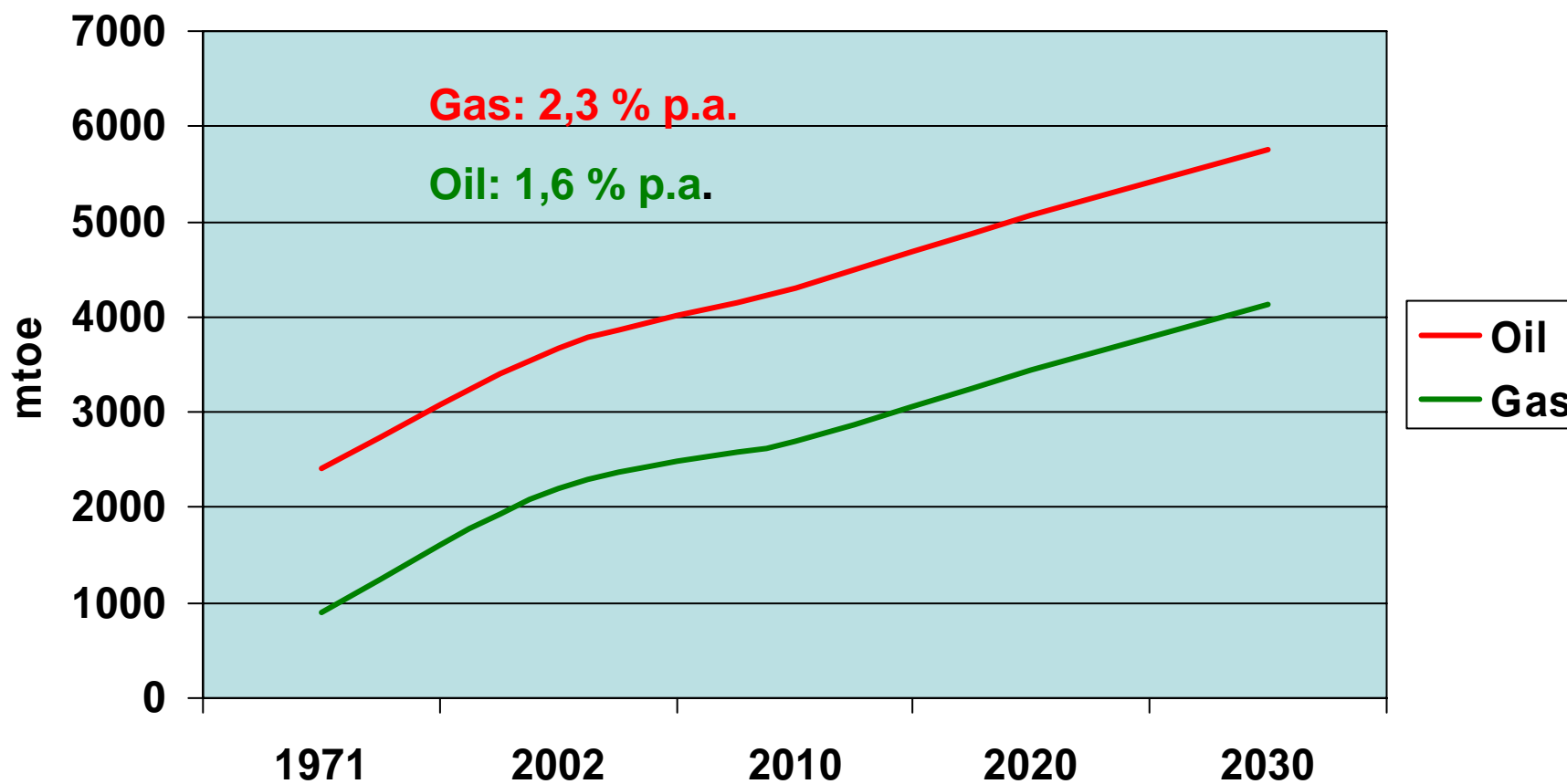
+ 60%



2030

Source: IEA

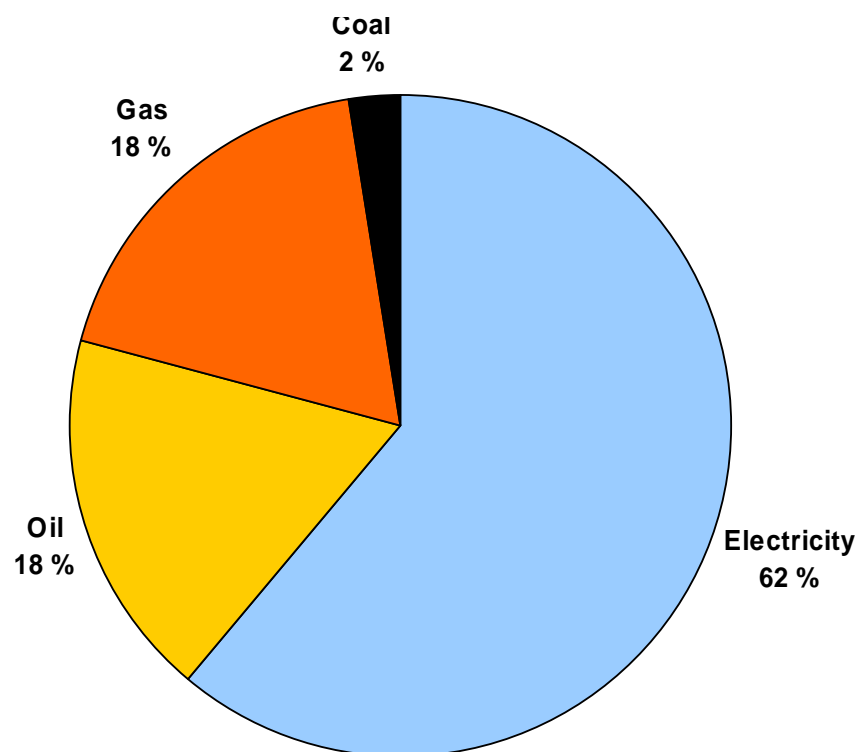
## ...and oil and gas consumption will increase



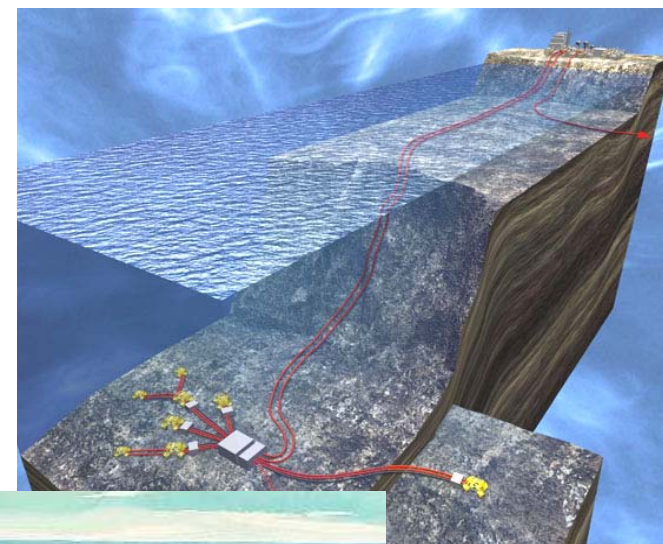
Source: IEA

# ... followed by huge investments in energy

Energy investments 2003-2030: 16 trillion USD



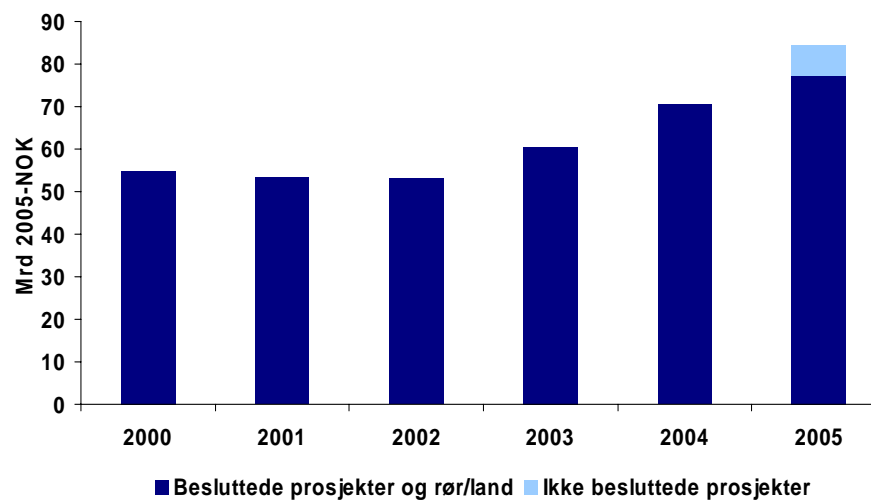
Source: IEA



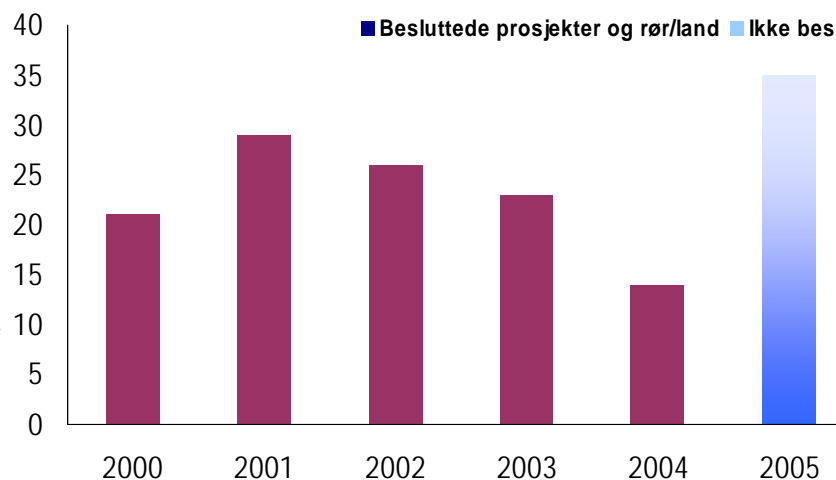


# Norway 2005: High activity level

Record investment levels of NOK 90 bn



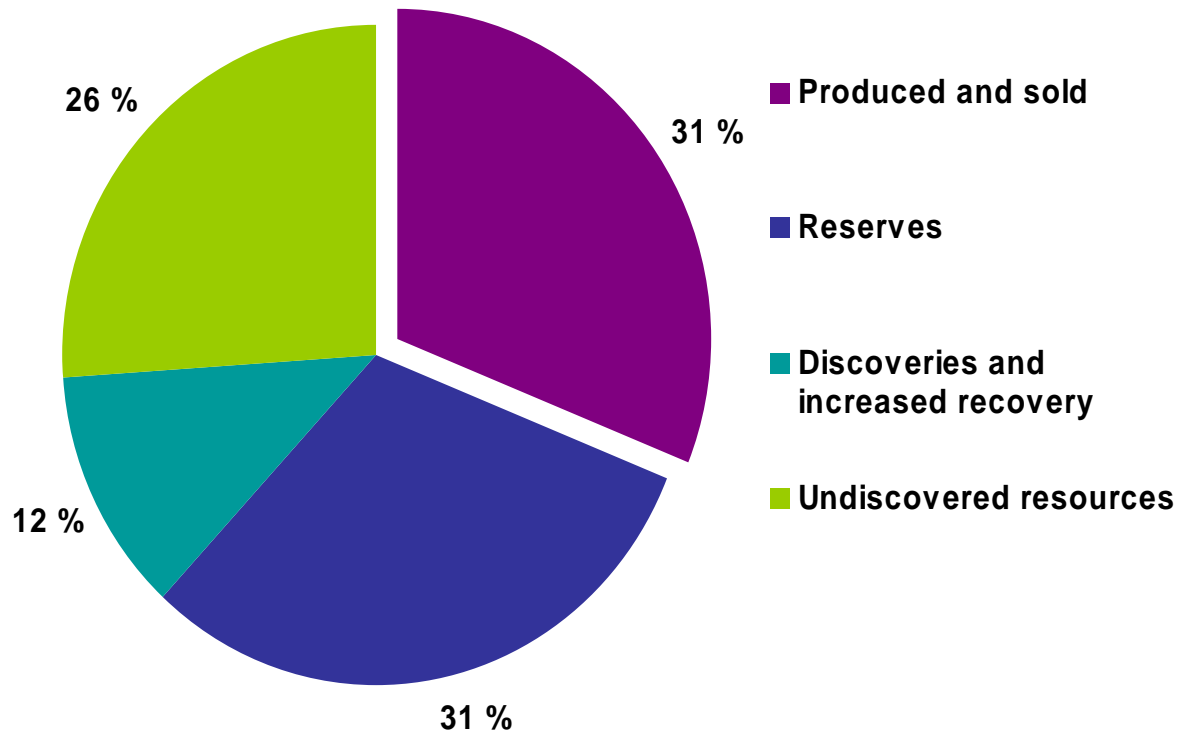
New optimism, but rig capacity a real constraint



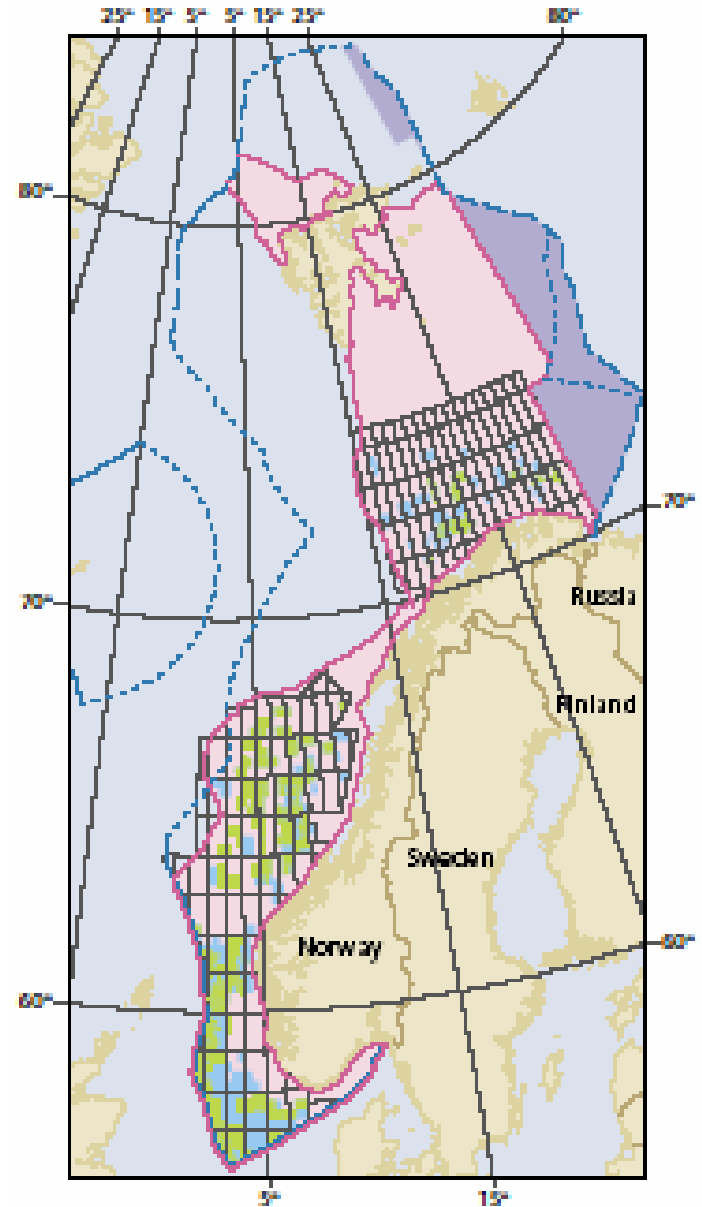
Planned wells at 1 January

# An attractive resource base..

Petroleum resources on the Norwegian Continental Shelf  
12,9 billion Sm<sup>3</sup> o.e.

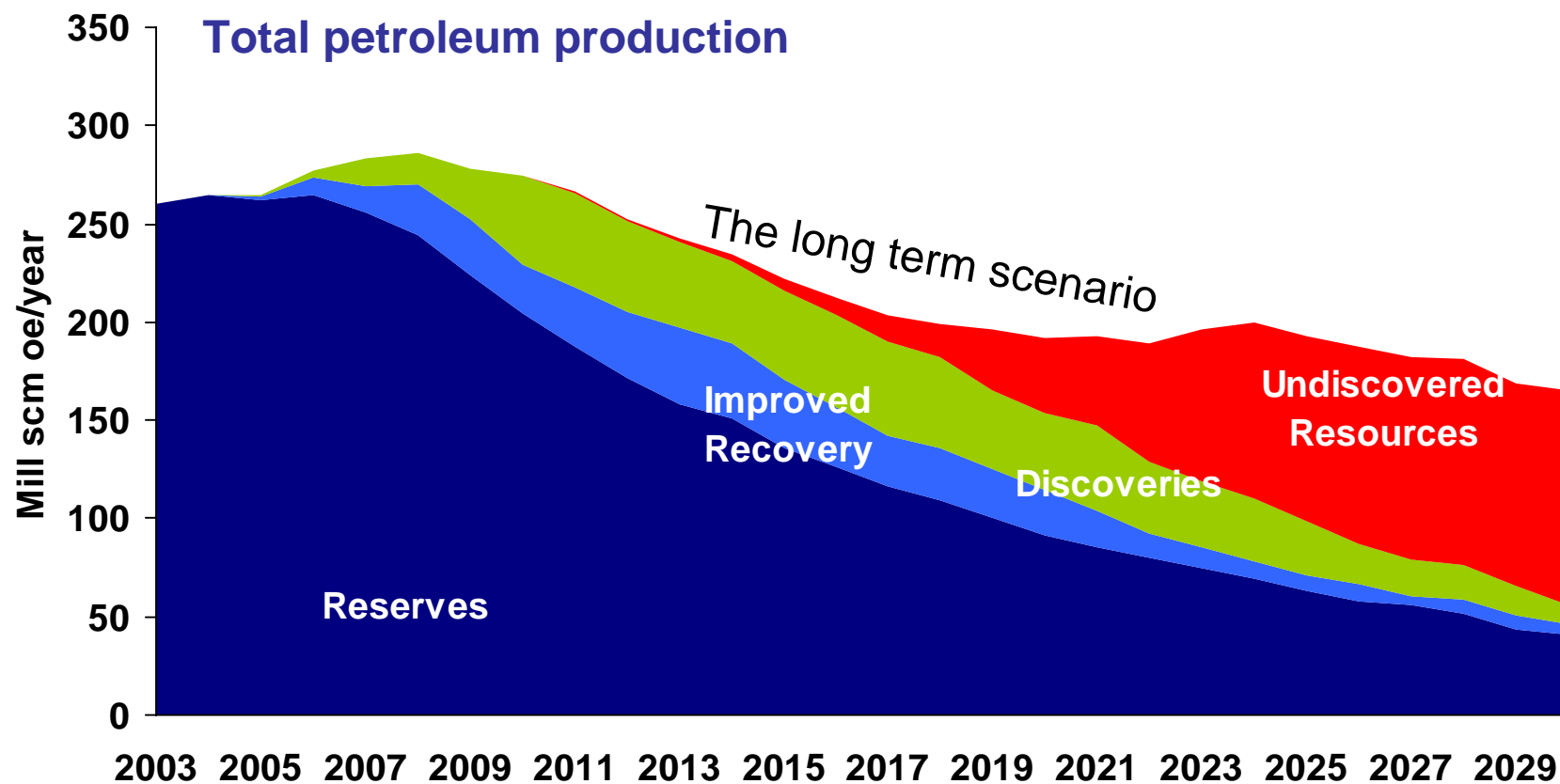


Source: NPD 2004 and 2005



- Boundaries
- - - Calculated centerline
- ... Exclusive economic zone (200 nm)
- Area with overlapping claims
- Production licences
- Relinquished production licences
- Area included in the resource account

## .. with a long term perspective



Source: MPE/NPD Fact sheet 2005

# New frontier areas: The Barents Sea

25% of world's remaining petroleum resources are in arctic waters (USGS)



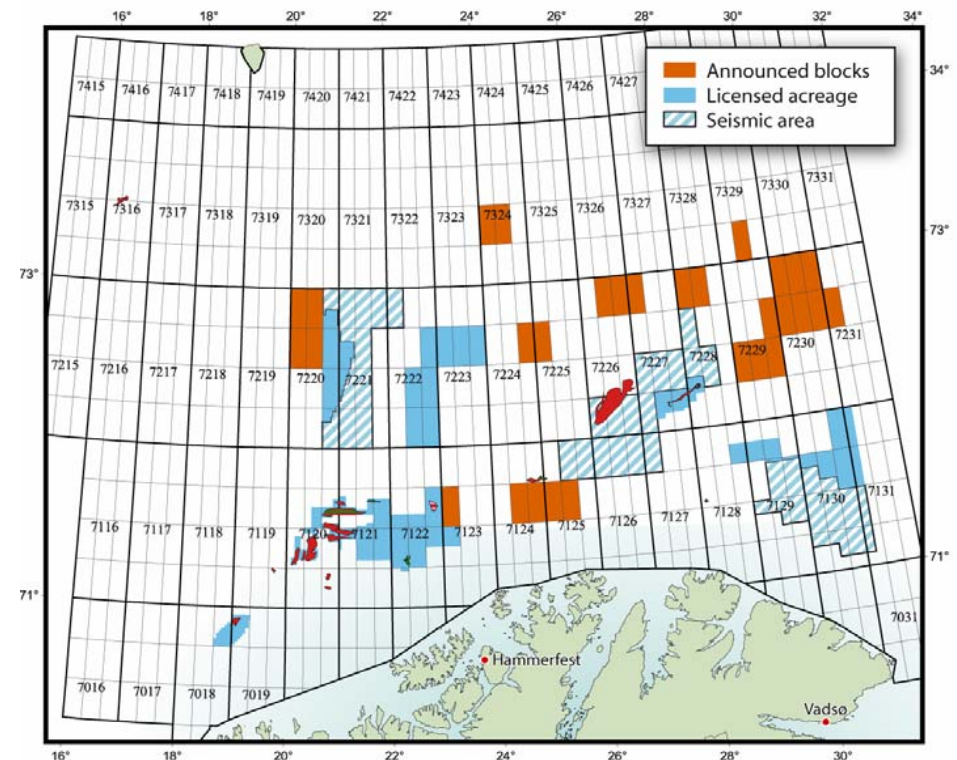
Kilde: Statoil

# ...with an extensive 19th Round

- 64 blocks announced in the Barents Sea and the Norwegian Sea
- Large interest from the oil companies through the nominations
- Gradual and efficient exploration of resource potential

## 19 Licensing Round

Announced blocks in the Barents Sea



OD 0506002

## .. and a close dialogue Norway/Russia

- Arctic Energy Agenda 2005
- Russian-Norwegian Joint Declaration on Energy
- White Paper on the Northern Areas
- The dialogue has a broad perspective and includes:
  - Energy policies and legislation
  - Petroleum activities in both countries
  - Norwegian oil companies' and supply industry's activities in Russia
  - Petroleum related environmental issues



# Attracting new players..

- An active policy to attract new players
- Tax regime changed to promote new entrants

## Pre-qualified/new companies since 2000:

<b>Sumitomo</b>	<b>OER</b>	<b>Petoro</b>
<b>Paladin</b>	<b>Talisman</b>	<b>Mærsk</b>
<b>Aker Energy *</b>	<b>Ruhrgas</b>	<b>Anadarko</b>
<b>Dong</b>	<b>Kerr McGee</b>	<b>CNR</b>
<b>Pelican *</b>	<b>Pertra</b>	<b>Lasmo*</b>
<b>GdF</b>	<b>Oranje Nassau</b>	<b>Revus</b>
<b>Lundin</b>	<b>Endeavour</b>	<b>Centrica</b>
<b>DNO</b>	<b>BG Norge</b>	<b>Wintershall</b>
<b>Altinex</b>	<b>Noble Energy</b>	

\* Companies which do no longer exist as separate entities

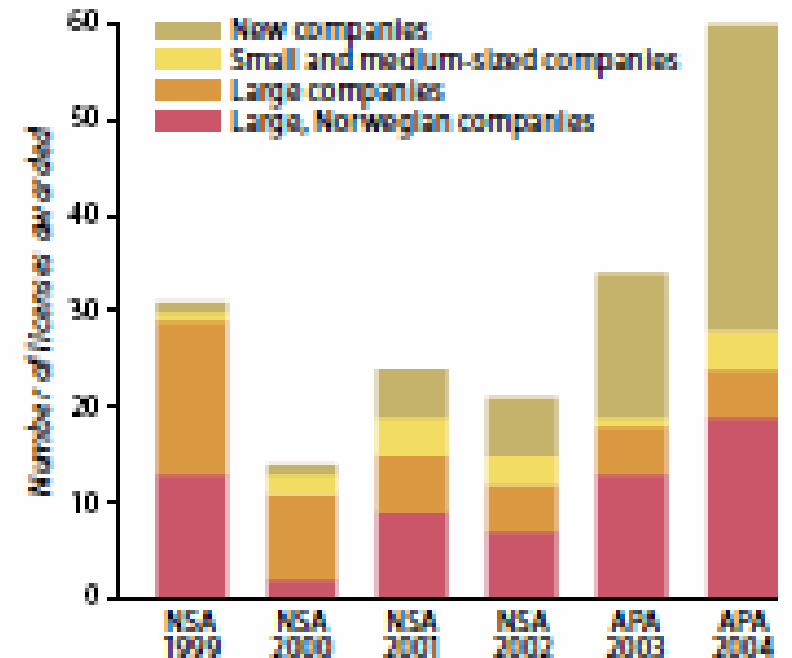
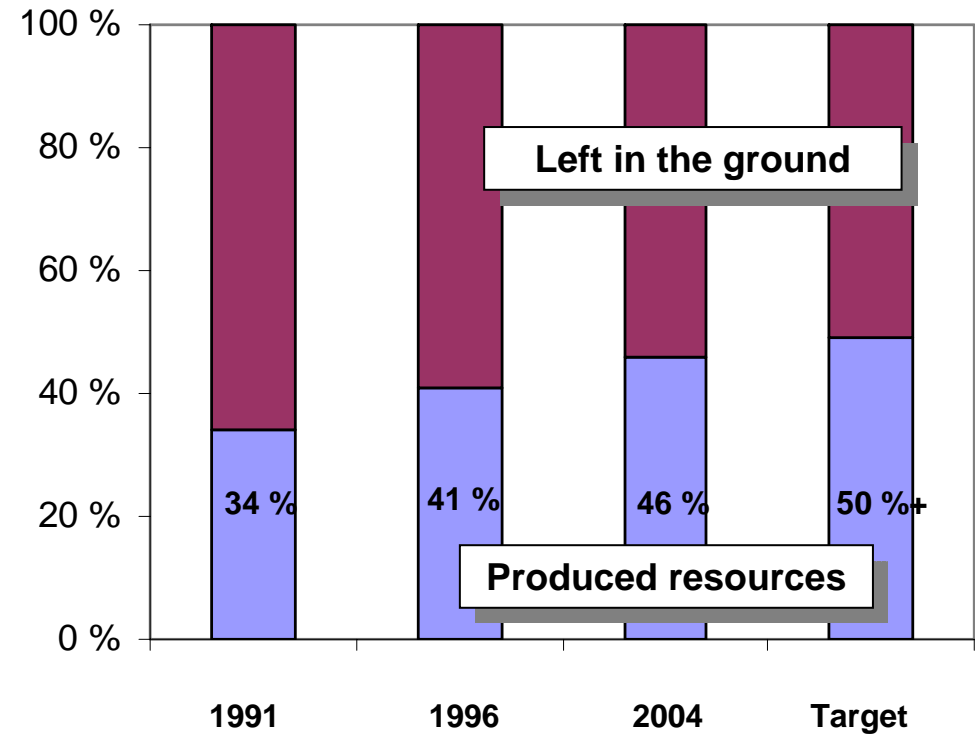


Figure 3.2 Number of production licences (all licensees) awarded in mature areas.

Source: NPD 2005

# Increasing the recovery factor..

- Recovery factor oil 2001-2004:
  - Increased by 0,5 p.p. per year
  - + 140 mill Sm<sup>3</sup>
- 1 % increase today equals 95 mill Sm<sup>3</sup> more oil
- New target: 5 bn barrels of increased reserves by 2015





# .. adding reserves...

... in and near producing fields

- Incremental recovery
- Develop discoveries
- Extend field life
- Explore near infrastructure



## .. building on petroleum R&D

Government spending on Petroleum R&D increased by 80 % 2004-2005

OG 21 –  
National R&D Strategy



# .. with a clear focus



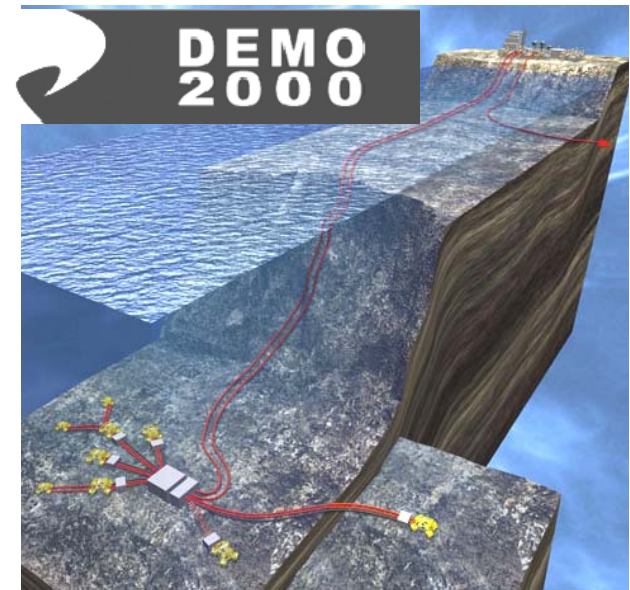
R & D/Competence



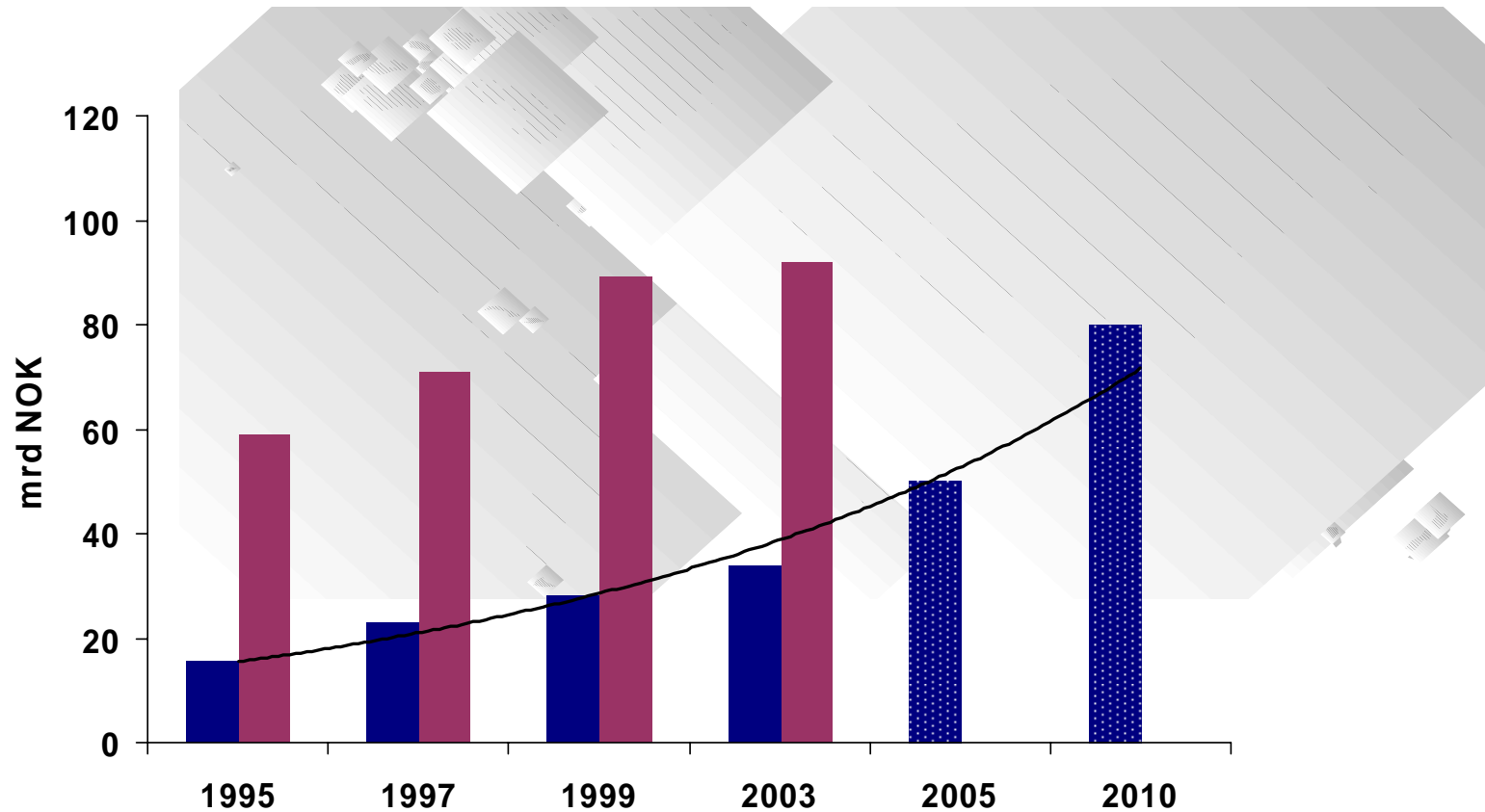
5 Main Focus Areas, OG 21

- Environment
- Enhanced Recovery
- Deep Water
- Small Fields
- Natural Gas Value Chain

New technology



# .. as a driver for Norwegian industry internationally



■ The supply industry's international sales and future ambitions (Source: INTSOK/SNF)

■ Total market on the NCS - CAPEX and OPEX (Source: MPE)

# Unlocking the Norwegian energy potential

## Perspectives on Norway and Energy

- abundant natural resources
  - strong companies and industrial clusters
  - world leading research institutions
  - energy focused capital markets
- 
- a prudent fiscal policy
  - an active and attractive licensing policy
  - increased energy R&D spending