



OLJE- OG ENERGIDEPARTEMENTET

The energy sector and challenges in Europe. Viewpoints from Norway

Johan Vetlesen

Deputy Director General

Ministry of Petroleum and Energy

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EU/EEA energy policy frameworks. Current challenges

- Promoting renewable energy production and consumption
 - EU; 20 percent share in 2020, new directive
- Promoting energy efficiency
 - EU; 20 percent improvements in 2020
- Promoting the efficient functioning energy markets
 - EU; third energy market package
- Promoting new energy technologies
 - EU; Strategic energy technology plan (SET plan) and CCS
- Relevance of cooperation programme
 - Strong interface with EU mainstream energy policy and stronger integration of energy and policies on climate change

European and EU energy policy developments. The overall balance in objectives

- Sustainable energy
- Competitiveness, functioning of markets
- Security of energy supply

EEA-Agreement and the energy sector. Situation - Norway

- The directives related to the internal energy market for electricity and gas
- Directives related to energy efficiency and renewable energy
- Directives related to Kyoto mechanisms as Emission Trading Directive (ETD)
- Programmes related to energy as Intelligent Energy for Europe under the Competitiveness and Innovation Programme
- Research development and Innovation (FP7 programme)
- Primary legislation (competition and state aid)

Cooperation programme - priority areas

Romania. Renewable energy/energy efficiency

- Promotion of energy efficiency
- Promotion of renewable energy
- Upgrading of energy systems
- Competence and capacity building (energy centers, networks and institutional cooperation)
- R&D



Parliament

Government

Ministry of Petroleum and Energy

Ministry of Trade and Industry

Authority

Owner

Owner

Norwegian Water Resources and Energy Directorate

Enova SF
Support of renewables

Statkraft
Production of electricity

Statnett SF
Transmission

Partial owner

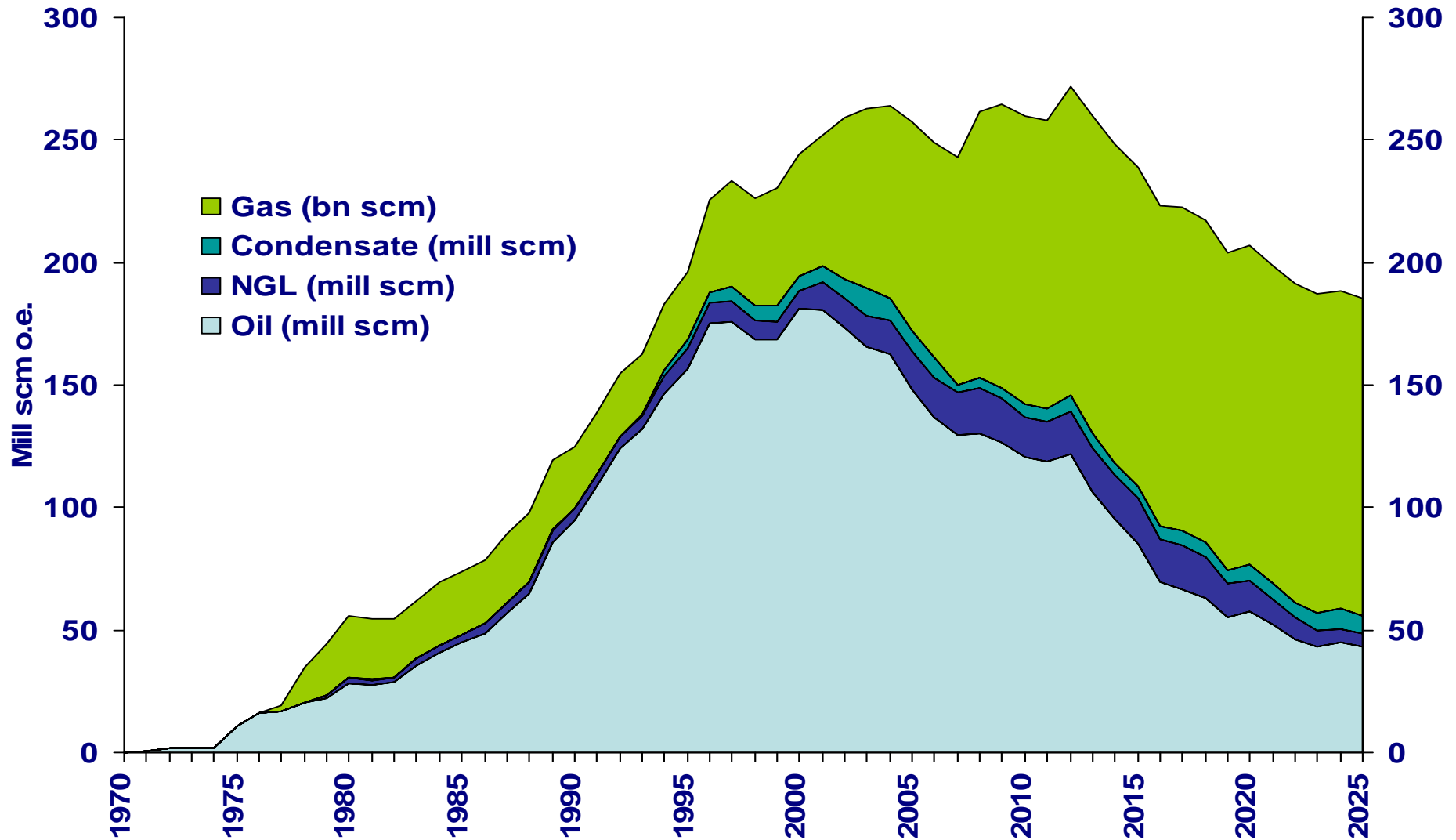
Nord Pool
power exchange

Electricity in Norway

- 99 per cent of electricity is produced by hydropower
- Installed capacity: 28 300 MW
- Average production capacity: 120 TWh/year (137 TWh in 2005)
- World's 6th largest hydropower producer



Total petroleum production

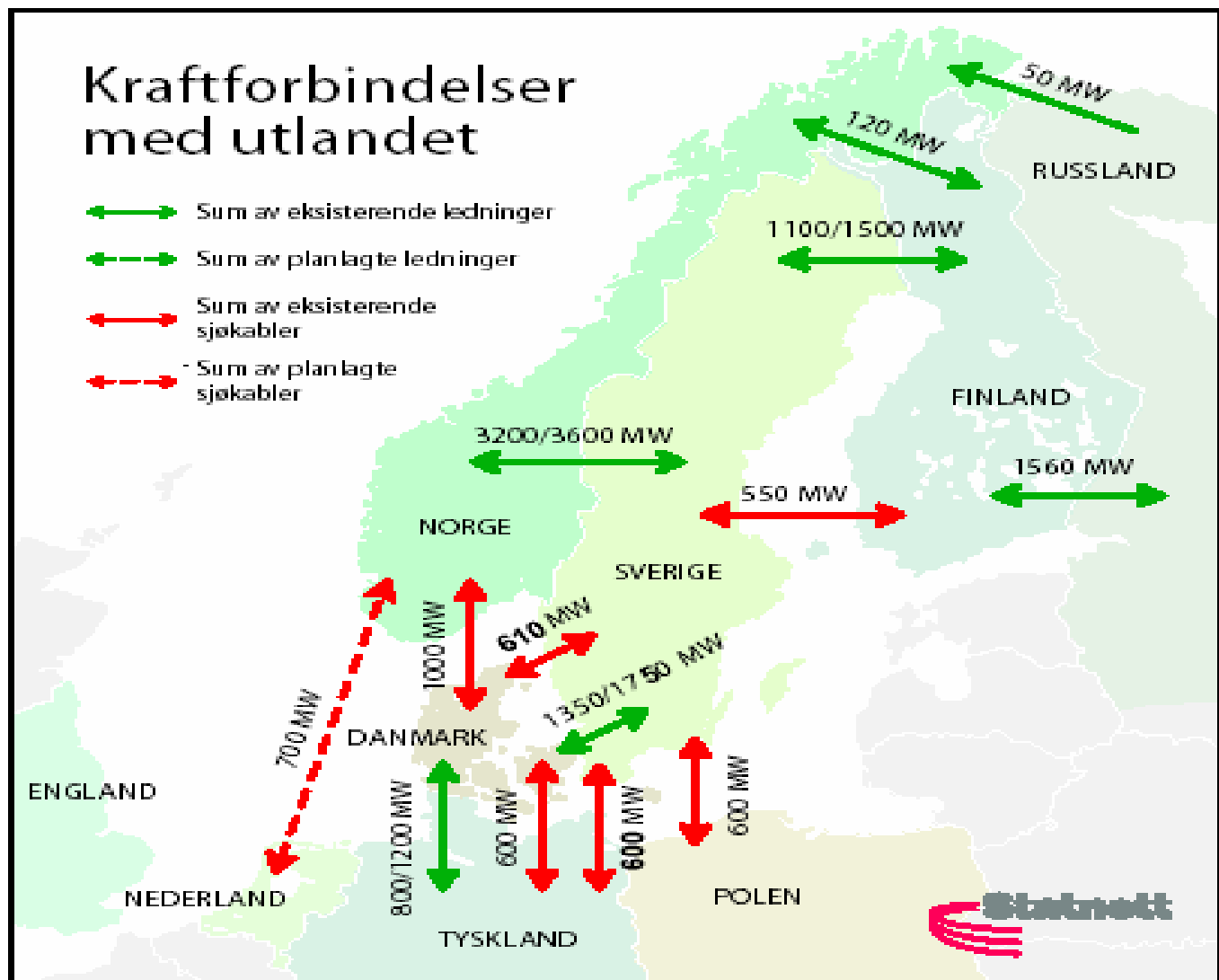


Source: Norwegian Petroleum Directorate, Ministry of Petroleum and Energy

Electricity market reforms in Norway - Some main elements (following Energy Act 1990)

- The consumers are free to buy electricity from any supplier (100 percent market opening)
- All actors involved have free access to the grid (regulated system access – Third party access)
- Point-tariff system (non-discriminatory)
- Unbundling of Transmission System Operator (TSO) Statnett SF
- Harmonization of Nordic legal frameworks in a Nordic market

Interconnections in Northern Europe





Energy policy drivers in Norway

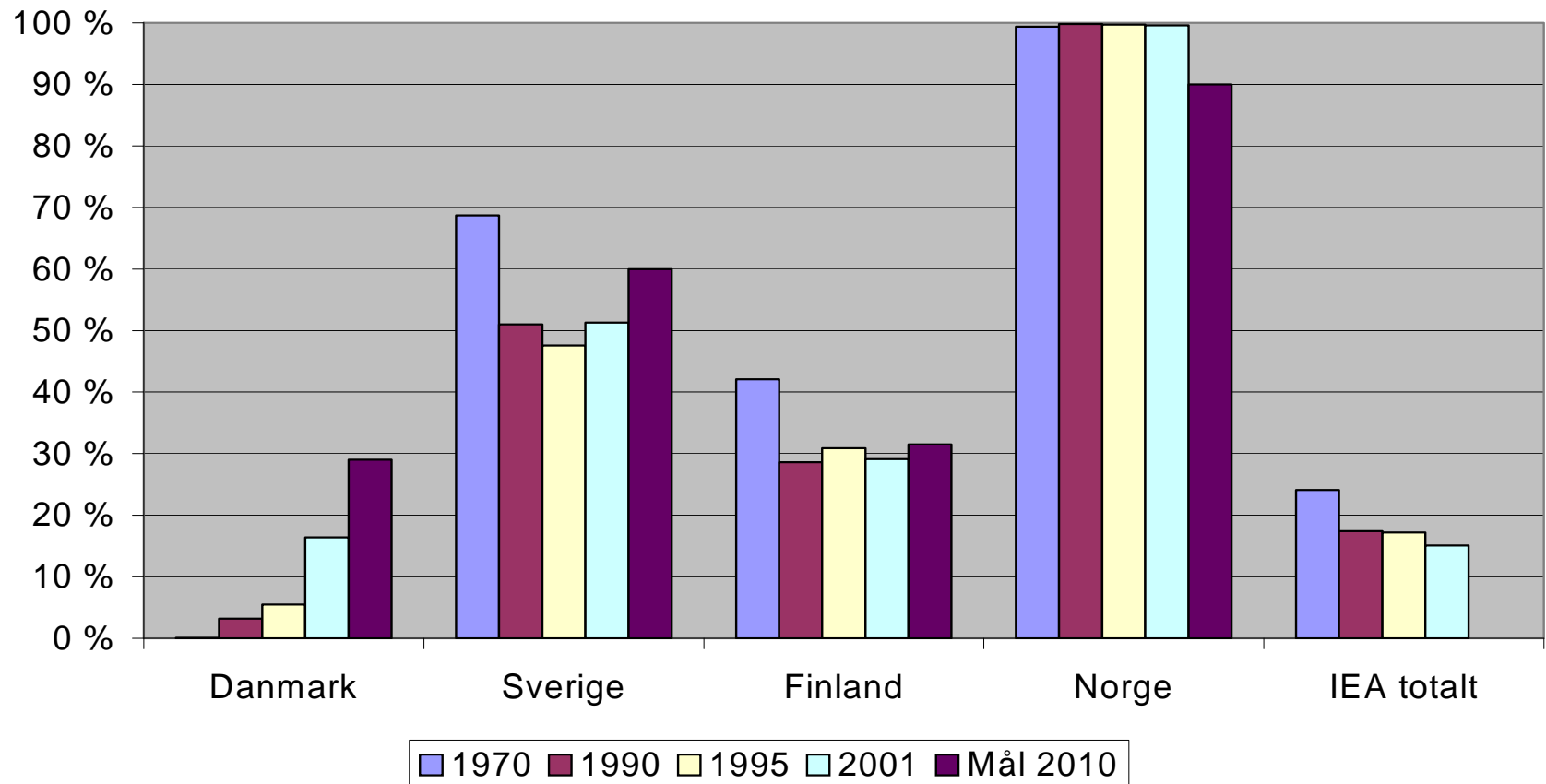
- energy efficiency and renewable energy

Norwegian electricity production is very dependent on hydropower –a need for some changes:

- Diversify the energy sector (energy security)
- Create a market for new energy solutions (competitiveness)
- Focus both on the supply, transport and demand side (integrated approach)

The projects must be both energy efficient and cost efficient

Norway; share of renewable energy

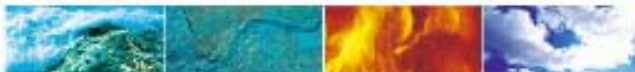


Role of Enova and the Energy Fund

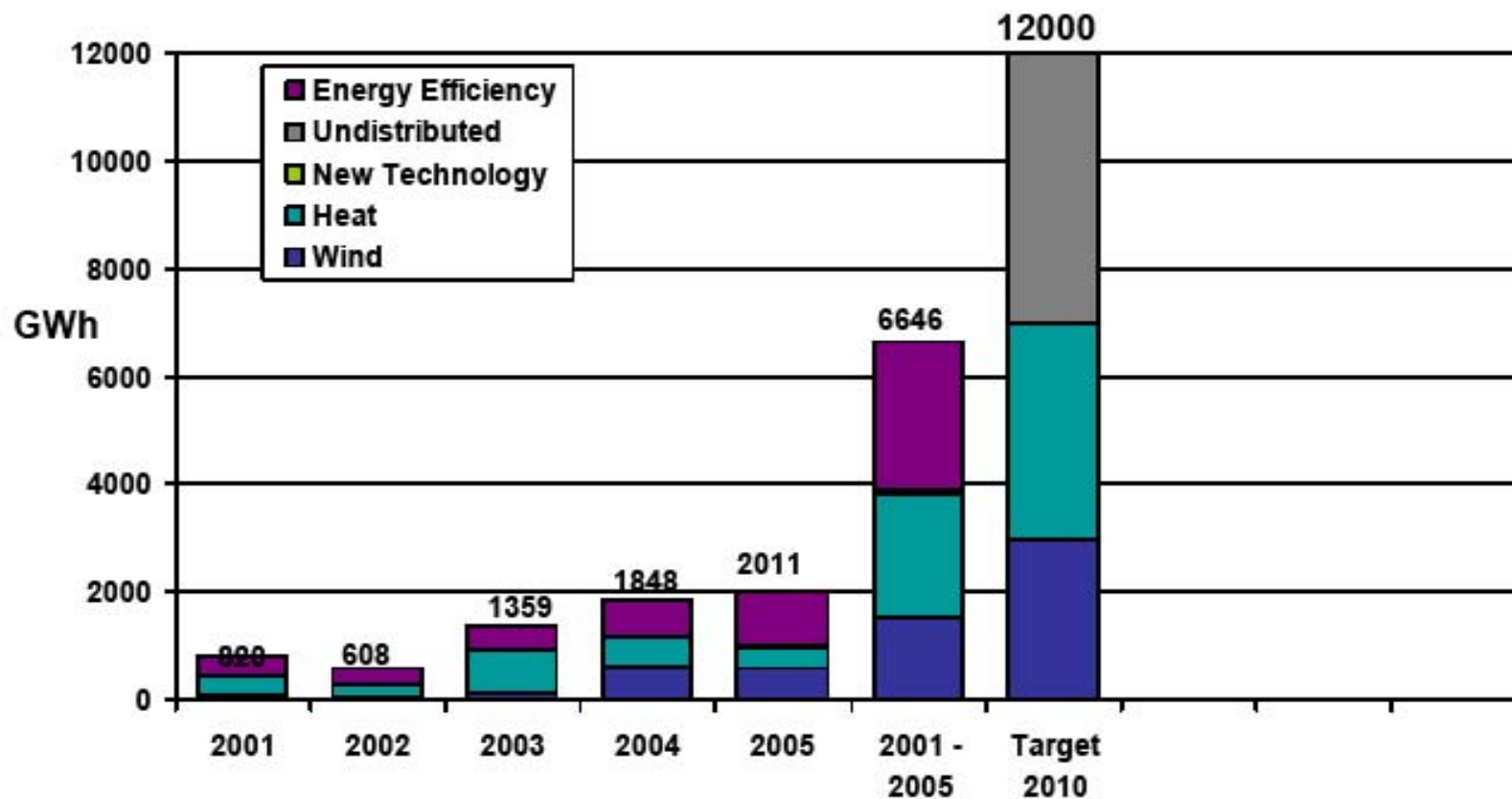
- ENOVA State Enterprise owned by the Ministry of Petroleum and Energy and handles policy instruments
- Operational as of 1 January 2002 and manages the Norwegian Energy Fund. Budget will increase
- Enova's results are measured against agreed targets
- 16 TWh/year in energy savings or new renewable energy by 2016
- Principles of cost-effectiveness (New production is valued equal to reduced consumption)
- New support scheme for renewables planned for 1.1.2008

Diversification - Government actions

- **Goal:** to secure a stable supply of energy at acceptable prices to households and to the industry
- **Measures include**
 - Enova and the initiative to change energy use and supply
 - **A fund of 20 Bn. NOK will be established to strengthen financing for Enova.**
 - **Increased production: Feed-in system for wind power, hydropower for first 3 MW and electricity from biomass will be established**
 - **Increased use of biomass and district heating**
 - **Short term measures directed at limiting electricity use in households**
 - Contribute to making gas fired power plants with carbon capture and storage a reality



Results so far and target for 2010



Opportunities for energy sector in the cooperation programme

- **Broad Norwegian competence in renewable energy (hydro for 100 years) and other renewable sources (in particular wind energy) and energy efficiency**
- **Many actors could contribute within industry, consultancy services, R& D and government structures**
- **Long experience in handling projects combining concerns for environment within planning and licencing procedures**
- **Experience in handling policies to promote EE and RES in a competitive market framework**
- **Experience in implementation of energy directives and in programmes**
- **Conclusion; Expect to see good and relevant projects under the cooperation programme**