

6 Gas Management System



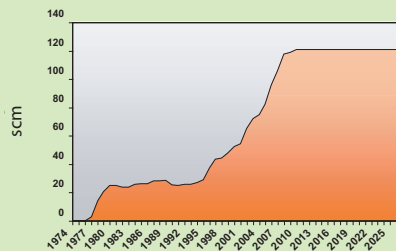


Figure 6.1 Historic and estimated Norwegian gas exports
(Source: NPD/ MPE)

Norwegian gas is important for supply of energy in Europe, and is exported to all of the major consumer countries in western Europe. There are four terminals receiving Norwegian gas on the Continent, two in Germany, one in Belgium and one in France.

There will be two terminals receiving Norwegian gas in the United Kingdom when the Langeled pipeline, which will pipe gas from the Ormen Lange field, comes on stream in 2007 (see map). The Norwegian gas transport system is extensive, containing a total of more than 6,600 km of pipeline. Treaties have been drawn up governing the rights and obligations between Norway and the gas recipient countries. In January 2005, Norway and the United Kingdom entered into a framework agreement that governs gas landing pipelines from Norway to the United Kingdom. This will be submitted to the Storting during the first half of 2005.

Norwegian gas exports meet around 14 percent of the European gas needs. Most Norwegian exports go to Germany and France, where Norwegian gas supplies around 30 percent of the total consumption. When the Ormen Lange field comes on stream, Norwegian gas will have a market share of around 15-20 percent in Britain. Producers on the Norwegian continental shelf (NCS) have entered into sales agreements with buyers in Germany, France, the UK, Belgium, the Netherlands, Italy, Spain, the Czech Republic, Austria, Poland and Denmark.

Norwegian pipelines currently have a capacity of 100 billion scm, which will increase to 120 billion scm when Langeled has been completed. This amount is equivalent to six times the total electricity production in Norway.

Achieving the highest possible value for Norwegian petroleum resources is an overall goal. Most of the fields on the NCS contain both oil and gas, so

that attempts must be made to achieve the optimum balance between oil and gas production. At the same time, the gas management system must lay the ground for efficiency in all stages of the gas chain – exploration, development and transport.

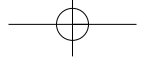
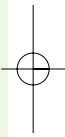
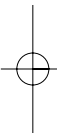
One special feature of gas production is that it requires major investment in transport. Norwegian gas is mainly transported from the field to the consumer in pipelines. The authorities place high emphasis on consideration of various transport alternatives, so that the selected solution is as robust as possible. Costs involved in constructing pipelines are high, and there are significant economies of scale involved in investment in the transport system. In many cases, it may be appropriate to build the pipelines somewhat larger than originally thought needed, so that any new gas discoveries can be transported through the existing pipeline system.

Each licensee in the Norwegian sector is responsible for selling its own gas. This policy changed in 2001, in connection with the closure of the Gas Negotiating Committee (GNC) system. In the past, all gas produced in the Norwegian sector was sold under supervision of the authorities through the GNC. Today, Statoil markets the Norwegian state's oil and gas together with its own petroleum, in accordance with the national sales regulations.

Official policy instruments

The general policy instruments employed in gas resource management are exploration policy, conditions for approval of development plans and production licences for oil and gas.¹ Many fields on the NCS contain both gas and oil. When awarding gas production licences, the authorities take into account optimum recovery of oil. On occasion, the authori-

¹ See chap. 3 Exploration and chap. 4 Development and operation



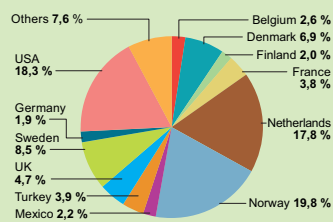


Figure 6.2 Sales of NGL/Condensate 2004* Total 21.1 mill. scm oe
* by country of first destination
(Source: NPD)

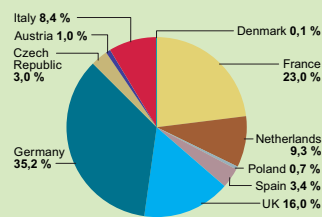


Figure 6.3 Norwegian natural gas exports 2004
Total 77.7 bill. scm oe
(Source: NPD)

ties, with a regard to the need to produce oil, have awarded licences for production of less gas than applied for by the companies.

The authorities play an important part in establishing transport capacity, and increasing system capacity. They are responsible for studying alternative transport methods, in order to ensure that the system develops efficiently. At the same time, it is important to ensure efficient operation, including achieving economies of scale. The Ministry of Petroleum and Energy (MPE) employs a number of instruments to achieve these. Three central instruments in the Norwegian gas transport system are: the operator Gassco AS, the coordinated ownership, Gassled, and regulated conditions for access to the transport system. Use of these instruments is assessed in association with development of new infrastructure and when the use of the existing infrastructure is changed. The operator, the ownership and questions of regulated access can be employed independently.

Gassco

Gassco AS is the operating company for Gassled, which comprises most of the transport system on the NCS. Gassco was established out of the partial privatisation of Statoil in 2001. Areas of operational responsibility include operations (planning, monitoring, coordination and administration of transport from the fields to the receiving terminals) and development of the transport system. Gassco is responsible for coordination of development processes for the upstream gas pipeline network, as well as assessing the need to carry out such developments. Gassco recommends solutions, but does not itself invest.

It is important to have a neutral and independent operator of the gas transport system. This ensures that all users of the system are treated equally, in

regard both to use of the system and to the consideration of capacity applications. This is necessary to ensure effective exploitation of the resources on the NCS. A neutral company ensures that a holistic view is taken of potential developments of the infrastructure, including exploitation of benefits of scale. Effective exploitation of the existing gas transport system may also contribute to the reduction, or postponement, of the need for new investment.

Gassled

The transport system for Norwegian gas, i.e. the pipelines and terminals, is mainly owned by the Gassled partnership. Gassled encompasses all rich and dry gas facilities that are currently in use or are planned to be used to any significant degree, by parties other than the owners (third party use). New pipelines and transport-related facilities are intended to be included in Gassled from the time they are taken into third party use and are part of the central upstream gas transport system.

Common ownership of the transport system ensures that the gas is transported as efficiently as possible. The greatest value is created when conflicts of interest about which pipeline is to be used to transport the gas can be avoided.

Regulated access to the transport system

The pipeline system is a natural monopoly, requiring huge initial investments. This is why gas transport tariffs are regulated by a dedicated regulation issued by the ministry. This ensures that economic returns are earned from producing fields and not from the transportation system. The oil companies' access to capacity in the system is based on their needs for gas transport. In order to secure good resource management, transport rights can be transferred between users when needs change.

Gassled – total ownership structure for gas transport

The ownership split in Gassled:

Petoro AS*	38.29%
Statoil ASA	20.38%
Norsk Hydro Produksjon AS	11.13%
Total E&P Norge AS	9.04%
ExxonMobil Exploration and Production Norway AS	5.18%
Norske Shell Pipelines AS	4.68%
Mobil Development Norway AS	4.57%
Norsea Gas AS	3.01%
Norske ConocoPhillips AS	2.03%
Eni Norge AS	1.68%

* Petoro AS is the licensee for the state's participation share (State's Direct Financial Interest- SDFI)

Petoro's share in Gassled will be increased by around 9.5 percent with effect from 1 January 2011, and the other licensees' shares will be reduced correspondingly at the same date. The SDFI share in Norsea Gas AS is 40.0 percent. When this is taken into account, the state, represented by SDFI, will have a share in Gassled of 39.5 percent in 2003-2010 and 49 percent from 2011. The licence period for relevant Gassled facilities will run until 31 December 2028.

The coordinated ownership structure for the most significant parts of the gas infrastructure has laid the way for a uniform access regime and will ease administration and daily operation of gas transport in the future.

