

6 Norwegian gas exports



Gas activities comprise an increasing part of the petroleum sector, and thus generate considerable revenues for the state. Norwegian gas is also important for the energy supply in Europe, and is exported to all of the major consumer countries in Western Europe. In terms of energy content, gas exports in 2008 were about eight times larger than the average Norwegian production of electricity. Norwegian gas exports supply approximately 16 per cent of the European gas consumption.¹ Most Norwegian exports go to Germany, the UK, Belgium and France, where Norwegian gas accounts for 25 to 35 per cent of the total consumption. Producers on the Norwegian continental shelf have entered into sales agreements with buyers in Germany, France, the UK, Belgium, the Netherlands, Italy, Spain, the Czech Republic, Austria and Denmark. With the Snøhvit field, Norway also supplies LNG (Liquefied Natural Gas) to the USA, Japan and other customers.

Current capacity in the Norwegian pipeline system is about 120 billion scm per year. There are four receiving terminals for Norwegian gas on the Continent: two in Germany, one in Belgium and one in France. There are also two terminals in the UK (see map). The Norwegian gas transport system consists of a network of more than 7800 km of pipelines. Treaties have been developed to govern rights and obligations between Norway and the countries that have landing sites for gas.

Achieving the highest possible value for Norwegian petroleum resources is a paramount goal. Most of the fields on the Norwegian continental shelf contain both oil and gas, and achieving the optimum balance between oil and gas production is vital. The gas management system must facilitate efficiency in all stages of the gas chain – exploration, development and transport.

¹ OECD Europe.

All licensees on the Norwegian continental shelf are responsible for selling their own gas. StatoilHydro sells the state's oil and gas, together with its own petroleum, in accordance with the regulations concerning marketing and sale of oil and gas.

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

Sector organisation

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 (see Chapters 4 and 5). Many fields on the Norwegian continental shelf contain both gas and oil. When awarding gas production permits, the authorities take into account the prospects for optimum recovery of oil. On occasion, the authorities have awarded production permits for production of less gas than applied for by the companies, out of consideration for the need to produce oil. The authorities play an important part in establishing transport capacity and increasing system capacity.

The authorities are responsible for studying alternative transport methods, in order to ensure efficient system development. At the same time, it is important to ensure efficient operation, including

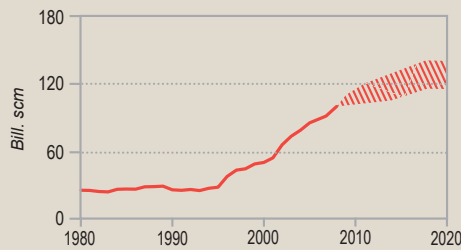


Figure 6.2 Historical and expected Norwegian gas sales. Sales of gas are expected to reach a level of 115-140 billion scm during the next decade
(Source: Norwegian Petroleum Directorate / Ministry of Petroleum and Energy)

achieving economies of scale. The Ministry of Petroleum and Energy employs a number of instruments to achieve this. 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. The Ministry considers the use of these instruments in connection with development of new infrastructure and when the use of the existing infrastructure is changed. Operatorship, ownership and issues regarding regulated access can be employed independently.

Gassco

Gassco AS is the operating company for Gassled, which comprises most of the transport system on the Norwegian continental shelf. Gassco was established in 2001, and is wholly owned by the Norwegian state. Gassco is responsible for operations (planning, monitoring, coordination and administration of transport from the fields to the receiving terminals), allocation of capacity and development of the transport system.

Gassco shall contribute to comprehensive further development of the Norwegian gas infrastructure. In cases where major developments is considered, this means that all other Norwegian gas, not just the resources in fields that trigger a need for gas transport, must also be included in such evaluations. Further development of the gas infrastructure must take place in a manner that is expedient for the existing gas infrastructure on the Norwegian continental shelf.

A neutral company ensures that consideration is given to the submitted development alternatives for infrastructure, as well as exploitation of economics of scale. Gassco's task is to coordinate the processes for further development of the upstream network of gas pipelines, and to assess the need for such further development. Gassco

recommends solutions, but does not itself invest in infrastructure. A neutral and independent operator of the gas transport system is important to ensure equal treatment of all users of the system, both as regards utilisation of the system and consideration of capacity increases. This is necessary to ensure efficient exploitation of the resources on the Norwegian continental shelf. Efficient exploitation of the existing gas transport system may also contribute to the reduction, or postponement, of the need for new investments.

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 put to use by third parties, and are thus 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 avoiding conflicts of interest about which pipeline should be used to transport the gas.

Regulated access to the transport system

The pipeline system is a natural monopoly, requiring enormous initial investments. This is why gas transport tariffs are governed by special regulations issued by the Ministry of Petroleum and Energy. This ensures that the economic returns are earned from producing fields and not from the transport 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. Gassco is responsible for allocating capacity.

Gassled – overall ownership structure for gas transport

The ownership split in Gassled:

Petoro AS*	38.46 %
StatoilHydro ASA	20.47 %
StatoilHydro Petroleum AS	11.63 %
Total E&P Norge AS	7.78 %
Exxon Mobil Exploration and Production Norway AS	5.29 %
Mobil Development Norway AS	4.14 %
Norske Shell Pipelines AS	3.97 %
Norsea Gas AS	2.73 %
ConocoPhillips Skandinavia AS	2.00 %
Eni Norge AS	1.53 %
A/S Norske Shell	1.35 %
DONG E&P Norge AS	0.66 %

* Petoro AS is the licensee for the state's participating interest (State's Direct Financial Interest - SDFI).

Petoro's share in Gassled will be increased by approximately 8 per cent with effect from 1 January 2011, and the other licensees' shares will be adjusted correspondingly on the same date. The SDFI share in Norsea Gas AS is 40.0 per cent. When this is taken into account, the state, represented by SDFI, will have a share in Gassled of 39.4 per cent in 2003-2010 and 47.5 per cent from 2011. The licence period for most of the Gassled facilities will run until 31 December 2028.

The coordinated ownership structure for the most significant parts of the gas infrastructure has laid the foundation for a uniform access regime and will ease administration and daily operation of gas transport in the future. The ownership structure may be adjusted when new facilities and pipelines are incorporated into Gassled.

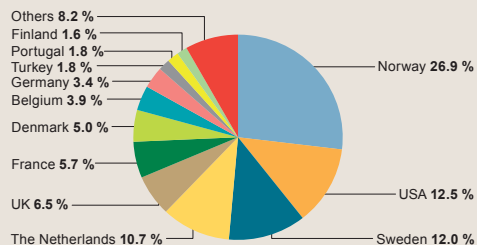


Figure 6.3 Sales of NGL/condensate 2008, distributed by first receiving country, total 19.5 million scm oe. (Source: Norwegian Petroleum Directorate)



Figure 6.4 Norwegian natural gas exports 2008, total 96.1 billion scm, distributed by receiving country (Source: Norwegian Petroleum Directorate)