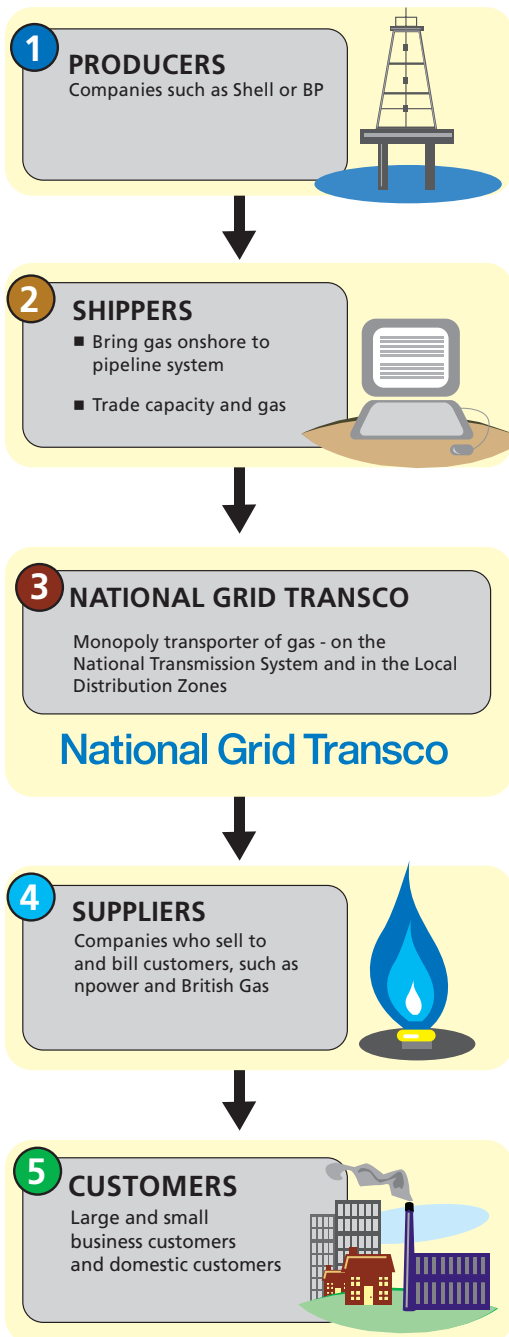


Securing Britain's gas supply

Security of supply in gas depends not only on having enough gas to meet demand, but on having the necessary pipeline network, to ensure the gas reaches consumers.



Where does Britain's gas come from?

Offshore gas fields from the North and Irish Seas produce the majority of Britain's gas, with an interconnector pipeline between Britain and Belgium allowing gas to be imported.

How does the gas market work?

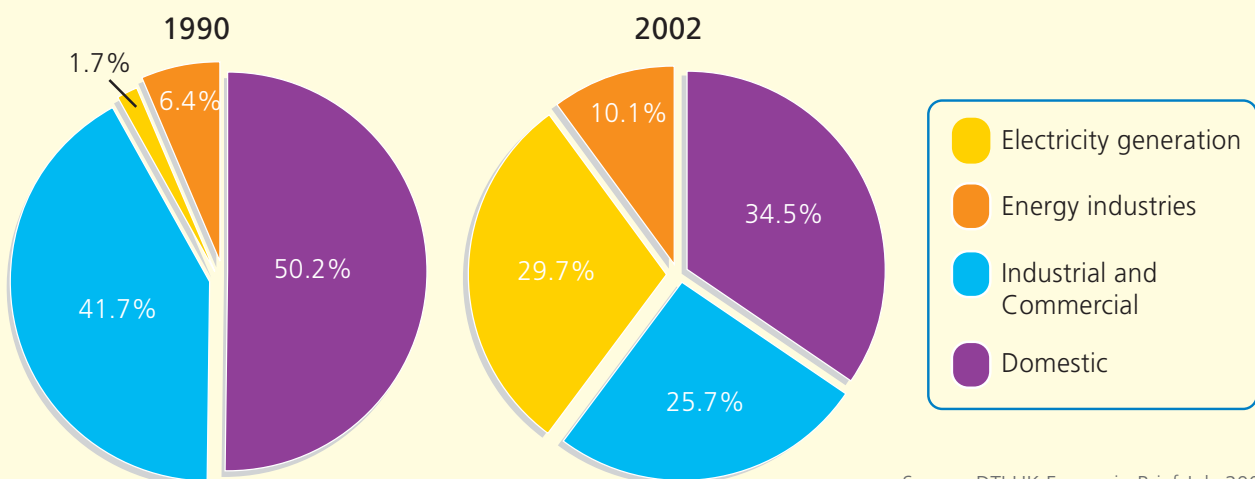
Since market reforms in 1996, wholesale gas has been traded like any other commodity. Suppliers buy gas from shippers - companies who contract with offshore producers to bring gas onshore - in order to meet the needs of homes and businesses.

As well as taking more gas from offshore gas fields and the interconnector, shippers can draw on gas held in large gas storage facilities. For example, Rough gas storage, located under the North Sea, can meet around 10 per cent of Britain's gas needs in winter when demand for gas is greatest.

To ensure they can provide suppliers with the gas they need, shippers buy space on the high pressure gas pipeline system owned and run by National Grid Transco (NGT). They can book this capacity through a series of auctions which allow them to buy space for up to 15 years in advance.

NGT, is responsible for ensuring the system remains in balance and can buy or sell gas to ensure supply matches demand.

Natural gas consumption



Is Britain becoming more dependent on gas?

Gas consumption has grown by **66 per cent since 1992** in Britain. It currently stands at **113 billion cubic meters (bcm)** a year. NGT forecast that total gas consumption is set to rise by a further 14 per cent between 2002 and 2011.

A major part of this growth has been the increase in the use of gas to generate electricity which currently accounts for **29.7 per cent** of all gas consumption.

How will Britain cope as a gas importer?

Britain and Canada are the only major industrialised (G7) countries currently self-sufficient in gas. As Britain's gas supplies decline it will have to import gas, as most other industrialised countries do. This can be done in two ways:

1 Liquefied Natural Gas (LNG) importation - this is a process whereby gas is cooled into a liquid and transported safely by ship.

In order to take advantage of LNG, Britain needs to have specialised import terminals and the capacity in the gas pipeline system to bring this gas onshore.

At the moment proposals are being discussed for the following import terminals:

- **NGT Isle of Grain**, capacity 4 bcm, 2005 (plans for up to 13 bcm)
- **Petroplus Milford Haven**, capacity up to 6-9 bcm, 2006/7
- **Exxon Mobil Milford Haven**, capacity up to 20 bcm from 2007

2 Interconnector pipelines - the following interconnector pipeline developments are planned to strengthen Britain's links with the European gas market.

- Upgrading the existing Belgian interconnector's import capacity to 16 bcm, 2005
- **Gastransport Services** interconnector from Holland to Britain, capacity 10+ bcm, 2006
- **Ormen Lange pipeline**, while not an interconnector, will link the Ormen Lange gas field directly to Britain, capacity up to 20 bcm, 2006.

Proposals are also being put forward to increase the amount of gas storage available.

- **Statoil/Scottish and Southern Energy** - storage facility at Garton, capacity 17 bcm, 2006/2007
- **Star Energy storage** facility at Barton Stacey, Hampshire, capacity 9 bcm from 2005
- **Scottish Power storage** facility at Byley, Cheshire, capacity 5 bcm from 2008/2009
- **Star Energy storage** facility at Welton, Lincolnshire, capacity 9 bcm from 2005/6

How reliable will gas imports be?

Diversity of supply is a very important factor in ensuring security of supply. LNG terminals will allow Britain to import gas from many different areas of the world, including the Middle East, Central Asia, Africa, and South America. So Britain would not just be dependent on one area of the world for its LNG imports.

The interconnectors and other pipelines will also give Britain access to gas from Norwegian and Dutch gas fields and the European gas market. However, more dependence on the European market increases the risk that distortions in the European gas market could affect Britain.

How will European gas market liberalisation affect British gas prices?

Through the Belgium interconnector, Britain is already part of the European energy market and our gas prices are linked to those on the continent. Greater reliance on gas from Europe means that British consumers will be increasingly affected by ongoing moves toward energy market liberalisation across the EU.

Lack of competition in Europe means higher prices for British and European consumers. More liberalisation in Europe will help drive down gas prices and the cost of transportation in Europe, benefiting all consumers.

Ofgem has increasingly close links with the other European regulators. In partnership with the Department of Trade and Industry, Ofgem will take an active part in the debate over the future development of a more competitive continental energy market.

How robust is Britain's gas transportation network?

Since privatisation over **£15 billion** has been invested in the gas network - a much higher amount than before privatisation. The system is very reliable and has a good safety record.

Will the gas network change to reflect the greater importance of LNG and gas imported from Europe?

Investment in the gas network will be essential to cope with greater use of LNG and gas from Europe. New price controls from Ofgem provide incentives for NGT to invest in increasing entry capacity to the gas pipeline system where the new pipelines and LNG facilities are to be built.

Price signals to help NGT target investment where it is needed are provided by a system of long-term entry capacity auctions. These allow shippers to buy capacity at entry points to NGT's pipeline system up to **15 years** in advance.

Could interruptions in gas supply this winter lead to electricity power cuts?

To prepare for unexpected events like gas interruptions and severe weather, NGT has a reserve margin of **20 per cent** of electricity generation over peak winter demand to meet unexpected reductions in electricity supply. One possible cause of such reductions could be interruptions to gas production.

NGT has reported to Ofgem that there will be enough power to meet the forecasted demand for electricity this winter, under all but the most exceptional circumstances.



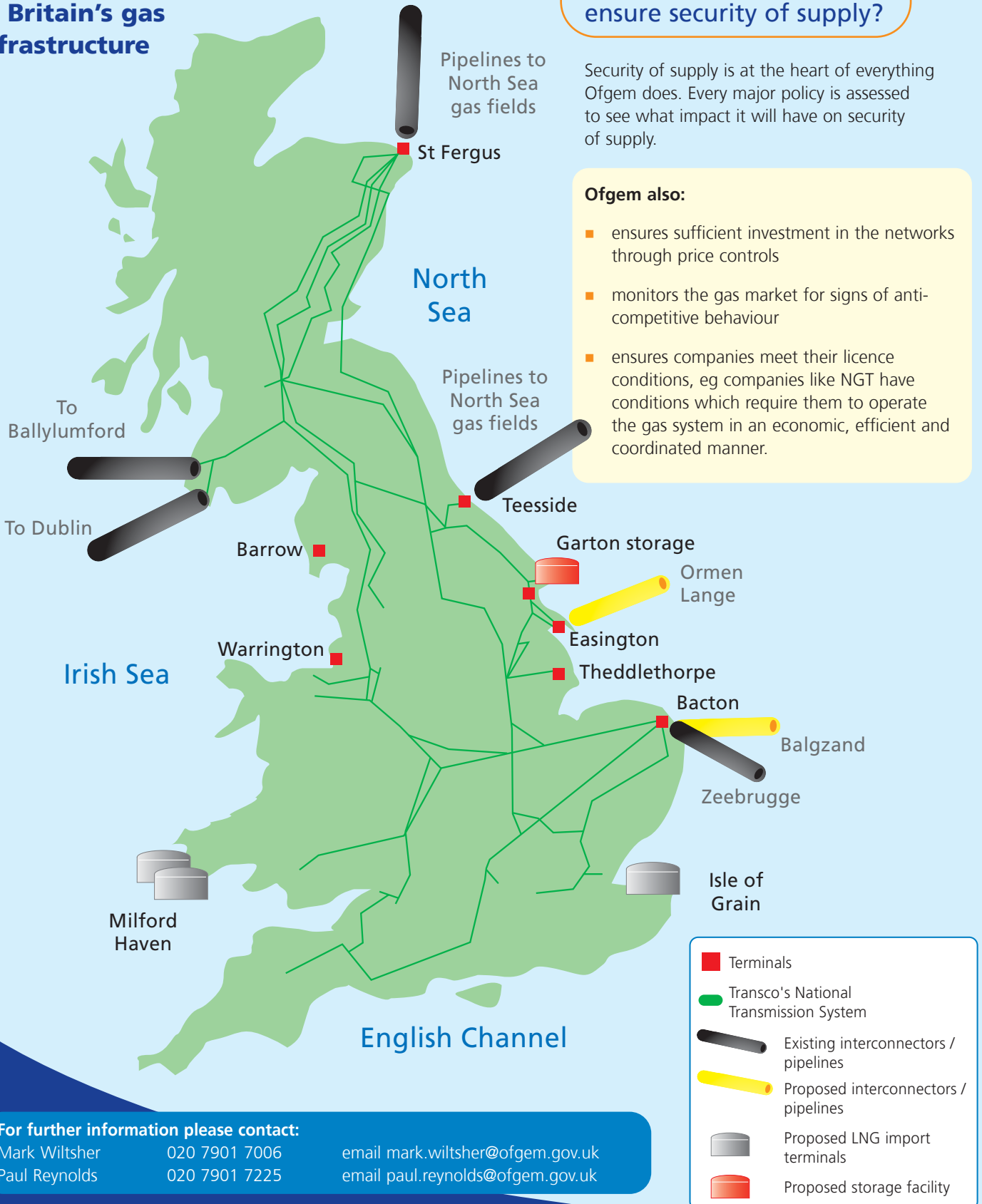
Proposed improvements to Britain's gas infrastructure

How does Ofgem work to ensure security of supply?

Security of supply is at the heart of everything Ofgem does. Every major policy is assessed to see what impact it will have on security of supply.

Ofgem also:

- ensures sufficient investment in the networks through price controls
- monitors the gas market for signs of anti-competitive behaviour
- ensures companies meet their licence conditions, eg companies like NGT have conditions which require them to operate the gas system in an economic, efficient and coordinated manner.



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- Terminals
- Transco's National Transmission System
- Existing interconnectors / pipelines
- Proposed interconnectors / pipelines
- Proposed LNG import terminals
- Proposed storage facility