

Updated Investing to meet Britain's energy needs

Factsheet 60

09.08.07

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Energy is crucial to our daily lives and to the needs of businesses and industry.

Delivering secure, affordable and sustainable energy requires efficient and timely investment in energy supplies - and in infrastructure, the pipes and wires which transport energy to our homes and businesses

A combination of **competition** and **regulation**, overseen by **energy regulator Ofgem**, has resulted in **significant investment** to meet Britain's developing energy needs since the industry was privatised some 15-20 years ago.

▶ Challenging the myths

According to some, the British arrangements have resulted in **'low investment'**, assets have been **'sweated'** - and the

These arrangements have **evolved** over the past two decades and will continue to do so to meet the **energy challenges** and **priorities** we face in the 21st century.

market has **'failed to deliver'**, threatening **security of supply**. These views are not borne out by the facts.

▶ Supplies

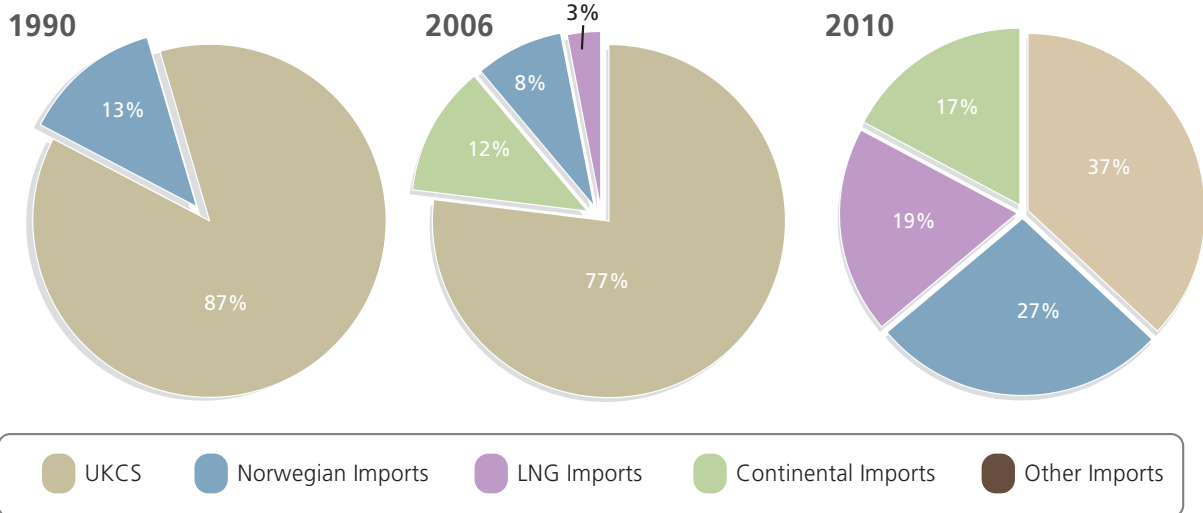
Gas

- We are moving from being self-sufficient in gas to being more reliant on imports. In response, the market is investing **£10 billion** in gas import and storage projects.
- Enough gas import capacity to provide **90 per cent of UK demand** will be ready by **2009**.
- Gas supplies will be **more diverse than ever**.
 - **In future**, our gas will come from Norway, Qatar, Algeria, Russia, Netherlands, Trinidad and Tobago, Oman and Egypt.
 - In addition to current import capacity, this gas will come via an upgrade to the Bacton-Zeebrugge interconnector and new LNG terminals (Grain, South Hook, Dragon, plus others in the planning stages).
- Gas storage capacity is set to **double by 2010**, providing no projects are delayed.
- See the 'Securing Britain's Gas Supply factsheet' (32) for more detail.

Electricity

- **£14 billion** has been invested in new gas-fired and renewable generation since 1990. This provides **31 Gigawatts** of electricity, more than 40 per cent of total generation capacity in Great Britain.
- We have **20 per cent** more generation capacity than required to meet demand, providing a satisfactory safety cushion in times of need.
- £1.2 billion has been invested in **Flue Gas Desulphurisation (FGD)** to reduce emissions and prolong the life of 11GW of coal-fired **power stations** well into the future.
- Britain now has **more diverse** electricity supplies than ever before.

Gas Diversity



Sources: IEA Statistics Natural Gas Information 2004; National Grid 10 Year Statement 2005; www.kslaw.com

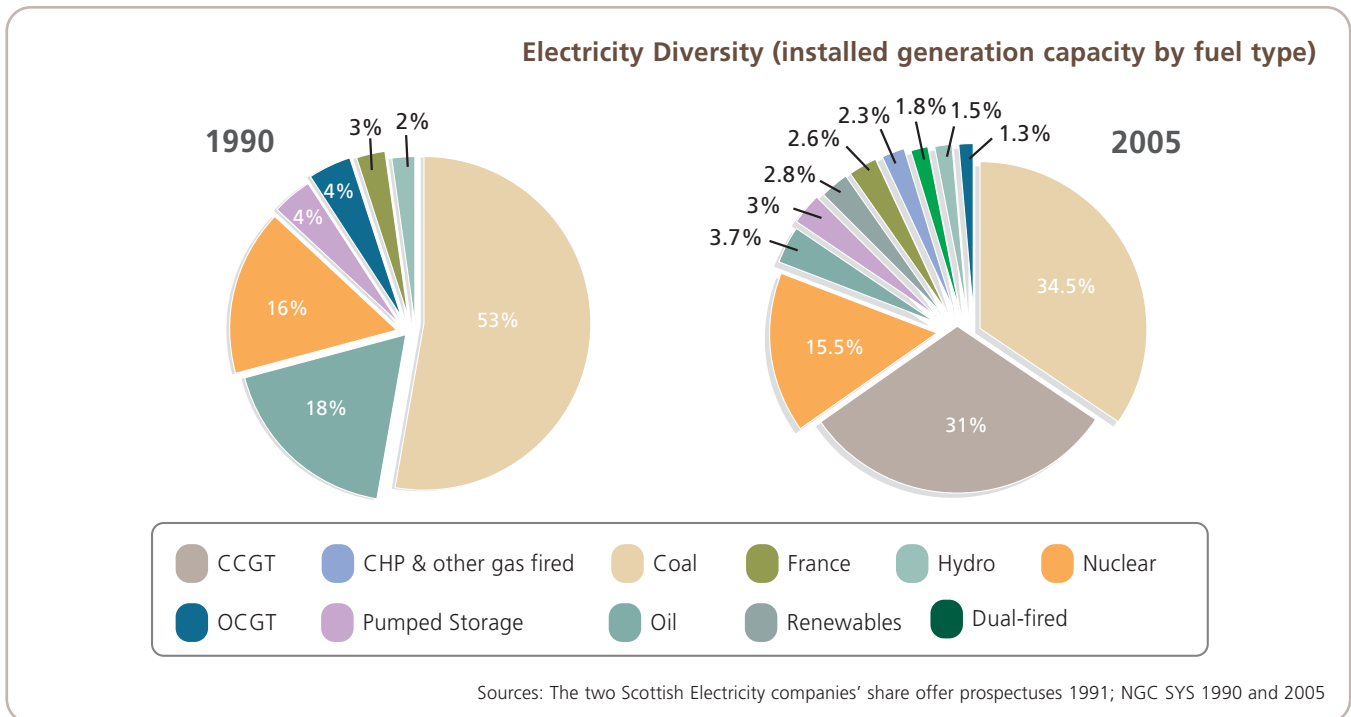
► Networks

As the **sources** of electricity generation and gas **change**, so energy **networks** need to **evolve** to meet the new demands.

- During the last 20 years, **more than £30 billion** has been invested in gas and electricity networks.
- Local electricity networks have invested **£15.5 billion** between 1991 and 2005 and a further **£7.4 billion** will be invested over next five years.
- Between 1991 and 2005, **£6 billion** was invested in the national high-voltage transmission network.
- Ofgem has authorised further investment of over **£5 billion** in Britain's gas and electricity transmission networks between 2007 and 2012. A further **£1 billion** of investment may be made to respond to additional requests for connection to the gas and electricity transmission networks by developers.

► Cost to customers

- Household bills are still **among the most competitive in Europe**.
- Costs of transporting gas, and transmitting electricity, have **fallen by 40-50 per cent** in real terms since privatisation.



► Sustainability and efficiency

Some **30 per cent** of the **UK's carbon emissions** are caused by **electricity generation**, and these have been **increasing** over the past three years. But, the energy sector has **contributed most** to the fall in emissions since 1990, reducing the amount of carbon emitted by almost **12 per cent**. Ofgem has an important role to play, through regulation and competition, to promote the efficient use of energy.

Networks

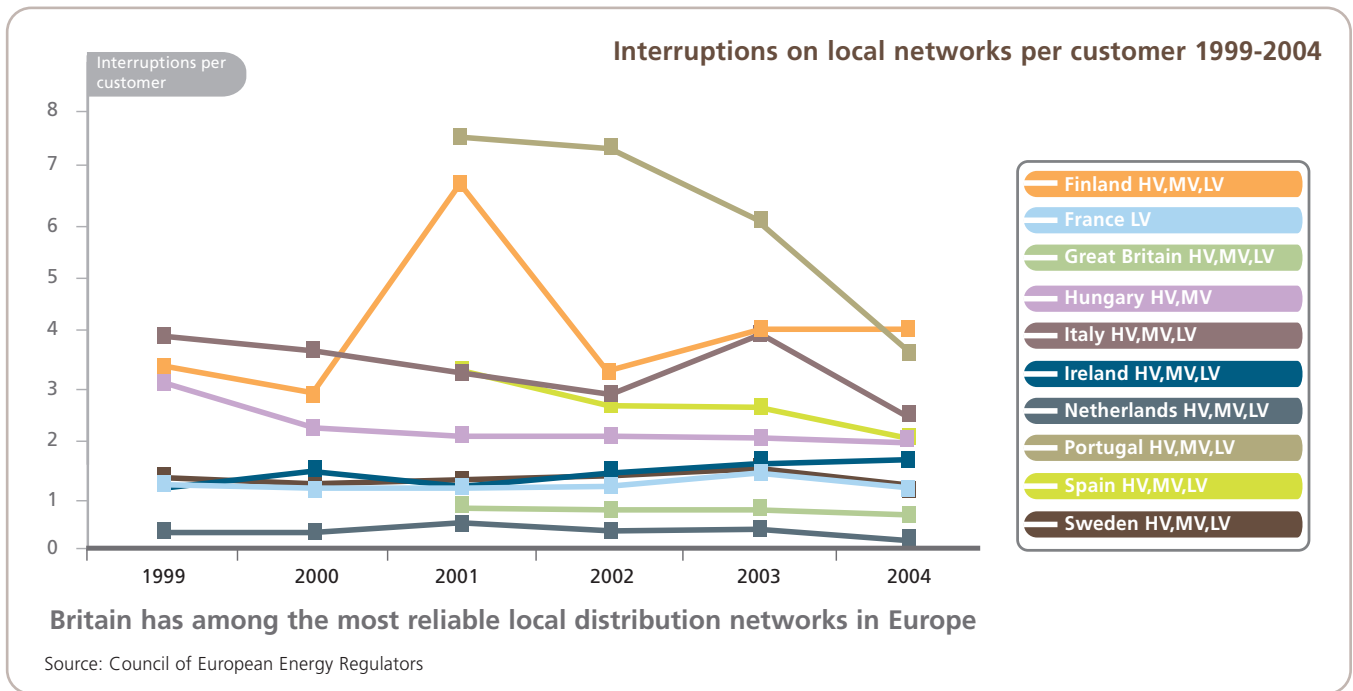
- Much has been done, for example at the last electricity distribution price review, to facilitate new lower carbon generation and promote efficiency.
 - incentives have been created to **respond proactively** to generators who want to connect to networks
 - an **Innovation Funding Incentive** was introduced which encourages companies to invest in research and development, equating to **£1-2 million** per company per year
 - incentives were strengthened to **reduce** the amount of energy **lost** as it travels along the wires, and
 - arrangements were set up to enable more **localised generation**, such as **microgeneration**, to develop and be connected.
- Ofgem is also working with the Government to develop a **new regulatory regime** for networks to connect **offshore wind farms**.

Generation

- New arrangements will be put in place during the **next 10 years** to enable the development of **micro-generation**.
- **12 Gigawatts** of new renewable plant such as onshore wind is planned.
- **FGD** is to be fitted to a further **7GW** of existing **coal-fired plant** to lower emissions.

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► Reliability and safety

Quality and reliability of Britain's energy networks **has not been compromised**. In fact, we benefit from one of the **most reliable energy supplies** in the world.

- Last year, the electricity transmission network was **99.9997 per cent reliable**. Power cuts on the local electricity networks have fallen **17 per cent** since 2002.

- Under the accelerated **mains replacement programme**, which was introduced in 2002, gas distribution companies are investing to **replace all iron mains** within 30 metres of premises over the course of **30 years**.
- Safety is **paramount** for Ofgem and the industry. In conjunction with the Health and Safety Executive, the British arrangements **deliver safe supplies**.

► Not an energy island

But, Britain is no longer an **energy island**. We are affected increasingly by what happens in other **European energy markets**.

That is why Ofgem is **integral** to the work being carried out alongside the **European Commission**, other **national**

regulators and **competition authorities** to promote full and **effective liberalisation** of European energy markets and shape **future regulation**.

► Fit for purpose for further challenge

The British arrangements for energy markets and network regulation are **continually evolving** to meet new challenges.

These arrangements have bought **certainty and stability** and have contributed significantly to creating a climate to

deliver **reliable, sustainable** and **affordable energy supplies**.

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