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**What are the prospects of expanding
energy provision while reducing
greenhouse gas emissions?**

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We can increase energy provision while reducing greenhouse gas emissions, but:

- Increased energy demand is not a given – we can reduce consumption by using energy more efficiently
- UK electricity demand is falling because of economic recession – not the preferred solution
- All sectors (e.g. transport, households, manufacturing) have a part to play in emissions reduction, not just power generation

Three pillars of energy policy

The Energy White Paper of 2003 gave us 3 main drivers:

- Competitive markets (to avoid over-pricing)
- Environmental protection (to mitigate climate change)
- Security of supply (to keep the lights on)

The 2007 Energy White Paper strategy is:

- Save energy
- Develop cleaner energy supplies
- Secure reliable energy supplies at prices set in competitive markets

The UK and EU have very ambitious (and legally binding) environmental targets:

- 34% GHG reduction by 2020 (UK Budget 2009), 80% by 2050 – to demonstrate leadership
- EU target 20% GHG reduction by 2020, or 30% if a new global agreement is achieved – negotiating position
- EU target 20% renewable energy by 2020 (15% for UK)
- UK looking at ~35% renewable electricity by 2020 (from a base of ~5% in 2007)

How can the power sector play its part?

- UK Committee on Climate Change (2008) envisages de-carbonisation of the sector by 2030
- EURELECTRIC (2009) aims to be carbon neutral by 2050
- Keep all new-build, low-carbon options open – renewables, nuclear (~10 years away), Carbon Capture and Storage (~15 years away)
- 30% of existing coal-fired power stations will close by 2016

Why keep all options open?

Because aspiration is easy and delivery is challenging!

There are practical problems with:

- Planning consent
- Grid connection
- Bringing new technologies to market
- Managing regulatory risk
- Finance
- Keeping the lights on during transition to low-carbon future

In the mean time, gas-fired power stations are preferred

Meeting the challenge

The power sector is at the forefront of improving energy efficiency and reducing emissions, but:

- At least £100 billion of investment will be needed by 2020
- There must be a long-term, stable regulatory framework to encourage investment in new plant and new technologies
- We need the flexibility to employ a range of technologies (including fossil fuels) during the transition to a low-carbon future

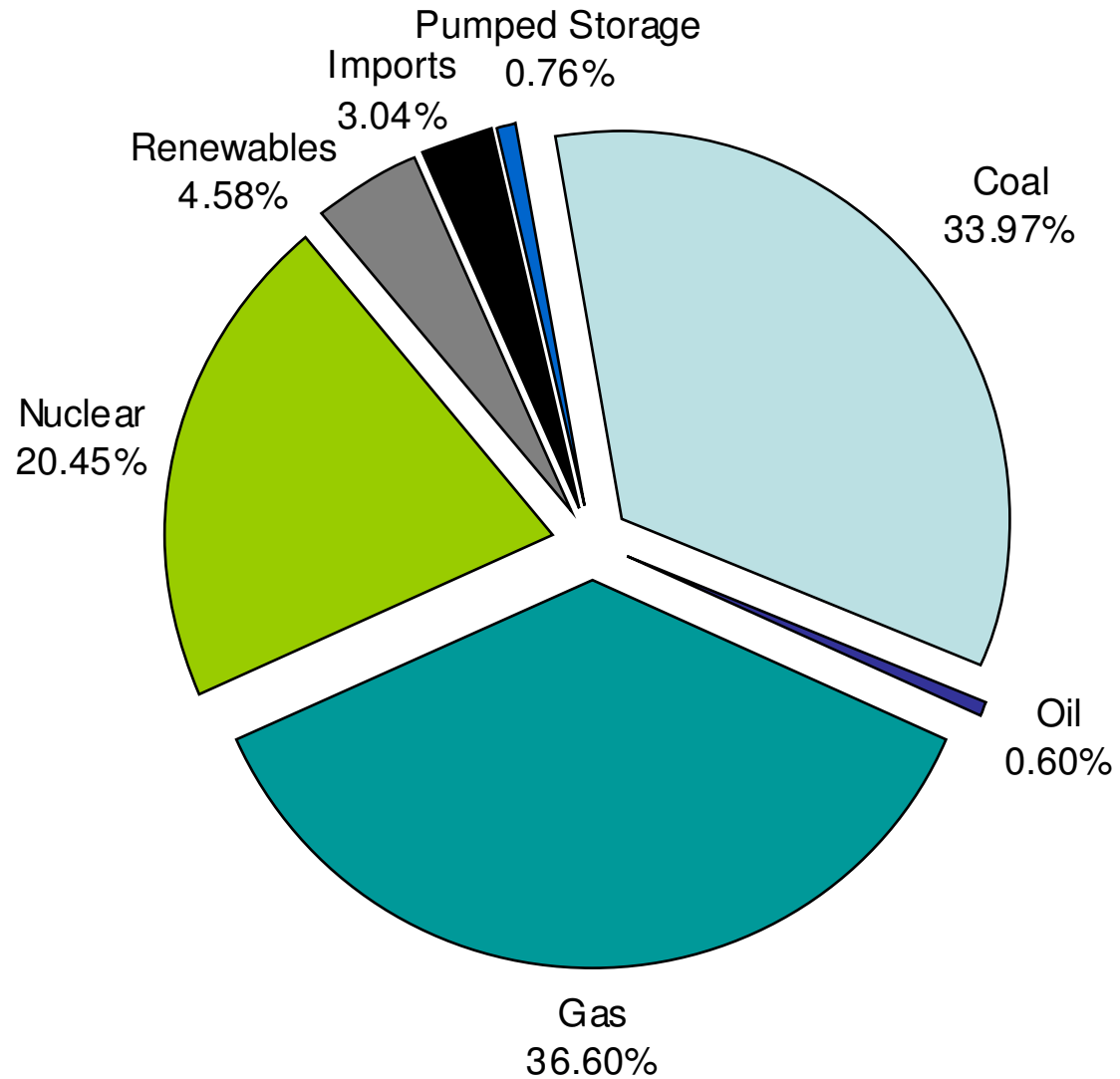


Association of Electricity Producers

The AEP is a trade association whose members include large, medium and small generating businesses, representing between them virtually all of the generating technologies used in the UK and the majority of the UK's power production.

They operate in a competitive electricity market and they have a keen interest in its success – not just in delivering power at the best possible price, but in meeting environmental requirements and expectations in respect of security and reliability of supply.

UK Generation mix (2005)

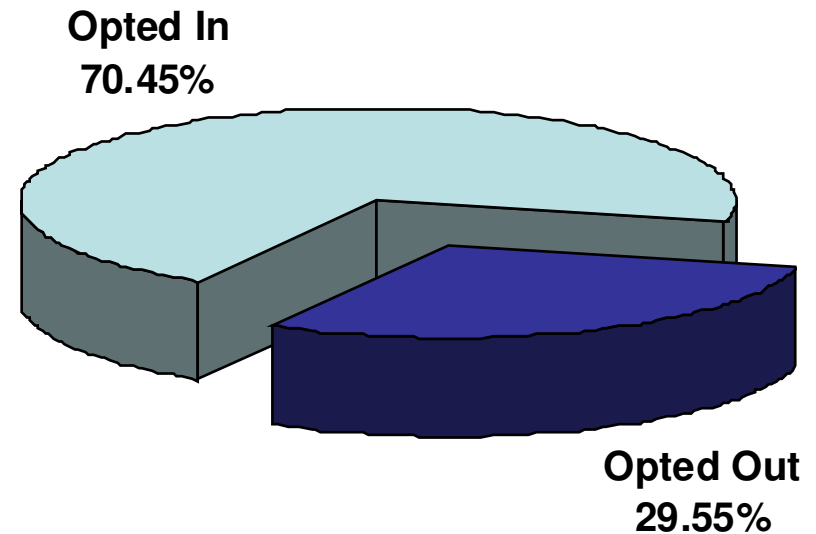


Plant closures under LCPD

| Coal | |
|-------------------------|--------|
| Capacity opted in (MW) | 20,677 |
| Capacity opted out (MW) | 8,672 |

To fit Flue Gas Desulphurisation (FGD) equipment to all opted-in capacity has cost ~£2.1 billion.

| Oil | |
|-------------------------|-------|
| Capacity opted in (MW) | 0 |
| Capacity opted out (MW) | 4,300 |

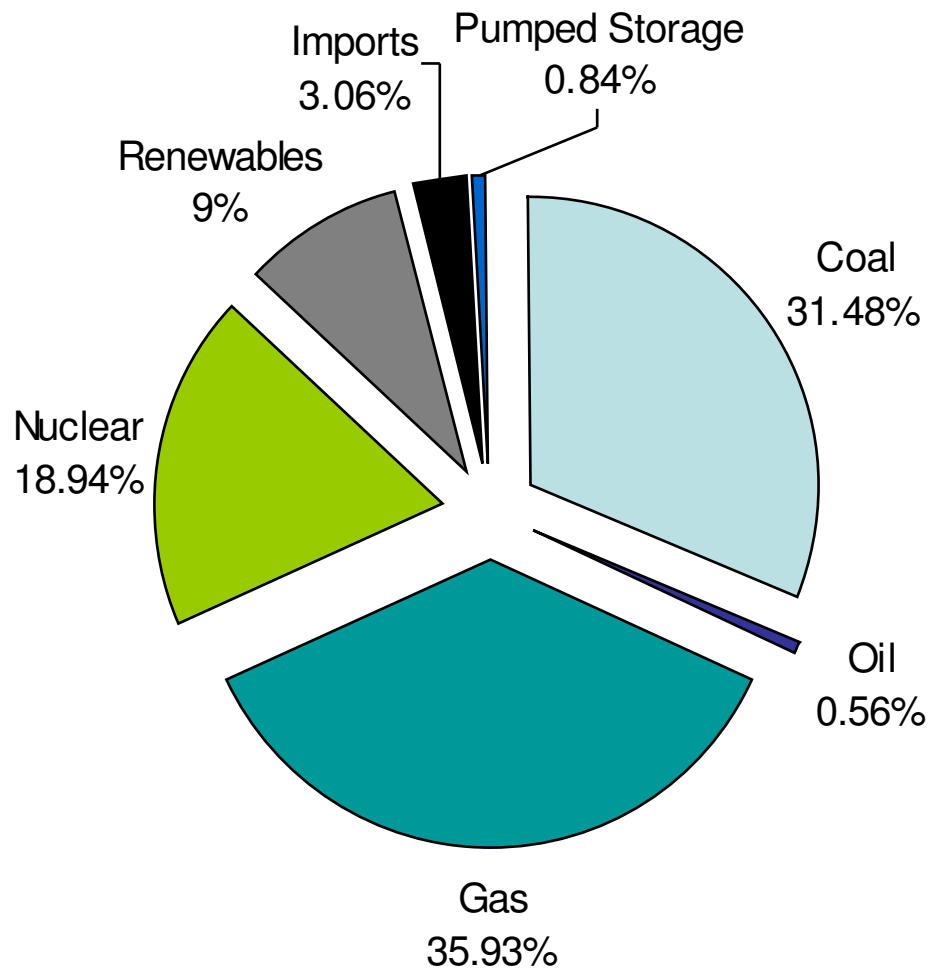


Projected electricity demand (TWh)

| | Baseline | Energy White Paper proposals |
|------|--------------|------------------------------|
| 2005 | 367.5 | 367.5 |
| 2010 | 365 | 360 |
| 2020 | 415 | 367 |

Future generation mix

2010



2020

