

# Outlook on Britain's future energy needs

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**This factsheet explains Ofgem's contribution to the first of what will be an annual joint Ofgem and Government report – the Energy Markets Outlook – outlining the prospects for gas and electricity supply to help the industry and consumers to make the decisions needed to maintain security of supply.**

## ▶ Markets deliver

Recent experience from the energy industry in Great Britain has shown that competitive markets deliver powerful incentives that spark action by energy producers as well as customers to maintain security of supply. We have seen this in the gas sector where markets delivered a surge of investment to maintain security of supply. We have seen too how price shocks can lead to reductions in energy use by

business and domestic customers which helps to manage temporary shortages.

For this reason Government policy combines competitive markets in energy with independent regulation to achieve its key aim of sustaining secure and reliable supplies of energy.

## ▶ Assessing risk

No amount of investment will ever be enough to deliver an absolute guarantee that energy supplies will be sufficient to

meet demand. So security of supply is a matter of assessing risks, rather than certainties.

## ▶ Outlook and insight

Ofgem and Government have launched a yearly Energy Market Outlook programme to review prospects for the medium- and long-term security of supply. This programme will look at the availability of infrastructure planning and

other constraints. And it will monitor the availability of primary fuels such as gas, oil and coal in the long-term.

## ▶ Time to act

The first report delivered by the Energy Market Outlook programme supports the view that the risks to energy security are sufficiently far in the future for industry and

customers to be able to invest and build to head-off the possibility of energy shortages.

## ► Electricity

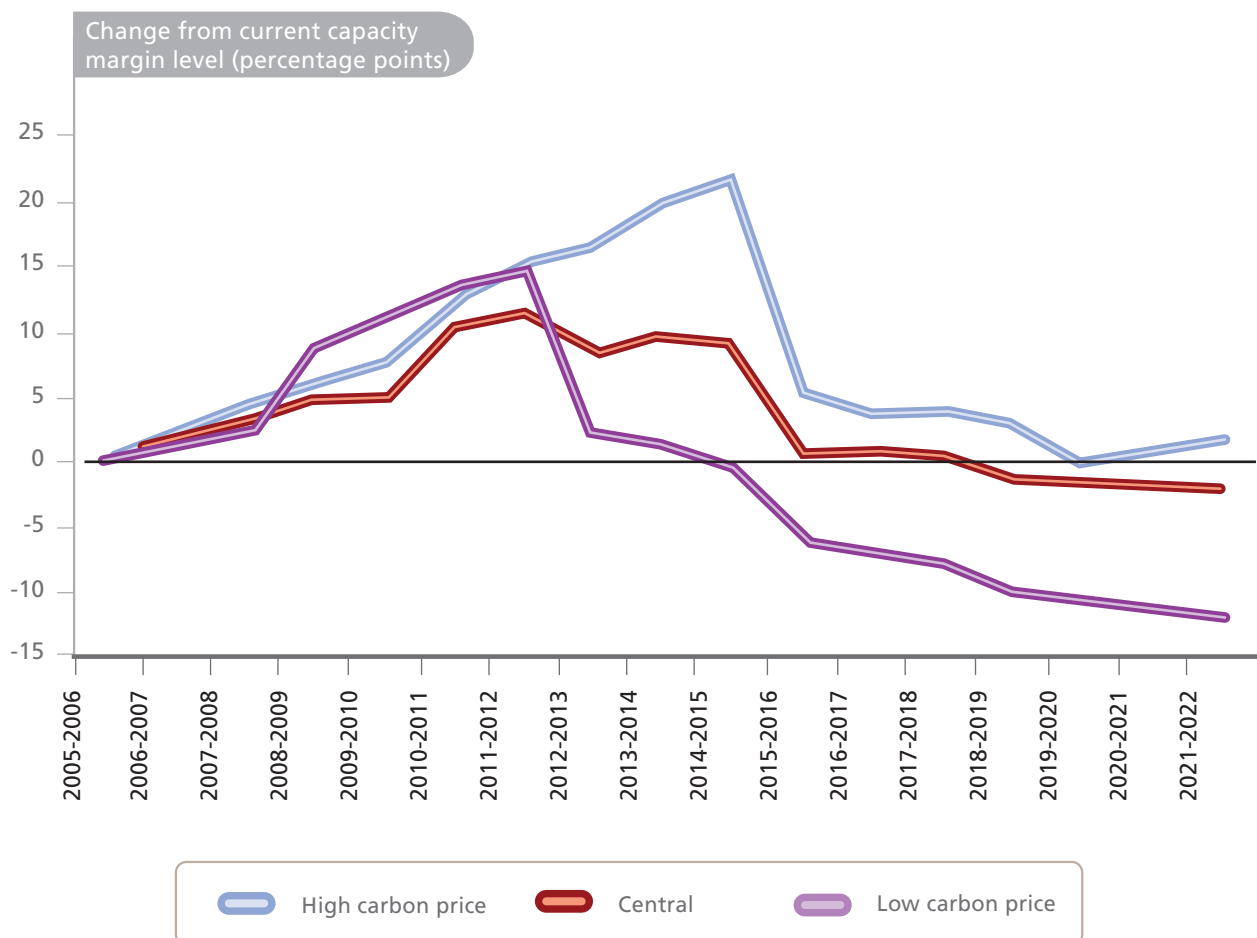
Britain currently has a diverse generation capacity. But next year European legislation, designed to curb the pollutants that cause acid-rain, will force closures of coal plant and oil-fired power stations. In addition, the existing generation fleet is ageing and a number of nuclear and fossil fuel plants are expected to close as a result. This will progressively erode the current generating capacity.

The market is already coming forward with new planned investment with some 14GW of new plant at various stages between proposal and commissioning. Looking forward, our analysis indicates that if there is no new investment, above

that which is currently known, Britain's level of surplus capacity will remain above the current level until 2014. This is sufficiently far out to enable the industry to fill any potential gap in the future.

A powerful influence on future surplus capacity will be the value of carbon dioxide emission allocations under the European Union Emissions Trading Scheme. For example, high carbon prices will increase electricity prices and so would be expected to push down demand (see graph) with low carbon prices having less impact on demand.

**Electricity capacity will continue to outstrip demand until 2014 with currently planned investment**



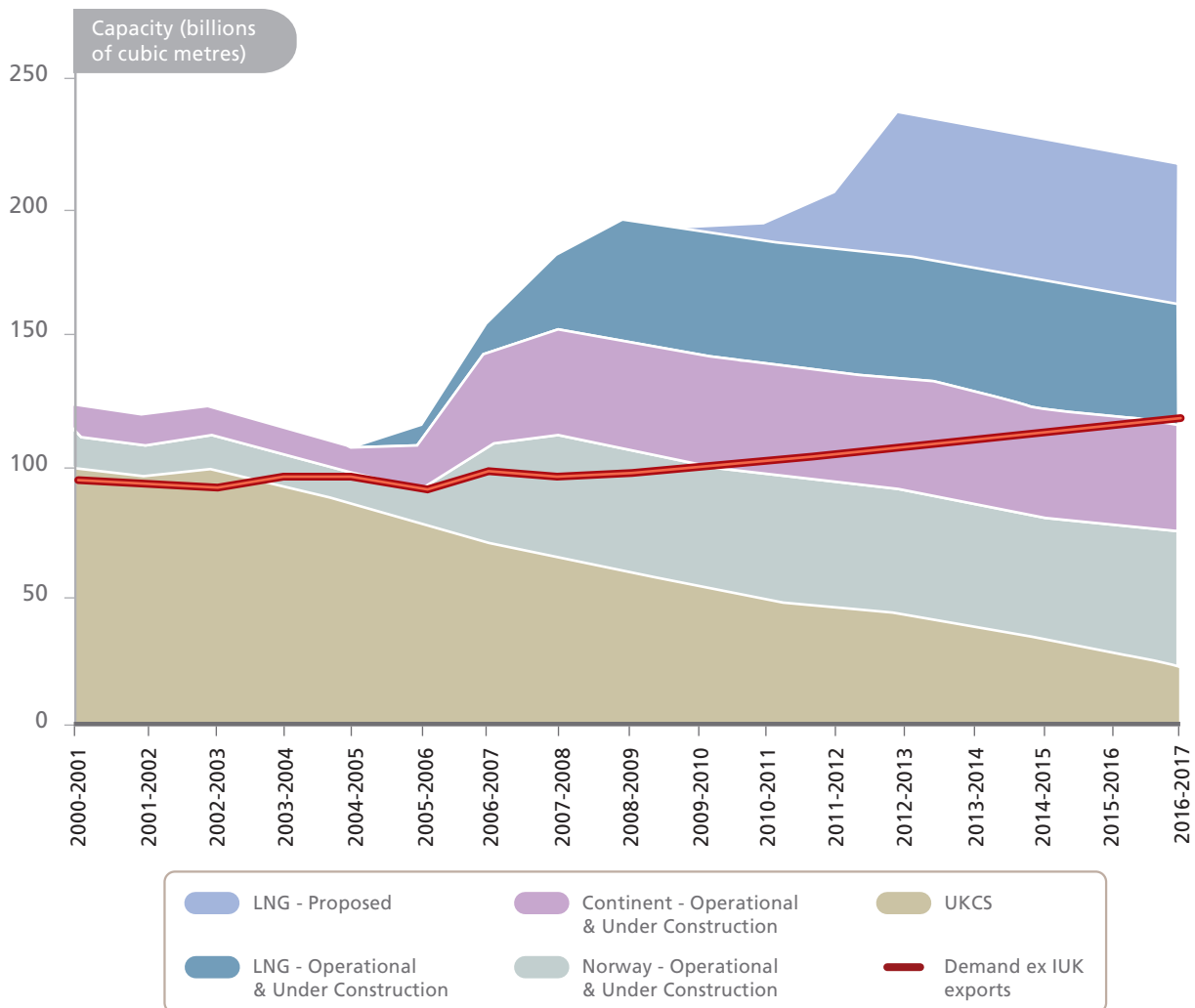
► Gas

The decline in gas supplies from the North Sea means that the UK's dependence on gas imports is growing. In response to that decline, recent heavy investment in new infrastructure has more than doubled the UK's capacity. This means that under any reasonable scenario, UK gas infrastructure capacity will outstrip demand.

This is particularly true in the case of Liquefied Natural Gas (LNG) which can be shipped in from many remote regions. The use of LNG creates flexibility to respond to unexpected difficulties but only if prices are attractive in the UK. This means price signals may have a growing influence on balancing short-term gas supply and demand.

But the price of imported gas is linked to global markets so there remains a question over how much that capacity will deliver and at what price given international competition.

**Adding current, under construction and proposed gas capacity, the total will exceed any reasonable demand forecast**



## ► Renewable energy

Britain enjoys a continued and sustainable abundance of wind and other primary renewable resources. The adoption of this form of generation is a crucial element of the UK's strategy to tackle climate change caused by the emission of carbon dioxide.

Prospective renewable generators are responding to the incentives to invest provided in the UK's Renewables Obligation which subsidises the price renewable generators receive for their electricity. And the industry is looking to the European Union regime for trading allowances to emit carbon dioxide – the EU Emissions Trading Scheme – to create further incentives to grow renewable capacity. But in the short term there is uncertainty about the market for carbon allowances which may delay investment and create a squeeze on capacity.

Extensive deployment of renewable energy will bring new costs including the need for back up capacity, upgrades to the electricity networks as well as greater cost of balancing the system.

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