ofgem **Theme 4**

Ensuring a secure and reliable gas and electricity supply

Sustainable Development Indicators

The UK Government and Devolved Administrations set out a strategy for sustainable development, *Securing The Future*, in 2005. Drawing on this framework and stakeholder feedback, we focus on the five themes which we think capture how the Gas and Electricity Markets Authority should contribute to the sustainability challenges of the 21st century.

The fourth of the five themes is ensuring a secure and reliable gas and electricity supply. Our regulation of the electricity and gas networks, and our commitment to sustaining a regulatory environment that supports investment, underpin our goal to ensure that cost-effective, reliable and diverse energy supplies are always available to consumers.

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Indicator 12: Reliability of supply – network performance

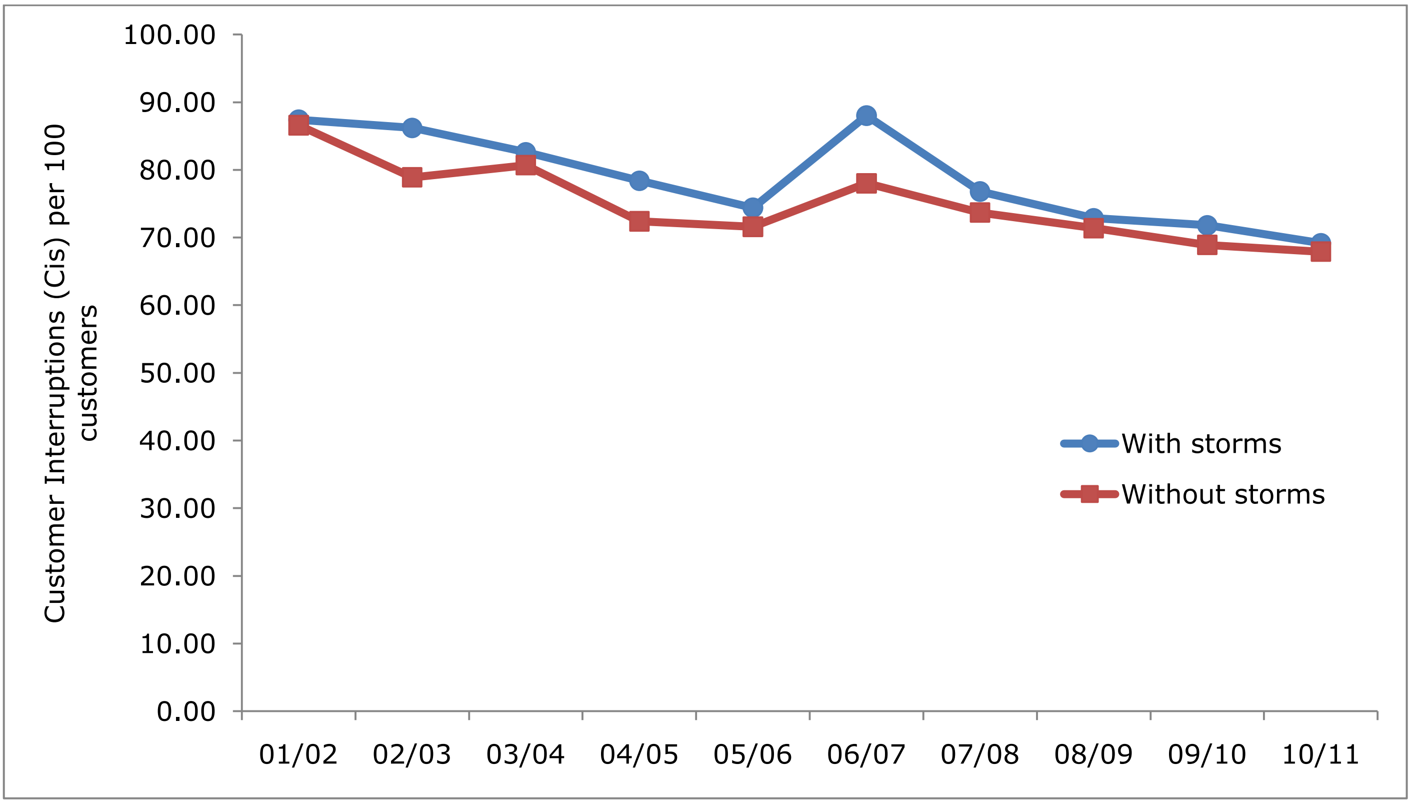

Figure 20 - Average electricity customer interruptions (CI) per 100 customers (updated January 2012)
Source: Ofgem data

The average number of electricity customer interruptions has fallen for the past 3 years. In the 2010/11 reporting year there were 18 fewer interruptions per 100 customers than in 2001/02 when quality of service incentives were introduced.

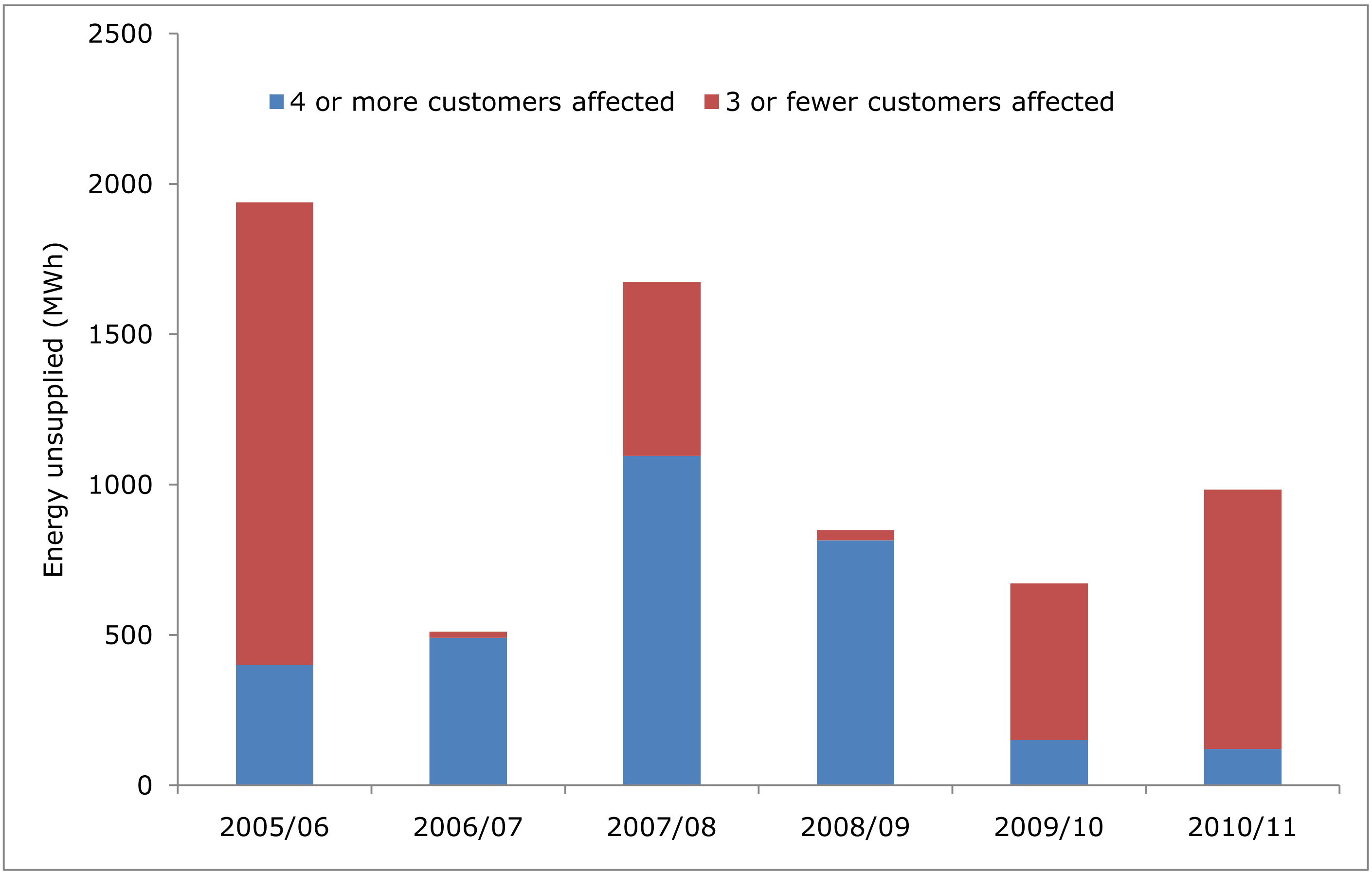

Figure 21 - Energy unsupplied due to transmission network faults (updated January 2012)
Source: Ofgem

There has been a slight reduction in energy unsupplied to 4 or more customers in the last year. The power cuts that occurred this year typically affected 3 or fewer customers; the increase in this category was mostly due to incidents in Lackenby, Hartmoor and Cockenzie where system trips coincided with planned maintenance.

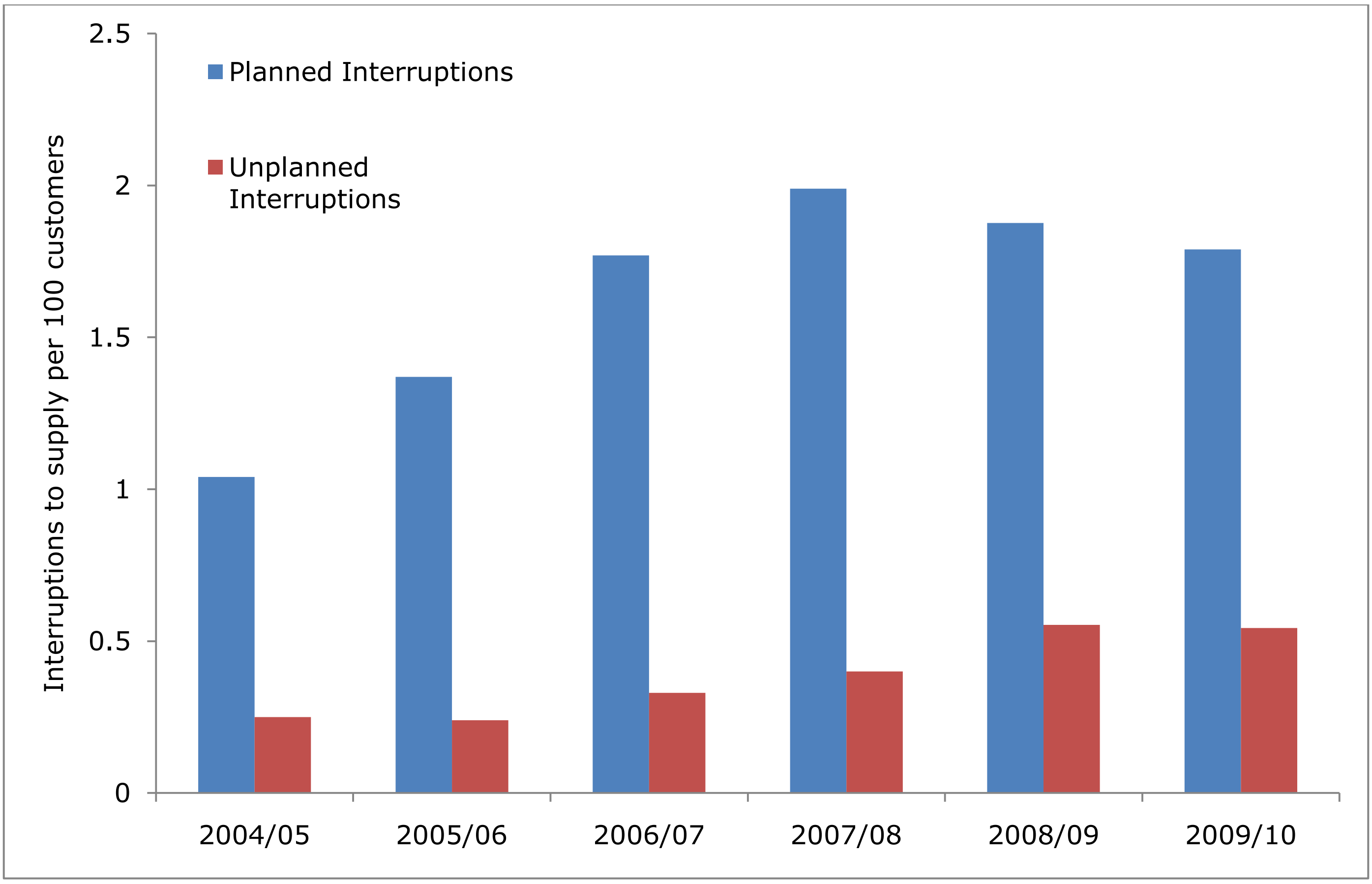

Figure 22 - Average gas customer interruptions per 100 customers (updated January 2012)
Source: Ofgem data

The graph shows that planned interruptions have fallen since 2007/08, and unplanned interruptions also fell last year. Improvements to the reporting of interruptions data have been made since 08-09 and this has improved both the accuracy and completeness of data reported. It should therefore be noted that some of the trends apparent in the data may be put down to an increase in reporting accuracy, rather than genuine changes in performance.

Indicator 13: Security and diversity of supply – market response

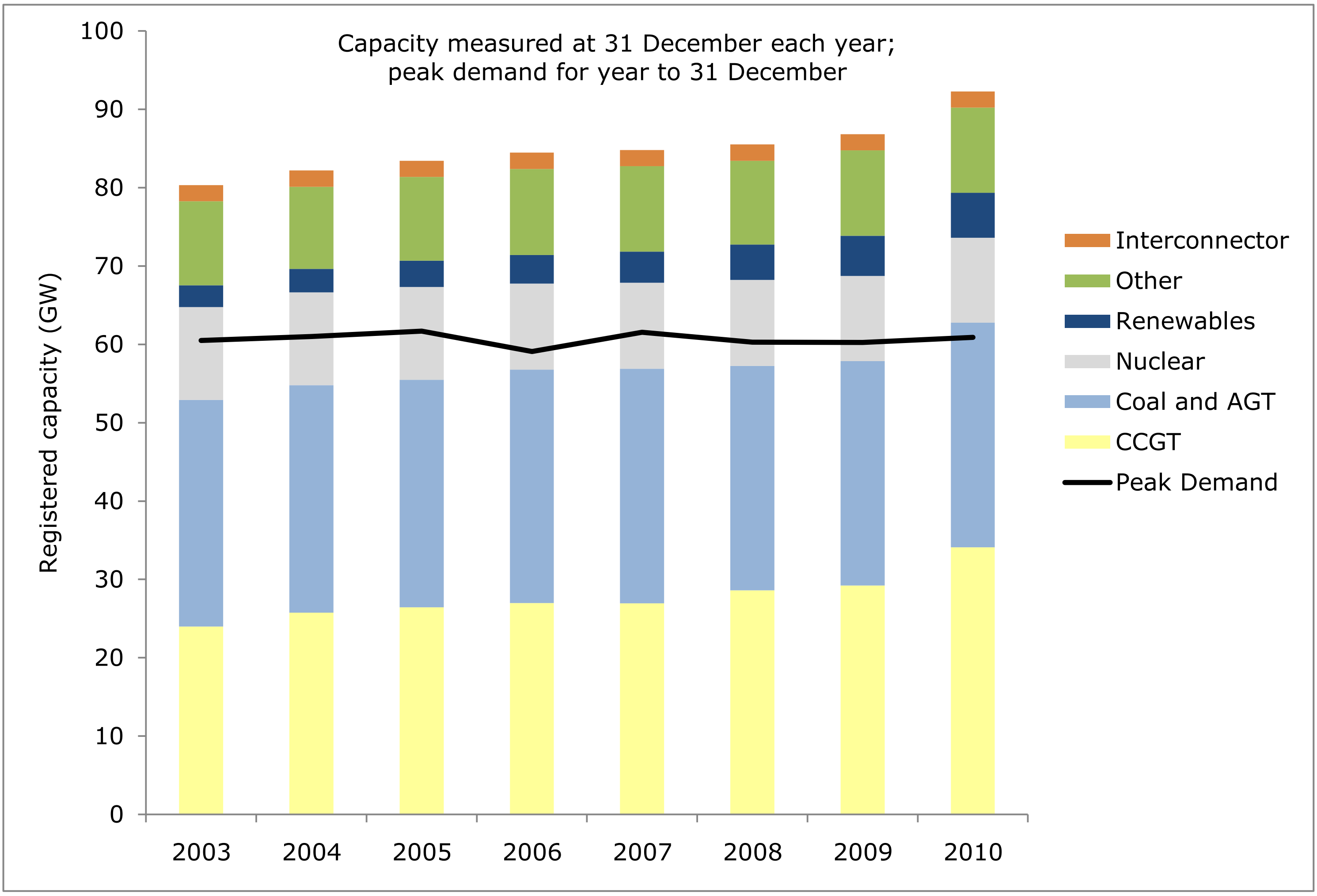

Figure 23 - The UK electricity generation mix (updated October 2011)
Source: DECC DUKES

5 new Combined Cycle Gas Turbine stations opened in 2010, producing nearly 5,000MW capacity between them, whilst capacity from other generation sources remained stable. The UK's maximum demand in 2010 represented 66 percent of all registered generation capacity. This relatively high capacity margin becomes necessary as intermittent generation sources, such as wind, form a greater part of the generation mix.

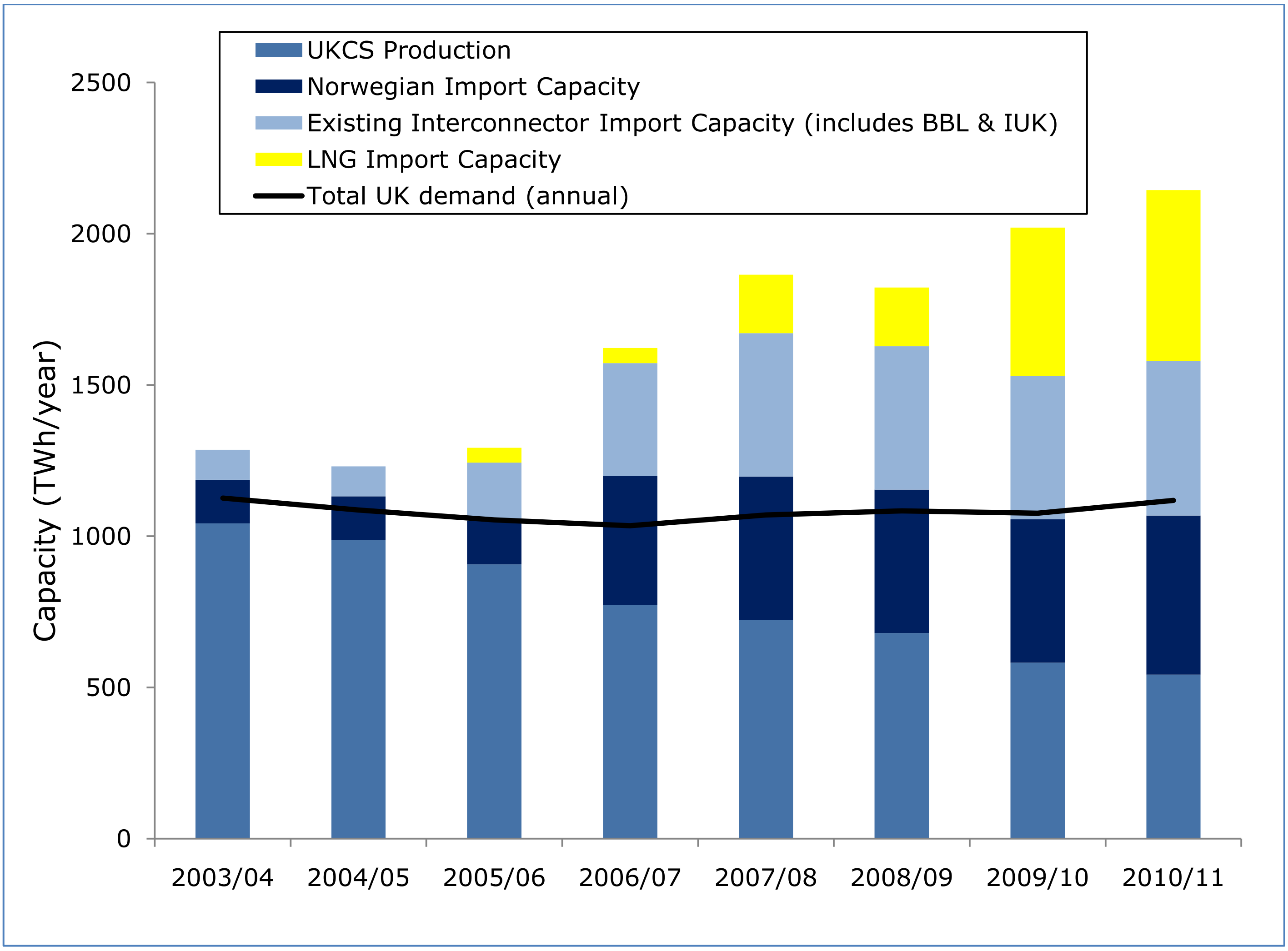

Figure 24 - Gas supply capacity in the UK (updated June 2011)
Source: National Grid

Liquefied Natural Gas (LNG) and interconnector import capacity have increased due to new projects coming online. Import capacity is becoming increasingly important for gas security of supply as UK continental shelf (UKCS) gas production peaked in 2000 and is now in decline. The UK has a fairly diverse supply as it comes from many different sources including imported LNG.

Indicator 14: Future supply capacity mix

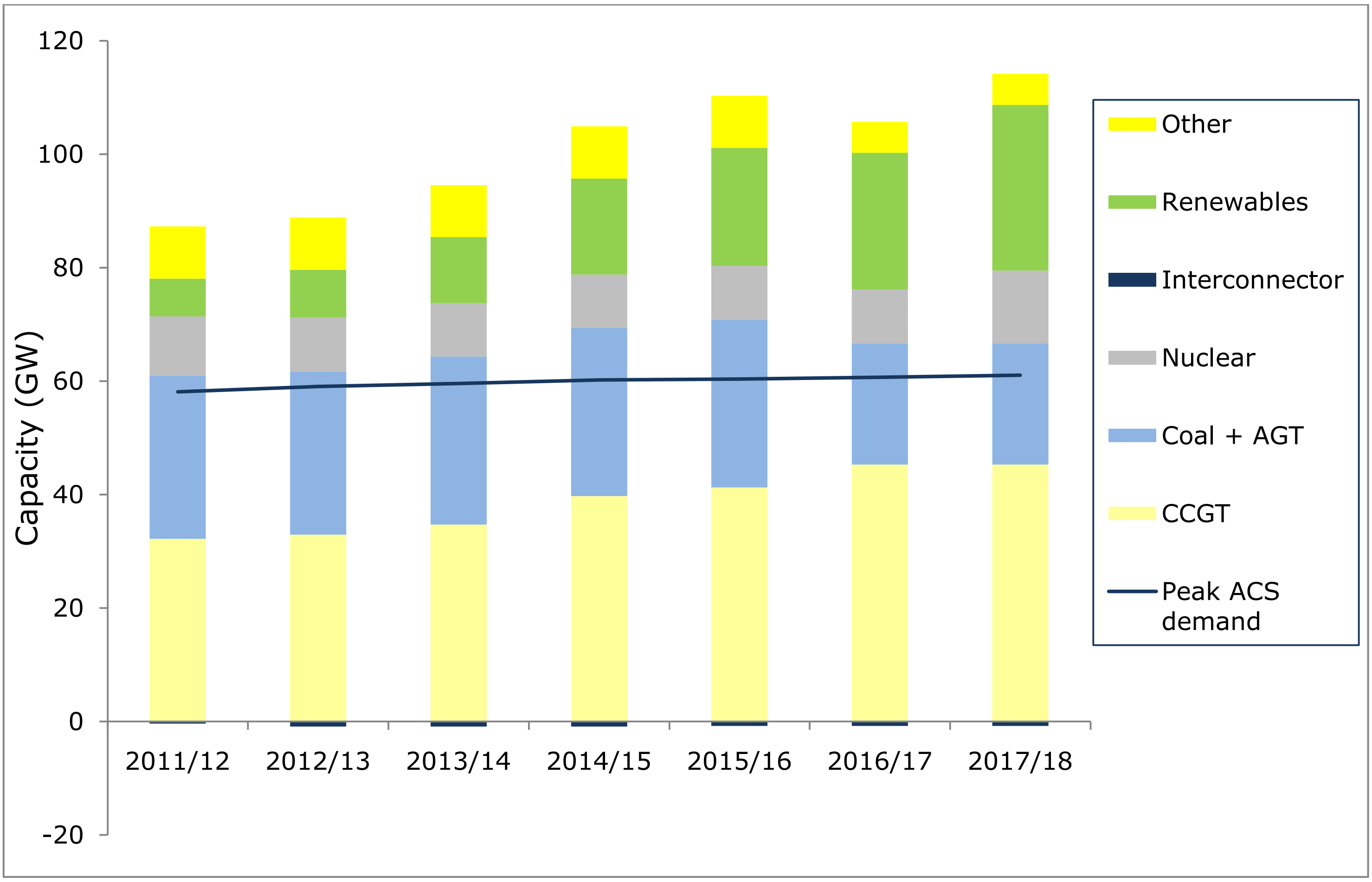

Figure 25 Projected UK electricity generation mix (updated June 2011)
Source: National Grid Seven Year Statement 2011

There will be significant changes in the electricity generation market this decade. As shown in the chart, gas and renewable energy generation are predicted to increase. According to the Seven Year Statement, renewables could reach almost 23 percent of installed capacity in 2017 while Combined Cycle Gas Turbines (CCGTs) could have a 40 percent share of capacity.

ACS stands for Average Cold Spell.

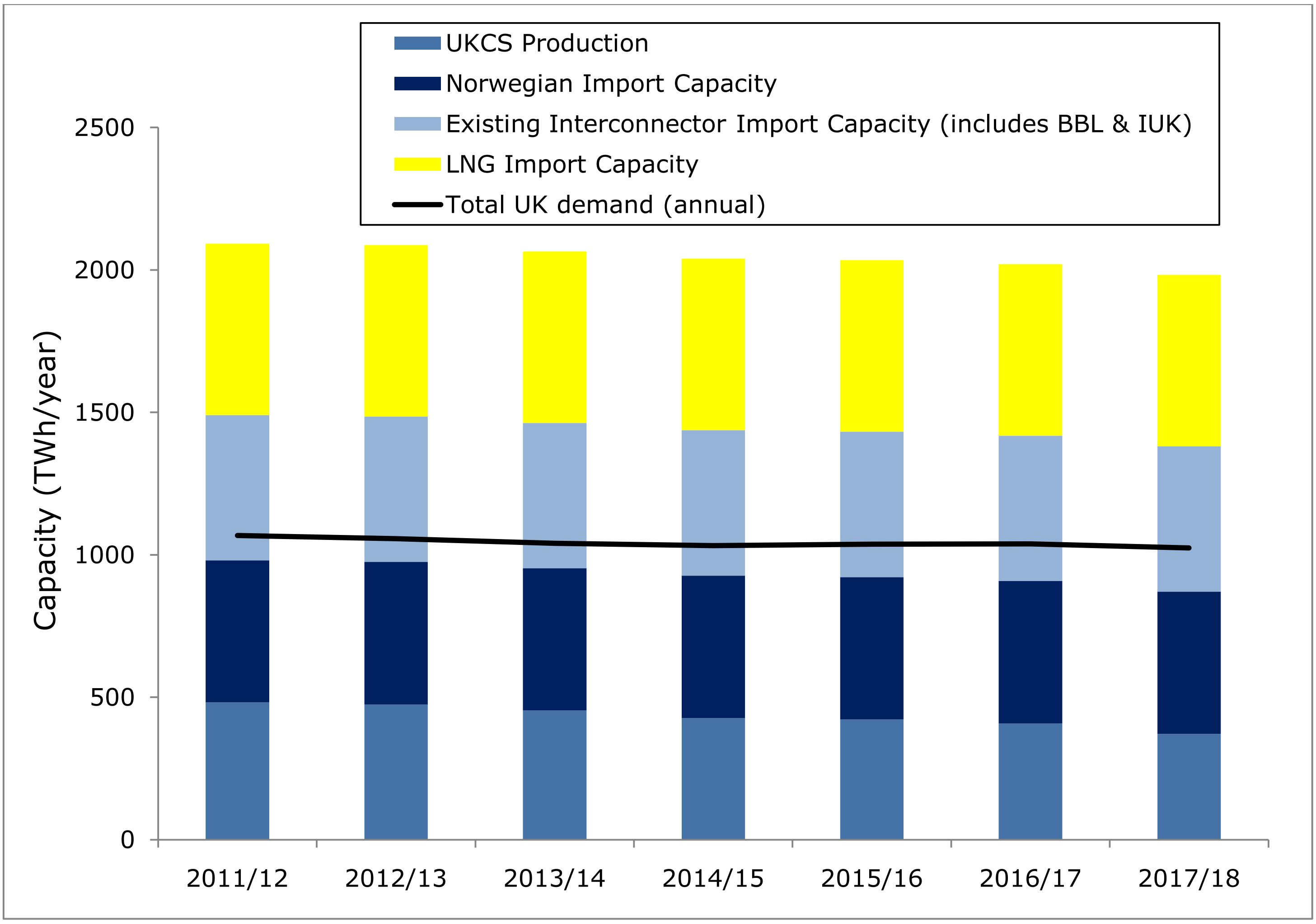

Figure 26 - Projected future gas supply capacity in the UK (updated June 2011)
Source: National Grid

In the future, UKCS supplies are expected to continue to decline, although this may be slowed by the prospect of new gas supplies from the West of Shetland in the medium term. Gas import capacity is expected to be maintained well above the level required to enable sufficient gas to be imported to meet demand. These supplies are diversified as they include pipelines and LNG re-gasification capacity.

Indicator 15: Product Innovation

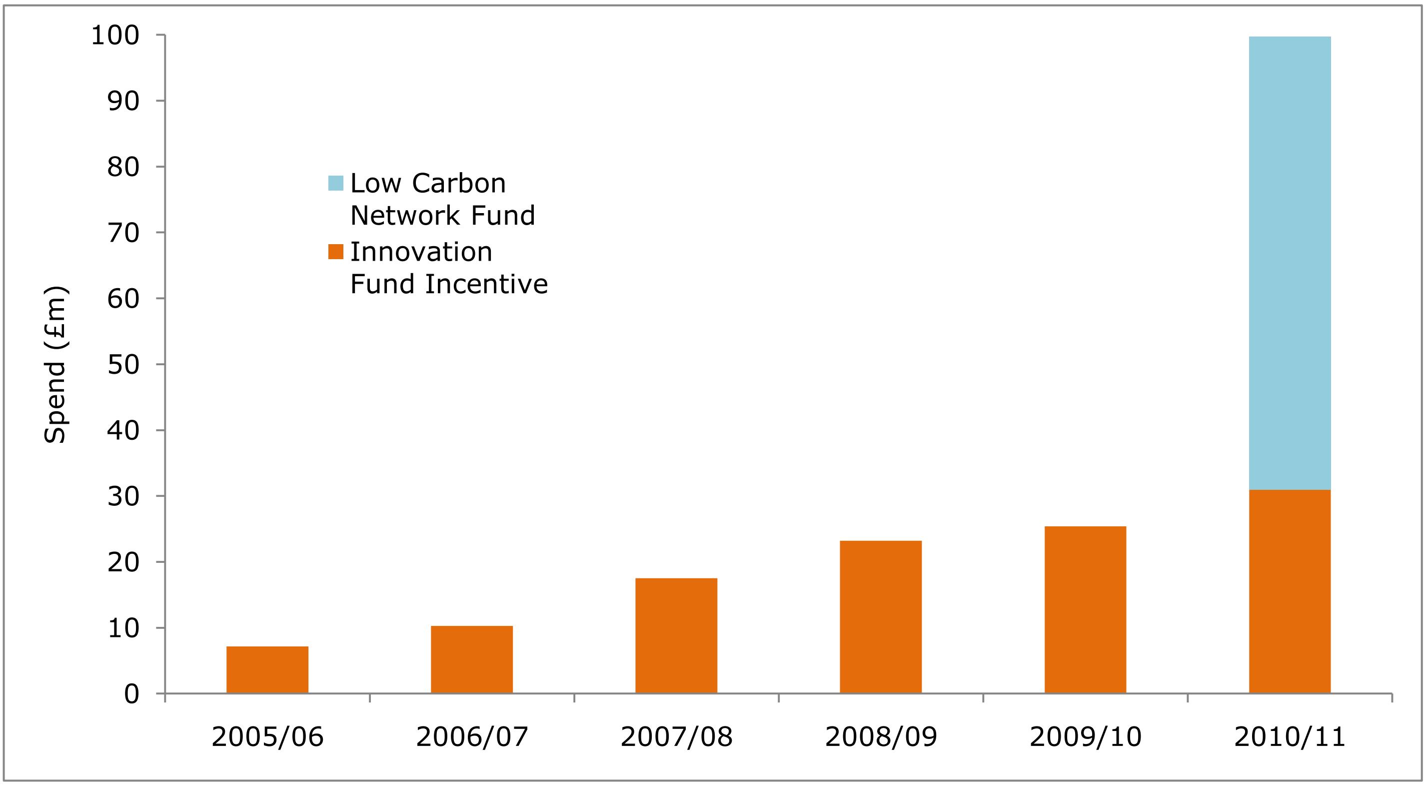

Figure 27 - Innovation funding (updated October 2011)
Source: Energy companies and Ofgem data

The Innovation Fund Incentive (IFI) has been growing since its conception in 2005, boosted by the inclusion of transmission companies from 2007. The IFI will remain in place until 2013 for Gas Distribution, Gas Transmission and Electricity Transmission Companies. It will continue until 2015 for Electricity Distribution Companies.

The second tier of the Low Carbon Network (LCN) Fund can allocate up to £320m during the price control period or up to £64m each year. In the first year, a total of £63.6m was awarded to innovative projects.