### 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 21<sup>st</sup> 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

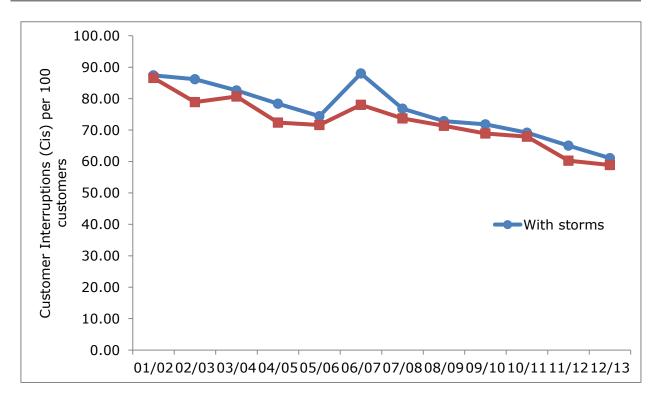


Figure 20 - Average electricity customer interruptions (CI) per 100 customers (updated January 2014)

Source: Ofgem data

The average number of electricity customer interruptions has fallen for the past 5 years. In the 2012/13 reporting year there were 27 fewer interruptions per 100 customers than in 2001/02 when quality of service incentives were introduced.

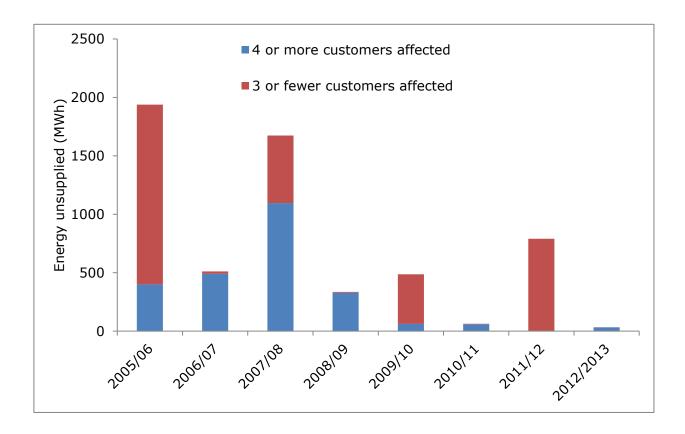


Figure 21 - Energy unsupplied due to transmission network faults (updated January 2014)

Source: National Grid

In 2012/13 there was a small increase in energy unsupplied to 4 or more customers. The '3 or fewer customers' category decreased substantially. This category covers locations where major industrial customers are directly connected to the transmission system.

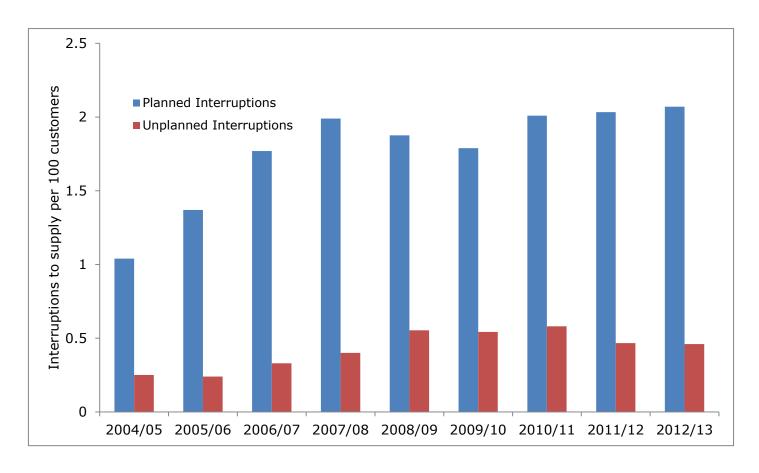


Figure 22 - Average gas customer interruptions per 100 customers (updated January 2014)

Source: Ofgem data

The graph shows that planned interruptions increased very slightly in the past year, but unplanned interruptions fell. 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

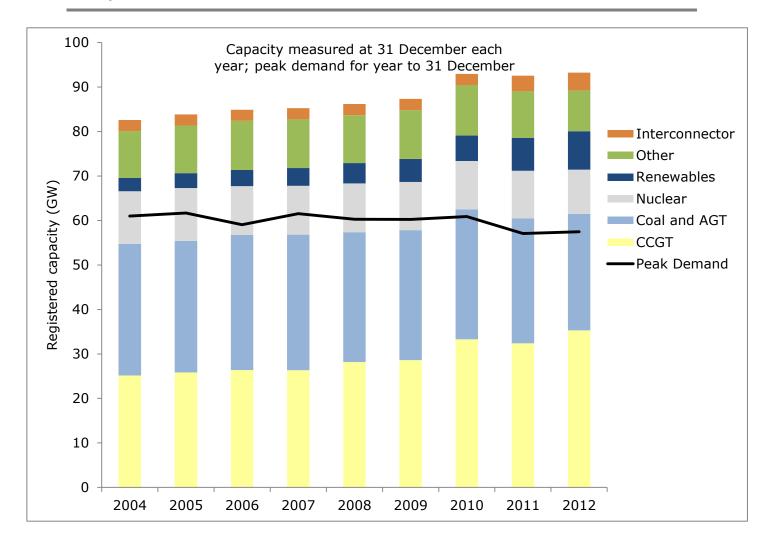


Figure 23 - The UK electricity generation mix (updated November 2013)

Source: DECC DUKES

Over the past year there has been more than a 1GW increase in renewables capacity, as well as a 0.5GW increase in interconnector capacity. The UK's maximum demand in 2012 represented nearly 62 percent of all registered generation capacity. This relatively high capacity margin is becoming increasingly important as intermittent generation sources, such as wind, are increasing their share of the generation mix.

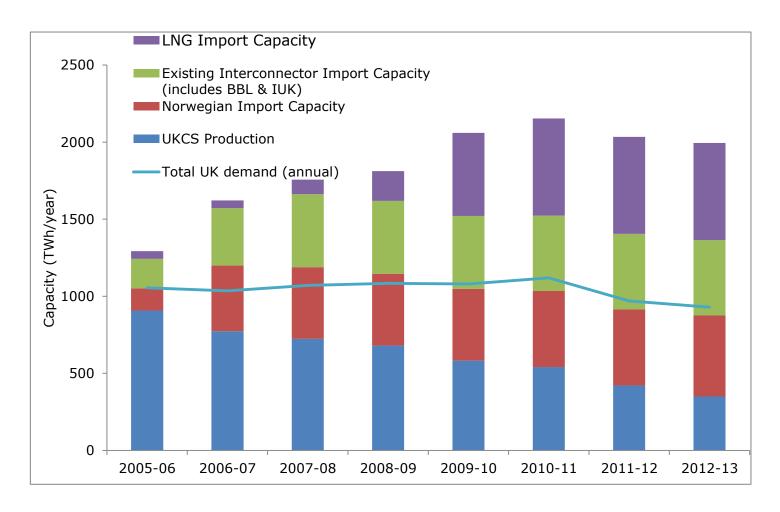
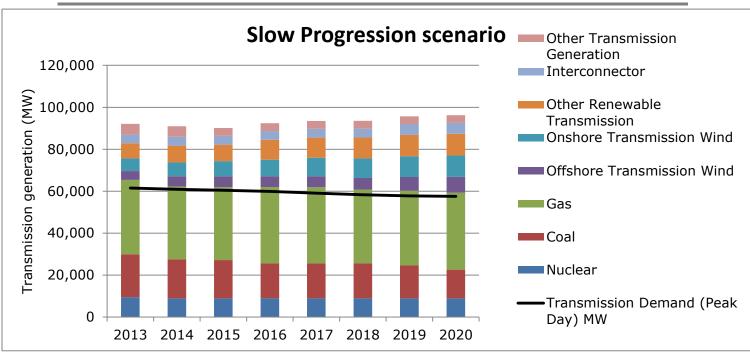


Figure 24 - Gas supply capacity in the UK (updated July 2013)

Source: National Grid

UK continental shelf (UKCS) gas production continues to decline, but there has been an increase in our Norwegian import capacity in the last year, as well as a decrease in demand.

### Indicator 14: Future supply capacity mix



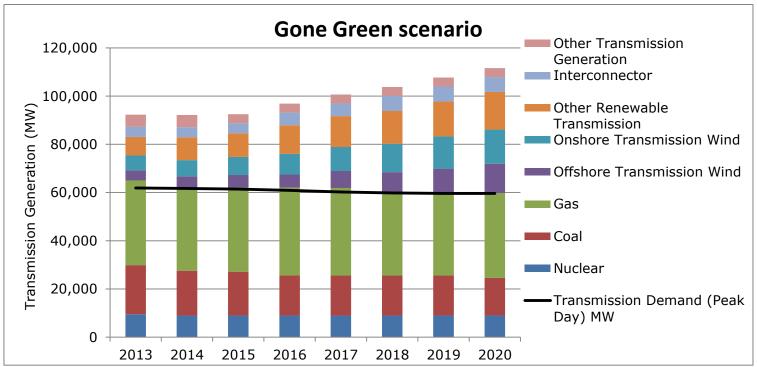


Figure 25 - Projected UK electricity generation mix (updated July 2013)
Source: National Grid Future Energy Scenarios, published July 2013

Future Energy Scenarios are scenarios published by National grid for the purpose of providing a detailed analysis of credible scenarios for the system out to 2035 and 2050.

The graphs show two possible scenarios for the future of the UKs electricity generation mix compared to the projected peak demand. The 'Gone Green' scenario involves significantly more nuclear and offshore wind than 'Slow Progression', but nearly 10MW less gas generation by 2020. Both scenarios provide more than 35MW capacity over the anticipated peak demand by 2020, with slightly lower demand and higher total capacity under 'Gone Green'.

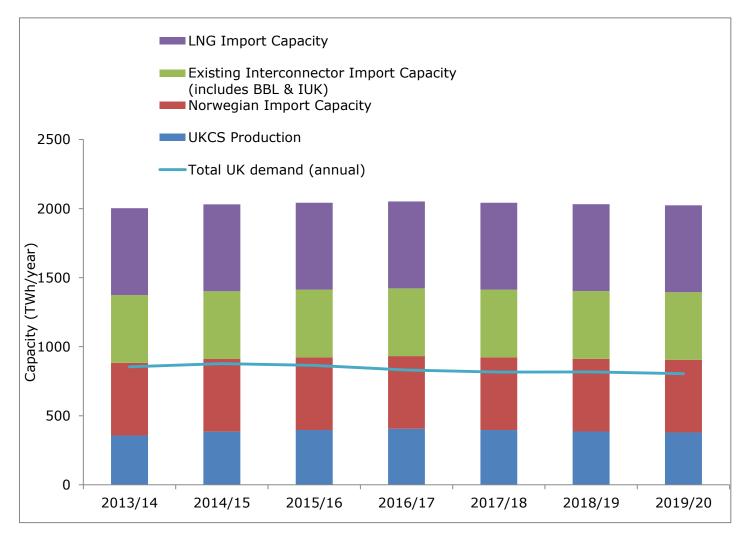


Figure 26 - Projected future gas supply capacity in the UK (updated July 2013) Source: National Grid

UK continental shelf (UKCS) supplies are forecast to increase up to 2016/17, before again declining. Demand is expected to fall from 2014/15 onwards, whilst import capacity is forecast to remain stable across the period.

#### Indicator 15: Product Innovation

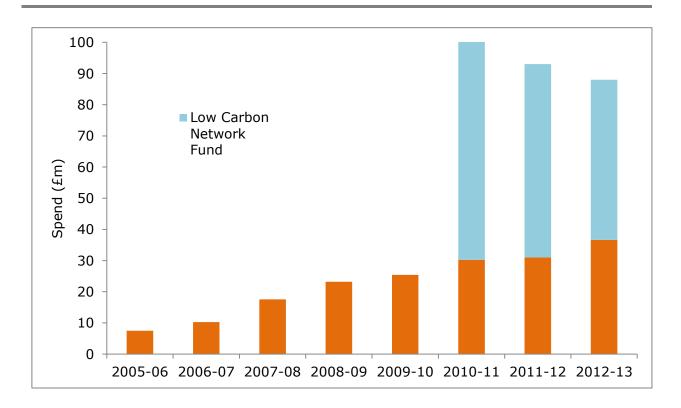


Figure 27 - Innovation funding (updated January 2014)

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. We replaced the IFI with the innovation stimulus package for gas distribution, gas transmission and electricity transmission licensees in April 2013. It will continue until 2015 for electricity distribution licensees.

£5.8m was spent on projects registered under the First Tier of the Low Carbon Network Fund (LCNF) in 2012-13. The Second Tier of the LCNF can allocate up to £320m during the price control, and in its third year awarded £51.3m.