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# Renewable and low-carbon power in the UK

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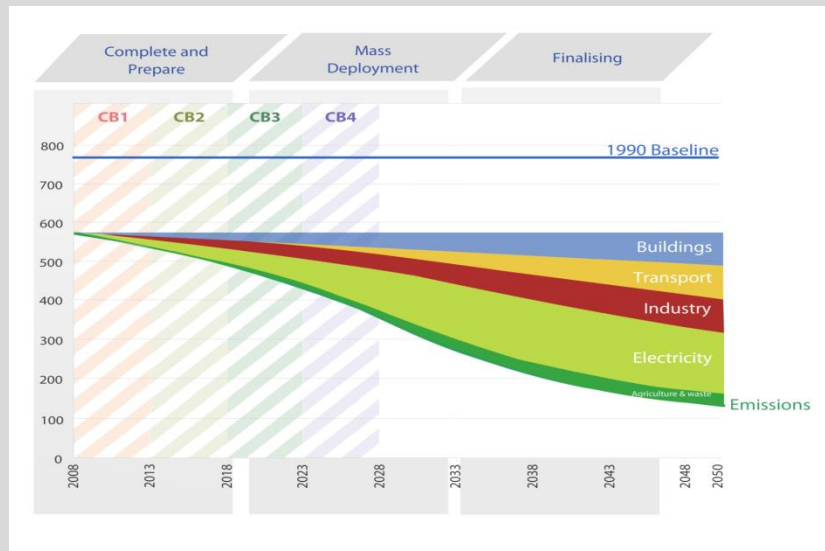
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# UK emissions must fall 80% by 2050

- The Climate Change Act commits the UK to an **80% reduction in Greenhouse Gases** in 2050 compared to 1990.
- The Act requires that we cap emissions over successive five year periods. These budgets must be set 12 years in advance.



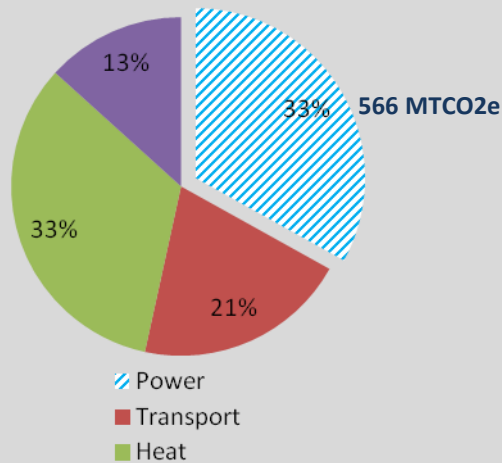
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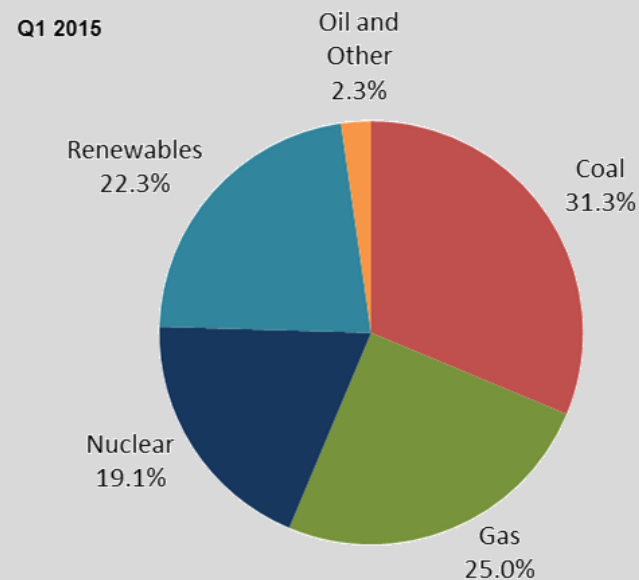
# The power sector is a significant emitter

The power sector makes up around a third of UK emissions.



2013

Current generation mix includes coal, gas, nuclear and renewables.



Source: UK Energy Trends June 2015

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# The UK power sector is undergoing transformational reforms

## Phase out unabated coal

In 2014, coal provided 30% of the UK's electricity but accounted for 69% of total carbon emissions from the electricity sector. The UK will consult on plans to close all by 2025.

“Frankly, it cannot be satisfactory for an advanced economy like the UK to be relying on polluting, carbon intensive 50-year-old coal-fired power stations” *Secretary of State Amber Rudd, November 2015*

## First nuclear new build in a generation

1. Hinckley Point C – mid 2020s
2. Plans for plants at Wylfa and Moorside

This fleet could provide up to 30% of the low carbon electricity which the UK is likely to need through the 2030s and create 30,000 new jobs.

## Renewables

Roughly half of all the world's offshore wind is installed in the UK.

We have a strong pipeline to deliver aspiration of 30% renewable power by 2020.

## New gas generation

Capacity market launched in 2014, will be reviewed in 2016 to ensure the market brings forward the gas plants needed in the 2020s.

Encouraging investment in our shale gas exploration to add new sources of home-grown supply to a diverse supply of imported gas.

Also consulting on a strategy to maximise the economic recovery of the North Sea.

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# We are progressing towards 30% power from renewable sources by 2020



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**Power sector has a strong pipeline to deliver UK aspiration for 30% renewables by 2020, including:**

- 10GW offshore wind
- 12GW onshore wind
- 12GW solar

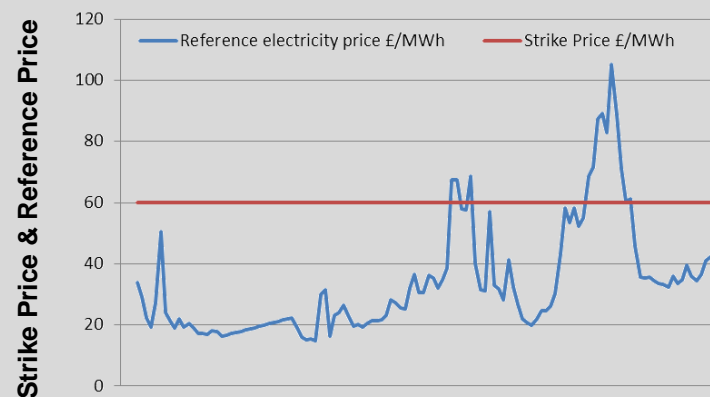
**The support regime has evolved through time:**

## **2002-2017: Renewables Obligation**

Suppliers required to purchase % of power from renewables, generating tradeable certificates. Demand led scheme.

## **2015→: Contracts for Difference**

Private law contract with generators – paid a ‘strike price’ for their power (e.g. Offshore wind in 2018/19: £114/MWh ) relative to reference price. Auction with constrained pot.



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# UK intends to target support where it is needed most and will have biggest impact



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## UK is **the global market leader**

5.1GW installed or under construction, and on track to deliver 10GW by 2020

14,000 people employed in the sector

Cost of contracts has fallen 20% in two years

**Subject to costs continuing to fall, UK will hold three further funding rounds this parliament**

Continued support for building a **new nuclear fleet**, providing up to 30% of the low-carbon generation needed in the 2030s.

**Costs of solar and onshore wind have fallen in the UK.** Expect to see 12GW of each installed by 2020. Where costs have fallen, we intend to allow technologies to compete in the market without subsidy.

**“We want to set a compelling example to the rest of the world of how to cut carbon while controlling costs”**

*Secretary of State Amber Rudd, November 2015*



# Kick-starting global innovation and deployment will support cost reductions



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**On Monday, the UK joined the US, China, India and Brazil in launching Mission Innovation** - an international programme to accelerate clean energy innovation and deployment:

- 20 countries committed to at least doubling government spending on clean energy RD&D within five years.
- Private sector investors committed to increase their multi-billion dollar investments in clean tech, particularly new disruptive technologies (including Bill Gates, Richard Branson, and Christopher Hohn).
- Increased coordination, exchange, and transparency on R&D programmes.



“Accelerating widespread clean energy innovation is an indispensable part of an effective, long-term global response to our shared climate challenge; necessary to provide affordable and reliable energy for everyone and to promote economic growth; and critical for energy security.”

- *Mission Innovation Joint Launch Statement*





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# Thank you!

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