

# The UK Low Carbon Transition Plan

An introduction to our national strategy for climate and energy

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 HM Government

## The UK Low Carbon Transition Plan

National strategy for climate and energy



Building Britain's Future  ACT ON  2

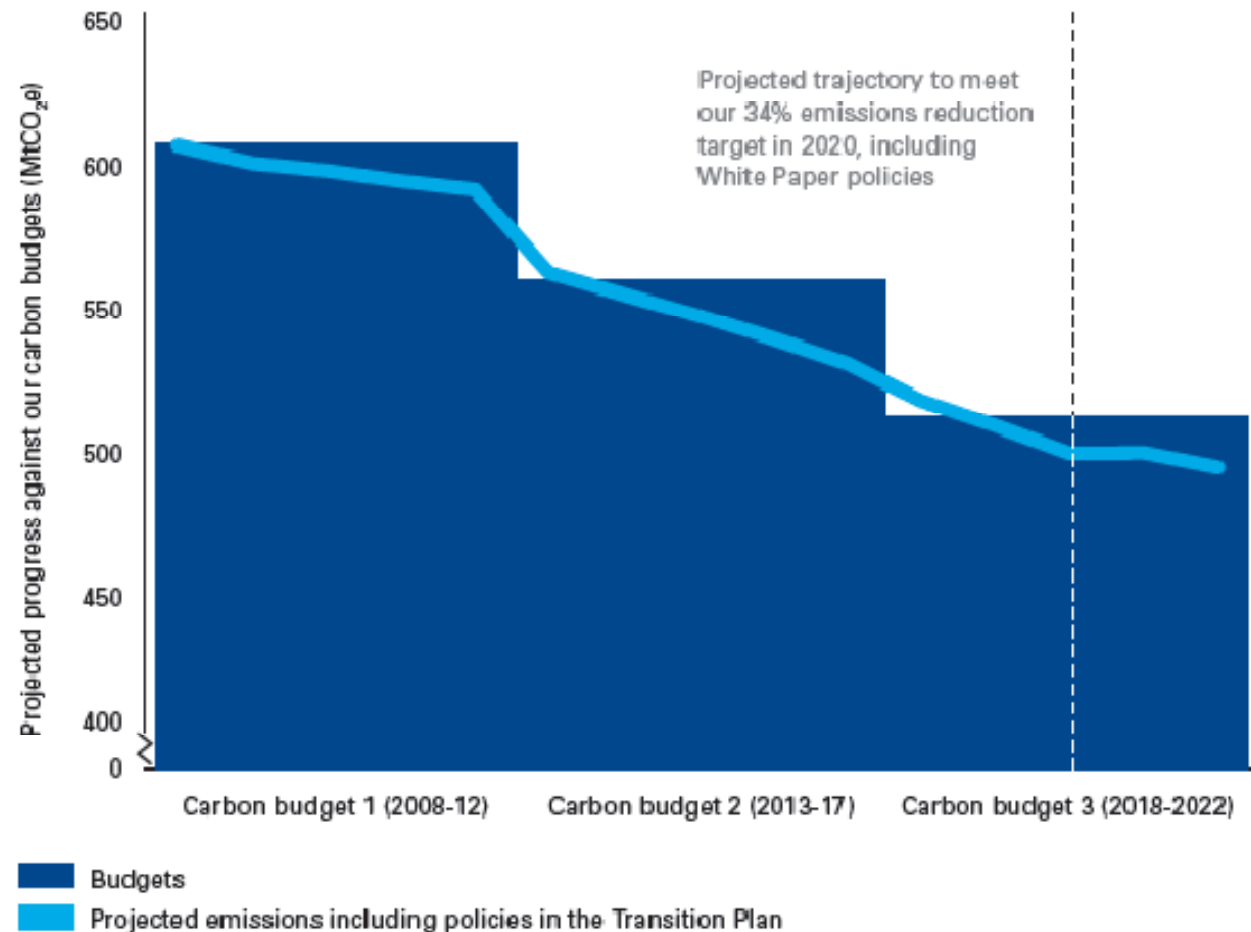
# The Government will drive the transition to a low carbon UK using the world's first ever legally binding carbon budgets

Chapter 2: Driving the transition

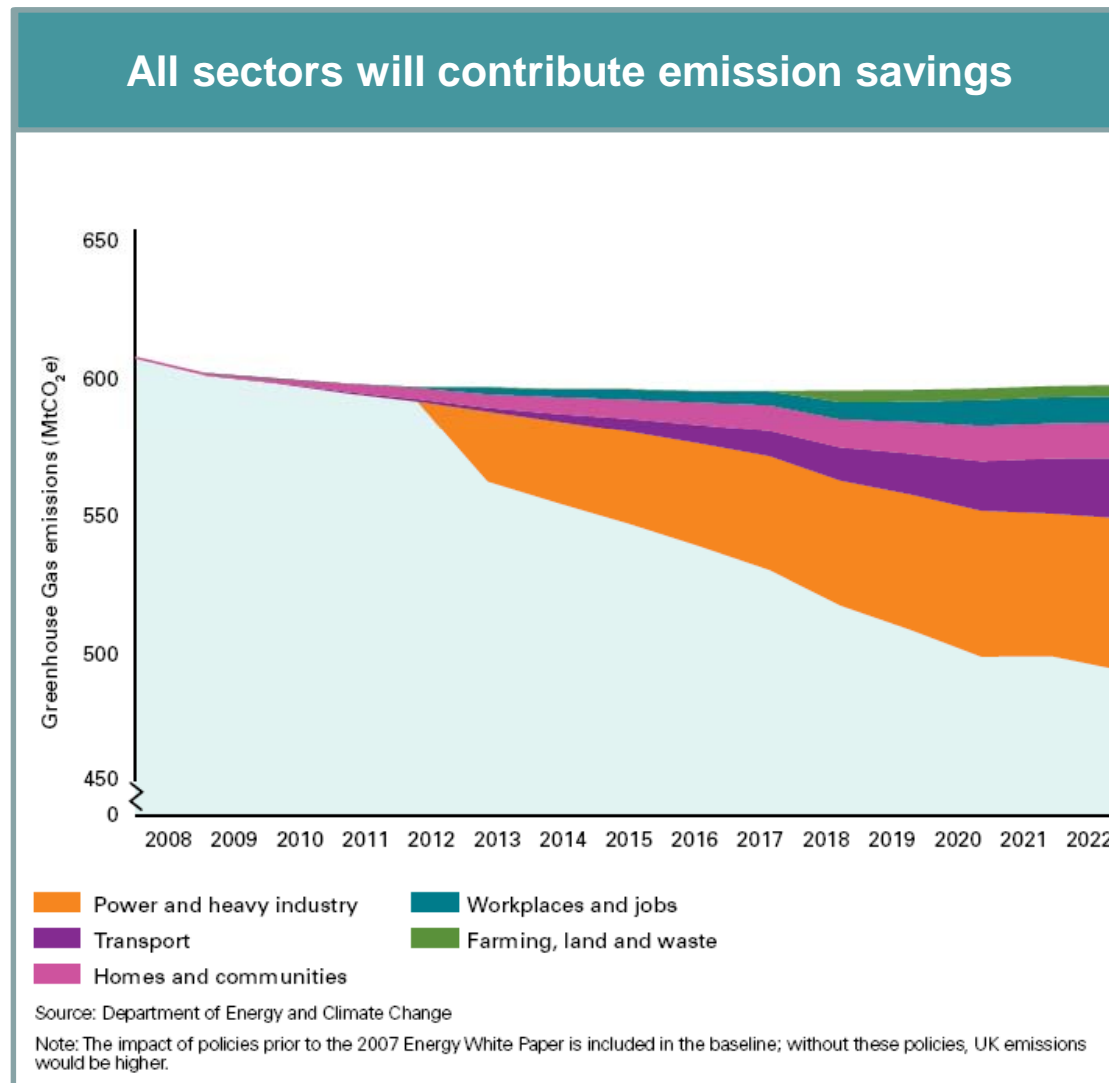
The UK's 2008 Climate Change Act set up the legal requirement for 3x5 year carbon budgets

Our carbon budgets are equivalent to a **34% cut in greenhouse gas emissions in 2020.**

The UK will also cut emissions by **80% by 2050.**



## This Transition Plan sets out how these budgets will be met



- The plan will ensure the UK meets its **15% renewable energy target** in 2020.
- **Government departments** have been allocated their own carbon budgets.
- The plan will help the **most vulnerable** and help ensure **secure energy** supplies
- Will cost £25-29bn in discounted lifetime costs – equivalent to 0.35% of GDP in 2020

The plan will ensure that 40% of UK electricity comes from low carbon sources by 2020 – power must deliver 50% of the cuts in emissions between now and 2020

At the heart of the Plan is the **EU Emissions Trading System** which sets a declining limit or ‘cap’ for emissions from electricity generation and heavy industry.

Further action:

30% of electricity through  
**renewables** in 2020

Supporting up to 4 new  
**CCS** demonstrations

**New nuclear** power  
stations under way by  
2018

12 planned by 2025

We will need a **bigger, smarter electricity grid** – the Government will publish a vision for this shortly, and suggestions for energy market reform (White Paper in Spring 2011).

**Maintain secure electricity supplies** by creating a supportive climate for timely investment – March 2010 Budget announcement of a ‘Green Investment Bank’

## Homes and communities will contribute 13% of emission cuts in 2018-22

The Government is making homes greener using new measures in the Transition Plan:

Extending the  
**Carbon  
Emissions  
Reduction Target**

Introducing the  
**Community  
Energy Saving  
Programme** for  
low-income areas.

Piloting “**pay as  
you save**” ways to  
help people make  
their whole house  
greener

Introducing **clean  
energy cash-back**  
schemes such as  
Feed-in Tariff, and  
Renewable Heat  
Incentive

The Government is helping people to play their part by:

- Rolling out **smart meters to all homes by 2020**
- Launching a new **personal carbon challenge** and developing more proactive services from the **Energy Saving Trust**
- Announcing ‘**Green Villages, Towns and Cities**’ competition
- Progressively tightening building standards for new homes, aiming for zero carbon by 2016

**Maintain secure gas supplies** by maximising UK economic production, improving import and storage capacity and strategic partnerships to source imports

# The Government is helping to make these changes more affordable through new measures, especially for the most vulnerable

The additional impact in 2020 of policies in this Transition Plan, relative to today, is £76 on annual bills – together with other climate policies, this is equivalent to approximately an 8% increase from current energy bills.

Help for the most vulnerable households – £20bn spent since 2000 tackling fuel poverty

Help for all households

## Price:

Creating **mandated social price support** at the earliest opportunity.

## Energy efficiency:

Increasing the level of **Warm Front grants**.

Help fuel poor households via **clean energy cash back**.

## Income:

**Winter Fuel Payments** and **Cold Weather Payments** for the most vulnerable.

New powers to **Ofgem** to tackle **market abuse**.

Clarifying that Ofgem should help **tackle climate change and ensure security of supply**.

## The plan will ensure our workplaces contribute 9% of emission savings in 2018-22

### Government helps reduce emissions from workplaces by:

- **Incentivising energy saving**, e.g. through EU ETS, the Carbon Reduction Commitment (a new UK mandatory emissions trading scheme), tax (the Climate Change Levy), regulation
- **Providing advice** on how to cut carbon emissions e.g. via Carbon Trust.
- Impact in 2020 of policies will be approximately a **17% increase in energy bills** for medium energy users. The Government is:
  - Providing loans/grants, FIT
  - Ensuring EU markets are competitive and fair

### Workplaces will contribute 9% of emission savings in 2018-22\*



\*Some workplaces also save emissions through their inclusion in the EU ETS. These are included in the savings attributed to the power and heavy industry sector.

# There are costs, but also opportunities from the transition to low carbon and the Government is helping businesses to grasp these

To help make the UK a world centre of the green economy the Government is:

Using **£405 million fund** to support low carbon industries, including:

- £120m for offshore wind
- £60m for wave and tidal
- £400m for EV development (£170 R&D, £230m consumer support)

Facilitating business access to up to **£4 billion of new capital** from the European Investment Bank for renewable and other energy projects – plus the new **Green Investment Bank**

Funding R&D (£1bn Energy Technologies Institute) and helping workers to develop the **skills** needed to thrive in a low carbon economy (e.g. National Skills Academy for Nuclear)

- Value of the UK LCEGS sector was £112bn in 2008/9 (somewhere between healthcare and construction in size), employing 910,000 people. UK overtook Denmark as largest producer of offshore wind (£30m support for Mitsubishi to locate new £100m offshore wind turbine research facility).
  - Top 3 exports were wind, building technology, water and waste water. China (including Hong Kong) is largest export market.
  - Further funding for 'smart' grid, 60 innovative low carbon homes, geothermal, nuclear
- UK Low Carbon Industrial Strategy** lays out the vision. By 2020 we could have:
- More than 1.2m green jobs in key sectors such as offshore wind and marine, civil nuclear, CCS, low carbon construction, low carbon vehicles, IT, specialist financial/business services.
  - 1.5m households producing own energy



## Transport will contribute 19% of emission savings in 2018-22

The Government is reducing emissions from transport (currently 22% of emissions) by:

### Making engines more fuel efficient

- New EU rules on car emission standards (130g/km from 2015, to 95g/km by 2020)
- £30 million for low carbon bus technology

### Supporting low carbon vehicles

- £400 million for R&D development and uptake – largest demo project in the world (500 cars in next 2 yr)
- 10% of transport energy to come from renewables

### Changing behaviour

- £29 million for the first 'Sustainable Travel City'
- £145 million for cycling
- Fuel duty will increase by 2.76p/l by Jan 2011, and .

**Rail:** increased energy efficiency and more electrification

European flights part of EU ETS from 2012; pushing for new global agreement on **international aviation and shipping**

**Maintain secure oil supplies** by maximising economic UK production, promoting a well-functioning global oil market, and improving UK fuel infrastructure (transport used 75% of UK oil consumption in 2008)

## The plan will ensure that farming, land and waste contributes 4% of emission savings in 2018-22

Farming and land use make up about 7% of UK emissions. We will drive down emissions from farming, land and waste by 6% on 2008 levels by:

Encouraging **voluntary action from English farmers** to reduce emissions at least 6% on BAU 2020 levels

Encouraging **private funding for woodland creation**

Reducing **waste** to landfill and capturing more methane emissions

Supporting “**waste to energy**” technology (anaerobic digestion)

Enabled by research to improve emission measurement and verification. The Government will also review voluntary progress in 2012 to decide whether further intervention is required.

# The Transition Plan delivers emission cuts to 2020. But we need to consider now the possible pathways to 2050

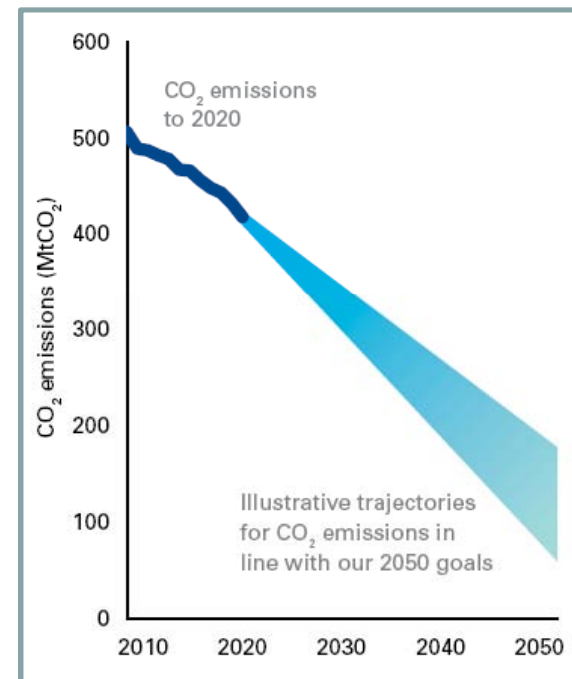
## What we might see in 2050

Early work shows **common themes** across most scenarios

- Energy demand will have to fall significantly (40%?)
- But electricity use likely to increase (by 50%?)
- So emissions from power sector remain key

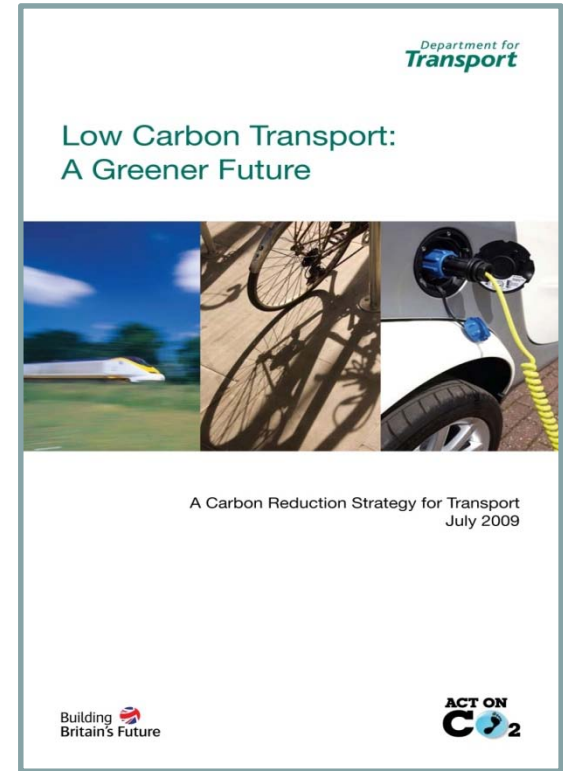
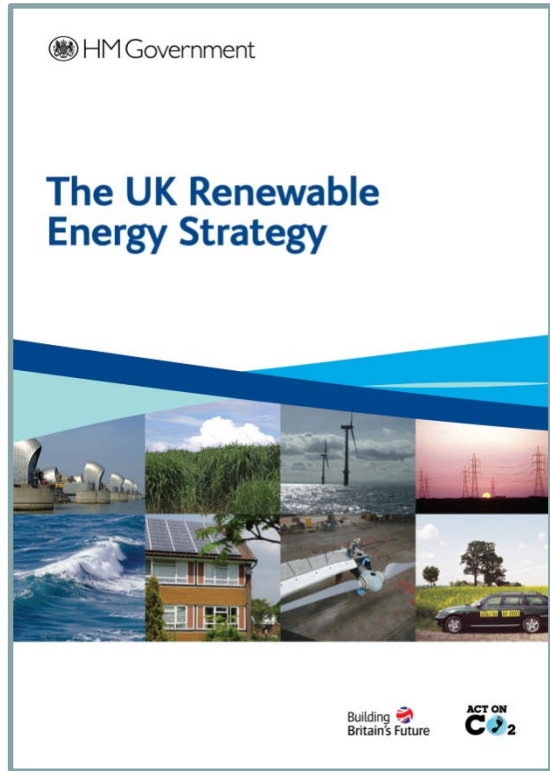
But some **big uncertainties**

Such as, how much electricity or bio-energy is used in heat and transport (biogas to supply 20% of UK household needs by 2020?)



The Government will work with industry and the public to publish a **roadmap setting out the path to 2050** by spring 2010

# Other Government publications supported the launch of the UK Low Carbon Transition Plan



## The UK Low Carbon Transition Plan received positive feedback from stakeholders and the media



“We welcome this mature and open debate that has been initiated by the Government on the future of Britain's energy requirements.”



“The commitment to a joined-up approach across Government is very welcome, as is the commitment to delivering 15% of renewable energy by 2020 from domestic sources. There appears to be a genuine commitment to a radical transformation of UK energy generation.”



“This is a promising start, and includes many measures the CBI has been calling for to reduce emissions across the economy.” (‘Going the Distance: the CBI’s low-carbon economy roadmaps covering transport, power, industry and buildings’ can be found at <http://climatechange.cbi.org.uk/reports/>)



“It is thoughtful, ambitious, and - for just about the first time I can remember - gives the impression that the various government departments know what meeting their headline targets will entail in practice.”



“This is a very welcome document that maps out not just a proper response to the threat of climate chaos but also starts to map out the shape of the UK economy after the recession.”



“No other government in the world has published anything quite like this, both a collective statement of intention and a fairly detailed description of how carbon reduction might be achieved.”

For further questions:

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