

The UK approach to sustainable growth

Prepared for UNECE Team of Specialists on
Innovation and Competitiveness Policies
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Session 2: Industrial policy and innovation policies for sustainable growth

The UK approach:

- Our **Clean Growth Strategy (2017)** is a blueprint for lowering carbon emissions, protecting the environment and meeting our climate change obligations while stimulating growth and prosperity, increasing earning power and creating and supporting thousands of jobs
- Our **Industrial Strategy (2017)** aims to boost productivity by backing businesses to create good jobs, and increase the earning power of people throughout the UK with investment in skills, industries and infrastructure
- Our **25 Year Environment Plan (2018)** sets out what we will do to improve the environment, within a generation

Clean growth and decarbonisation policy framework



Climate Change Act 2008

Long-term target

The UK Climate Change Act commits the UK to an at least **80% reduction in Greenhouse Gas (GHGs) emissions** in 2050 compared to 1990 levels.

Carbon budgets

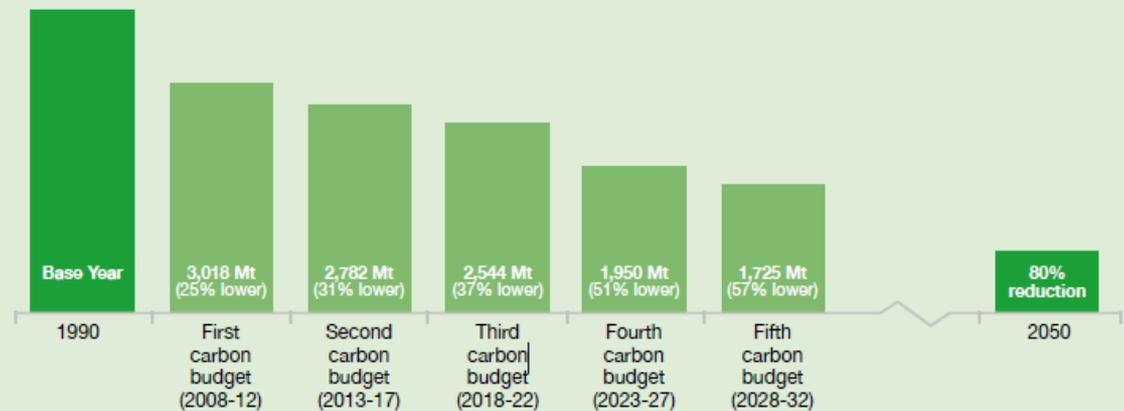
The Act requires that we cap GHG emissions over **successive 5 year periods**.

Scrutiny

The Act established an independent **Committee on Climate Change (CCC)**.

UK's Long term targets

Figure 3: UK carbon budgets and 2050 target³⁵



Source: UK legislation; BEIS

Clean Growth Strategy (October 2017)



The Clean Growth Strategy (2017) set out policies and proposals across different parts of the UK economy



Business and industry efficiency

Package of measures to improve business energy efficiency by at least 20% by 2030 – cutting costs and improving productivity.



Improving our homes

Households to benefit from lower bills and warmer homes with aspiration for as many homes as possible to be EPC Band C by 2035.



Low carbon transport

End the sale of new conventional petrol and diesel cars and vans by 2040.

£1 billion to support the take-up of ultra low emission vehicles.



Clean, smart, flexible power

Investing in renewables such as offshore wind, with up to half a billion pounds for further auctions.

Phasing out use of unabated coal to produce electricity by 2025.



Enhancing our natural resources

Future system of agricultural support to focus on delivering better environmental outcomes, including addressing climate change more directly.



Leading in the public sector

Introduce a voluntary public sector target of 30% reduction in carbon emissions by 2021.

- A long term plan to **boost productivity** and **earning power** of people throughout the UK
- We are building a Britain **fit for the future** – helping businesses create better, higher-paying jobs in every part of the UK with investment in the skills, industries and infrastructure of the future
- By planning for a rapidly changing future, we can shape new markets and build the UK's **competitive advantage** as well as improve the quality of our everyday lives.

To boost productivity by backing businesses to create good jobs and increase the earning power of people throughout the UK with investment in skills, industries and infrastructure.

By:

- **Strengthening the foundations** by encouraging innovation, developing high quality jobs and supporting businesses throughout the UK to thrive and grow.
- **Taking on Grand Challenges** – the society-changing opportunities and industries of the future where we can build on strengths and lead the world.
- **Building long-term strategic partnerships** with businesses through Sector Deals between government and industry.

We will focus on five foundations of productivity:



The Ideas Foundation in Detail



Strengths



Global leader in science and research

Home to 3 of top 10 universities

Rated an 'innovation leader' in European Innovation Scoreboard

Produce and attract some of the top talent and high levels of internationally mobile R&D

Challenges

Addressing underinvestment in R&D

Improving our ability to turn our ideas into commercial products and services; and capturing their value

Building research and innovation excellence across the country

Ensuring the UK remains a world leader in global science and international collaboration

Some key policies

Increasing investment to 2.4% of UK GDP by 2027; and 3% in longer term

New Strategic Priorities Fund to support inter- and multi-disciplinary research

Investing over £300m in world-class talent

Increasing rate of R&D tax credit to 12%

Over £1.7bn investment in strategic innovation challenges

'Knowledge Exchange Framework' to benchmark universities' knowledge sharing and commercialisation

Reforming Research Excellence Framework to increase impact weighting.

Increasing funding that supports universities and businesses in innovating to £250m per year

Continued support for Catapult network

New Strength in Places Fund to help local areas build on innovation strengths

Expectation that publicly-funded laboratories support local economic growth

Mapping UK innovation infrastructure assets

Strong link to Local Industrial Strategies, building on findings of Science Innovation Audits.

Publishing a new International Science and Innovation Strategy

Launching a Fund for International Collaboration.

Rutherford Fund supporting fellowships for researchers

Doubled number of available visas for top researcher talent.

Pioneering new collaborations with countries e.g. USA, China Israel

Commitment to research collaboration with developing countries and leadership of wider global initiatives

We must also adopt Grand Challenges to plan for a rapidly changing future.

Key criteria

Is it a complex coordination challenge?

Is it a global market megatrend?

Is it relevant to society?

Does it build on existing UK strengths?

Is it relevant to UK businesses and productivity?

The four Grand Challenges



Growing the AI & Data-driven Economy

We will put the UK at the forefront of the artificial intelligence (AI) and data revolution



Clean growth

We will maximise the advantages for UK industry from the global shift to clean growth



Ageing society

We will harness the power of innovation to help meet the needs of an ageing society



The Future of Mobility

We will become a world leader in the way people, goods and services move

The first missions

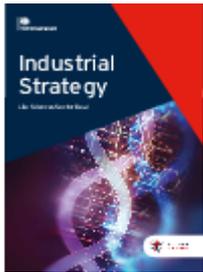
Mission: Use data, Artificial Intelligence and innovation to transform the prevention, early diagnosis and treatment of chronic diseases by 2030

Mission: At least halve the energy use of new buildings by 2030

Mission: Ensure that people can enjoy at least 5 extra healthy, independent years of life by 2035, while narrowing the gap between the experience of the richest and poorest

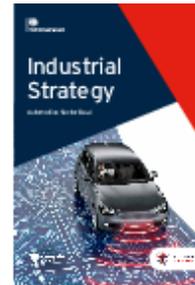
Mission: Put the UK at the forefront of the design and manufacturing of zero emission vehicles, with all new cars and vans effectively zero emission by 2040

Partnerships between government and industry aiming to increase sector productivity:



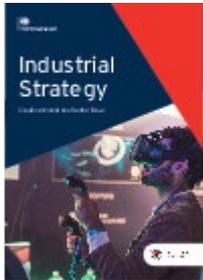
Life Sciences

- Ensures new pioneering treatments and medical technologies are produced in the UK,
- £1.1bn investment from private and charitable sectors



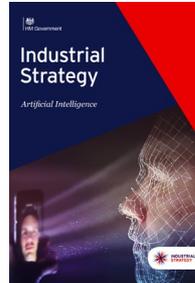
Automotive

- Ensures that the UK continues to benefit from the transition to ultra-low and zero-emission vehicles by building an agile, innovative and cost competitive supply chain



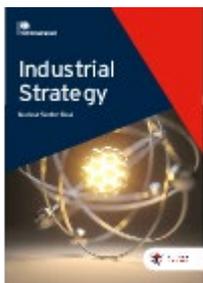
Creative

- £150m across the lifecycle of creative businesses
- Invests in creative clusters, technologies, and skills to unlock growth for creative businesses



Artificial Intelligence

- Establishing the UK's position as a leader in developing AI technologies
- Actions to increase data availability and developing high-level skills



Nuclear

- £200m to drive down cost of nuclear energy
- 30% reduction in the cost of new builds by 2030
- Establishing a framework for the development of small modular reactors



Construction

- 420 million of investment to transform construction with new digital and offsite manufacturing technologies
- Cheaper energy bills for families and businesses

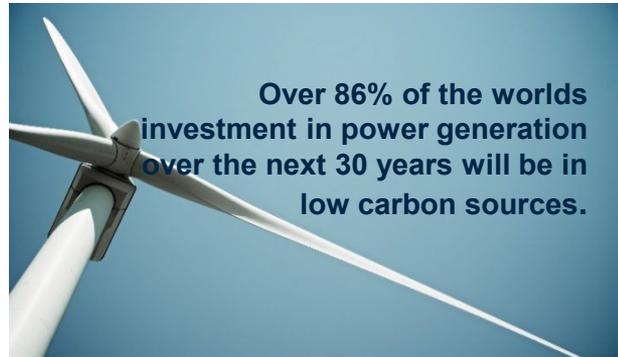
Future Sector Deals: We are currently prioritising all proposals based on a rigorous, objective, analytical assessment. We will announce a number of Sectors that we are proceeding into negotiations with in the coming weeks, with a view to finalising further deals over the course of 2018.

Clean Growth Grand Challenge

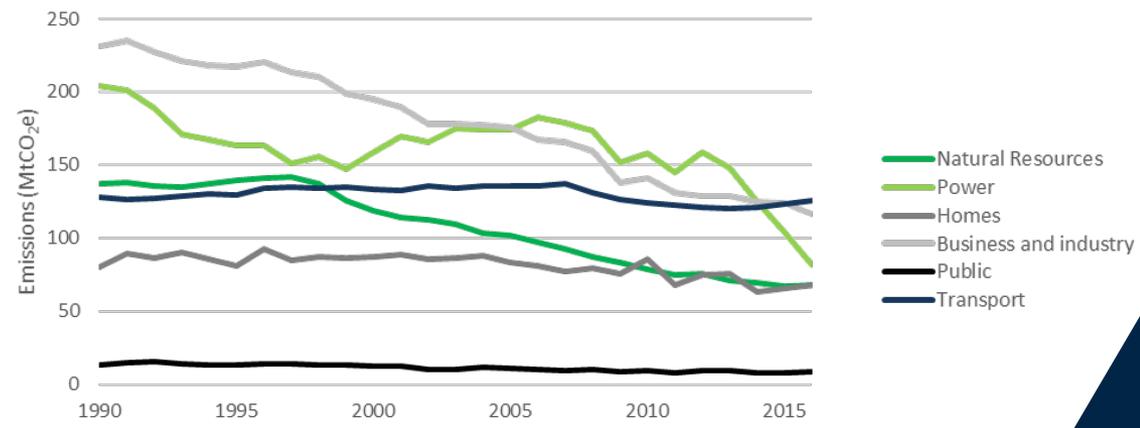


The aim of the Clean Growth Grand Challenge is to maximise the advantages for UK industry of the global shift to clean growth, through leading the world in the development, manufacture and use of low carbon technologies, systems and services that cost less than high carbon alternatives

High confidence in shift to clean energy & global markets

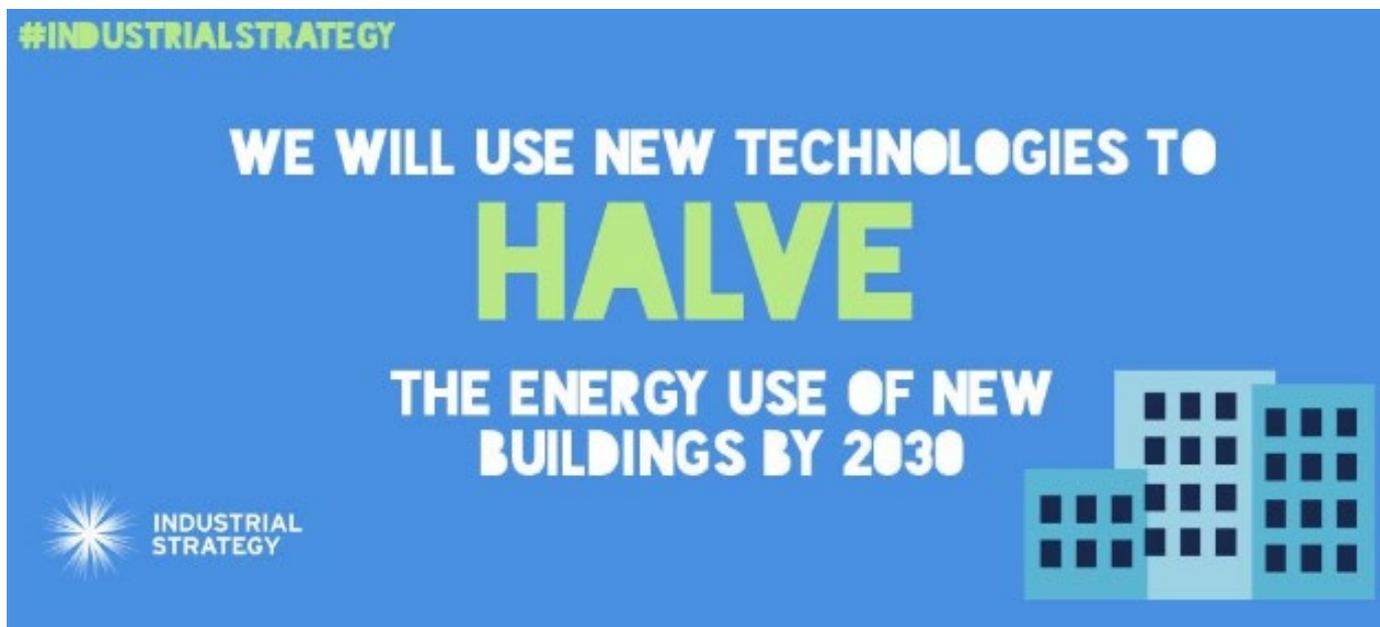


Acute decarbonisation challenges



Emission reductions 1990-2016

Our first Clean Growth mission



The first Clean Growth Grand Challenge mission was announced by the Prime Minister in May 2018. Through this mission we will:

- Make sure every new building in Britain is high quality, much more efficient and no longer uses high carbon heating
- Make it cheaper to build new, low energy buildings
- Drive lower carbon, lower cost construction through innovative techniques
- Give consumers more control over how they use energy through smart technologies
- Halve the cost of renovating existing buildings to a similar standard as new buildings