



The UK has a good track record on climate action, showing ambition on its carbon goals at home and helping to set strong international standards.

In the past two years we have:

- become the first major economy in the world to announce the phase out of coal fired power
- approved the fifth carbon budget, setting ambitious emissions reduction targets up to 2032
- ratified the Paris Agreement on climate change

These actions have not only laid the groundwork for reducing carbon emissions at home but have also improved the UK's reputation abroad.

However, no significant policy plans have been published to meet the ambition of the fifth carbon budget since it was set in June 2016 and current policies fall short of meeting the fourth carbon budget.<sup>1</sup>

This lack of direction is creating uncertainty for business and investors and reducing the

government's ability to meet its own carbon reduction goals. The consequences of the delay are already becoming evident in the power, heat and transport sectors.

But, with the right policy and funding, the UK could become a centre for world class low carbon infrastructure, boosting jobs and competitiveness and developing UK expertise in the fast growing global low carbon market.

An effective plan to achieve this must work across government departments, integrating with other plans currently in train, such as the industrial strategy and the cost of energy review, to release new investment for the renewable energy, transport and energy efficiency sectors.

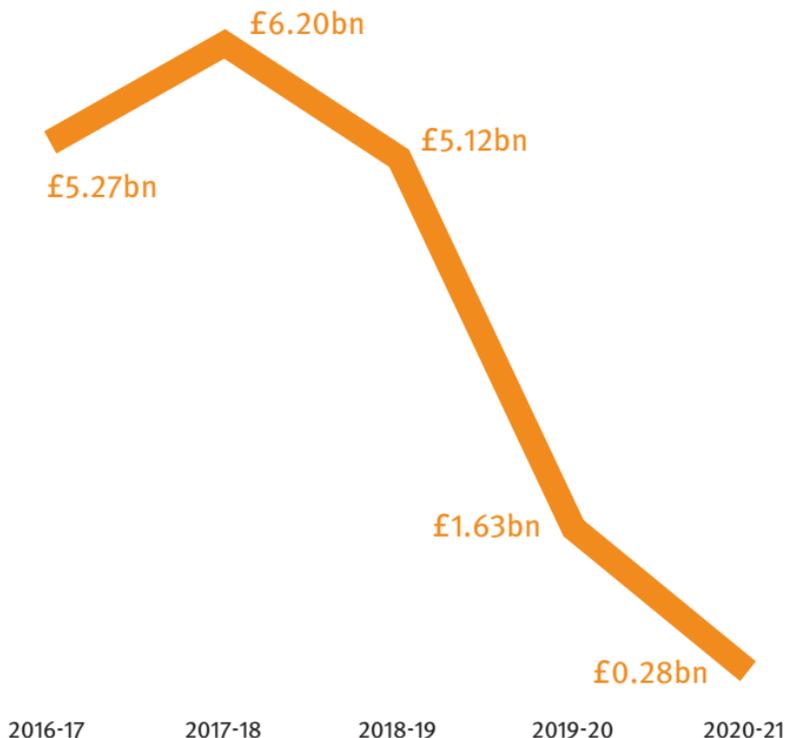
To maximise benefit from its past and future investments, the UK must be bold and act now. The government should close the current policy gaps and chart a trajectory for future low carbon policy in the UK with a clear ambitious clean growth plan this year.

# The consequences of delay

## Power

Investment in new renewables is projected to peak at £6.2 billion in 2017-18. Without clear government policy from the end of this decade, it is estimated that investment will drop by 95 per cent to below £0.3 billion by 2020-21.

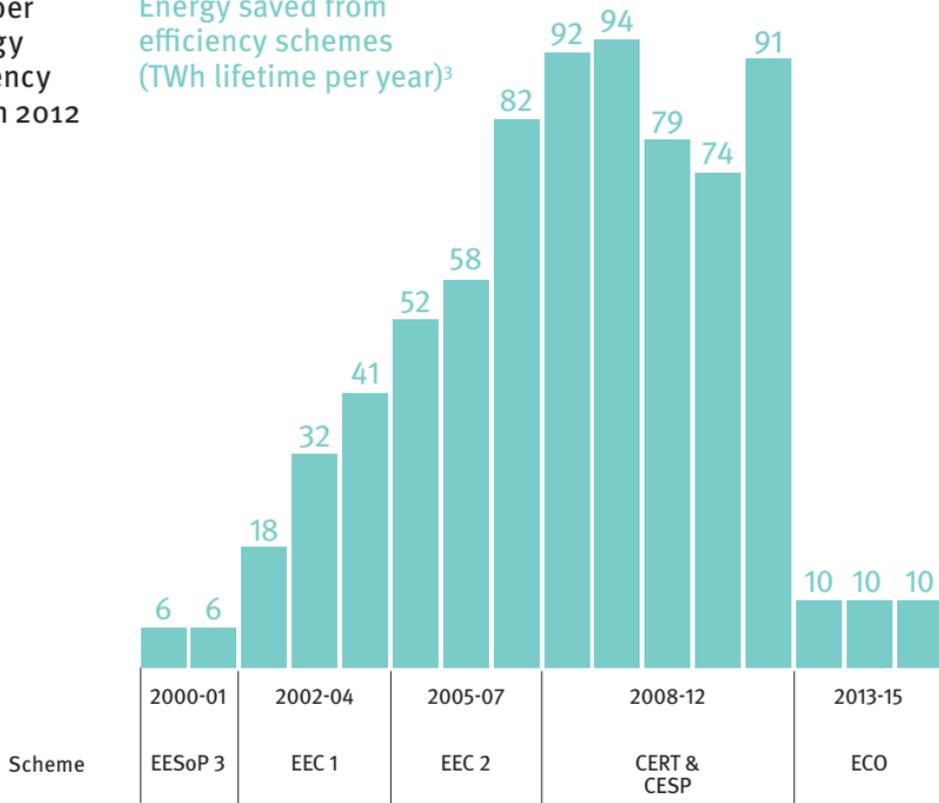
Total planned renewables investment  
(at autumn 2016)<sup>2</sup>



## Heat

There was an 89 per cent drop in energy saved from efficiency schemes between 2012 and 2013 and this number hasn't increased since.

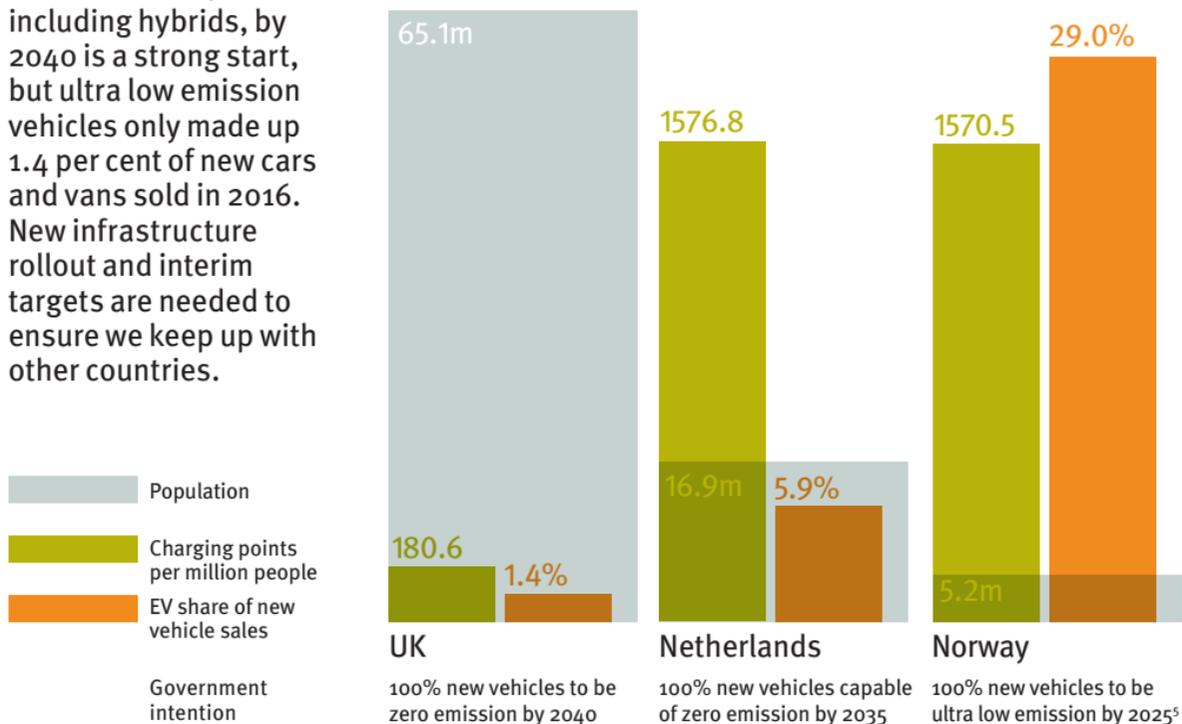
Energy saved from efficiency schemes (TWh lifetime per year)<sup>3</sup>



# Transport

The UK's commitment to phase out new petrol and diesel cars, including hybrids, by 2040 is a strong start, but ultra low emission vehicles only made up 1.4 per cent of new cars and vans sold in 2016. New infrastructure rollout and interim targets are needed to ensure we keep up with other countries.

## Electric vehicle rollout: how the UK compares<sup>4</sup>

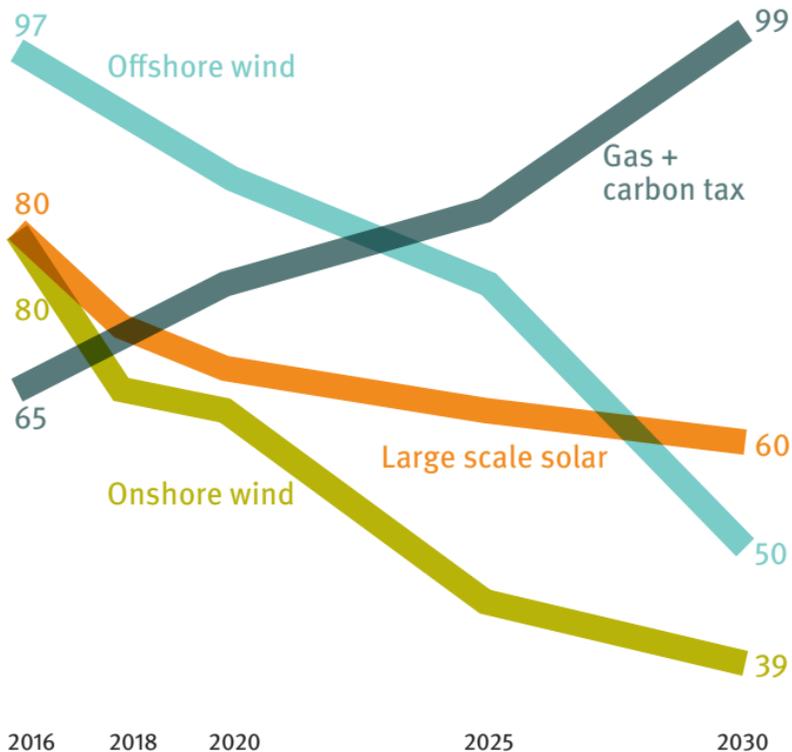


Opportunity  
Ensure Britain benefits  
from clean power

Renewable sources are now cheaper than fossil fuels based on 2016 prices. But, just like gas plants, they need auctions to allow them to be built.

The government should allocate an additional £1.7 billion between 2020 and 2025 to low carbon auctions. Customers can then benefit from lower bills and manufacturers can invest in UK supply chains for the long term.

Cost estimates for future energy projects (£/MWh)<sup>6</sup>



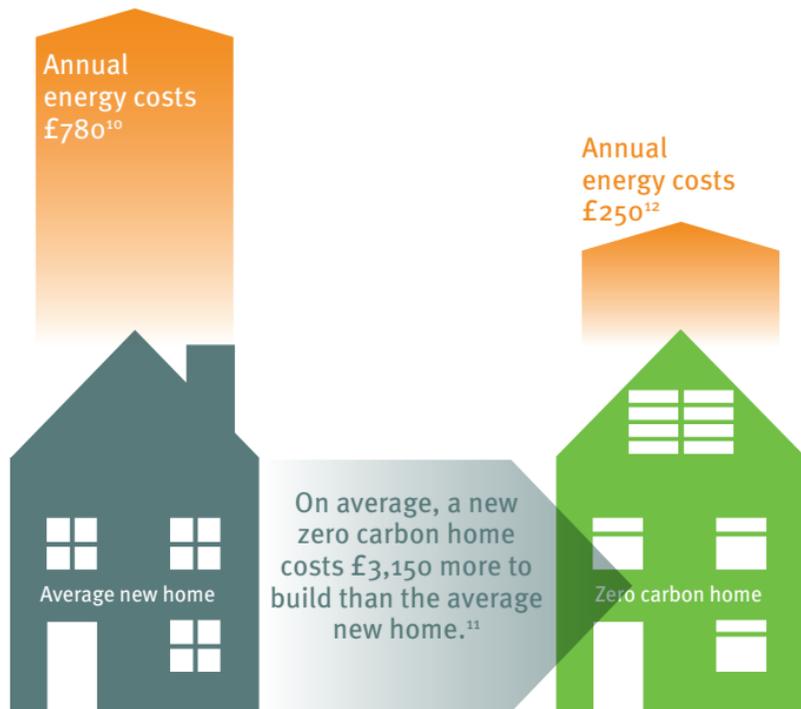
Opportunity

Build homes worth having  
for the long term

Zero carbon homes cost around 1.4 per cent more to build than a standard new home, but they have energy bills 80 per cent lower than the UK average.<sup>7,8</sup> And some of the best zero carbon homes are cheaper to build than the average home.<sup>9</sup>

The government should reintroduce a zero carbon homes standard by 2020. And it should set a target to improve the energy efficiency standards of all existing domestic and commercial properties to EPC C by 2035.

## Zero carbon homes have lower energy costs



The additional cost of building a zero carbon home would be paid off by savings in energy bills after around six years

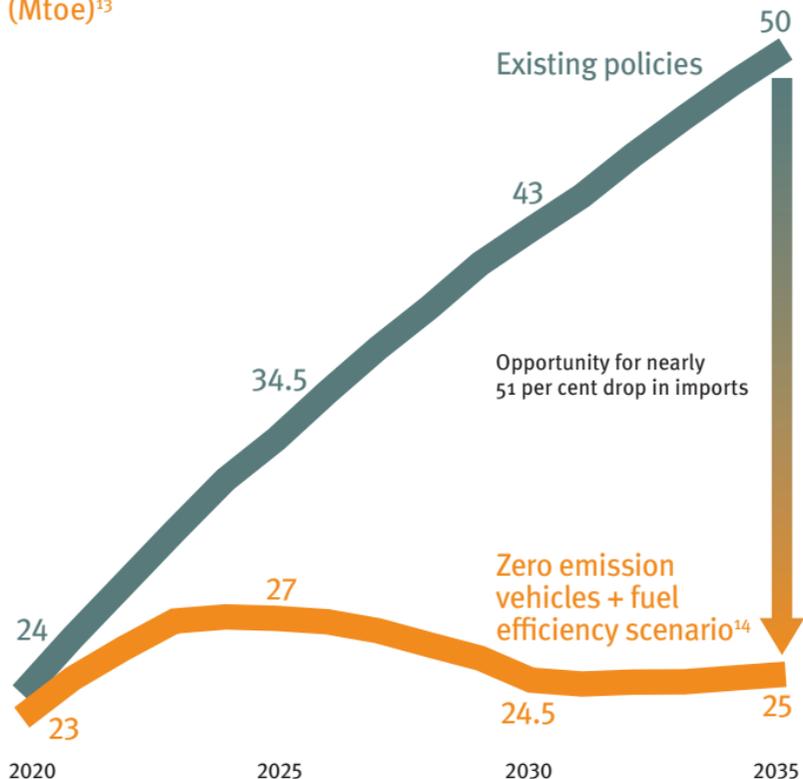
Opportunity

Electric vehicles can help  
cut oil imports

The ban on new sales of conventional cars and vans by 2040 is a step in the right direction but more ambitious targets are needed to bring forward public health and economic benefits.

For instance, if the UK government required all new cars and vans to be zero emission by 2030, we could reduce UK foreign oil imports by more than 50 per cent by 2035.

### Oil import scenarios (Mtoe)<sup>13</sup>



# Endnotes

- 1 Committee on Climate Change, 2017, *Meeting carbon budgets: closing the policy gap. 2017 report to parliament*
- 2 Green Alliance, 2016, *The UK's infrastructure pipeline*
- 3 J Rosenow, 14 August 2017, Personal communication; BEIS, 2017, *ECO: Help to Heat April 2017 to September 2018. Final stage impact assessment*; Ipsos MORI, CAG Consultants, University College London & Energy Saving Trust, 2014, *Evaluation of the Carbon Emissions Reduction Target and Community Energy Saving Programme*; NAO, 2016, *Green Deal and Energy Company Obligation*; J Rosenow and N Eyre, 2013, *The Green Deal and the Energy Company Obligation*
- 4 [www.eafo.eu/countries](http://www.eafo.eu/countries). Electric vehicle market share and charging infrastructure figures are for 2016.
- 5 <https://elbil.no/english/norwegian-ev-policy/>
- 6 Green Alliance analysis, using data from: Agora Energiewende, 2017, *Future cost of onshore Wind*; Baringa, 2017, *An analysis of the potential outcome of a further 'Pot 1' CfD auction in GB: a report for Scottish Renewables*; BEIS, 2016, *Electricity generation costs*; Carbon Trust, 2008, *Offshore wind power: big challenge, big opportunity*; Catapult, 2016, *Cost reduction monitoring framework: quantitative assessment report*; Committee on Climate Change, 2015, *Power sector scenarios for the fifth carbon budget*; IRENA, 2016, *The power to change: solar and wind cost reduction potential to 2025*
- 7 Calculation based on data from: HM Land Registry, 2017, UK House Price Index summary: April 2017; Zero Carbon Hub & Sweett, 2014, *Cost Analysis: Meeting the zero carbon standard*;
- 8 Dr Jo Patterson, Cardiff University, 18 July 2017, Personal communication; Ofgem, 2017, *Infographic: Bills, prices and profits* (<https://www.ofgem.gov.uk/publications-and-updates/infographic-bills-prices-and-profits>). Average energy cost for existing households in the UK is £1,129 per year, energy costs for zero carbon homes are between £200 and £300 per year
- 9 The Pentre Solar homes were built for between £1,000 and £1,100/m<sup>2</sup> whereas the average build cost for UK houses is between £1,083 and £1,157/m<sup>2</sup> depending on number of units. Dr Jo Patterson, 15 February 2017, 'Zero-carbon homes: saving money as well as energy', *New Statesman* (<http://www.cardiff.ac.uk/architecture/files/2017/02/zero-carbon-homes.pdf>); BCIS, 2015, *Housing development: the economics of small sites – the effect of project size on the cost of housing construction*
- 10 Zero Carbon Hub and NHBC Foundation, 2014, Annual household energy spend infographic, [www.zerocarbonhub.org/sites/default/files/resources/reports/Annual\\_Household\\_Energy\\_Spend\\_Infographic.pdf](http://www.zerocarbonhub.org/sites/default/files/resources/reports/Annual_Household_Energy_Spend_Infographic.pdf)
- 11 Calculation based on data from Zero Carbon Hub & Sweett, 2014, *Cost Analysis: Meeting the zero carbon standard*. Calculation takes into account reduction in cost of installing solar PV since 2013
- 12 Dr Jo Patterson, Cardiff University, 18 July 2017, personal communication
- 13 Green Alliance analysis based on data from: BEIS, 2017, Updated energy and emissions projections: 2016; BEIS, 19 July 2017, Personal communication; Oil and Gas Authority, 2017, OGA production and BEIS demand projections, March 2017
- 14 In this scenario we assume that all cars and vans sold from 2030 onwards are zero emission vehicles and that fuel efficiency of internal combustion vehicles improves in line with the ambitions contained in the Committee on Climate Change's 2015 report, *Sectoral Scenarios for the Fifth Carbon Budget*.



## Why the UK needs an ambitious clean growth plan now

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