

	Current government plan and physical consequences by 2030	Physical change required by 2030 for -45%	Policy required by 2030 for -45%	Change required beyond 2030
Electricity Generation	120TWh of new non-emitting electricity generation, if offshore wind capacity quadruples. Nuclear generation falls slightly as Hinkley Point C opens while all other nuclear power stations close. Contract for up to 2TWh of green hydrogen to be awarded in 2023.	Reduce total energy demand by 30% by 2030; Continue to develop pilot trials of CCS and hydrogen (no significant effect on UK emissions before 2030); Halt offshore oil and gas exploration and remove any subsidies to fossil fuel sectors.	Most of 45% cut in emissions by 2030 to come from energy efficiency ; Ensure that promised x4 of offshore wind is delivered; Expand solar and onshore wind generation rapidly, along with storage and demand-side response.	Continued expansion of non-emitting generation capacity, closure of the North Sea oil and gas fields and existing gas power plants.
Industry and manufacturing	Two CCS Clusters to move into next stage of negotiation for £1bn CCS fund, but no planned date for operation. £300m fund for fuel switching. No other specific commitments.	45% cut in blast furnace produced steel, cement and other bulk chemical productions ; Building material efficiency improved by 30-40% ; No new gas boilers in low heat manufacturing from 2028 ; reduced weight for new vehicles	Zero carbon public procurement contracts for low carbon materials; Update building regulation to include upper limits on material usage; introduce VAT on demolition and new buildings while removing it from retrofit and refurbishment.	All activities with process emissions stop, grow manufacturing base to replace imported goods.
Transport	Passenger / light goods vehicles: phasing out new fossil fuel vehicles by 2030; Freight: no meaningful policy before 2030; Public transport: no 2030 rail electrification targets, increase electric buses to 15% of fleet; Aviation: no targets.	20% reduction in vehicle-km for cars and vans, 45% reduction in vehicle-km for heavy goods vehicles; Reopen 350 miles of railway track ; 50% of outstanding rail network to be electrified by 2030 .	Decrease rail fares and increase fuel duty ; Vehicle excise duty levied based on vehicle weight; Electric road network for HGVs ; Tax incentives to increase HGVs utilisation and reduce empty leg trips; international taxation on aviation and shipping.	Creation of an electric road system for freight on highways; increased use of the rail network for people and freight, aviation ceases.
Space and water heating	Heat pumps: target of 600 thousand installed per year by 2028, of which 90 thousand supported by £5k grants; ambition to have no new gas boilers by 2035, but no commitment. Small funding for partial retrofit of fuel-poor and social housing.	7m heat pumps installed by 2028; Retrofit all homes without loft insulation and wall cavity insulation ; Retrofits on 30% solid wall properties by 2030; All non-domestic properties have EPC rating A by 2030 .	Gas boilers banned from 2028; Greater subsidies for heat pump installation and retrofits for low-income households; Incentivise deep energy retrofits; Minimum energy efficient standards for all rented buildings increased to an EPC A rating .	Heating in all homes is decarbonised by 2040 and all homes retrofitted to PassivHaus standard.
Agriculture and land use	No specific commitments	Halve all food waste ; 30% reduction in beef, dairy and lamb consumption; 30% reduction in agricultural waste; Halve direct emissions from soil; Manage land-use for net zero emissions.	Information, labelling and procurement contracts to promote low-emissions diets; Taxes on beef, lamb and dairy products; Investment in 'alternative proteins'.	All beef lamb and dairy consumption ends, replaced by new diets.
Waste management	Landfill tax continues to reduce methane releases.	Ban on all biodegradable waste going to landfill from 2030 .	The ban must be enacted as legislation with policies to support the transition such as whole crop purchase contracts, increases in landfill tax and household behaviour change policies.	Movement towards a complete material and waste recovery where all waste is minimized and directed towards recycling and reuse.