

News response briefing: Net zero policies could be weakened

Background

It has [been reported](#) that the Government is considering weakening various policies related to net zero, with an announcement expected imminently. The following briefing covers the economic case for net zero, why action now is essential, and details on policies which have been rumoured to be weakened.

How will net zero impact the economy and households?

- The [Treasury's Net Zero review](#) in 2021 highlighted that “the costs of global inaction significantly outweigh the costs of action”
- Chris Skidmore MP's independent review of net zero found that “net zero is the growth opportunity of the 21st century”, “the economy and climate change are intertwined”
- In July 2023, [the Office for Budget Responsibility found](#) that continuing our dependence on gas at the current level would cost as much or more than acting on climate change.
- The [OBR also stated](#) that delaying the net zero transition by 10 years would double overall costs
- A report from [the Energy and Climate Intelligence Unit and CBI Economics](#) found that the net zero economy contributed over £70billion (3.7%) GV to the UK economy as of the end of 2022. It also supports 840,000 jobs which are 1.7 times more productive than the national average.
- The [consultancy McKinsey has said](#) that supplying the goods and services to enable the global net-zero transition could be worth £1 trillion to UK businesses by 2030.
- Households with net zero technologies like electric vehicles, heat pumps, solar panels and good levels of insulation could have saved over £2,000 in 2022 compared to households that are reliant on petrol cars and gas boilers.
- Excessively cold homes, i.e. those with poor energy efficiency, cost the NHS £1.2bn per year. The costs of gas during the crisis in 2022 reached £70bn - the same as furlough.

Why net zero by 2050, and why 1.5C?

- Unless the state of ‘net zero’ is reached, emissions in the atmosphere will continue to rise, and climate change will continue to get worse.
- This summer has seen extreme global temperatures, causing heatwaves, wildfires and heavy rainfall worldwide, resulting in an [increase in concern](#) about climate change in the UK.
- [On the first page of the 2019 Conservative manifesto](#), the party committed to “reaching net zero by 2050 with investment in clean energy solutions and green infrastructure to reduce carbon emissions and pollution.” All the other major political parties also committed to delivering net zero at that election.

Policies rumoured to be weakened:

Zero emission vehicle mandate

- The Government committed to [phase out the sale](#) of all new petrol and diesel cars and vans by 2030, and for all new vehicles to be zero emission as of 2035.

- To assist in delivering on this target, the Government committed to introducing a [Zero Emissions Vehicle \(ZEV\) mandate](#) in its [Net Zero Strategy](#). The [Independent Review of Net Zero](#), carried out by Chris Skidmore MP, recommended the ‘swift delivery’ of a ZEV mandate, to apply from January 2024.
- The ZEV mandate is a requirement for manufacturers to ensure that an increasing proportion of the vehicles that they sell in the UK are electric; the current proposal is [22% of a car manufacturer’s sales](#) to be electric in 2024, rising incrementally each year (e.g. 38% in 2027, 80% in 2030) until 2035 when 100% of car sales will be fully electric. However, these targets are not much higher than existing market trends.
- [A more robust mandate](#) that tracks the car industry’s own ‘high’ projections for EV sales to 2035 could have a greater impact on the EV roll out (e.g. 34% in 2024, 60% in 2027, 80% in 2030, and 100% in 2035).
- Without a mandate, 15.4 million EV sales are expected in the UK by 2035. With currently proposed targets, 16.8 million sales are expected but with a strengthened mandate, the figure rises to 18.9 million.
- The ZEV mandate could widen access to the savings and benefits that come from EV ownership. [ECIU research](#) has found that EVs can be up to 3.5 times cheaper to fuel than their petrol and diesel equivalents.
- A stronger mandate could also speed up the growth of the second-hand EV market, critical if households across the UK are to access [the £500-£800 a year savings](#) that come from EV ownership, and through increased access to EVs on this market, deliver an extra £9bn in savings to the UK’s drivers by 2035
- A clear sense of likely demand could give investors confidence to invest in supply chains, e.g. gigafactories, necessary for the UK to remain a major player as the world transitions to EVs and [‘...to stay at the cutting edge and capture jobs of the future’](#). Such certainly could also unlock investment in UK’s charging infrastructure, vital as the number of EVs on the nation’s roads increases significantly.
- Other potential announcements could be made to support the UK’s car manufacturing industry, for example investment in the EV supply chain, e.g. [Jaguar Land Rover are seeking £500m of Government investment](#) to develop a battery factory potentially in Somerset.

On gas grid boiler phase out

- Currently around [85%, or 24 million homes in the UK are connected to the gas grid](#). The UK’s reliance on gas heating prompted [the International Monetary Fund to state that the UK was the worst hit by the gas crisis](#).
- The UK Government has set a target to phase out the installation of gas boilers from 2035. It is possible this could be delayed or scrapped, as it is not a formal policy or in legislation.
- Polling has shown [that 97% of the public do not know when the gas boiler phase out is](#), nearly two-thirds (61%) think it is two or more years sooner than it is and nearly half (43%) think it is five or more years sooner than it is.
- For comparison, [Ireland has set a phase out date for new fossil fuel boilers from 2025](#) and [Germany and the Netherlands have phase out dates](#) set for 2026. European countries are expected to adhere to a proposed EU Directive that commits to a 2029 gas boiler phase out date.

- [Similarly in Australia](#), the Australian Capital Territory has banned new gas grid connections from November 2023 and the state of Victoria is considering a 2035 phase out date for all fossil fuel boilers.
- Bill savings could be made in households that switch from a gas boiler to a heat pump. Gas boilers typically have an efficiency of around 90%, making heat pumps three times more efficient. This helps to counteract the higher unit costs of electricity compared to gas, as a result of environmental and social levies being unevenly distributed between gas and electricity and artificially inflating electricity bills.
- Due to the UK's marginal pricing system, expensive gas often sets the price for all electricity generation despite new renewables like offshore wind being multiple times cheaper.
- The Government has already stated it will seek to [de-couple gas and electricity prices](#) and explore reviewing the distribution of environmental and social levies on gas and electricity bills.

Off gas grid fossil fuel boiler phase out

- In the [2017 Clean Growth Strategy](#), the Government committed to phasing out fossil fuel boilers in off gas grid homes during the 2020s. Since then, this policy has been reaffirmed throughout successive administrations.
- In [2021, the Government consulted on phasing out fossil fuel boilers](#) off the gas grid from 2026, such that when it next breaks a fossil fuel system must be replaced with clean heating, such as an electric heat pump.
- In 2023, the first version of the [Government's Powering up Britain document](#) confirmed that the proposed policy will go ahead from 2026. However, this was later redacted in a version of the document that said instead Government will make a decision on the policy by the end of 2023.
- There are [currently 3.6m \(15%\) homes in England](#) that are off the gas grid. The [Government estimates that 1.1m](#) of those (30%) currently use fossil fuel heating.
- It is expected that [the policy would impact around 65,000](#) (2%) off-grid homes each year, because of the natural replacement rate of fossil fuel systems (assuming lifetime of 15 years).
 - There are 834,000 oil-heated households in England, and 50,000 are replaced every year
 - There are 141,000 LPG-heated homes, with 8,500 replaced every year
 - And 101,000 coal-heated households, with 6,000 replaced every year
- The six year delay to making this decision means that now, there could potentially be only two years between announcing the policy and it coming into force, prompting some concerns about whether this is enough time for households and the heating industry to adapt and prepare for the policy.
- Oil boiler units [cost on average around £5,000](#). Running cost savings could be made from off gas grid homes transitioning to a heat pump. [During the gas crisis in October 2022](#), the costs of heating oil averaged 9.2p per kWh, compared to gas at 10.3p and LPG 12.1p. By contrast, standard-rate electricity cost 34p per kWh, while off-peak electricity averaged 20p. As heat pumps have 300% efficiency, this means that they could have been cheaper than the fossil fuel alternatives.
- [Industry has indicated](#) that targeting off gas grid homes first could help to ready heat pump supply chains and increase the number of heat pump installers so that the mass market

(homes on the gas grid) can benefit from scales of economy (more installers = lower prices) later on.

- Homes off the gas grid are more used to non-gas systems such as oil boilers, which like heat pumps have both an outside unit (an oil tank) that acts with the indoor system (boiler) to produce and distribute heat in the home.

Clean heating alternatives

- The main technology expected to replace fossil fuel boilers is a heat pump. Heat pumps use electricity and a heat exchanger to turn ambient heat from the air or ground into useful heat inside the home.
- There are [over 20 million heat pumps installed in Europe](#), and in 2022 the [US sold more heat pumps than gas](#) boilers, however the heat pump industry is nascent in the UK.
- A [UK Government study](#) showed that heat pumps are highly efficient, typically 3x more efficient than gas boilers, in the UK even down to -6C
- An [earlier study also found](#) that “There is no property type or architectural era that is unsuitable for a heat pump”, “from Victorian mid-terraces to pre-WWII semis and a 1960s block of flats”
- Heating a home with a [heat pump uses 70-80% less gas](#) than with a gas boiler, with the residual due to gas being used to generate electricity. Gas savings will grow as more renewables are built, reaching c.95% gas saving if we hit renewables targets.
- The Government has set a target for the UK to install 600,000 heat pumps per year from 2028, which is [below the target of 1 million per year by 2030](#) recommended by the Climate Change Committee. [Sales in the UK in 2022 were around 60,000.](#)
- The Government also has a [target to half the cost of heat pumps by 2025](#) and make them cost comparable to boilers by 2030. There is a £5,000 Boiler Upgrade Scheme grant available for installing heat pumps and Octopus Energy and British Gas now offer heat pumps for £2,500 and £2,999 respectively including the grant. Unveiling a new model of heat pump, Octopus Energy recently stated that it may be able to deliver a heat pump completely free using the grant.
- The [Climate Change Committee](#) found that costs of installing a heat pump fell by 2% in 2022, and the Government has set a target to bring heat pump costs down by 25% - 50% by 2025.
- Electricity prices are expected to fall as more, cheaper British renewables come online. Oil and gas prices, including LPG, are expected to stay volatile and rise to 2050 as carbon pricing impacts the international markets.
- It has [recently been reported](#) that one trade body for the heating industry, the Energy and Utilities Alliance, has been extensively campaigning against heat pumps in the UK. Some of the members of this trade body manufacture or sell both gas boilers and heat pumps, either in Europe or the UK. Minister [Lord Callanan described this as a waste of money](#) if true.

The Clean Heat Market Mechanism

- In order to build the necessary supply chains and heating industry, the Government will introduce the [clean heat market mechanism from 2024](#). This policy requires fossil fuel boiler manufacturers to sell a set proportion of heat pumps, with the proportion rising every year. Trade is allowed under the scheme so those failing to meet the requirement would either have to buy permits from a manufacturer with an excess or face a penalty fine.
- [Analysis from the Energy and Climate Intelligence Unit](#) has found that a less ambitious ‘heat pump mechanism’ and allowing gas connections to new homes could see the UK buying an

additional 200TWh of foreign gas, from countries such as Qatar, between 2024 and 2035. This is the equivalent of over 16m homes annual gas use or the gas contained within over 200 LNG tankers. Costs of this gas could reach over £9bn.

- [Previous analysis by the Energy and Climate Intelligence Unit](#) has found that three-quarters of the UK's boiler exports are to countries that have phase-out dates for gas boilers before 2030, and the UK may lose £65m in exports every year by the end of the decade if it does not start switching to heat pumps.

Future Homes Standard for new builds

- In 2015, [the Government scrapped the Zero Carbon Homes](#) policy which was due to be implemented in 2016. The policy would have ensured that new homes had higher standards of energy efficiency and were futureproofed for low carbon heating such as heat pumps. It has been reported the policy was scrapped because of [lobbying from major housebuilders](#) including Persimmon.
- Instead, in 2019, [the Government committed to introducing the Future Homes Standard](#), which would see new builds produce 75-80% less carbon, from 2025. In April [2023 there was an uplift to the existing Building Regulations](#) as part of the interim Future Homes Standard that tightened energy efficiency requirements in new homes. From 2025, the full Future Homes Standard is due to see low carbon heating installed as well as potentially other low carbon technology like solar panels.
- A consultation on the [technicalities of the full Future Homes Standard was due in 'Spring' 2023](#) but this is yet to be released. This may include a decision on whether new homes will be allowed to connect to the gas grid. However, in [August 2023 the Government did re-commit](#) to introducing the full Standard from 2025.
- The full Future Homes Standard from 2025 is almost ten years after the original Zero Carbon Homes standard was proposed, during which [over 1.1 million new homes have been built that will now require retrofitting](#).
- The Government has a target to both [build 300,000 new homes per year from the mid 2020s](#), and [install 600,000 heat pumps per year by 2028](#). New builds being fitted with heat pumps as standard would therefore mean half of the Government's target reached.

Private rented sector energy efficiency regulations

- Regulations on the energy efficiency of homes in the private rented sector have been in place since April 2018, and were tightened in 2020, meaning that [privately rented homes now must reach a minimum of Energy Performance Certificate \(EPC\) band E](#) to be let out.
- In 2021, the Government proposed upping the regulations via secondary legislation, so that landlords would be obliged to [meet EPC band C in new tenancies from 2025 and in all tenancies from 2028](#). However, there has been no response to this consultation yet and earlier in 2023 the Minister responsible indicated that [a response may not be forthcoming until the end of this year](#).
- It has been reported that because of the delay in confirming the standards due to be implemented in 2025, the Government may now scrap the interim standard and push it back so that instead, all new homes must meet EPC band C by 2028.
- The [Energy and Climate Intelligence Unit has found that a two year delay](#), in which new homes meet EPC band C in 2027 and all homes in 2029 could cost renters more than £1bn in extra gas bills.

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