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**C H A N C E**



**UK CLIMATE ADVISOR  
RECOMMENDS 2050 NET  
ZERO CARBON  
EMISSIONS TARGET**



**— THOUGHT LEADERSHIP**

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## UK CLIMATE ADVISOR RECOMMENDS 2050 NET ZERO CARBON EMISSIONS TARGET

A new report by the UK Climate Change Committee has recommended that the UK toughens its climate target to net zero greenhouse gas emissions (GHG) by 2050. This would require major action across the power, building, transport, agriculture and other sectors to speed up development of the low carbon economy. In the context of recent climate activism, the UK Parliament has also passed a motion declaring a 'climate emergency' and called on the Government to implement this strengthened target although the Government has not immediately adopted it. Achieving the target would require significantly stronger climate policies to be put in place quickly in the face of future economic and other challenges.

The Committee on Climate Change (CCC), the UK Government's climate change adviser, has released a report 'Net Zero – the UK's contribution to stopping global warming.' It advises that the UK can achieve net zero greenhouse gas (GHG) emissions by 2050. It recommends legislating a target of 100 per cent reduction in GHG emissions (compared with 1990 levels), covering all sectors of the economy, and for this to be achieved through domestic efforts, without relying on carbon credits to offset emissions.

The advice also recommends that Scotland can achieve this target by 2045, due to its potential for afforestation and carbon capture and storage; whereas Wales will only be able to achieve a 95 per cent reduction on 1990 levels by 2050 due to its high agricultural emissions and lower potential for CO<sub>2</sub> storage.

The shift to net zero emissions would represent a significant strengthening of the current target to reduce GHG emissions by at least 80 per cent by 2050 relative to 1990 levels (already established in the Climate Change Act 2008). It would, however, align the UK with its commitments under the 2015 Paris Agreement to reach net zero emissions later this century and to pursue efforts to limit temperature increase to 1.5 oC above pre-industrial levels. The CCC advises that if other nations followed suit, there is a greater than 50 per cent chance of remaining below a temperature increase of 1.5oC by 2100 and thereby avoiding the worst effects of climate change.

The publication of the report marks a turning point on the issue of climate change following growing public and political pressure, in large part due to recent protests on government and global inaction (such as Extinction Rebellion in London and global youth climate protests led by Swedish student Greta Thunberg), cross-party pressure groups, increased media coverage and recent local authority declarations of a 'climate change emergency'.

### Achieving net-zero

The report acknowledges that although feasible, achieving zero emissions will be highly challenging and heavily reliant on the uptake of low-carbon technologies, drastic changes across the economy and investment in offsetting technologies and actions such as carbon capture and storage (CCS). The actions necessary to achieve the target include:

- **Electricity generation:** Quadrupling the supply of low-carbon power (including at least 75 GW of offshore wind) by 2025 through the "consistently strong deployment" of renewables, nuclear and CCS plants. The report also recommends that the forthcoming Energy White Paper should support this target and that government intervention will be required to encourage investment through CfD contracts and other funding arrangements.
- **Prioritisation of CCS:** The report concludes that CCS is "a necessity and not an option" in achieving the net zero target. CCS should be implemented at scale in the UK by 2030, and aggregate annual capture and storage volumes of up to 175Mt CO<sub>2</sub> should be provided by 2050. The policy framework must support the CO<sub>2</sub> infrastructure necessary to enable the construction of CCS plants.
- **Investment in hydrogen:** Low-carbon hydrogen should become a key option for industry and be used for industry processes, heating, and as a fuel option for HGVs and ships.
- **Agriculture and land use:** The CCC advises that the agricultural industry will need to change the way it farms and uses land, with greater emphasis on carbon sequestration, biomass production and low-carbon farming practices, such as

better soil and livestock management. Coupled with societal changes in dietary choices, the CCC anticipates that a fifth of UK agricultural land will be able to shift to afforestation, energy crops and peatland restoration.

- **Buildings:** Policy should focus on improving the energy efficiency of new and existing buildings through a shift to low-carbon heating systems and improvements to building insulation.
- **Societal changes:** A number of the recommendations will be supported by societal changes which reduce carbon-intensive activities, including reductions in meat and dairy consumption, reduction in food waste, and a shift to sustainable modes of transport and heating sources.
- **Transport:** The current target date for the ban of all fuel-powered vehicles by 2040 is considered to be too late and a new target of 2035 should be set. In addition, the Government should seek to reduce emissions associated with international aviation and shipping, which will require some government intervention to manage growth and support technological developments associated with these sectors, such as pricing, fuel use and policies to manage the use of airport capacity.

While the CCC advises that the net zero target should be legislated as soon as possible (ideally by the end of 2019), it warns that the target and associated measures will only be achieved if there is adequate policy and investment frameworks in place:

*“Our advice is offered with the proviso that net-zero is only credible if policies are introduced to match...[a net-zero target] is only possible if clear, stable and well-designed policies to reduce emissions further are introduced across the economy without delay. Current policy is insufficient for even the existing targets...”*

*Policies must be fully funded and implemented coherently across all sectors of the economy to drive the necessary innovation, market development and consumer take-up of low-carbon technologies, and to positively influence societal change.”*

## Comment

Although the UK Government has yet to respond formally in detail on the recommendations, momentum is clearly building for a step change in ambition on

GHG reductions. Even before the CCC’s report was published on 2 May 2019, Parliament had already spoken by declaring a ‘climate emergency’ and approving a Labour Party motion calling on the Government to toughen the carbon reduction targets to net zero emissions by 2050, increase short-term targets for the roll-out of renewable and low carbon energy and transport, and build other areas of the low carbon economy.

The Government’s Environment Secretary spoke in support of the motion at the debate, but following publication of the CCC’s report, the Secretary of State for Business Energy and Industrial Strategy (responsible for climate change strategy) confirmed that the Government was *“not immediately accepting the recommendations set out in the [CCC’s] detailed report but will be responding in due course to ensure the UK continues to be a world leader in tackling climate change”*.

It seems likely that the Government will ultimately accept the new target. While the target could be easily legislated through an amendment to the Climate Change Act 2008, the CCC is right to focus on the need for a robust policy framework to ensure high levels of investment in low-carbon technologies, infrastructure and innovation. The Government would need to make an all-encompassing and determined effort to put these policies in place quickly. This would inevitably require the Government to take some risks (such as enhancing the support it gives to infrastructure development) in order to foster private sector investment and encourage some measure of societal change that might be necessary (e.g. changes in eating habits).

The real challenge for the Government would be to hold steadfast in maintaining a strengthened policy framework and continuing to provide the support necessary in the face of other challenges which might ordinarily divert the Government from this aim; for example, a global downturn or possible economic shock following the UK’s departure from the EU. Recent history has shown how detailed UK policy on GHG reduction can fluctuate (e.g. reductions or phasing out of financial incentives for renewable power, and downgrading of support for carbon capture and storage). As always, private sector investors will want to see a stable and longer-term outlook if they are to commit to the massive wave of investment across the low carbon economy that would inevitably be required to meet a net zero target by 2050.



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