

## Twitter Thread by Ketan Joshi



**Ketan Joshi**

@KetanJ0



**The UK government's climate advisory body is launching its next carbon budget: basically, outlining what the UK can emit between 2033 and 2037. It's a big deal - launch video starting right now.**

**Watch along:**

Just 15 mins until the launch event for our new advice to Government on the Sixth Carbon Budget. If you haven't registered, you can watch live on YouTube from 10am. Link: <https://t.co/PjlcIDSYEC>  
[#UKCarbonBudget](#) [pic.twitter.com/1zOTfmxDVp](https://pic.twitter.com/1zOTfmxDVp)

— Climate Change Committee (@theCCCuk) December 9, 2020

Will tweet along snippets. Pretty relevant to.....everything, really. [#UKCarbonBudget](#)

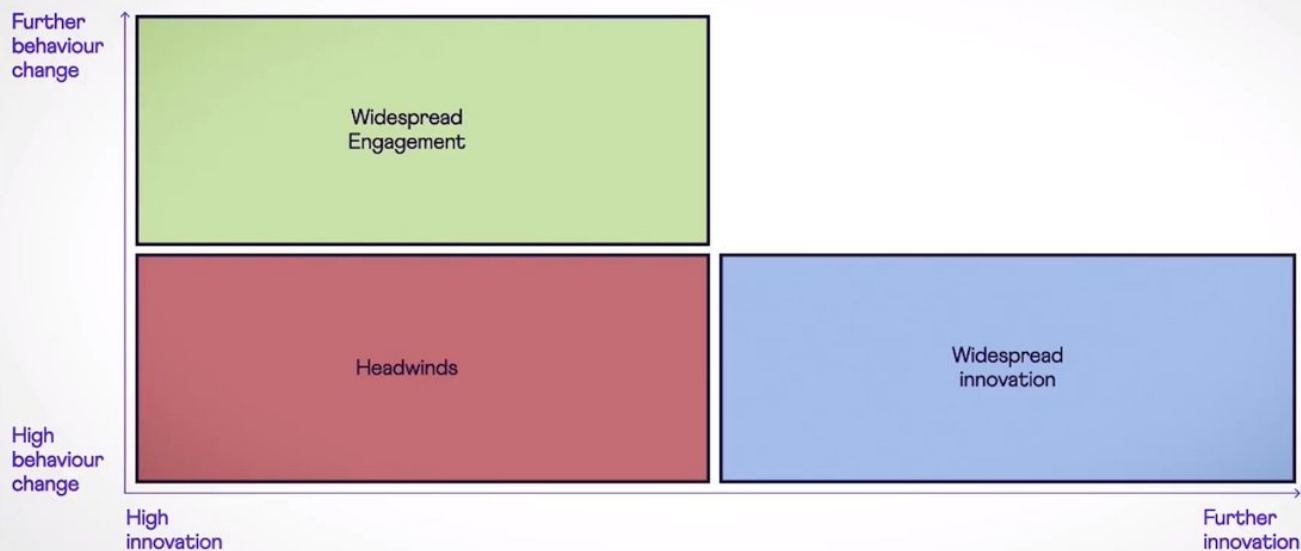
"Instead of being just a budget, it's a pathway we have to tread to reach net zero in 2050" [@lorddeben](#)

Just like quite a few other modelling exercises, CCC use a spectrum between behaviour change and between technological change. [#UKCarbonBudget](#).

Both = best (just like [@AEMO\\_Media's](#) Step Change scenario in their ISP)

## Our approach

Three exploratory scenarios to reach Net Zero by 2050

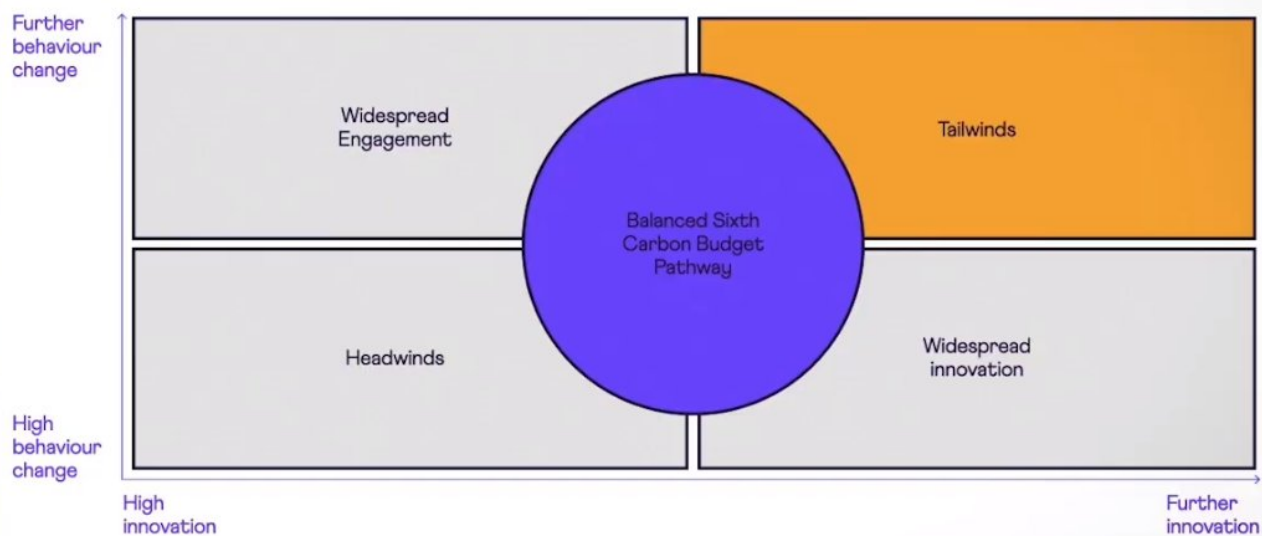


'Balanced' is what they use for their recs. "We're doing 60% of the emissions reductions in the first 15 years, and then 40% in the next".

The slinky kitty curve....good to see. No evidence of delaying action to Dec 29 2049, here. #UKCarbonBudget

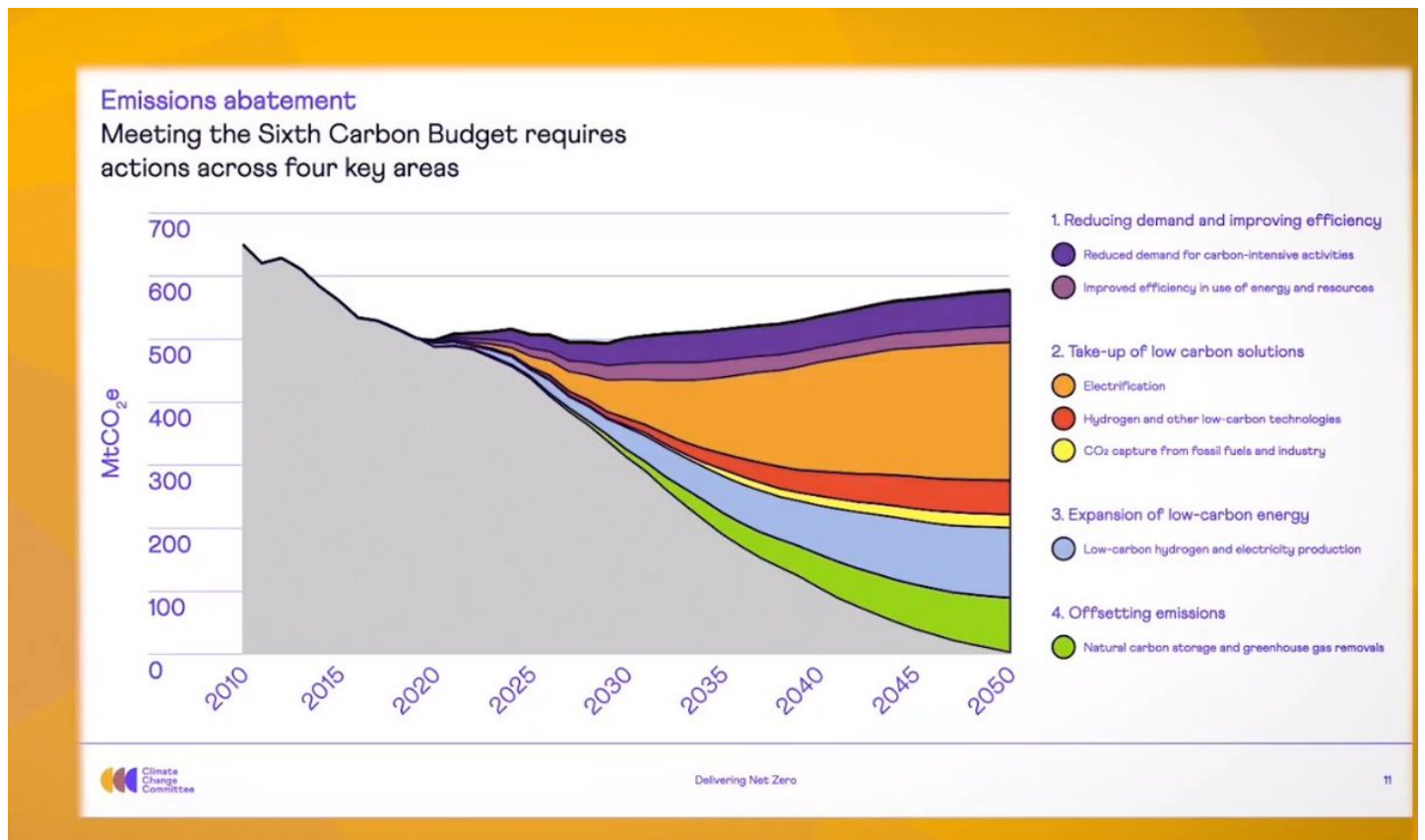
## Our approach

A balanced pathway to keep options open



"By front loading, we're minimising the UK's contribution to cumulative emissions" - really important point. A slow path to net zero - more climate harm than a fast one. #UKCarbonBudget

"This is our rainbow of abatement" - nice @IEA-style split-out of how to cut emissions to near-zero by 2050. Reducing demand for CO2 intensive stuff (flying, meat) is quite a big purple chunk there. #UKCarbonBudget



This is a really interesting graphic:

Orange = purely behavioural change

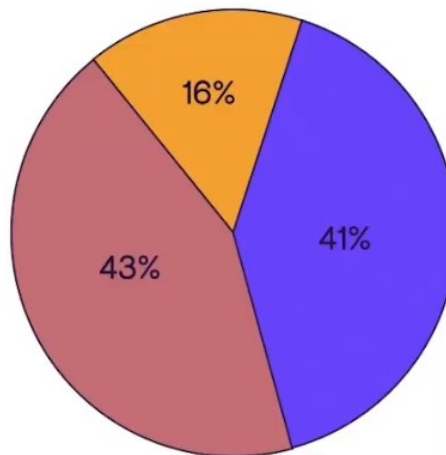
Purple = purely tech

Red (pink??) = a mix of tech and behaviour

"There is nothing to be afraid of at all.....they won't be major change to our lifestyles", on the red wedge #UKCarbonBudget

## Delivering Net Zero

Role of behavioural and societal change in meeting the Sixth Carbon Budget



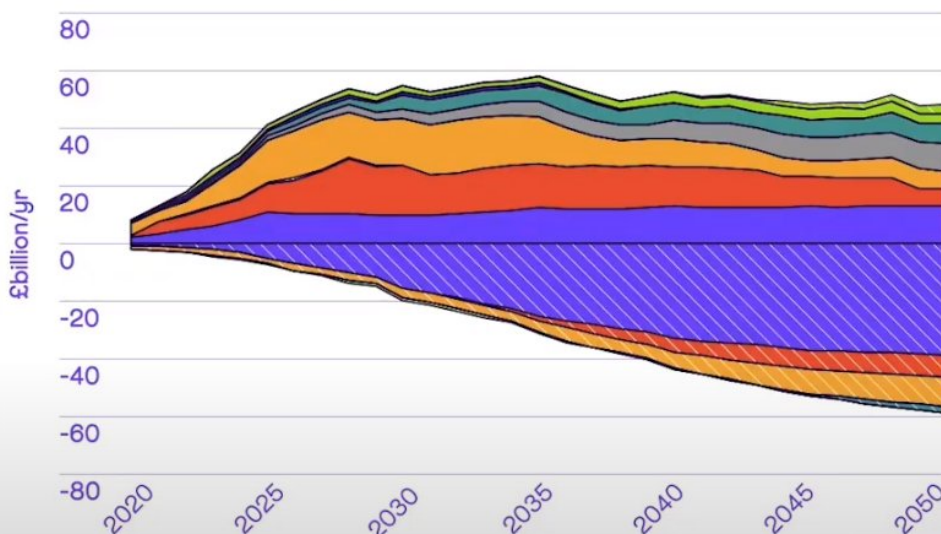
- Low-carbon technologies or fuels, not societal/behavioural changes
- Measures with a combination of low-carbon technologies and societal/behaviour changes
- Largely societal or behaviour changes

UK will need a huge amount of (mostly private) investment in new zero carbon assets, but the savings from not buying fossil fuels eventually cancel that out.

"Any notion that we can't afford to tackle climate change is clearly nonsense" #ukcarbonbudget

## Investing for Net Zero

Major investment programme, delivering offsetting operating cost savings



### Notes:

Costs of electricity are included in the energy supply sector, whereas costs of other low-carbon fuels such as hydrogen and bioenergy are included in the sectors that use these fuels.

M&C is manufacturing and construction. "Other" category includes aviation, shipping, land-use, land-use change and forestry, agriculture, removals, waste and F-gases. CAPEX refers to additional annual capital investment. OPEX refers to savings due to operational cost reductions.

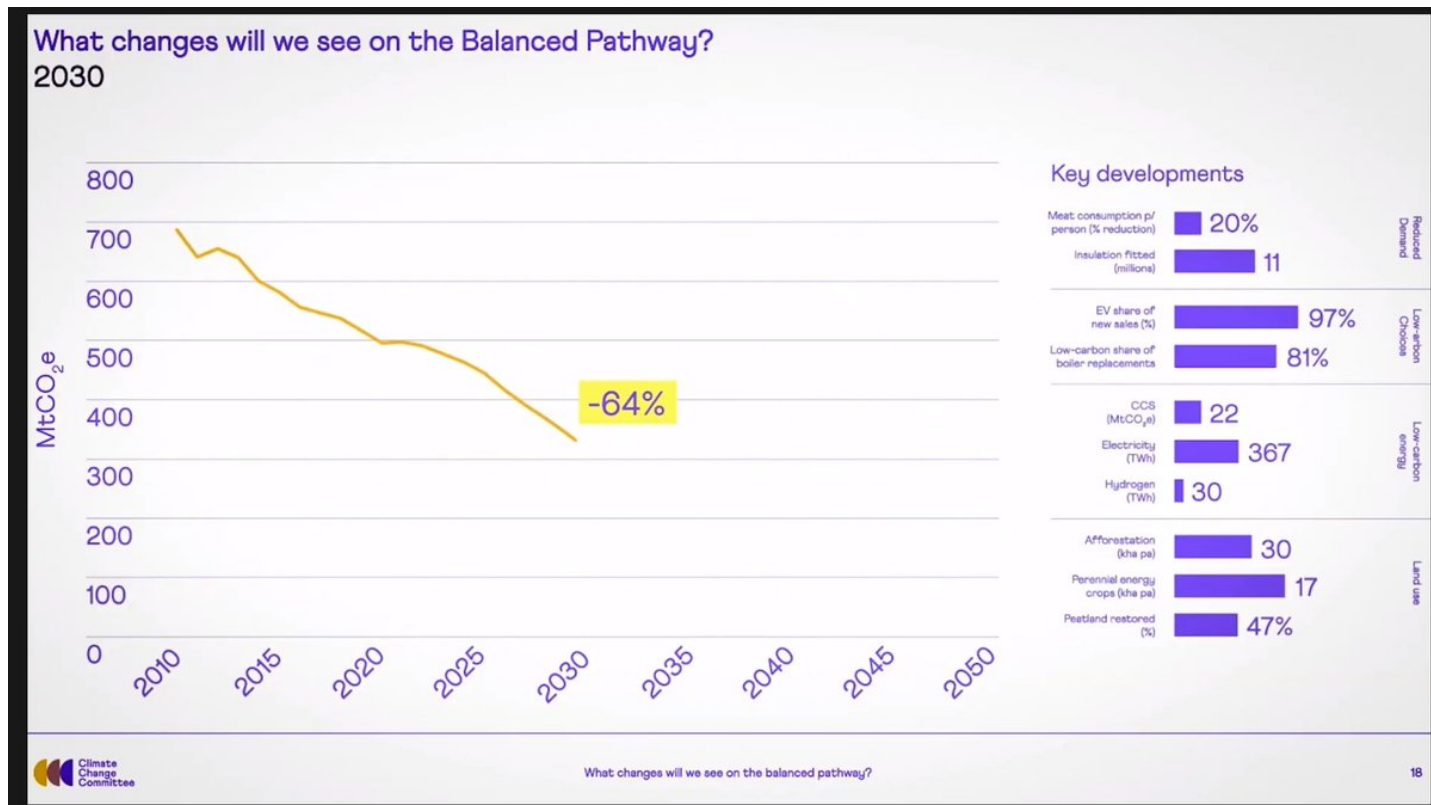
Source: CCC analysis.

"The challenge is not to rely on a pandemic to cut emissions. The key is to drive changes that last"

CC @AngusTaylorMP #ukcarbonbudget

"We're hitting a million heat pump installations by 2030", in addition to nearly 100% of new car sales being electric (small amount of hybrids) #ukcarbonbudget, w/ 30TWh of H2 produced.

Zero carbon elec by 2035 (just like the US). No new sales of gas boilers by 2033



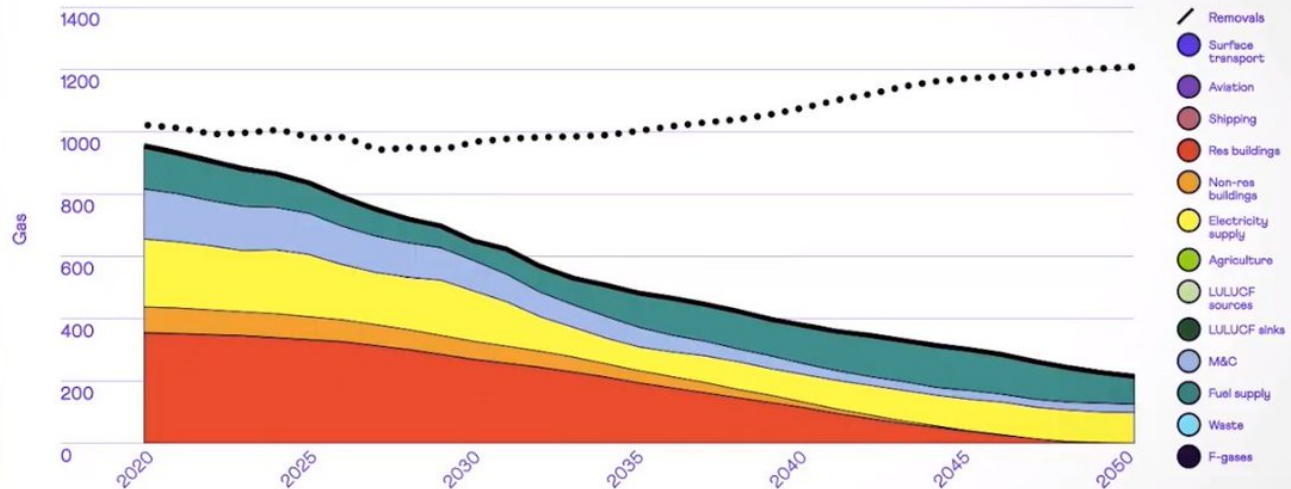
"The crucial point here is that this is all genuinely feasible.....but it is also genuinely challenging" #UKcarbonbudget @ChiefExecCCC

"Gas is not acting as a bridge fuel. It's a fossil fuel and we need to move away from it" #UKcarbonbudget



## Changes in energy demand Natural gas (TWh)

Source:  
CCC Analysis

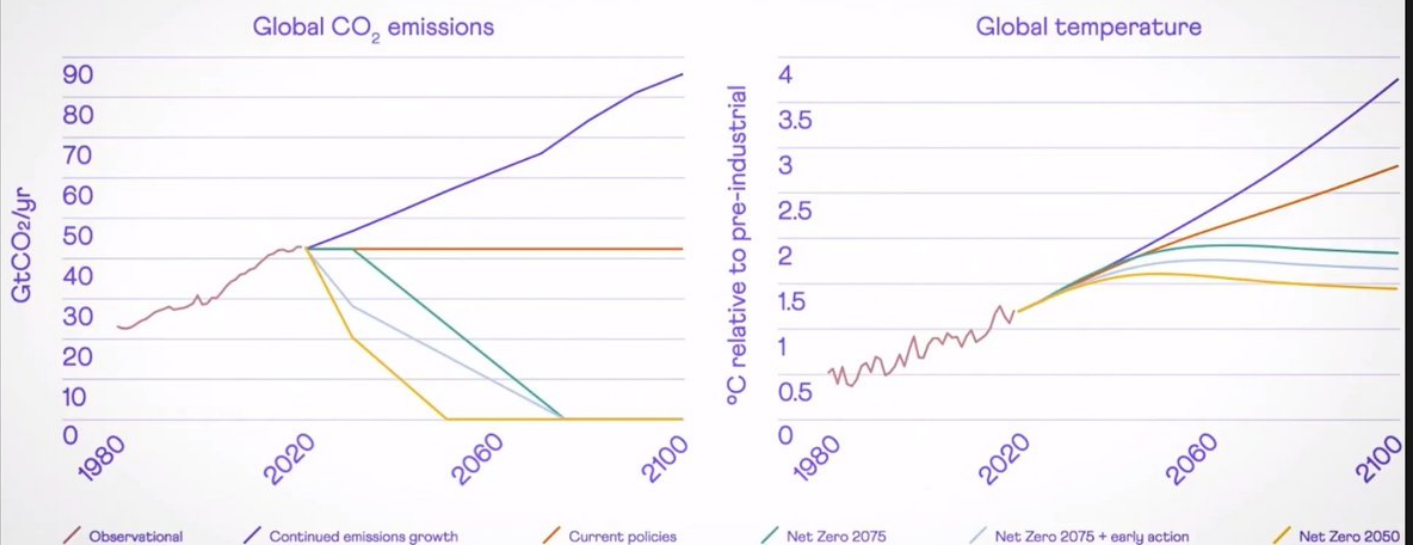


Nice comparison of emissions vs temps. The decisions made to cause the problem have mattered - the decisions made to stop it matter too.

#ukcarbonbudget

## Breaking down global warming

Fully aligning to 1.5C would require more early action and earlier Net Zero



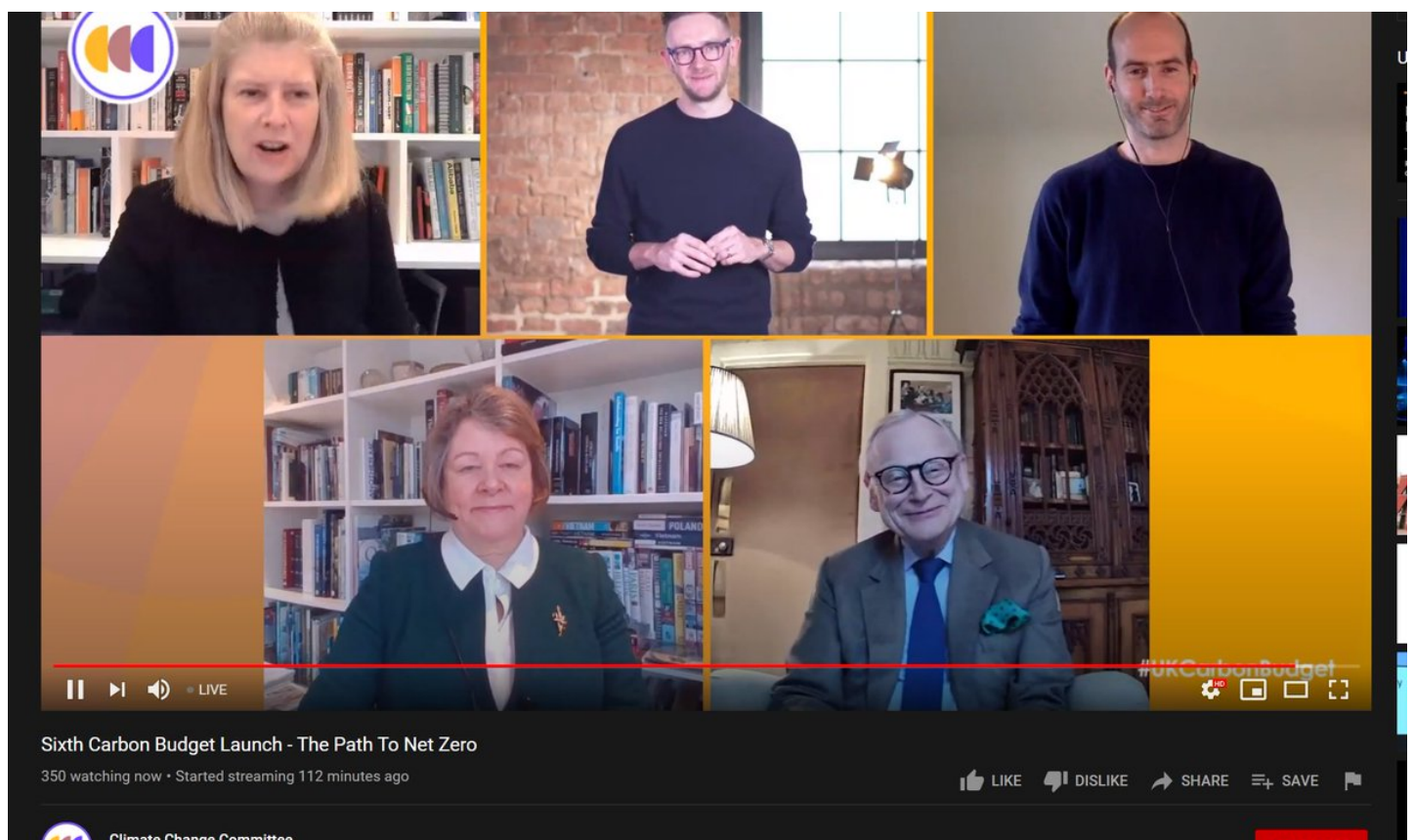
A familiar accent from [@pilitaclark](#) during the Q&A session.... #ukcarbonbudget <https://t.co/faxRj5KF8x>

"If you take the time to guide people through this, they're really supportive of action" on how to integrate behaviour change into net zero. Can't help but think of toxic UK media outlets and how easily they could ruin all that. #UKCarbonBudget

Aus media and conservatives used a "the government is coming to take your car" narrative in 2019 on efficiency standards and it definitely helped them win an election #UKCarbonBudget

A really interesting point from [@ChiefExecCCC](#) - the hard, empirical pathway (spreadsheets) and the qualitative, consultation-led pathway (climate assemblies, etc) both end up in really similar places. #UKCarbonBudget

Lord Deben literally having an air-sourced heat pump installed during the call #UKCarbonBudget



He's got biomass backup #UKCarbonBudget



# Sixth Carbon Budget Launch - The Path To Net

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On heat pumps and the suggestion to phase out gas boilers in thirteen years - these are two headline describing precisely the same piece of news:

#UKCarbonBudget

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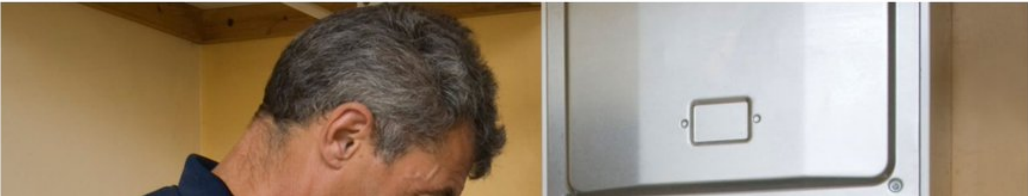
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## 'We need to be more ambitious': Ban sale of gas boilers by 2033, says Committee on Climate Change

Gas boilers must be banned in the next 12 years or the UK will miss its net-zero climate target by 2050

By Emma Gatten, ENVIRONMENT EDITOR  
9 December 2020 • 6:00am

Related Topics  
Climate change, Energy, Department of Energy & Climate Change, Clean energy, Renewable energy, Global warming



"While its great to hear commitments to net zero.....the path by which we get there is crucial. It's the accumulated CO2 emissions in the atmosphere that are changing the climate.....they must have a tough intermediate target. The 2030 NDCs are crucial"



By 2030, the UK won't be building any more new unabated gas plants (that should surely be.....now, right?), under the CCC's balanced pathway scenario #UKCarbonBudget

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<b>Table 3</b> Phase-out dates of high-carbon activities under the Balanced Pathway		
<b>Technology/behaviour</b>	<b>Phase out date (sales)</b>	<b>Backstop date (operation)</b>
<b>New fossil-fuelled cars and vans</b>	2032 (including plug-in hybrids)	2050
<b>Gas boilers</b>	2033 (in residential homes) 2030-33 (in commercial properties)	2050
<b>Oil boilers</b>	2028 (in residential homes) 2025-26 (in commercial properties)	2050
<b>Gas power generation (unabated)</b>	2030 (no new build of unabated gas plants)	2035
<b>HGVs</b>	2040	Beyond 2050
<b>Biodegradable waste sent to landfill</b>	N/A	2025 ban on all municipal & non-municipal biodegradable waste going to landfill
<b>Unabated energy-from-waste plants</b>	From today, new plants and extensions should be built with CCS or CCS ready	2050

UK shifting energy from oil+gas into electricity+hydrogen ends up with a total \*lower\* amount of energy consumption, because electricity is just so much more efficient.

Also see: @GriffithSaul's @rewiringamerica work!

Or: <https://t.co/BYvbPTPX6e> #UKCarbonBudget

Energy demand falls on aggregate, with fossil fuels replaced by low-carbon electricity and hydrogen.

Figure 2.7 Energy demand (TWh) by sector in The Balanced Net Zero Pathway

