Environment APPG: Event briefing

Low Carbon Homes – Building for Net Zero
Tuesday 13th July, 16:00 - 17:00pm BST
Chair: Anthony Browne MP

Speakers:
Greg Jackson (CEO, Octopus Energy)
Juliet Phillips (Senior Policy Advisor - Clean Economy, E3G)
Zoe Guijarro (Policy Manager, Citizens Advice)
TBC Representative (Active Buildings Centre)

Background
The Government has committed to making homes more energy efficient, cheaper to run, and less reliant on fossil fuel-based heating sources, which will be vital in meeting the UK's climate targets. Ahead of the upcoming Heat and Buildings Strategy, the UK has an opportunity to deliver the foundations for a low carbon future for buildings. Our expert panellists will discuss:

- Policies needed to boost industry and consumer confidence to invest in green homes, skills training, and robust supply chains that will be necessary to get on track to net zero emissions
- The importance of providing an ambitious, coordinated roadmap for decarbonising buildings through the eagerly awaited Heat and Buildings Strategy
- How funding energy efficiency and heat pumps can support the delivery of a green recovery from covid
- Key lessons that can be drawn from the Green Homes Grant Scheme

Political context
Decarbonising homes is going to be politically and technologically difficult because it involves changing people's private property and there are also some quite large costs in doing so, which need to be brought down. Earlier this year, the government's flagship green recovery policy, the Green Homes Grant, was scrapped. In recent months, there has also been a backlash in The Sun and The Daily Mail on the cost of replacing gas boilers with low carbon alternatives.

Policy context
Buildings account for 16% of UK emissions and reductions have been very slow over the past decade, reducing only ten per cent between 2009 and 2019. To meet its legally binding carbon reduction targets and net zero carbon emissions by 2050, the government will have to find an acceptable pathway to a near complete decarbonisation of the housing stock.

Heat & Buildings Strategy
The Department for Business, Energy and Industrial Strategy's (BEIS) forthcoming Heat & Buildings Strategy will serve as the blueprint for decarbonising buildings this decade. The Strategy has been continually delayed, but is due to be published shortly. It is expected to contain a phase-out date for gas boilers, new money for heat pumps to help reduce the cost for consumers installing them, as well as energy efficiency schemes to replace the Green Homes Grant voucher scheme.

The Future Homes Standard
New standards for homes have been introduced that will ensure they produce 75-80 per cent lower emissions than those built to current standards, with homes required to have low carbon heating installed rather than being connected to the gas grid. However, despite previously suggesting the Future Homes Standard would be introduced in 2023, it has now been delayed to 2025, meaning

hundreds of thousands of homes are likely to be built to lower standards in the period to 2025, placing the burden and cost of home efficiency improvements on the future owners of those homes.

The Green Homes Grant
It was scrapped in March this year. Retrofit measures that the Green Homes Grant covered included insulation (wall, floor, and roof), installation of low-carbon heating measures including heat pumps and solar thermal, replacing single glazed windows with double or triple glazed, upgrading to energy efficient doors, and installing thermostats or heating controls. It is rumoured that the Green Homes Grant scheme will be replaced and extended as part of the upcoming Heat and Buildings Strategy.

How can we decarbonise our homes?

- The main source of emissions from our homes is our gas boilers. Over 85% of our homes use gas for heating.
- The UK government's independent climate change advisors, the Climate Change Committee (CCC) estimate that by 2050, 75% of our homes will instead be heated by heat pumps.
- The government can also help boost the energy efficiency of homes through investing in floor, wall, loft and window insulation, with an energy efficiency scheme like the Green Homes Grant.

What are heat pumps?

- The government has set a target for 600,000 heat pumps to be installed each year by 2028
- Heat pumps use electricity, not gas. They are used across Europe, as well as in industrial buildings in the UK. An air-source heat pump works like a fridge in reverse. Heat from the outside air is absorbed by a fluid in the pump, and then is passed through a compressor to increase the temperature. As well as providing hot water and heating, heat pumps can cool properties, helping boost the resilience of our homes to a warming planet.
- Octopus Energy, one of the event panellists, have publicly stated they will roughly half the cost of a heat pump within the next 18 months.

What about hydrogen?

- The CCC indicate that 11% of homes will be heated by hydrogen in 2050.
- Green hydrogen – derived from renewable energy – is currently a scarce resource, representing around 1% of the total production.
- Blue hydrogen, produced using fossil fuels, is not zero emissions, due to methane leakages along the value chain, as well as speed and scale limitations associated with the Carbon Capture and Storage (CCS) technologies it relies on.
- Analysis for the CCC also found that the sunk costs of having an extensive gas grid do not automatically mean that it will be lower cost to switch it over to hydrogen and use it in hydrogen-ready boilers.

Useful resources:
Green Alliance Net Zero Policy Tracker: Net_zero_policy_tracker_April_2021.pdf (green-alliance.org.uk)
CCC Sixth Carbon Budget Report:
The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf (theccc.org.uk)
E3G, Green Alliance + Greenpeace briefing on low carbon homes:
Briefing_low_carbon_homes_mythbusting.pdf (green-alliance.org.uk)
EAC Committee inquiry on the energy efficiency of existing homes: Energy Efficiency of Existing Homes - Committees - UK Parliament .
Future Homes Standard Explainer: Future Homes Standard: What do the New Energy Targets Mean? | Homebuilding