

# COP26 Regional event

West Midlands Combined Authority

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# The energy transition is happening in three waves

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1. **Power systems** need to significantly expand in response to the electrification of other sectors and transform to utilise only low carbon energy sources

- ▶ The target to decarbonise UK electricity production by 2035 will mean offshore wind could grow to 100GW or more by 2050, supported by low carbon firm power and significant sources of flexibility
- ▶ Fundamental changes to GB system operation now expected, including an Future System Operator (ISO) and potential separation of the Distribution System Operation (DSO) function
- ▶ Reforms to deliver a smart, flexible energy system and intelligent grids are underway, creating large opportunities for new technologies and business models

2. Need to decarbonise **transport** will drive new investment and the emergence of new technologies and business models - including EVs, charging networks and biofuel/hydrogen-powered vehicles and other transport modes

3. **Decarbonisation of heating and industrial processes** will drive deployment of four main technologies:

- ▶ Electrification of heat through deployment of heat pumps and smart heating controls
- ▶ Biogases are already being injected into the gas grid, with further expansion planned
- ▶ Hydrogen - green hydrogen generated from low carbon energy and blue hydrogen using CCUS
- ▶ Heat networks -up to 18% of UK heat being delivered via these networks by 2050

# The energy transition is happening in three waves



## Government 10-point plan

1. Offshore wind
2. New/advanced nuclear

PLUS:

- Other renewables
- ESO/DSO transition
- Smart/flexible markets & grids
- Offshore grids

3. Zero emission vehicles
4. Green public transport
5. Jet Zero & Green ships

6. Greener buildings

PLUS:

- Industrial clusters strategy

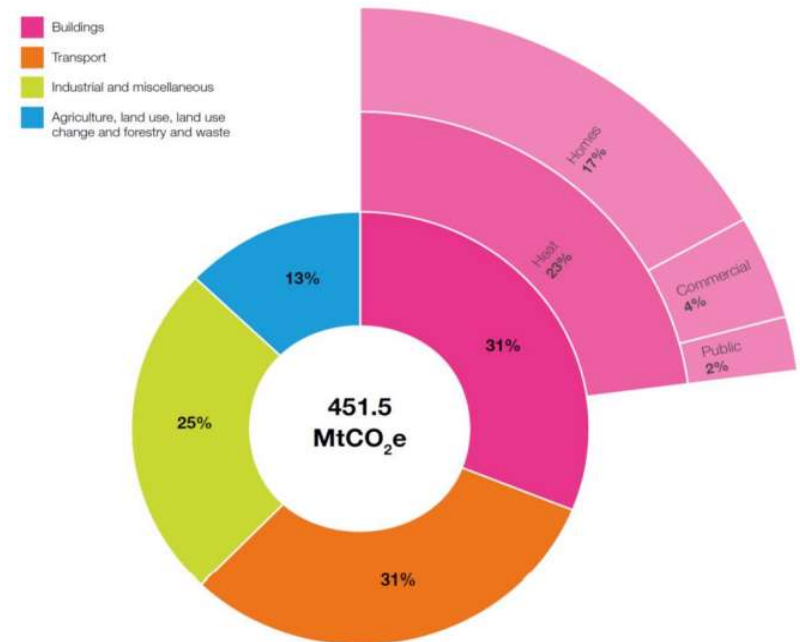
7. Low carbon hydrogen
8. Carbon Capture Usage & Storage
9. Green finance & innovation
10. Protecting our natural environment

PLUS:

- Sustainable supply chains
- Carbon markets
- Customer transformation

# Heat & Building strategy - key elements

- ▶ To meet Net Zero virtually all heat in buildings will need to be decarbonised
- ▶ Net Zero will mean gradually, but completely, moving away from burning fossil fuels for heating.
- ▶ The journey to Net Zero buildings starts with better energy performance
- ▶ Govt aims to take major strategic decisions on the role of Hydrogen for heat by 2026
- ▶ Ahead of these decisions, need to ramp up the rollout of heat pumps and low carbon heat networks to meet near term carbon budgets



# Heat & Building strategy - key commitments

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- ▶ Improving the performance of existing homes - achieve EPC band C by 2035 for as many homes as possible, where cost-effective, practical and affordable
- ▶ Target energy efficiency support on social housing, low income/fuel poor households and public sector
- ▶ Ensuring all new buildings in England are ready for Net Zero from 2025
- ▶ Phasing out installation of fossil fuel heating systems in properties not connected to the gas grid
- ▶ Intention to phase out the installation of new gas boilers from 2035
  
- ▶ Ambition to reduce the costs of installing a heat pump by 25-50% by 2025 and aim that heat pumps are no more expensive than gas boilers by 2030
- ▶ Providing financial support to meet capital costs - replace RHI with £5k upfront grants
- ▶ Rebalancing energy prices to ensure that heat pumps are no more expensive than gas boilers
- ▶ Ensuring the electricity system can accommodate increased electricity demand and heat pumps can be quickly and affordably connected to the network
  
- ▶ Increasing the proportion of biomethane in the gas grid - Green Gas Support Scheme (GGSS)
- ▶ Developing hydrogen for heating buildings by assessing the feasibility, safety, consumer experience and other costs and benefits, by the middle of the decade
  
- ▶ Accelerating growth of the low-carbon heat network market through a series of complementary measures - the Green Heat Network Fund and Heat Networks Investment Project

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