



What might the UK's energy transition journey to 2050 look like?

Today's energy system is dominated by fossil fuels. In the UK, natural gas is mainly used for power generation and heat and oil is used for transport. But things are changing.

Electricity is getting greener, and the number of Electric vehicles is rising. But heat pumps are yet to make an impact in domestic heating.

Now, in 2035, North Sea oil and gas production continues to decline and almost all our electricity is low carbon. Industry and some power plants use low carbon hydrogen and capture carbon dioxide to store under the sea. Heat pumps are more common, and people sell electricity to each other and the national grid. More electric vehicles than petrol and diesel are on the road. Heavy transport embraces electricity and hydrogen.

Here, in 2050, the sea is now a major source of electricity and hydrogen and stores more carbon dioxide. Wind, solar and nuclear provide almost all our electricity, with a small portion coming from gas and biomass supported by carbon capture. The UK energy system is more complex with different fuel sources and greater interconnection. Most transport will run on electricity, hydrogen, and sustainable fuels.

Get in touch to discuss how we can get there.

Deloitte UK Energy System. Our path to net zero.