

The Midlands: powering the UK's clean energy revolution

Cadent and National Gas Transmission – Hydrogen Valley

CASE STUDY

Low-carbon hydrogen will play a significant role in the future energy mix, proving vital for the UK's energy security, and enabling decarbonisation in hard-to-abate sectors such as industry and heavy transport.

Cadent and National Gas Transmission are collaborating on an innovative regional industrial hydrogen proposition: Hydrogen Valley. This corridor will stretch from Norfolk in the East to Shropshire in the West, covering a landlocked region of the UK with limited access to renewable energy for green hydrogen production.

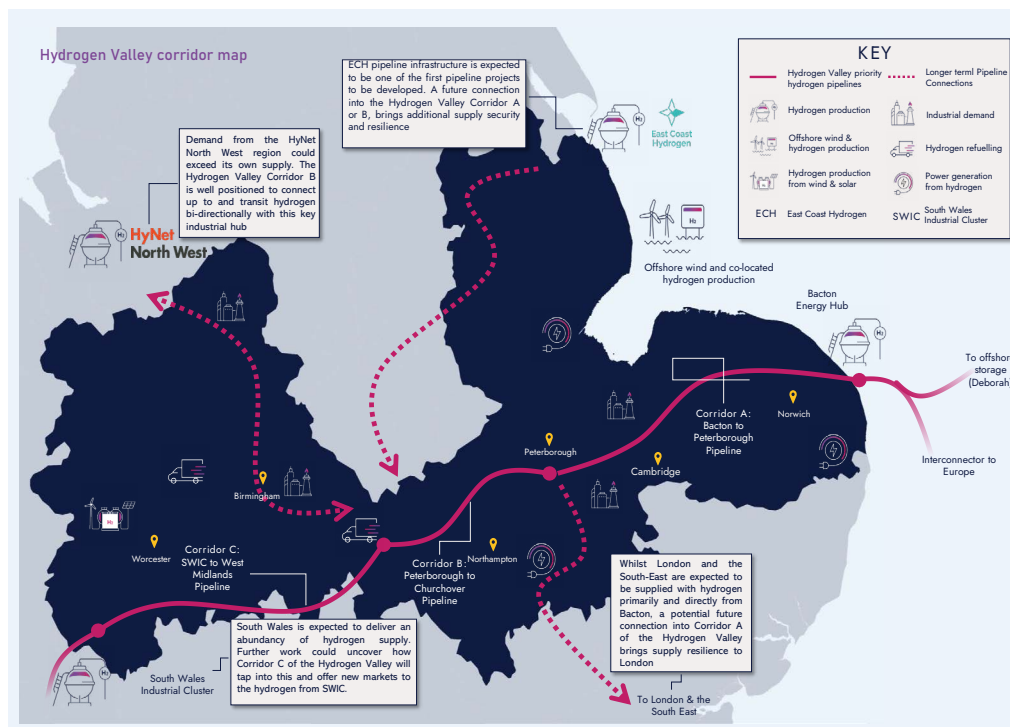
It will extend from Staffordshire, Stoke-on-Trent, Telford and Wrekin, into the West Midlands Combined Authority area, and could potentially be connected to East Coast Hydrogen pipeline infrastructure in the future, adding supply security and resilience.

The programme aims to establish a vision and kickstart the hydrogen economy in the region. This involves investigating the role of hydrogen in the future energy mix across a number of sectors, and identifying the infrastructure needed to support this and ensure that industry have a potential decarbonisation pathway and are not left behind.

Hydrogen Valley could reduce reliance on fossil fuels by producing 48TWh of clean hydrogen and reposition the UK as an energy exporter instead of an importer. The North Sea - Europe's largest reservoir of offshore wind, local natural gas, CO2 and hydrogen storage - can be used to produce hydrogen domestically. Making use of these local resources would protect consumers from volatile prices and reinforce the UK's energy security.

Hydrogen Valley could also unlock socioeconomic benefits for local people and businesses. Cadent and National Gas Transmission expect that it could sustain 25,000 jobs and create another 9,000 new ones. It would cut CO2 emissions by 12.9 million tonnes, which is 25% of what is required for the entire region to achieve net zero. Hydrogen Valley could also attract up to £28 billion in private capital investment.

The programme aims to explore infrastructure opportunities to secure long-term, low-cost hydrogen to help supply large demand centres across the Hydrogen Valley. It is focused on extending its regional collaboration and building market confidence. As the Hydrogen Valley consortium continues to expand, it is gathering public sector support to promote investments and keep up the momentum, further improving market certainty to attract investment, and initiate pre-front-end engineering design planning and project development.



Credit:
<https://www.hydrogenvalley.co.uk/>