

PRESS RELEASE

For immediate issue

North West hydrogen cluster could drive economic growth and help de-carbonise the region's energy

- A new report – commissioned by Peel Environmental - reveals developing a hydrogen economy in the North West could unlock £1.6billion of GVA by 2050 and create over 2,300 peak jobs
- **Carbon dioxide reductions of up to 10 million tonnes per annum by 2050**
- Air quality improvements for Greater Manchester and Liverpool city regions would result from the use of hydrogen as a road transport fuel decreasing emissions of NOx and particulates

The creation of a North West hydrogen cluster could boost the regional economy by £1.6 billion, create over 2,300 peak jobs, reduce carbon dioxide emissions and help improve the region's air quality, according to a new report commissioned by Peel.

It outlines how delivery of a hydrogen network between Greater Manchester and Liverpool could significantly de-carbonise the region's energy, usher in a new era of hydrogen-fueled vehicles and cut CO₂ emissions by 10 million tonnes per year by 2050. It could also improve air quality by reducing particulate matter and nitrogen oxides in the atmosphere, produced by the region's road vehicles.

As one of the North's leading land and property companies, Peel is collaborating with other firms in progression of the exemplar project – with the company's Protos energy destination near Ellesmere Port a potential central hub for the cluster. It comes shortly after the launch of the UK's first Energy Innovation District in the North West, an area promoted by the Cheshire Energy Hub to stimulate future energy technology.

Release of the report follows details of a conceptual study by Cadent, the gas distribution network operator in the North West, to deliver a major hydrogen infrastructure project called the 'Liverpool-Manchester Hydrogen Cluster'.

Commenting on its findings Dr. Tony Smith, of Peel Environmental, said:

“The creation of a hydrogen economy would be game-changer for the North West in so many ways. From de-carbonising our energy and contributing to climate change targets, to making substantial improvements to the region's air quality, delivering a fully-functioning hydrogen industry would be transformational.

“This report shows there is real opportunity to attract inward investment, create thousands of jobs and put the North West at the forefront of the UK's hydrogen industry.

“Making it a reality will take collaboration. We're working alongside some of the biggest names in the energy-intensive industries to promote an exemplar and deliverable hydrogen project, which responds directly to the Government's recently-published Clean Growth Strategy.”

Hydrogen is a de-carbonised energy source which can be used to create electricity and heat. When used as a replacement for fossil fuels in road vehicles, its only emission is water. There is also the potential to blend hydrogen into the existing gas distribution network to reduce carbon emissions at the point of consumption. Such combined application of hydrogen across the North could therefore reduce carbon dioxide emissions and help improve health and air quality.

Peel's report, authored by independent experts Aqua Consultants, sets out how use of hydrogen could contribute to the targets identified in the 2008 Climate Change Act. It also outlines how a North West hydrogen production hub in the North West, including Carbon Capture Storage and Utilisation facilities in the East Irish Sea, could feed large industrial users in the region. It could support a network of hydrogen vehicle re-fueling stations across Liverpool, Manchester, Cheshire and Warrington.

Supporting the concept, Professor Joe Howe, Executive Director and Professor of the University of Chester's Thornton Energy Research Institute said:

“Low carbon energy technology is very much at the forefront of the work undertaken by both academics and businesses at the University of Chester's Thornton Science Park, especially through our newly established Energy Centre.

“This report represents another positive step in the region's growing reputation for both research and commercialisation of these innovative technologies. It provides a strong, economically robust case, based on real evidence, for the use of hydrogen and its associated supply chain as a credible route to a low carbon gas economy. Furthermore it contributes to the emerging understanding of the potential for a Liverpool-Manchester hydrogen cluster.

“I welcome the report's focus on air quality and decreasing transport emissions in our North West city regions and I see the additional potential for innovation, skills, and supply chain development as extremely exciting both for the University and the regional economy as a whole”

Chris Barron, Director at Aqua Consultants, authors of the report, said:

“De-carbonising heat and transport are recognised as the biggest challenges in achieving the UK's 2050 emissions reduction targets. Repurposing all or parts of the existing gas networks to hydrogen would meet the peaks in demand required for heat, whilst providing an option for the energy infrastructure required to displace petrol and diesel in road transport.”

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NOTES TO EDITORS

ABOUT PEEL & PROTOS

Peel Land and Property (including Peel Environmental) owns 1.2 million m² of property and 15,000 hectares of land and water. Holdings are concentrated in North West England, the Clyde, Yorkshire and the Medway with a portfolio valued at £2.3 billion. Our specialist teams have a proven track record in delivering high quality sustainable mixed use developments with a focus on creating new communities. Peel Land and Property is one of the UK's foremost investors in real estate, infrastructure and transport, with assets owned or under management of more than £5 billion.

Protos, located near Ellesmere Port between Manchester and Liverpool, is expected to deliver over 3,000 jobs once operational and a £350 million boost to the economy each year. A flagship energy destination for Peel Land and Property Group, it boasts various energy assets including one of the UK's largest onshore wind farms, a 21.5MW biomass facility under construction, a consented Energy from Waste facility and 35MW of installed flexible electricity generation on site. It is strategically linked to the neighbouring Thornton Science Park and part of the recently-created Cheshire Enterprise Zone.

ABOUT THE HYDROGEN REPORT

The Aqua Consultants report, entitled 'Liverpool-Manchester Hydrogen Hub – The Power to Fuel the Northern Powerhouse', has been commissioned by Peel Environmental and authored by independent experts Aqua Consultants. The aim of the report was to examine the impact that delivery of a hydrogen economy between the two city regions would have on the UK's energy trilemma – the need to provide low cost energy to meet increased demand; to ensure security of supply; and meet the 2050 emission reduction targets.

The report can be read in full at <http://thisisprotos.com/downloads/>

It builds on the Liverpool-Manchester Hydrogen Cluster conceptual report, recently published by Cadent: <https://cadentgas.com/About-us/Innovation/Projects/Liverpool-Manchester-Hydrogen-Cluster>

It examines three scenario models, including slow progression of the industry, the creation of a North West Regional Hydrogen Hub, and the establishment of a UK-wide Hydrogen Economy. The figures and findings quoted in this release are taken from the scenario of a North West Hydrogen Hub. Key findings include:

- A forecasted growth of hydrogen-fueled vehicles to represent 32% of transport fuel consumption by 2050
- 32 Terawatt-hours (TWh) of hydrogen consumption across industrial users; domestic and commercial heating; and transport demand by 2050
- An estimated reduction of 10 million tonnes of CO₂ emissions per year by 2050
- Health benefits by improving air quality and reducing particulates
- A cumulative £1.6 billion Gross Value Added (GVA) impact for the economy by 2050
- Creation of over 2,300 peak jobs

For more information about the report, please get in touch.

GUIDANCE FOR EDITORS

- This press release is for immediate release and use
- Interview candidates from Peel Environmental are available upon request.

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