

PRESS RELEASE

For Immediate Release

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New alliance of industry leaders back North West as the UK's primary hydrogen economy

- **Exciting research and development programmes to explore hydrogen already underway in the region**

A POWERFUL industry group has come together to highlight how the North West of England could make hydrogen energy a reality in the UK helping to bring down the region's CO₂ emissions and support clean growth.

The North West Hydrogen Alliance (NWHHA) unites some of the UK's most influential organisations who are driving forward work to position the region as the UK leader for hydrogen energy.

The founding members of the NWHHA are Atkins, BOC, Cadent, Costain, Peel Environmental, Shell and the University of Chester. They contend that the North West has the industry, infrastructure and innovation to lead the UK's hydrogen energy revolution, bringing with it huge benefits to the region in new jobs, skills and investment.

The North West and Alliance partners are leading the way in response to the Committee on Climate Change's call for urgent on the ground action to show the potential for hydrogen. The Committee has recognised that *"hydrogen can make an important contribution to long-term decarbonisation"* if it is combined with other energy saving measures.

Tony Smith, Commercial Strategy Manager at Peel Environmental, said:

"The North West of England is poised to be the primary region for the development of a decarbonised, hydrogen based energy market for the UK. It already features all the necessary components to develop a hydrogen economy – thriving industry, an existing skilled workforce, city regions that collaborate, as well as natural and industrial assets."

Innovative ideas to advance clean energy build on the hydrogen production and use that has been happening in the region for many years, such as BOC's hydrogen plant in St.Helens. Powerhouse Energy is developing technologies to turn waste plastic into hydrogen and ITM Power, along with Cadent, is exploring the use cutting edge hydrogen production technology in the region.

The North West is also poised to deliver two exciting 'first of their kind' hydrogen energy projects. The first public network trials of hydrogen and blended gas are being planned for the North of England through Alliance partner Cadent's [HyDeploy](#) project. Blended hydrogen (up to 20% vol.) and natural gas could be a straightforward way for customers to make carbon savings from their homes without any changes to their appliances or the way they use gas. More ambitious plans have also been set out in Cadent's [HyNet North West](#) project which plans to use hydrogen for significant CO₂ emissions savings from industry, homes and transport. Phase 1 of HyNet is now underway which includes looking at how to re-purpose



existing infrastructure in the region for hydrogen delivery, and exploring opportunities for hydrogen vehicles, including trains.

Professor Joseph Howe, Chair of the NWA and Executive Director of the Thornton Energy Institute, said:

“To meet climate change targets and reduce CO₂ emissions we need to find ways of decarbonising our energy systems. Hydrogen can be used as a clean energy source to heat our homes and businesses and is changing the face of transport with fuel cell cars, commercial vehicles and trains.

“We’re seeing major leaps forward in the technology all over the world, but some of the leading research and development is taking place right here in the North West. Take Cadent’s HyNet and HyDeploy projects – flagship schemes to distribute hydrogen across the Manchester and Liverpool regions. They’ll bring with them a £17 billion economic boost, 5,000 jobs and over 1 million tonnes of CO₂ savings every year. That’s just one project.”

The Alliance has launched a website – **NWHydrogenAlliance.co.uk** – acting as a one-stop-shop for news, insight and resources on how hydrogen is taking off across the region. Over the coming months the NWA will promote the region as a green energy leader, share its knowledge and resources via the website, Twitter @HydrogenNW and LinkedIn ‘North West Hydrogen Alliance’, allowing everyone to benefit from the members’ collective expertise in the field.

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About hydrogen

Unlike natural gas, when pure hydrogen is combined with oxygen and burned it produces no harmful CO₂ emissions, only heat and water. When hydrogen is used in transport to power



electric fuel cell vehicles, it produces no Nitrogen Oxides or particulate emissions, so as a transport fuel it could help improve air quality.¹

We still rely heavily on fossil fuels (mainly natural gas) for heating our homes and businesses. The natural gas distribution networks are currently connected to more than 20 million UK homes, providing gas for heating and cooking. By using the existing gas network, hydrogen could be used as an economical heat source which would reduce our impact on the environment. Studies are underway (HyDeploy) to test how hydrogen blending could be used for supplying heat to UK homes, without the need for replacement of domestic appliances.

Hydrogen can be stored as a gas or as a liquid, in large amounts and for long periods of time. Pressurised hydrogen can be stored in several ways and efficient hydrogen storage is an active research area. For use in the gas network, hydrogen can be stored as pressurised gas ready for use in the pipes, or at a much larger scale, in salt caverns. Hydrogen can also be transported in pressurised tanks or bottles or be stored and used in fuel cells, which generate electricity.

About the North West Hydrogen Alliance

The North West of England is poised to be the UK's primary region for the development of a hydrogen-based economy. The region's reputation as the industrial North – including the necessary industries, academia, innovation, skills and natural assets – means it is in pole position to grasp the opportunity of hydrogen use.

Partners

ATKINS GLOBAL

Part of the SNC-Lavalin Group, Atkins Global is one of the world's most respected design, engineering and project management consultancies. Headquartered in the UK, Atkins has a global reach, with 18,000 employees, and leads in the infrastructure, transportation and energy sectors.

BOC

BOC has a strong and long-established presence in the North-West. We employ more than 600 people at our UK-wide Customer Service Centre in Worsley, Manchester. Our St Helens site, which has been operating for over 40 years, produces gases – including hydrogen – for supply to the local glass works and other regional manufacturers. BOC also has production facilities at Runcorn.

CADENT

CADENT owns and operates four of the UK's gas distribution networks. Covering the North West – and some of the largest cities outside London – its network uses over 130,000km of pipeline to deliver gas to around 11 million customers. The company is behind HyNet, a major project in the North West to produce and distribute hydrogen, reducing carbon emissions from industry, domestic heat and transport.

¹"The implication of hydrogen combustion for NOx emissions must be established - across applications in buildings, industry and power." [Hydrogen in a Low Carbon Economy](#), Committee on Climate Change, November 2018



COSTAIN

As a smart infrastructure solutions company, Costain helps to improve people's lives by deploying technology-led programmes to meet urgent national needs across the UK's energy, water and transportation sectors. Costain is delivering numerous high profile contracts across the whole asset life-cycle through the delivery of innovative consultancy, asset optimisation, technology and complex delivery services.

PEEL ENVIRONMENTAL

The Peel Group is a privately owned UK infrastructure and property investor with assets owned and under management of over £5Bn, centralised in the North West of England. Its portfolio of investments ranges from ports, airports and energy, to commercial property, retail and logistics. Peel Environmental owns key infrastructure which may be critical to successful implementation of decarbonised energy in the North West including Protos, and through Peel Ports, the Manchester Ship Canal and the Port of Liverpool. Peel is a strong advocate of the North West as an exemplar cluster in the development of UK decarbonised energy based on hydrogen which sits at the heart of the Energy Innovation District.

SHELL

Royal Dutch Shell plc is incorporated in England and Wales, has its headquarters in The Hague and is listed on the London, Amsterdam, and New York stock exchanges. Shell companies have operations in more than 70 countries and territories with businesses including oil and gas exploration and production; production and marketing of liquefied natural gas and gas to liquids; manufacturing, marketing and shipping of oil products and chemicals and renewable energy projects.

THORNTON SCIENCE PARK

Thornton Science Park is a high-tech home for innovative and growing businesses in the energy, environmental, automotive and advanced manufacturing sectors. Located within the Cheshire Science Corridor Enterprise Zone and offering 1.1 million sq.ft of space, Thornton provides a base for new technologies to be developed, tested and deployed in the surrounding industrial heartland.

