HyNet launches demonstration at Unilever’s Port Sunlight site to fuel production with hydrogen.

100% hydrogen has been used to power the manufacturing of personal care and home care products at Unilever’s Port Sunlight factory in the North West.

Led by Progressive Energy, the demonstration is part of the wider ‘HyNet Industrial Fuel Switching’ Programme.

The Programme will provide evidence to enable major manufacturing sites to switch to low carbon hydrogen as soon as it is available from the HyNet project.

A central part of the North West’s industrial heritage, Unilever’s Port Sunlight factory has been manufacturing household brands and products since 1888. During the trial, believed to be the first large-scale demonstration of 100% hydrogen-firing in a consumer goods production environment anywhere in the world, Unilever products including TRESemmé and Persil products will be manufactured using hydrogen.

As part of the trial, both 100% hydrogen, and a blend of natural gas and hydrogen is being used to fire a boiler which provides steam for the production process. The demonstration of hydrogen technology at Port Sunlight will provide critical evidence to enable decarbonisation of a range of industry sectors, thus making a critical contribution to the UK’s journey to Net Zero.

The bulk production of low carbon hydrogen in the North West is imminent. HyNet is the UK’s leading industrial decarbonisation project and has been fast-tracked by Government to begin operation in the mid-2020s. Vertex Hydrogen, a HyNet consortium partner, will supply low carbon hydrogen into the UK’s first 100% hydrogen pipeline network, being developed by Cadent, another HyNet partner. The network will distribute low carbon hydrogen to industry and power generation sites across the North West.

The HyNet partners are supporting wider industry sites in the glass, food and drink, paper, chemicals, automotive and metals sectors to enable switching from fossil gases to low carbon hydrogen. In August 2021, as part of the HyNet Industrial Fuel Switching Programme, NSG-Pilkington in St Helens achieved a global first in the production of flat glass using hydrogen. The Programme was awarded funding of £5.3M from BEIS through its Energy Innovation Programme in February 2020.

As part of their climate action commitments, Unilever has set the target of achieving zero emissions from their operations by 2030. In addition to increasing their use of renewable energies, including wind and solar, and by introducing capability to generate renewable energy on-site, Unilever is exploring and supporting the innovation of new renewable heating technologies – including
Steve Rotheram, Metro Mayor of the Liverpool City Region said:

“I’ve been a longstanding and passionate advocate of innovative ways to tackle climate change. HyNet is a revolutionary approach to clean, green energy, and has the capacity to protect and create thousands of high-skilled, high-paid jobs across the region as we transition towards zero emission solutions. It is the Liverpool City Region that is at the heart of HyNet, from pioneering trials of new technology in St Helens and the Wirral, to carbon storage in Liverpool Bay.

“When it is up and running in the mid 2020’s, the project will provide a huge boost to our economy and our ambitious net zero targets. Alone, HyNet will reduce the region’s carbon emissions by 10m tonnes every year by 2030. It could also generate up to £31bn for the UK and will single-handedly deliver 80% of the country’s clean power targets by the end of the decade.

“It is my ambition for our region to be at the forefront of the green industrial revolution, leading the charge towards net zero, and taking advantage of the myriad of jobs, investment and opportunities that it provides. From our existing strengths in wind and solar power, to revolutionary new projects like HyNet and our Mersey Tidal Power scheme, our region has the potential to become Britain’s Renewable Energy Coast – with local people benefiting from the employment and training opportunities that go with it.”

David Parkin, Director of Progressive Energy and Project Director of HyNet North West said:

“HyNet is fully focused on providing a route for industry to decarbonise. This demonstration shows how close we are to hydrogen becoming a reality. HyNet will not only substantially reduce the level of carbon dioxide emissions entering our atmosphere but will kick-start a low carbon hydrogen economy across the North West and North East Wales”.

Madeleine McLeod, Factory Director Port Sunlight, Unilever, said, “At Port Sunlight, alongside Unilever sites around the world, we’re adapting and innovating our factories and processes to help reduce the impact we have on our planet and to progress our climate commitments.

“In our operations, we’ve already reduced our emissions by 64% since 2015, and now we’re working towards our commitment to have zero emissions by 2030. To achieve this, we’re looking at new technologies, which is why we’re excited to be working with Progressive Energy to trial the use of hydrogen at an industrial scale. The results will help us to better understand the role hydrogen could play in decarbonising our factory sites and provide insight and learnings to support wider-industry action towards Net Zero too.”

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About HyNet North West
HyNet North West

HyNet North West is a low carbon energy project at the forefront of the UK’s journey to a Net Zero future, being developed by a consortium of world-leading organisations.

From 2025, HyNet North West will produce, store and distribute hydrogen as well as capturing and storing carbon. It will decarbonise the North West of England and North Wales through the creation of state-of-the-art infrastructure.

This game-changing project has the potential to reduce carbon dioxide (CO₂) emissions by 10 million tonnes every year by 2030 – the equivalent of taking four million cars off the road. HyNet North West will create and maintain thousands of local jobs, as well as enable long-term sustainability for businesses and financial security for communities across the region.

The HyNet North West consortium includes Progressive Energy, Cadent, Essar, INOVYN, Eni, University of Chester, Vertex Hydrogen, CF Fertilisers, Viridor and Hanson.

For more information, visit www.hynet.co.uk.

About Unilever

Unilever is one of the world’s leading suppliers of Beauty & Personal Care, Home Care, and Foods & Refreshment products, with sales in over 190 countries and products used by 3.4 billion people every day. We have 148,000 employees and generated sales of €52.4 billion in 2021. Over half of our footprint is in developing and emerging markets. We have around 400 brands found in homes all over the world – including iconic global brands like Dove, Lifebuoy, Knorr, Magnum, OMO and Surf; and other brands such as Love Beauty & Planet, Hourglass, Seventh Generation and The Vegetarian Butcher.

Our vision is to be the global leader in sustainable business and to demonstrate how our purpose-led, future-fit business model drives superior performance. We have a long tradition of being a progressive, responsible business. It goes back to the days of our founder William Lever, who launched the world’s first purposeful brand, Sunlight Soap, more than 100 years ago, and it’s at the heart of how we run our company today.

The Unilever Compass, our sustainable business strategy, is set out to help us deliver superior performance and drive sustainable and responsible growth, while:
- improving the health of the planet;
- improving people’s health, confidence and wellbeing; and
- contributing to a fairer and more socially inclusive world.

While there is still more to do, in the past year we’re proud to have achieved sector leadership in S&P’s Dow Jones Sustainability Index, ‘Triple A’ status in CDP’s Climate, Water and Forest benchmarks and to be named as the top ranked company in the GlobeScan/SustainAbility Sustainability Leaders survey, for the eleventh consecutive year.

For more information about Unilever and our brands, please visit www.unilever.com.