

North West is home to the leading hydrogen and carbon capture project in the UK - HyNet

As the news coverage of a potential 'green Arecovery' grows daily, it is good to know that the North West is right at the heart of this. In fact, it's ideally placed to lead the UK into a more prosperous and environmentally friendly future.

At the centre of this vision is a project called HyNet, created by the UK's largest gas distribution network Cadent in partnership with green energy consultants Progressive Energy Ltd.

HyNet proposes that, with government funding and private investment, we create hydrogen production facilities in the region, together with a major pipeline to form the spine of a network that will deliver hydrogen across the North West.

This will provide zero carbon energy to industries including those that need very high temperatures in their production processes. The surplus hydrogen would be used to provide blended gas heat for around two million homes in the region, reducing carbon emissions from domestic heating at the same time – without customers having to make any changes to their appliances.

The North West is the ideal location for this highly innovative proposal. The high concentration of industry in a relatively small geography means there is consistent gas demand, avoiding the need for hydrogen storage (which can be expensive).

The hydrogen will be produced from methane and biomethane using a process called autothermal reforming (ATR). This enables 97% of the CO₂ byproduct to be captured.

What will happen to this CO₂? Once again, the North West has the answer: The proximity and timing of the depletion of the Liverpool Bay oil and gas fields means that these can be repurposed as a 130m tonne CO₂ storage facility underground; there is no need to build new facilities or scrap the old ones – and the CO₂ never reaches the atmosphere, so is harmless.

Finally, the support within the North West – from its political leaders to its industrial and business stakeholders – is a huge factor. The region has a proud history of bold innovation and industry and this positive support for HyNet will be a major factor in its success.

HyNet also represents excellent value for money and is one of the lowest cost options being considered by government at the moment. The estimated infrastructure investment for

the full HyNet project is around £0.9 Billion. This includes hydrogen production, pipelines and the full Carbon Capture Utility and Storage chain. In return for this investment, the project will deliver CO₂ savings of 1m tonnes every year and over 5,000 jobs between now and 2025 when it would launch. It's also estimated that it would provide £31bn in gross value added for the UK.

No wonder, then, that a recent report from the All Party Parliamentary Group on Hydrogen ('How the UK's hydrogen sector can help support the UK's economic recovery') noted that HyNet "has gained significant momentum and is now viewed as the leading hydrogen and CCUS project in the UK today".

HyNet is an excellent example of repurposing existing infrastructure (which has had huge investment during its lifetime) and thereby keeping customer disruption to a minimum, as well as continuing to get value from that investment. It's a classic example of how the North West can adapt to changing circumstances and come out of it stronger and in great shape for the future.

The HyNet consortium consists of Cadent, Progressive Energy Ltd, Essar, CF Fertilisers and the ENI.

www.hynet.co.uk