



North West
Hydrogen
Alliance



**A manifesto for
delivering a world
leading hydrogen
economy in the
North West**

2024

Introduction

Hydrogen is set to play a vital role in the UK's journey to net zero. It can provide clean energy for our industries, businesses, transport networks and homes. Developing a hydrogen economy will also unlock investment, secure and create jobs and boost supply chain opportunities – creating 100,000 jobs and £13 billion of GVA in the UK by 2050¹.

The North West of the UK's roadmap to decarbonisation shows that hydrogen and carbon capture are essential for the region to meet its ambition to be the UK's first net zero carbon industrial cluster by 2040.

The North West will be first to develop a decarbonised, hydrogen-inclusive energy market. It already features all the necessary components to develop a hydrogen economy – thriving industry, an exemplary hydrogen safety record, an existing skilled workforce, city regions that collaborate, appropriate geology for storage as well as natural and industrial assets.

Hydrogen is already happening in the North West where it is used at numerous industrial sites. Additionally, the region is one of the first two decarbonised energy clusters given Government backing, with HyNet North West selected as a Track-1 Carbon Capture, Usage and Storage (CCUS) cluster. We are also home to green hydrogen projects, hydrogen buses, trials of hydrogen in industry, salt cavern hydrogen storage and much more.

With Government support, industry in the North West is ready and willing to invest in many components of the low carbon hydrogen economy, including production, distribution, energy storage and fuel switching, within the HyNet Track-1 Cluster project and beyond. There is strong demand for hydrogen and the supply chain is already mobilising.

However, we must go further and faster. We stand ready to work with Government to deliver North West hydrogen projects as quickly as possible and ensure the region and the UK capitalises on this huge opportunity.

This manifesto sets out how working together we can deliver a world-leading hydrogen economy in the UK.



100,000 jobs



£13 billion of GVA



1. Set a new target of 20GW of hydrogen by 2035

With the right support from Government the North West could deliver up to 6GW by 2035.

In line with recommendations by the Climate Change Committee (CCC) that 13-25GW of hydrogen will be needed to decarbonise the power system by 2035, we believe 20GW is the minimum we will need. We have a pipeline in the North West able to make a significant contribution to this target, but only if we move quickly. The North West is leading the way, with a diverse range of production pathways under development in the region including CCUS enabled and, electrolytic utilising both renewable and nuclear power sources. With projects including the world leading HyNet, Trafford Green Hydrogen and First Hydrogen production plants (in Liverpool and Manchester), the North West is home to over 4GW of production capacity that is currently being developed in the region. There are additional projects that we expect to come forward over the next few years that will increase the total capacity that could be in operation by 2035. The region could also be a key enabler for the import and export of hydrogen in the form of ammonia.



2. Accelerate Track 1 and Track 2 cluster projects

Give clear timelines and deliver as quickly as possible Track 1 and Track 2 cluster projects in the North West, with Government funding announced in 2024.

This will enable the UK to hit its ambitious production targets that will make a significant contribution towards delivering on our climate change commitments. Specifically, we are calling for:

- Electrolytic Hydrogen Allocation Rounds to be expanded and accelerated
- Contracts to be put in place for Track 1 clusters and Electrolytic Hydrogen projects as quickly as possible
- Rapid selection of Track 1X projects and next rounds of Electrolytic Hydrogen revenue support allocation

3. Accelerate hydrogen transport and storage business models and provide interim measures to unlock early infrastructure

Hydrogen requires production, demand and infrastructure to synchronise to deliver decarbonisation.

Hydrogen distribution and storage are key to the roll out of the HyNet Cluster in the North West. Scaling beyond a small number of users will require a hydrogen network to deliver hydrogen to offtakers. In addition, hydrogen storage is required at scale to balance production and demand. This is particularly the case in relation to electrolytic production coupled with intermittent renewables and in end use sectors with variable demand such as power and heat. Large scale storage will need to be in place by 2030 if we are to fully realise the benefits of hydrogen production in the region. Infrastructure development typically has long lead times and therefore we need to start work now if we are to deliver on time. Business models by 2025 will not provide enough time and interim measures are required to kick start investment in these no regrets areas.



4. Deliver a national supply chain and skills strategy

There is a need for a national supply chain and skills strategy which reflects the strengths and needs of different regions and which can support the reskilling and training a net zero future will require.

Some of the skills needed already exist, particularly when it comes to project management and industrial-scale projects. But the scale of work required to reach net zero in 2050 means much more needs to be done to ensure the UK has the skills to meet the targets. The North West is home to several universities with strong hydrogen capabilities and, investment is required to ensure that there is sufficient coordination between educational and training centres and industry. This will ensure that degree courses, apprenticeships and training programmes deliver the skills that will be required by industry in the future.



5. Review of planning processes for hydrogen

The development of hydrogen in the North West will require a diverse range of new production and infrastructure projects to come online over the coming decades.

There is a need to invest in planning and permitting bodies to ensure that officers have a good understanding of hydrogen projects. In addition to hydrogen, the delivery of net zero in the North West will also require a large volume of other energy infrastructure projects. There is therefore a need to increase capacity of planning and permitting functions to ensure that there is sufficient bandwidth to process applications. Given the need to deliver change quickly overarching policy guidance is required to flow down into the Development Plan system.



6. National public engagement programme around net zero to prepare consumers and foster public awareness and acceptability

The NWAH is committed to supporting hydrogen across the North West supply chain through information sharing, education and communication, however if we are to reach our net zero obligations a national public engagement programme is required to educate and inform consumers around the need for change and what that change means in practice.

In its 2020 report 'Public attitudes to hydrogen and Net Zero' the NWAH called for a Net Zero body, funded by both Government and industry, but independent of both, which can take on the role of public education. This national campaign would create the imperative for change with each region taking forward local engagement to deliver the change.

7. Need to create an enabling regulatory environment to unlock investment in electricity infrastructure to support the growth of green hydrogen production

The North West has a number of green hydrogen projects which will see hydrogen created from renewable electricity.

The right regulatory environment is required to enable investment in electricity infrastructure which will support projects required to achieve net zero.



About the North West Hydrogen Alliance

The North West Hydrogen Alliance (NWHHA) brings together many of the UK's most influential organisations developing the nation's leading regional hydrogen economy.

Working with regional partners we helped the North West become one of the first two decarbonised energy clusters given Government backing.

We have the industry, infrastructure and innovation to make hydrogen energy a reality. The North West of England and North Wales are already delivering a range of hydrogen projects from research, production, distribution and storage, which will create and sustain a hydrogen market.

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