

North West Innovators

To achieve Net Zero by 2050, it is essential that the major industrial hubs such as the North West push ahead with the development and implementation of renewable energy and carbon capture schemes. It is evident that hydrogen will play a vital role in this drive towards cleaner energy for businesses and the wider community.

In the Spring issue of “Elements”, class-leading UKAS-accredited Inspection and NDT provider, Axiom Engineering Associates Ltd, discussed the integrity challenges associated with ‘unwanted’ hydrogen in existing process applications. ‘Pure’ hydrogen does however have the power to be transformative, with its harnessing as a means of generating clean, sustainable energy, at the forefront of industry’s thinking as we progress towards Net Zero. Manchester Metropolitan University has partnered in a collaborative project with the expertise from SMEs to much larger companies in the creation of the city’s first low carbon hydrogen hub. This will be in addition to Trafford Low Carbon Energy Park which already operates other Net Zero projects aligned with the UK Government goals.

This collaborative approach ensures that the best minds, from both academia and industry, are harnessed to address the climate emergency whilst ensuring that a range of stakeholders play a central role in the energy transition. This also presents pioneering opportunities for regional economies involved in the Process sector and the UK plc. as a whole.

A key takeaway from the work being spearheaded in such initiatives, is the use of process simulation to essentially filter the myriad of options being put forward to generate Hydrogen, or to improve its production efficiency, and deal with carbon capture. What Axiom knows from experience is that once a potential process innovation shows promise then the next stage will invariably involve multi-discipline feasibility studies.

Material selection, as discussed previously by Axiom, is a key consideration, as is how pressure systems are designed to cater for what may be challenging pressures, loadings and temperature burdens. The re-use, and re-purpose, of existing infrastructure in the deployment of new solutions is another technical challenge which relies on detailed domain knowledge.

Axiom has already engaged in advising and supporting emerging companies involved in renewables and green technology solutions. With their regional base in Runcorn already delivering localised value-added support to a growing portfolio of clients in the North West, Axiom are well-placed to support the development needs of a hydrogen-based economy.

We can be rest assured that the proactive approach adopted by the North West will place the region at the forefront of the UK’s drive towards a cleaner and sustainable industry. With collaboration between the know-how of businesses such as Axiom and academia, the challenging targets set for the North West to achieve Net Zero carbon emissions are highly achievable.

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