

Written evidence submitted by the North East of England Process Industry Cluster (NEPIC) Limited (LRS0077)

The North East of England, from Redcar in the south to Berwick in the north, is home to roughly half of the UK's chemicals manufacturing capacity, and a third of its pharmaceutical manufacturing. Moreover, the Teesside chemical parks represent the second largest process cluster in the whole of Europe. Alongside these manufacturers, there are also many supply chain companies. Any policy that seeks to level up the North East economy should therefore include leveraging this concentration of process-based companies who together represent £2.1bn GVA, support 39,000 skilled jobs and turnover £12 bn per annum.

All these process companies share common issues such as asset management, productivity, safety, skills, digitalisation and innovation. This means that they generally share common supply chains and benefit from working together to share best practice and trade together. The chemical industry has been described as the 'industry of industries' as 90% of UK manufacturing is dependent on the chemicals and materials it produces.

The North East of England Process Industry Cluster (NEPIC), is a small company dependent largely on its 300 members for financial support. It is well known that companies in clusters tend to do better than those without competitors, suppliers, close by. NEPIC ensures that opportunities for trade, cooperation, collaboration, best practice sharing and networking are captured and exploited to further enhance the whole industry. The North East process cluster also includes five universities - Teesside, Durham, Sunderland, Newcastle & Northumbria - as well as the Centre for Process Innovation (CPI), part of the High Value Manufacturing Catapult, all networked together by NEPIC for the benefit of industry.

The majority of the chemical industry on Teesside is contained in a number of Chemical Parks located at Wilton, Seal Sands, Billingham & North Tees. These parks are interconnected with pipelines supplying water, steam, gases and chemicals. In addition, there is a common provision of electricity and effluent treatment. Many products, or by-products, of one factory are the raw materials for another further increasing benefits of locating on this industrial parks. This integrated nature is a great strength in that it makes current facility expansion or foreign direct investment (FDI) much easier due to the lower capital expenditure required and lower plant running costs.

It is important that the advantages of economic agglomeration of the chemical and pharmaceutical industries and the integrated nature of the chemical parks is not only preserved but leveraged for growth.

A number of factors could be added to the clustering and integration that would grow the cluster. These are:

- Decarbonisation
- Freeport
- Supply Chain Development
- Innovation
- Joined Up Government

Decarbonisation

Decarbonisation of the chemical industry on Teesside could give rise to the first decarbonised chemical cluster in the world. This would help existing companies improve the environmental credentials of their products and encourage FDI. Progress is being made via NET Zero Teesside on this decarbonization but there still is not a business model in place for companies to utilize the Carbon Capture and Storage infrastructure once it is deployed. A realistic financial reason for companies to capture their CO₂ needs to be developed by HM

Treasury soon for decarbonization to proceed. Decarbonisation would also allow the production of green hydrogen to be ramped up on Teesside which could then be used for transport and domestic heating.

Freeport

The Freeport model that is being suggested by government includes many Enterprise Zone tax advantages such as increased capital allowances. If the chemical parks were included in a freeport, these tax advantages would encourage existing companies to invest and help new companies set up within the decarbonised and integrated zone.

Supply Chain Development & Innovation

The current Covid-19 pandemic has highlighted the fragile nature of many global supply chains and presents an opportunity to re-shore them. This is a common opportunity across both chemical and pharmaceutical manufacturing. However, it must be realised that much of the process manufacturing that has been lost overseas is due to the much lower cost of production in the far east. This highlights the need to not burden the process sector with additional costs but also the need to deploy innovative new processes to reduce industry's costs.

There are opportunities for companies to enter new supply chains for advanced materials, automotive batteries and circular supply chains. The materials for automotive batteries alone are thought to be worth £4bn in the UK.

Most of the UK's chemicals that flow into the plastics manufacturing supply chains are made on Teesside. All these manufactures are keen to be part of the environmental solution to plastics waste by recycling used plastics back into their production processes. In fact, the Teesside area has the opportunity to become the major hub for plastics recycling in the UK.

The development for circular supply chains, automotive battery materials and other advanced materials and pharmaceuticals requires innovation. However, despite a highly developed academic base, this innovation is not flowing into our process industries to enhance their productivity or help create new supply chains and products.

A good solution to this issue was contained in a 'Strength in Places' (SiP) submission called PRISMS that sort to harness and coordinate the considerable process sector relevant academic expertise in the northern universities for the benefit of the mostly northern-based chemical industries. This bid included the Centre for Process Innovation (CPI) to help move the science up the Technology Research Levels (TRL) to be market ready for industry. This SiP submission was turned down as were all the other North Eastern SiP submissions. This trend of not supporting excellent applications to help northern industry to innovate must not continue if leveling up is to be achieved.

Joined Up Government

To encourage the process sector to grow in North East England, government must stop intervening in industry in a negative way. Current examples include the UK Global Tax that is planned to be levied on some raw materials not manufactured in the UK and will make some NEPIC member operations in the UK uneconomic. Another example is Ofgem greatly reducing the Short Haul Tariff concession for industrial gas users. This will greatly increase the energy costs of many process sector companies in the UK. These are two examples of a lack of joined up government thinking and not taking the needs of industry into account in policy making.

A year ago, the Chemistry Council submitted a document to government "*Sustainable Innovation for a Better World – Our strategy for delivering chemistry-fueled growth of the UK economy*".

This strategy comprises of three workstreams:

- Innovation
- Supply Chains
- Regions and Infrastructure

However, this report has been largely ignored by government, despite being co-developed with government and industry. It was resubmitted in March this year as a more focused ‘ask’: Sector Deal Phase 1. The recommendations in both these reports have been carefully considered and need to be translated into a sector deal for the Chemical Industry as a central pillar of any plan to level up the North of England.

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