Six of the country’s most heavily industrialised regions are pressing ahead with ambitious decarbonisation projects after securing up to £8 million of government net zero funding to kick-start their transformation plans.

Phase 2 of the Industrial Decarbonisation Challenge is looking to develop infrastructure that can yield significant emissions reductions while creating highly skilled jobs to revive the fortunes of deprived communities.

Central to the vision for a net zero future are low-carbon technologies that will thrive and grow, halting the drift of young talent from industrial towns and cities, especially in the north of the country.

Bryony Livesey, Challenge Director, Industrial Decarbonisation, said: “This represents a huge opportunity for the next generation entering the world of work.

“The heavy industries that created these communities will give way to clean-growth infrastructure creating many thousands of jobs, attracting young women as well as men.”

The projects cover the Tees Valley, the North West, the Black Country (West Midlands), the Humber region, Scotland and South Wales.

The objective is to establish the world’s first net zero industrial clusters by 2040, largely through carbon capture, utilisation and storage and by establishing hydrogen networks.

For example, Net Zero Tees Valley aims to decarbonise a cluster of carbon-intensive businesses by 2030, supporting up to 5,500 direct jobs.

The plan is to capture up to 6 million tonnes of CO₂ emissions each year, equivalent to the energy used in two million homes. Storage would typically be under the North Sea, opening up further technically demanding career opportunities.

Government is committing a total of £170 million to the Industrial Decarbonisation Challenge, with industry being asked to contribute a further £280 million. The challenge is a key part of the UK’s Clean Growth Strategy to achieve net zero emissions by 2050.

Bryony added: “Our industrial regions have got to attract investment from new ‘clean’ industries or decarbonise the ones they already have. So what the challenge is doing is to kick off the investment needed to decarbonise existing industries. Even closing them down would only mean importing the same products from overseas, which does nothing to reduce carbon emissions globally. We also need to attract new industries and new investment.”

She said: “Investment in decarbonising needs to be at an industrial scale. In building the carbon capture infrastructure for a power plant you can also support other industries in the cluster, including hydrogen production.”

The Industrial Strategy Challenge Fund (ISCF), delivered through UK Research and Innovation, brings together the UK’s world-leading research base with the UK’s best businesses to transform how we live, work and move around. It will put the UK in the best position to take advantage of future market opportunities.

The six Industrial Decarbonisation Challenge projects are: South Wales Industry - A Plan For Clean Growth (led by CR Plus consultancy); Repowering The Black Country (Black Country Consortium); Net Zero Tees Valley (Tees Valley Combined Authority); Scotland’s Net Zero Roadmap (Neccus); Net Zero North West (Peel Environmental); and Humber Industrial Cluster (Humber Local Enterprise Partnership).