

NET ZERO NORTH WEST

ENERGY PRICES AND SYSTEM RESILIENCE

JANUARY 2022

INTRODUCTION

Increasing energy prices have put into sharp focus the need for a resilient net zero energy system. This will also be vital if we are to reach our legally binding net zero 2050 targets in the UK.

The North West has all the ingredients to underpin a long term, resilient national net zero energy system combined with industries that stand ready to invest to deliver UK low carbon growth.

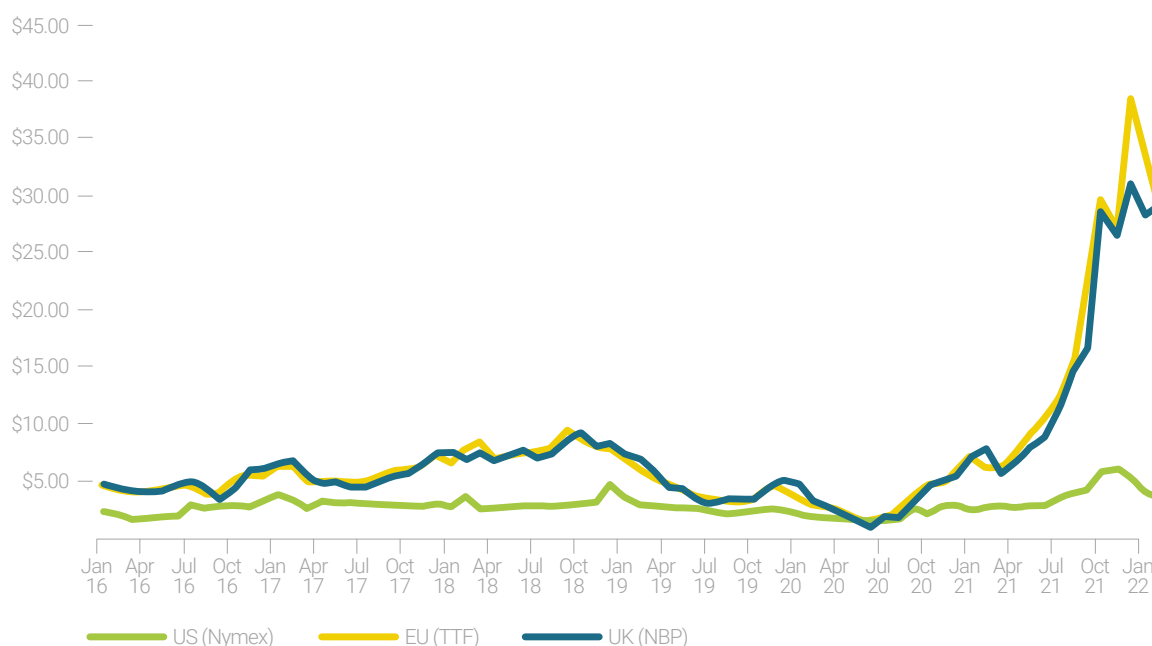
THE CONTEXT

Energy intensive industries, such as fertiliser, glass and steel, have warned that without help some businesses could be forced to close, with some regional production already operating on minimum rates or in one case, shutdown altogether.

The current high energy prices are not the result of a single 'shock event' but are the result of a combination of factors. Increased worldwide demand, including a cold winter in Europe and increased demand from Asia for liquefied natural gas, has pushed prices up across the globe.

A worldwide squeeze on gas and energy supplies has pushed prices up across the world. Since last January, wholesale gas prices have risen 250%.

Gas Price Gap Between US, EU and UK in \$ per mmbtu



IN THE UK WE HAVE BEEN PARTICULARLY VULNERABLE TO THESE PRESSURES:

- We are still very reliant on gas, but the UK gas supply is diminishing. Gas fields in Liverpool Bay are coming to the end of their usable life and some will become carbon capture storage (CCS) sites instead
- Domestic UK energy storage has always been small and has diminished in recent times
- We have focused on the development of renewables, but these are intermittent – last summer the wind levels were the lowest they have been for 50 years

Recent events are taking place in the context of uncompetitive electricity prices for energy intensive industry. According to BEIS's own numbers, UK Energy Intensive Industries (EIIS) face some of the highest electricity prices in the EU due to a complex tangle of decarbonisation on-costs. In the last couple of years, governmental policy appears to be shifting to rebalance these on-costs away from electricity onto gas. This simply increases costs for gas intensive industries like hydrogen and ammonia production.

The North West boasts the largest concentration of advanced manufacturing and chemical production in the UK and is home to a concentration of energy intensive users. These businesses are trying to pass through the unprecedented hike in energy prices.

Where sectors are exposed to global commodity market dynamics, this is proving to be challenging and production is being impacted.

Where costs can be passed through to downstream customers, prices are increasing in a wide range of sectors including food & drink products, water treatment, medical supplies, automotive and construction to name a few.



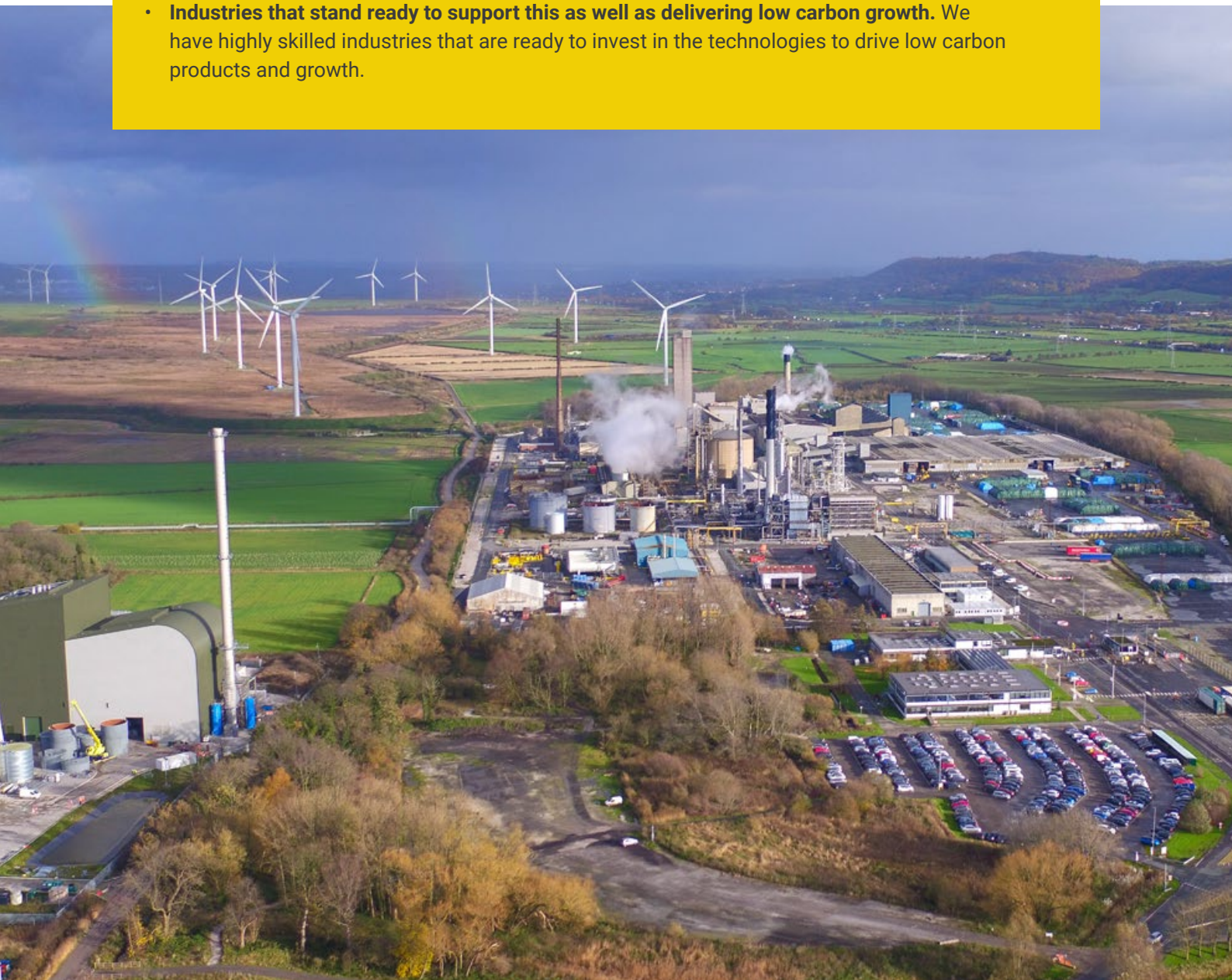
TRANSITIONING TO A RESILIENT NET ZERO ENERGY SYSTEM

The current energy price situation is a serious headwind for industry but there are even greater challenges to address. To reach our binding net zero 2050 targets and secure the futures of our vital industries we need an integrated, long-term and resilient UK Energy Strategy and we believe that the North West is uniquely placed to help deliver this.

There is no silver bullet and we are going to need a range of technologies – including renewables, nuclear and hydrogen – to provide energy security for the future. Electrification is not the solution for everything, for example some industries can't electrify, they need a gas alternative, such as hydrogen.

THE NORTH WEST IS UNIQUELY PLACED TO HELP WITH THE SOLUTIONS THE UK NEEDS. WE HAVE:

- **All the ingredients to underpin a long term, resilient net zero energy system in the UK.** We have a diverse mix of wind, biomass, tidal, solar, nuclear and hydrogen. We have a UK leading carbon capture and storage project underpinning decarbonised hydrogen and ammonia projects. We already have gas storage and have the potential for hydrogen storage. We are developing a blue print for smart grids and peer to peer trading.
- **Industries that stand ready to support this as well as delivering low carbon growth.** We have highly skilled industries that are ready to invest in the technologies to drive low carbon products and growth.



WHAT'S NEEDED TO DELIVER THIS

In the short term we need to ensure our businesses can carry on the journey to net zero in the face of immediate pressures, such as increasing energy prices. In particular, energy-intensive industries need an immediate plan to curb energy prices to prevent closures. Competitive energy is crucial for decarbonisation.

WE NEED A SHORT TERM TRANSITIONAL ENERGY STRATEGY UP TO 2030 THAT PROVIDES AFFORDABLE ELECTRICITY AND NATURAL GAS:



Affordable electricity (renewables supported by natural gas) helps electrification to support the roll out of electric vehicles and the continued switch to low carbon electricity



Increased levels of renewable energy are vital to decarbonising the electrical grid, planning policy needs to be reviewed to encourage further onshore wind and solar development



Hydrogen will provide an important transition fuel in decarbonising industrial heat and transport fuels. We need to encourage the generation of all forms of low carbon hydrogen production to kickstart and develop at scale the delivery of net zero in the UK. Market support mechanisms need to reflect the long-term transition



Local energy networks across all the energy vectors have a role in both decarbonising the energy network and managing costs more effectively. Ofgem must embrace this direction of travel and identify the necessary regulatory reform and new investment in the electricity network to enable this to occur



Affordable natural gas for industry remains vital both as a feedstock and a fuel during the transition, the latter until hydrogen is available as a substitute



Small Modular Nuclear Reactors have a role in both the generation of electricity and low carbon hydrogen. Fit for purpose market support mechanisms, regulation and policy need to be in place to ensure this is achieved



Carbon pricing needs to be introduced in a way that doesn't offshore the problem by industries shutting down and production happening overseas. Low carbon domestic industries need to be protected from competition with high emission imports. It needs to provide a clear trajectory for business which encourages investment rather than disproportionately impacting certain industries.

To support levelling up, in the longer term we need a strategy that takes into account the needs of manufacturing regions such as the North-West. This requires working in close partnership with both BEIS and Ofgem. BEIS need to define a competitive UK industrial energy strategy that will support regional clean growth. Ofgem need to be mandated by BEIS to create a fair and effective regulatory platform that places as much emphasis on industrial energy affordability, as it does currently for domestic consumers.