

Energy and Climate Change Policy

Background

The chemical industry's products and technologies will provide the foundation for net zero. We create the advanced materials that seed new low-carbon industries and drive green growth in the UK, but chemistry is energy-intensive and even in normal times the cost of energy is a challenge for UK manufacturers.

The UK's chemical sector competes in the global market but faces disproportionately high and rising energy and climate-related policy costs, which are eroding our international competitiveness. This means that new investment often goes elsewhere, where it often supports more carbon-intensive manufacturing techniques. The result is that highly skilled science-based jobs and manufacturing capability are offshored, and global carbon emissions are increased.

Current status: high energy prices

Paradoxically, our success in deploying renewable electricity means we face much higher prices than our competitors in the rest of the world. This price disparity represents not the wholesale cost of electricity, but the pass-through of cost of:

- Carbon pricing applied to thermal electricity generation;
- Subsidies for renewable power ¹; and
- Increases in our network capacity, needed to balance intermittent and distributed renewables. These pass-through costs, which are increasing over time, pay for the decarbonisation of the UK's electricity sector and our manufacturing sector has disproportionately shouldered this burden.

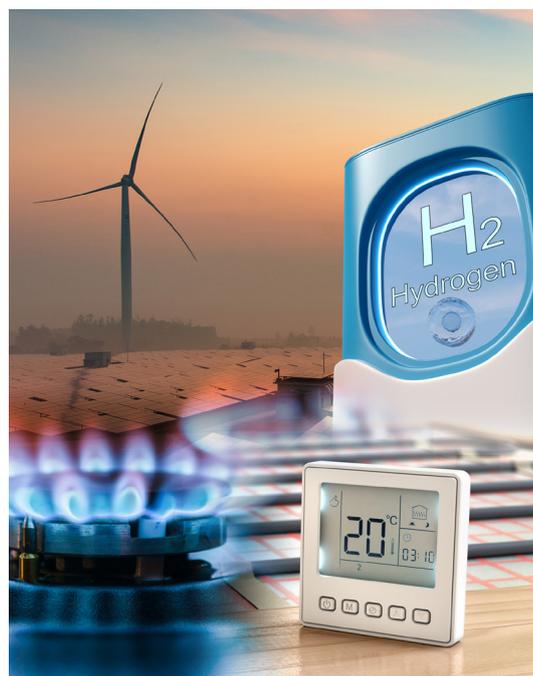
As cumulative policy and network costs have pushed up electricity bills, lower UK gas prices have allowed us to continue to compete internationally despite higher electricity costs. However, the spiralling cost of gas is disproportionately impacting UK industry, leaving us with comparatively higher gas bills than even our European competitors, and higher electricity bills as a result of our electricity grid's dependence on gas-fired generation. Looking forward, we are also increasingly concerned that the cost of gas, which we use for heat, will continue to rise if industrial consumers are asked to pay for the decarbonisation of our heat supply as we were with the electricity grid. Given the gas grid's much greater contribution to total UK energy demand, a far more significant amount of financial support would be needed.

It is not just the cost of energy. At the same time that energy prices have risen, the creation of an independent UK Emissions Trading Scheme (ETS) post-Brexit, means that we now have a higher and more volatile carbon price than even our nearest neighbours. The reasons for the differential stem from the design of the scheme and it is within government's power to remedy. These factors expose UK industry to higher costs than their international competitors, heightening the risk of carbon leakage from the UK.

Our opinions and actions

There has been talk of the need for greater deployment of renewables to insulate us from international gas prices. UK industry uses natural gas for heat. In the future, we can substitute this fuel for low carbon hydrogen or for clean electricity, or we can capture the emissions from the use of natural gas where fuel-switching is not possible. The Climate Change Committee agrees that these options comprise our pathway to net zero, but they are reliant on the ongoing deployment of public infrastructure and come at a significantly higher cost than conventional production techniques. This means we need effective government support to continue to compete globally until our industrial competitors match the UK's climate ambition.

UK industry can decarbonise but we need support to navigate the UK's clean transition because our production costs will increase and, because of global competition, we will not immediately be able to pass through that additional cost to our customers.



Why we matter

Net Zero: Our sector is the foundation of a net zero economy. We provide the advanced materials used to make: batteries, wind turbine blades and solar PV; novel fuels like hydrogen, ammonia and synfuels; lightweight materials for transport; and heat pumps and insulation to keep our homes warm. Continued access to a diverse and innovative chemical sector at home will provide the UK with the raw materials to compete in these newly arising low-carbon industries, ensuring that the electric vehicles we drive are made here, because batteries are made here. Without skilled, equipped, and competitive chemistry assets, these nascent industries will take root elsewhere.

Levelling up: The UK's chemical assets provide direct employment for 153,000 people, mainly in the North West, North East, South Wales and Grangemouth in Scotland. On average our employees earn 35% more than other manufacturing industries and 54% more than the average worker in the economy. These are highly skilled jobs in science and engineering, and local supply chains mean that our economic contribution has a very strong regional multiplier; we support 350,000 jobs indirectly. Annually the industry spends around £5.9 billion on business investment and has a gross value added (GVA) of over £18.3 billion for the UK economy, this equates to a GVA per employee of £120,000, 82% higher than the manufacturing average and 90% higher than the economy's average. Our exports are worth £56bn to the UK economy each year.

Innovation and growth: We are pleased to see a focus on innovation. In 2019 the UK chemical and pharmaceutical industry invested £5.7 billion on research and development (R&D), up 5.8% on the prior year. This equates to 34.4% of the manufacturing sector's total spend and 21.9% of total UK business spend. The chemical and pharmaceutical industry employs 14.4% of all UK R&D workers, a full time equivalent of 39,000 people, which breaks down to around 17,000 scientists and engineers, 12,000 technicians and laboratory assistants and 10,000 in administrative and clerical roles. Regionally, we represent 39.4% of the total R&D spend by businesses in the East of England, 34.4% in the South East, 27.4% in Yorkshire & Humber, 27.1% in the North West and 26% in the North East.

We are asking the UK government to take the following actions now, to afford UK manufacturers a just transition as we move to a net zero economy:

1. Protection from the rising non-wholesale cost on the electricity bill;
2. Protection from the rising non-wholesale cost on the gas bill;
3. The linking of the UK Emissions Trading Scheme (ETS) to the EU ETS to create a level-playing field and the implementation of effective carbon leakage prevention within the UK scheme.

Outcomes

We must transition to a net zero energy system and the UK's foundation industries must be insulated from the cost of that transition, until other countries catch up to where the UK is now. If not, we will continue to see the carbon leakage of manufacturers from the UK, with the loss of jobs and capability that entails and without benefit to the climate. Industry needs access to secure and competitively priced sources of zero carbon energy, that would provide a credible pathway to a diversified and decarbonised economy, and the right outcome for the planet.

References

- 1 Contracts for Difference, Feed-in Tariffs, the Renewables Obligation and the Capacity Market

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