

### Written evidence submitted by The Chemical Industries Association

CIA is the trade association representing and advising chemical and pharmaceutical businesses across the UK. The UK chemical and pharmaceutical industry directly employs 152,000 people who have an average weekly earning 33% higher than manufacturing and 50% higher than the wider economy. Of those directly employed, 32% are women which, when comparing to other manufacturing industries, puts the chemical industry in the top third for female employment. The industry employs 33,000 people in R&D related roles and is at the heart of multiple high value supply chains and is estimated to support a further 350,000 jobs. A significant contributor to the UK economy (£17 billion of Gross Value Added on a turnover of £55.5billion), the chemical industry is at the heart of UK manufacturing, with chemistry and chemicals helping to ensure clean water, sufficient food, clean energy and many other essentials to everyday life.

Good, effective regulation is essential for a successful economy and we welcome the Committee's Green Jobs Inquiry to ensure the transition to a more sustainable future is just. The chemical industry is a highly regulated sector, helping to give confidence to our workforce, local communities, consumers and society at large. At the same time the chemical industry is critical to the development of an environment-respecting nation. For every one tonne of CO<sub>2</sub> we emit directly, the products and solutions we produce deliver a saving of 2.5 tonnes for our customer industries from construction to transport. Chemistry and chemicals are crucial in enabling a future hydrogen economy and underpinning battery technology and related materials to drive electric vehicle production. With the UK taking its role as a global leader in addressing climate change, and adopting an accelerated transition to net zero, it is critical that we mitigate any potential negative impact to our economy and its industrial base. Please see our recent publication for further information "The UK Chemical Industry: An Essential Partner in Delivering Net Zero 2050".<sup>1</sup> Foundation industries like ours underpin modern manufacturing, but to trade in an internationally competitive global market we are in need of growth-sensitive, reliable policy and regulation.

#### **1. What estimates are there for the jobs required to meet the pathway to net zero emissions, by sector, and other environmental and biodiversity commitments?**

Chemical and pharmaceutical manufacturing capabilities are largely concentrated in the regions and it follows that employment figures follow a similar trend.<sup>2</sup> As outlined in the Chemistry Council Sector Deal proposal, employment figures in industrial chemical clusters are included below.

- Scotland: 37,000
- North east: 39,000
- North west: 37,000
- Yorkshire and Humber: 21,000

The sector deal proposal includes projects and associated investments that if realised, would create an additional 50,000 jobs across the UK. These investments cover sustainable production of base chemicals through the proposal for a bioethylene oxide plant, polymer recycling facilities to help unlock the circular economy and a host of innovative solutions to enable continued improvements and step changes related to the low carbon transition.

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<sup>1</sup> <https://www.cia.org.uk/news/details/The-UK-Chemical-Industry-An-Essential-Partner-in-Delivering-Net-Zero-2050>

<sup>2</sup> <http://ukchemistrygrowth.com/wp-content/uploads/2019/11/Chemistry-Council-Sector-Deal-041119-1.pdf>

**4. What measures should the Government take to ensure that its proposals to meet environmental targets do not by default lead to jobs in affected industries being exported?**

The products and services of the chemical and pharmaceutical manufacturing industry are essential to everyday life – ensuring everything from clean water to sufficient food, effective medicines to safe travel. The solutions of many chemical companies have also been contributing directly towards the fight against COVID-19 – whether that is repurposing ethanol for hand sanitiser production; supplying key ingredients to ensure effective disinfectants or critical raw materials for paracetamol, insulin and other medications, or working to deliver critical vaccines.

We are also responsible for around half a million largely hi-tech, highly skilled and well-rewarded jobs right across the country, with many in locations that are critical to the Government’s levelling-up agenda. Using CIA analysis of ONS data, the productivity of our industry is 82% higher than other manufacturing sectors and 103% higher than the average across the whole of the economy - with an even stronger performance in the northwest, northeast and Yorkshire and Humberside, in large part due to the important chemical clusters around Runcorn, Teesside and Hull. Complementing that productivity performance, the chemical sector is also contributing – both directly and indirectly – to tackling climate change and decarbonisation. The UK chemical and pharmaceutical sector has reduced its direct emissions by 82% over the period 1990-2018 whilst increasing production by 40%. This has resulted in scope 1 greenhouse gas emissions intensity decreasing by 87% over that period, although most of the gains were achieved between 1990 and 2010.<sup>3</sup> Abatement and efficiency measures currently available and affordable have been exhausted and to continue reducing emissions, Government needs to invest in the hydrogen economy CCUS. However, key UK production capabilities (e.g. ethylene oxide and methanol) have been lost over that period whilst global demand for those products has remained strong. The contributions to sustainability go beyond climate mitigation with promising new technologies like chemical recycling paving the way for a more circular economy, address the plastic waste issue, and the UK has an opportunity to create the right policy and market conditions to attract investment in these technologies.

**6. Are the Government’s ambitions for green job creation in the public and private sectors sufficient for the scale of the challenges? What changes should be made?**

Whilst many chemical and pharmaceutical businesses in the UK have adapted well to the severe economic challenges of the pandemic, the industry is already planning for a prolonged period of reduced demand – especially with regard to key industrial markets such as automotive, aerospace and construction. Stimulating demand for the products and solutions of our industry’s customers and their customers, alongside more targeted support for our industry, would, we believe, enhance our industry’s ability to deliver more economic, social and environmental progress for the country.

Many competitor nations and key trading partners of the UK have recently committed to significant economic recovery support packages. With manufacturing in mind, we have seen Germany commit €11 billion to reduce electricity prices for consumers by reducing EEG, a levy on electricity prices to subsidize renewable energy sources wind and solar, €9 billion towards a Hydrogen Strategy: making Germany a “supplier of the world” in green hydrogen technologies and €2 billion to a CO2 building refurbishment program to fund investments into energy-efficient buildings. In France there is an €8 billion plan to encourage a less carbon intensive automotive sector and a €15 billion aid package for its

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<sup>3</sup> CIA analysis of 1990-2018 Chemical Sector GHG emission data in the UK National Atmospheric Emissions Inventory and data from the ONS Production Index

aerospace industry. The European Commission too has agreed a €1.8 trillion recovery package – focused on the green agenda – with all Member States.

The UK's own response has of course been extremely supportive – especially with regard to protecting the millions of jobs and related businesses that have been hit first and hardest by the impact of COVID-19 – but we highlight that competitive clean energy and thriving manufacturing sectors will not only benefit the chemical industry but are in turn dependent on the solutions that we bring in terms of sustainable products and services. Similarly, the welcome investment in large infrastructure projects, announced this week by the Prime Minister and so crucial to a levelling up of opportunity and growth across the country, will require chemicals and chemistry for raw materials and effects.

To play our part most effectively, we ask that Government recognises the need for a cost-effective transition to a decarbonised, more sustainable future – best delivered through competitive energy costs for key industrial consumers and long-term and predictable public/private partnerships to secure commercially attractive and investment-attracting future energy solutions such as carbon capture use and storage and hydrogen.

Looking ahead, the sector is an enabler of priority areas identified in the White Paper to decrease the cost of decarbonisation. These include:

- Sustainable aviation fuels for the recently established JetZero Council and part of the country's 10-point green recovery plan
- Synthetic fuels made from captured CO<sub>2</sub> for cars, or from waste to feed into the gas grid.
- Providers of hydrogen to transition homes, heavy goods vehicles, planes, and trains to net zero.
- Providers of hydrogen and ammonia to decarbonise marine transport.
- Strong, lightweight materials for vehicles or wind turbine blades.
- Batteries for electric vehicles, including their recycling at end-of-life.
- Insulation to keep homes warm whilst saving energy.

#### **7. How can the UK ensure jobs are created in areas most impacted by the transition to a low-carbon economy?**

Our industry's productive contribution to the regions outlined in Question 4, demonstrates the potential to further contribute to the Government's levelling up agenda. To continue providing high quality, highly skilled, productive, and well remunerated employment in an industry that holds the solutions to many of today's challenges, the chemical sector needs competitive energy costs and a cost-effective low carbon transition. The chemical and pharmaceutical industry is concentrated in industrial clusters located in regions of the UK where high quality jobs are needed most and therefore, our sector has a prominent and potentially increasing role to play.

#### **8. What additional interventions should be undertaken to aid in a 'just transition'?**

With respect to the transition to net zero GHG emissions, three key policy drivers are outlined in our recent publication<sup>4</sup>:

1. Internationally competitive energy markets with delivered billed costs of energy that are not disproportionately higher for UK industries holding decarbonisation solutions.

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<sup>4</sup> <https://www.cia.org.uk/news/details/The-UK-Chemical-Industry-An-Essential-Partner-in-Delivering-Net-Zero-2050>

2. Delivering the next generation of carbon reduction schemes that truly drive emissions reductions and do not undermine domestic manufacturers to compete internationally.
3. Strategic and rapid policies designed to enable investment in industrial decarbonisation infrastructure projects which make a step change in reducing emissions from foundation industries.

UK energy costs are a critical factor adversely impacting our ability to compete internationally and so managing the net zero transition in a way that supports job creation is key to ensuring high quality employment in areas where they are most needed.

#### **9. What impact can green jobs have on the wider UK economy?**

Looking to the next couple of decades it is clear there will be some growth areas within the UK economy. Social care provision will have to increase to tackle our ageing population, digitalisation and the relevant skills will be required as more of our world moves online and the transition to a net-zero economy will provide to opportunities for new technologies and green jobs through investments in infrastructure and retrofitting solutions such as in the built environment. Green jobs have the potential contribute to net zero ambitions and must at the same time promote economic growth. The right investments, taken now, into projects that create sustainable, green jobs will create economic prosperity for all regions of the UK, supporting supply chains and local regions alike.

#### **10. What contribution can green jobs make to the UK's economic recovery from Covid-19?**

Underlying transitions within the economy, such as the uptake of digitalisation, online shopping habits and more sustainable working and living practices have in some areas been fast tracked by the Covid-19 pandemic. As is the case with any transitions, this is detrimental to some sectors and beneficial for others and again, as in any transition, will require a reskilling of the labour force to enable agility when shifting labour from one sector to the next. As mentioned in question 9, the transition to a green economy represents future growth opportunities. CIA considers the green jobs provided for by the chemical and pharmaceutical sector should be at the heart of the economic recovery from the covid-19 crisis. If those jobs are successfully created, shorter-term benefits include increased employment and looking to a longer time horizon, investing in green jobs cements our capacity to address climate change, level up across the economy and meet additional sustainability challenges.