SEPTEMBER 2022

THE GREEN LINE: A ROUTE OUT OF CRISIS AND TOWARDS PROSPERITY – AN ALDERSGATE GROUP MANIFESTO

SUMMARY FOR POLICYMAKERS

Coming into power at a challenging time, the new government has a key opportunity to address the energy and cost of living crises, cut emissions and adapt to climate change in a way that makes the UK an attractive destination for innovation and investment.

The UK is already seeing the economic benefits of its climate and environmental ambitions: in 2020 alone, businesses in the low carbon and renewable energy sectors generated **£41.2bn in turnover, directly employing 207,800[1] full-time equivalent employees and up to half a million when associated supply chains are included.**[2] This is also helping level up the country, with jobs in sectors like offshore wind, low carbon hydrogen, EV chargepoint installation or home insulation being distributed right across the UK.

At a time of energy crisis, it is also critical to consider the contribution that homegrown renewable energy is making to lowering bills. In 2021, **renewables generated just under 40% of the electricity in the UK, with 29% coming from wind and solar, displacing around £6.1bn worth of gas,** equivalent to £221 of gas per household per year.[3] With the right market arrangements, we could also see industry and households more directly benefitting from cheap renewable energy, which can be contracted for as little as **£37.35/MWh,[4] relative to current gas prices, which are fluctuating between €270–340/MWh.[5]**

Whilst the opportunities of the transition are clear, and business appetite to invest is significant, existing market frameworks and regulations have not been keeping pace with private sector ambition and require urgent strengthening to drive much needed innovation, infrastructure investment and job creation. **This manifesto, supported by businesses with a collective turnover in excess of £550bn,** academic institutions and civil society, highlights how climate and environmental progress can help tackle some of the most pressing issues the new government will be facing and maximise the economic benefits of the transition.

This manifesto offers practical recommendations for the new government to deliver against its most urgent priorities: **1. alleviating the energy affordability and security crisis; 2. driving economic prosperity; 3. improving resilience to extreme weather events and supply chain disruptions; and 4. realising the vision of Global Britain.**

An **appendix** then sets out in more detail the Aldersgate Group's key policy recommendations across a range of policy areas including energy supply, energy efficiency, heavy industry, transport, green finance, resource efficiency, nature restoration, trade and global climate diplomacy.

1. ONS (February 2022), *UK Low carbon and renewable energy economy*, UK: 2020
2. https://eciu.net/analysis/briefings/net-zero/net-zero-economy-and-jobs
3. UK Onward (2022) *Renewed Importance: How investing in renewables cuts energy bills*
4. S&P Global (7 July 2022) "UK awards 10.8 GW new renewable capacity at record low strike prices"
5. FT (30 August 2022) "Gas prices slide in UK after record-breaking rally"

ALDERSGATE GROUP
LEADERS FOR A SUSTAINABLE ECONOMY

This policy briefing is one of a series published by Aldersgate Group, an alliance of major businesses, academic institutions and civil society organisations that drives action for a competitive and environmentally sustainable economy.

SUMMARY OF POLICY RECOMMENDATIONS:

PART 1: ALLEVIATING THE ENERGY CRISIS

1. **Make energy efficiency in homes and infrastructure a priority to slash bills, improve energy security and create jobs.** To ensure future energy efficiency schemes are successful, government should coordinate the delivery of: (i) public funding and market mechanisms to attract investment; (ii) regulation for minimum energy efficiency standards; and (iii) investment in skills and supply chains.

2. **Accelerate the delivery of grid infrastructure to support the deployment of low cost renewables,** by addressing planning and consenting hurdles and reducing delays that are currently stretching up to 12 years.[6]

3. **Use the Review of Electricity Market Arrangements to explore how best to decouple gas and electricity prices, and unleash the capability for UK renewables to deliver lower bills for industry and households.** This will be essential to prevent fossil fuels which, whilst generating around 40% of electricity, set the price of electricity from all sources 84% of the time in the UK.[7]

PART 2: DRIVING ECONOMIC PROSPERITY

1. **In parallel with the upcoming review, implement the Net Zero Strategy at pace to provide the right market signals and boost investor certainty,** and use **smart regulation to mobilise private investment** in skills, innovation and low carbon supply chains.

2. **Deliver targeted interventions through the UK Infrastructure Bank (UKIB) to crowd in private investment into key sectors** by looking to **rectify market failures** (e.g. in energy efficiency retrofits or natural capital projects), or **de-risking investment in emerging sectors,** such as CCS or hydrogen production

3. **Develop a clear strategy for low carbon skills,** by embedding sustainability at all levels of the educational system and making training and financial support available for workers in need of reskilling mid-way through their careers.

6 FT (4 April 2022) "Clean power groups call for slicker process on UK planning and permits"

7 UCL-ISR NECC Working Paper 1: Behnam Zakeri*, Iain Staffell, Paul E. Dodds, Michael Grubb, Paul Ekins , Jaakko Jääskeläinen , Samuel Crossf , Kristo Helin, Giorgio Castagneto Gissey (2022) Energy Transitions in Europe – *Role of Natural Gas in Electricity Prices*

PART 3: IMPROVING RESILIENCE THROUGH NATURE AND RESOURCE EFFICIENCY

1. **Strengthen and finalise the Environment Act targets and develop a comprehensive first Environmental Improvement Plan**. This will mobilise investment in nature restoration by creating a pipeline of investable projects, and deliver public goods like ecosystem restoration or flood resilience.

2. **Implement the Environmental Land Management Schemes (ELMS) without delay to incentivise better agricultural practices and boost domestic food security.** ELMS should tackle emissions from agriculture, reverse soil degradation from overproduction, create more resilient supply chains and jobs for local farmers.

3. **Accelerate the transition to a more circular economy to increase resource security and reduce exposure to volatile commodity prices.** Mandatory product standards and Extended Producer Responsibility schemes should be prioritised, alongside fiscal interventions so resource efficient products can be cost competitive.

PART 4: MAINTAINING GLOBAL BRITAIN'S CLIMATE AND ENVIRONMENTAL LEADERSHIP

1. **Use increased policy flexibility provided by the UK's exit from the EU to introduce ambitious and smart regulations to make the UK the most attractive economy in which to invest in low carbon goods, infrastructure and services.** A strong domestic market will also create important export opportunities, with exports of UK goods and services contributing 30.01% of GDP.[8]

2. **Support the COP27 presidency in delivering a successful summit** by leveraging diplomatic networks to progress areas like closing the gap on international climate finance and ensuring all nations honour their pledges at Glasgow to increase their emission reduction commitments. **Supporting COP CBD 15 negotiations to deliver a step change in commitments to protect biodiversity and restore nature** will also be fundamental.

3. **Align trade and climate objectives by taking steps to grow low carbon exports, prevent carbon leakage, protecting the UK's right to regulate, and fostering international cooperation.**

8 Trading Economics (2020) https://bit.ly/2YcTETh

PART 1: HOW NET ZERO CAN BOOST ENERGY SECURITY AND DELIVER LOWER BILLS

Addressing the spiralling costs of energy and key commodities that are driving inflation is a key near-term priority for government. Through the publication of its Energy Package, the government has already taken measures to offer immediate relief to households and businesses. However, the government now has the opportunity to lay the foundations for a modern and more resilient energy system in the longer term, to ensure the UK is less exposed to geopolitical risks and volatile fossil fuel prices.

At present, gas prices are seeing unprecedented levels of volatility following the Russian invasion of Ukraine: **concerns over availability of gas supply and intense demand competition between Europe and Asia for alternatives such as liquefied natural gas (LNG) means that global gas prices are likely to increase even further.**[9] In addition, with Russia now having stopped gas flows to Europe, governments across Europe are doing contingency planning in the event of further price hikes or an inability to meet demand for energy. Whilst the UK does not import the bulk of its gas directly from Russia, its high reliance on gas means that it remains very exposed to the significant price volatility of the global gas market which is in part driven by changes in global demand and the tense geopolitical situation.[10]

At the same time, volatility in global gas markets is driving increases in the cost of electricity, with gas setting the price for all generators,[11] meaning businesses and domestic consumers are not fully benefitting from the falling cost of renewables, a key barrier to electrification.

To bolster energy security and mitigate these impacts, it is essential that the **new Prime Minister's energy security strategy focuses on two key planks:**

- **reducing fossil fuel dependence** by accelerating the transition to a low carbon energy system, driving more rapid investment in supporting grid infrastructure, reforming the wholesale market, so that energy costs can better reflect the ability to generate cheap renewable energy domestically.

- **lowering demand for energy** through greater energy efficiency and demand flexibility measures across the economy. This will also be key to shave off peaks in demand that might be difficult to meet in the short term in the event of further gas supply disruption or unaffordability.

Through its Energy Support Package, the government has put forward immediate relief to support households and businesses with high energy costs. However, more needs to be done to permanently and more predictably lower energy costs in order to ensure industry and households are not faced with uncertainty over future energy costs and the level of support that might be available to them going forward. As such, **addressing the structural causes of high prices is essential.**

9 FT (5 August 2022) "Europe and Asia intensify battle to secure gas supplies"

10 CEPA (March 2017) *A review of gas security of supply within Great Britain's gas market – From the present to 2035 – Report for BEIS*

11 Existing arrangements under the wholesale market are based on marginal pricing, with the most expensive generator (currently gas) needed to meet demand setting the price for all types of electricity generating technologies.

MAKING IT HAPPEN – TOP 3 POLICY SOLUTIONS:

1 **Make energy efficiency in homes and infrastructure a priority to slash bills, improve energy security and create jobs.**[12] Research shows that households living in homes rated below the government's target Energy Performance Certificate (EPC) C rating **are set to pay £748 more on average per year for their energy than the 10 million living in homes at or above the threshold.**[13] Homes with poorer insulation also tend to be clustered in areas such as Wales, Yorkshire & the Humber and the West Midlands, where levels of poverty are higher than the UK average, clearly showing the levelling up benefits that a mass insulation programme can bring.

> Households living in homes with energy efficiency ratings below EPC C are set to pay £748 more on average per year on their bills.

Energy efficiency measures should **tackle both heating and cooling,** so that buildings do not overheat in upcoming heatwaves and do not lose heat in winter. To ensure energy efficiency schemes are successful and also drive job creation, they should be established as a national infrastructure priority, with government playing a central role in coordinating the delivery of all relevant elements. This will require cross-departmental collaboration between BEIS, DHLUC and HM Treasury to set clear metrics to judge the success of such a scheme and identify hard to reach communities that will benefit from retrofitting programmes. A future scheme should encompass the following elements:

a **market mechanisms to attract investment** including incentives for energy efficiency improvements or financial instruments like green mortgages.[14] Private finance can do the heavy lifting in upgrading assets and bringing them up to modern energy efficiency standards, but measures like stamp duty rebates, VAT or tax breaks for investments in energy efficiency or low carbon heat are much needed to achieve this. Market mechanisms are also important to ensure upgrades are done in the able-to-pay segments of the market first and considered as part of buying decisions, in order to enable costs to come down through economies of scale.

However, **for low income households and social housing, market mechanisms will need to be complemented by public investment too in the form of grants that can help cover the upfront cost of renovations.**

b **the regulatory framework,** including tightening the Minimum Energy Efficiency Standard and requiring that all homes are upgraded to EPC band C by 2035. Without clear and timely regulation, it will be difficult and risky for the private sector to invest in skills and build up low carbon supply chains. Previous schemes like the Green Homes Grant, which were not underpinned by regulation did not provide enough certainty to businesses to invest at scale, which is why they were hampered by a lack of skilled installers and shallow supply chains. Smart, long-term and properly enforced regulation is essential to kickstart private investment and welcomed by businesses across the economy. A good example in this sense is the automotive sector, where the phaseout of petrol and diesel cars has led to innovation and investment in EVs across all major European manufacturers.[15]

12 According to the Construction Industry Training Board (CITB), improving the building fabric energy efficiency of every building in the country in need of retrofit will require 12,000 workers to be trained every year for about the next four years, before the need to ramp up annual recruitment by up to 30,000 workers between years 2025 and 2030. This implies an increased trained workforce of up to 230,000 by the end of the decade. CITB (2021) – Building skills for net zero

13 Kingfisher, OnePoll, CEBR (August 2022) *Tackling the UK's energy efficiency gap*

14 Green Finance Institute (2020) *Financing energy efficient buildings: the path to retrofit at scale*

15 Europe is set to be the world's fastest-growing EV market this decade, with production growing from 20.5% of global EV output in 2021 to 31% in 2030 and significant investments from all major OEMs: Volkswagen is investing $100bn in electric cars and trucks, Daimler has committed to growing production from 113,000 electric cars in 2021 to 2.1 million in 2030, and Toyota has committed $35bn investment to electric mobility through 2026. IHS Markit (26 January 2022) "Europe's EV supply chain revs up"

delivery capability, such as investment in the appropriate skills for builders and engineers, robust supply chains and consumer support schemes. This will be key to ensure that delivery can keep pace with growing demand and that skills shortages that are already endemic in the construction sector are reduced. Support for consumers through a one-stop-shop advice package from local authorities[16] and certification schemes such as Each Home Counts Quality Mark scheme will also be needed to bring the public along on this journey, and reduce the burden of navigating less familiar markets for low carbon heat or insulation, while also building consumer trust.

Whilst the need to reduce pressure on bills immediately is understandable, **it is paramount that government does not repeat the errors of 2013, which saw the scrapping of energy efficiency programmes and support for effective and cheap onshore wind.** This delivered small reductions to bills in the short term, but estimates now show that in the longer run this ended up adding £2.5bn to energy bills. This amounts to an average of an additional £40 per year on average household energy bills, rising to £60 under the revised price cap.[17]

2 Build on progress to date on low carbon power generation and ensure the swift delivery of key grid infrastructure to lower bills.

Building up a secure domestic supply of energy from renewable sources is an important way to bolster energy security, so accelerating progress towards the 50GW of offshore wind by 2030 and the 2035 target to generate all electricity from low carbon sources is critical. To date, government support for renewables through the Contracts for Difference (CfD) scheme has been pivotal in driving innovation, reducing costs and bringing online significant capacity, **with 10.8GW of renewable energy at clearing prices as low as £37.35/MWh gaining contracts at the latest CfD auction round.**[18] Going forward, it is essential to continue supporting the sector, which attracts record levels of investment into the UK, through annual CfD auctions with predictable and ambitious volumes, and clarity on Crown Estate seabed leasing rounds.

10.8GW
of renewable energy at clearing prices as low as £37.35/MWh gained contracts at the latest CfD auction round.

In addition to continued support for renewables, **it is now critical for government to turn its attention to ensuring the right infrastructure is in place to maximise the benefits of low cost, non-fossil generation.** As committed in the British Energy Security Strategy, government should urgently address planning and consenting hurdles to ensure the necessary transmission infrastructure connecting offshore windfarms onshore is delivered in a timely way, reducing delays that are currently stretching up to 12 years.[19] **Investing in storage and interconnection will also be key to balance the system as renewable penetration grows. Accelerating the deployment of key grid infrastructure is essential to enable the delivery of current offshore wind targets and to avoid curtailment costs,** which cost UK consumers £282m in 2020[20] due to the inadequacy of the energy system to support surplus capacity produced at times of high generation. This means that in 2020, 6% of Britain's wind output was wasted, which with the right network and storage capacity in place could have been stored to meet peak demand at times of low generation, **or exported to continental Europe to boost the UK economy.**

16 To avoid confusion in the market, a single well-advertised consumer-facing brand should be established, which offers clear advice, facilitates targeted financing, and synchronises with available industry schemes. MaPrimeRenov scheme in France could serve as a useful model for this.

17 Carbon Brief (20 January 2022) "Analysis: Cutting the 'green crap' has added £2.5bn to UK energy bills"

18 S&P Global (7 July 2022) "UK awards 10.8 GW new renewable capacity at record low strike prices"

19 FT (4 April 2022) "Clean power groups call for slicker process on UK planning and permits"

20 https://reports.electricinsights.co.uk/q4-2020/record-wind-output-and-curtailment

In addition, scaling up the production of green hydrogen could be essential for better integrating renewables into the energy system, allowing excess generation capacity to be diverted to electrolysis, using hydrogen as a storage solution, and providing essential balancing system services. This would also yield important economic benefits: **UK's green hydrogen exports from offshore wind could reach £48bn annually with potential for £200bn of gross value added (GVA) and up to 120,000 jobs from the production of green hydrogen and export of electrolysers** to overseas markets.[21]

> UK's green hydrogen exports from offshore wind could reach £48bn annually with potential for £200bn of gross value added (GVA) and up to 120,000 jobs from the production of green hydrogen and export of electrolysers to overseas markets.

3 **Use the Review of Electricity Market Arrangements (REMA) to explore how best to decouple gas and electricity prices, and unleash the capability for UK renewables** to deliver lower bills for industry and households. Current arrangements under the wholesale market are based on marginal pricing, with the most expensive generator needed to meet demand setting the price for electricity from all types of generating technologies. This is why, in spite of the falling cost of renewable generation, we are seeing climbing electricity prices, with gas as the marginal generator.

Therefore, **government could look to use the REMA consultation to explore how best to reform the wholesale market. One option is establishing a market for long-term, zero carbon and tradable electricity contracts,** with standardised structures made available to business consumers and aggregated to be made available for households too. This could be facilitated through a **green power pool,** operated in parallel to the electricity spot market. Consumers holding these contracts would thereby avoid the indirect costs of carbon prices, and the volatility of fossil fuel prices through marginal pricing arrangements in the wholesale market.

Whilst the reforms proposed under REMA would be implemented from the mid-2020s onwards, the first steps towards a green power pool could be taken sooner and provide a testbed for REMA proposals, before these are rolled out at scale. Specifically, government could look into how renewable electricity generated under future CfD supply contracts – to which the government-owned Low Carbon Contracts Company (LCCC) is the counterparty – could be sold directly to suppliers or consumers through demand-side contracts with the LCCC, rather than be made available through the standard wholesale market.

21 Catapult Network (2020) *Accelerating a UK hydrogen economy*

PART 2: NET ZERO AND NATURE RESTORATION: A SIGNIFICANT OPPORTUNITY TO DRIVE ECONOMIC PROSPERITY ACROSS THE COUNTRY

With 70% of the global economy and over 3,000 businesses covered by net zero targets in 2021,[22] it is clear that the private sector understands the opportunities of a net zero, nature positive economy. With the falling cost of low carbon technologies and growing global demand for low carbon goods and services, facilitating the development of the UK's low carbon sectors will be a key vehicle for boosting business competitiveness and attracting investment into the UK.

Investment trends also confirm the appetite of businesses to invest and position themselves as leaders in the energy and net zero transition. According to the IEA, increased investment in the global energy sector has primarily arisen from investment in renewables, electricity grids, and energy efficiency.[23] Looking across sectors, the **global low carbon economy has achieved compound annual growth rates of approximately 14% over the last 12 years,** and with a market capitalisation of over $7 trillion, it would be the fifth largest industry (comparable in size to the fossil fuel sector[24]).

> The global low carbon economy has achieved compound annual growth rates of approximately 14% over the last 12 years, and with a market capitalisation of over $7 trillion, it would be the fifth largest industry (comparable in size to the fossil fuel sector).

This investment, accelerated by robust policies and stable regulation, has been key in driving job creation and levelling up key regions outside of London and the South East: 26,000 jobs have been created in the offshore wind sector in areas like the Humber and Solent, with the possibility to reach nearly 70,000 by 2026.[25] 200 jobs have been created in cable manufacturing in Blyth,[26] and almost half a million jobs in low carbon businesses and their supply chains across the country.[27]

There are valuable opportunities to boost these numbers further by continuing to implement key strategies and plug gaps in the existing policy framework. For instance, a **low carbon hydrogen sector** in the North-West could see the creation of 5,000 new jobs; CCS could deliver 5,500 jobs in Teesside by 2025 and 18,000 jobs nationally by 2030;[28] the **transition to EVs** could create 200,000 permanent jobs across the UK, with 57% coming from the installation, operation and maintenance of chargepoints;[29] improving the energy efficiency of every building in the country in need of retrofit will require 12,000 workers to be trained every year for about the next four years, before the need to ramp up annual recruitment by up to 30,000 workers between years 2025 and 2030.[30]

MAKING IT HAPPEN – TOP 3 SOLUTIONS:

1 **In parallel with the upcoming review, accelerate the implementation of the Net Zero Strategy to provide the right market signals and boost investor certainty, and use smart regulation to mobilise private investment.**

The Net Zero Strategy and the underpinning sectoral decarbonisation have been instrumental in providing the certainty and policy stability needed to de-risk investment in low carbon solutions, and drive the adoption of low carbon technologies and processes. Regulation is foundational to this certainty, as it creates a floor for ambition and can help companies overcome sector inertia and stimulate innovation, upskilling and competitiveness – businesses have

22 https://sciencebasedtargets.org/net-zero
23 https://www.iea.org/reports/world-energy-investment-2022
24 FTSERussell (2022) *Investing in the green economy 2022: Tracking growth and performance in green equities*
25 Offshore Engineer (March 2021) "UK: Offshore Wind Industry to Support Almost 70,000 Jobs by 2026", with data from Offshore Wind Industry Council
26 https://www.bbc.com/news/uk-england-tyne-61730399
27 https://eciu.net/analysis/briefings/net-zero/net-zero-economy-and-jobs
28 Vivid Economics (May 2020) *Net Zero Teesside Economic Benefits*
29 AIE (November 2018) Powering a new value chain in the automotive sector: the job potential of transport electrification
30 CCITB (2021) – *Building skills for net zero*

already pointed to **gains in jobs, innovation and skills driven by smart ambitious regulation in sectors including construction, waste or automotive.**[31]

Continuing to implement and plug existing policy gaps in these key sectors will be essential to drive investment in infrastructure and innovation right across the economy. For instance, clear regulation on minimum energy efficiency standards in homes will be needed to kickstart sustained investment in the skills and supply chains needed to meet demand and create jobs across the country. Likewise, the development of mandatory product standards that gradually drive down embodied and lifecycle emissions in industrial products will be key to securing a level playing field for sectors like steel, cement and manufacturing, that are investing to decarbonise production.[32] A more detailed overview of the key policy gaps and policy priorities under the Net Zero Strategy can be found in the appendix to this report.

2 **Supplement the implementation of sectoral strategies with targeted interventions through the UK Infrastructure Bank (UKIB) to crowd in private investment into key sectors.**

Whilst policy stability, market mechanisms, and clear regulation are essential in mobilising and de-risking private investment, institutions like national and state banks have historically played a role in successful reconstruction post-crisis, for example after the Second World War and the 2008 Global Financial Crisis. The UKIB should now be instrumental in accelerating economic recovery and clean growth, by supporting accelerated investment into key sectors, which in turn will lead to job creation across the country and the delivery of key public benefits like thriving natural capital, cleaner air or more energy efficient homes.

It is therefore welcome to see that UKIB has been set up with a mandate to tackle climate change and support regional and local economic growth. To ensure the capital of UKIB is deployed in the most efficient way and effectively crowds in private finance, its priorities should be:

a **Rectifying market failures** by providing loan guarantees or project aggregation, supplying technical support and expertise to support delivery at the local level, and developing appropriate financial products for private investment. These interventions would be particularly useful in areas like energy efficiency retrofits or nature restoration projects, where investment is currently hampered by a lack of investable projects, lack of aggregation for smaller-sized opportunities, or uncertainty about future revenue streams for investors.

b **De-risking investment in early stage technologies,** through co-investment, equity funding, or guarantees in technologies like next generation batteries, carbon capture and storage, or greenhouse gas removals.

3 **Develop a clear strategy for low carbon skills to maximise levelling up opportunities in the low carbon economy.** Following the work of the Green Jobs Taskforce, it is now essential that its recommendations, developed in partnership with businesses from across key sectors, are implemented as soon as possible. To develop a joined-up skills strategy, reforms to the national curriculum will be needed, which embed sustainability at all levels of the educational system, to ensure that the upcoming workforce has the skills needed to reap the employment benefits of a growing low carbon economy. In addition, it is important to ensure that training provisions and financial support are in place to support workers in need of re-skilling mid-way through their careers. For instance, **the offshore wind skills passport provides a useful example of transitioning experienced workers from the oil and gas sector into offshore wind, making the most of their transferrable skills and experience.**

31 Buro Happold (March 2021) *Fostering Prosperity: Driving innovation and creating market opportunities through environmental regulations*

32 Aldersgate Group is working with Frontier Economics to develop a report on the role of mandatory product standards in driving industrial decarbonisation and helping industries remain competitive. This will be published in November 2022 and recommendations will be based on interviews with companies in steel, cement and the food and drink sectors.

PART 3: BUILDING A RESILIENT AND COMPETITIVE ECONOMY: ACCELERATING INVESTMENT IN NATURE RESTORATION AND RESOURCE EFFICIENCY

At a time of commodity supply disruptions, increased climate impacts and a rapidly degrading natural environment, the government needs to deliver faster progress to restore nature and drive much greater resource efficiency across the economy. Action in both areas is essential to strengthen our economy, not just in terms of greater resilience to climate impacts, but also to supply disruptions and rising commodity prices.

Investment in nature restoration and natural capital is critical, in particular to help mitigate the impacts of extreme weather events and improve food security. In the UK, it is estimated that **adequate tree cover saved London more than £5bn in 2014–2018 through air cooling and prevented productivity losses of around £11bn** by preventing overheating in the summer – maximising tree canopy coverage in urban areas will therefore be key in reducing energy demand from air conditioning during heatwaves.[33] Moreover, the value provided by coastal wetlands in terms of **buffering the effects of storms and flood control has been estimated at £1.5bn annually**,[34] and saltmarshes protect assets worth £1.79bn from flooding just in England.[35] In the context of rising food prices and worsening food security across the globe, there is an urgent case for reversing the decline of nature: **soil degradation in combination with climate change are predicted to reduce crop yield by 10% globally and 50% in certain regions.**[36] It has been estimated that the costs of soil degradation in England and Wales amount to £1.2bn per year,[37] which is why supporting agricultural practices that help reverse this degradation is critical.

Adequate tree cover saved London more than **£5bn** in 2014–2018 through air cooling and prevented productivity losses of around £11bn by preventing overheating in the summer.

Beyond these benefits, an ambitious nature restoration agenda can help drive investment and job creation across the country. For instance, improving green infrastructure in neighbourhoods without green space could create 10,800 jobs across the UK.[38] Restoring habitats and delivering green infrastructure can create jobs in areas with limited alternative employment opportunities: for example, two thirds of the most suitable land for planting trees is in constituencies with worse than average labour market challenges.[39]

The Dasgupta Review commissioned by the UK government further shows how dependent wealth and productivity are on the exploitation of natural resources. The transition to a circular economy offers a solution to break the link between economic growth and unsustainable resource use that is driving nature degradation. In addition, **a set of key resources like metals are usually not recovered and reintegrated into production, instead being downcycled or exported as waste. This has left us more vulnerable to supply chain disruptions and rising commodity prices which are a key driver of inflation** – non-energy prices, including agriculture and metals, are projected to increase almost 20% in 2022, remaining well above the most recent five-year average and wheat prices are forecast to increase more than 40%, reaching an all-time high in nominal terms this year.[40] These trends have already destabilised UK markets and supply chains, and if unaddressed will continue to do so.

Despite the economic benefits and public support for circular economy measures that go beyond plastic and packaging concerns, UK government strategies on resource efficiency have to date lacked ambition and detail. Designing out waste, keeping materials in use and regenerating natural systems will result in environmental benefits, generate significant economic returns, reduce our dependence on virgin resources and imports, boost local repair, remanufacturing, and upcycling economies, and better equip us to withstand climate change and exogenous shocks like the COVID-19 pandemic.

33 UK Green Building Council (May 2020) *Green recovery position paper*
34 HM Government (June 2011) *The Natural Choice: securing the value of nature*
35 ONS (July 2022) *Saltmarsh flood mitigation in England and Wales, natural capital: 2022*
36 Earthwatch Institute (2019) *Soil health, biodiversity and the business case for sustainable agriculture*
37 Cranfield University (2015) *The Total Costs of Soils Degradation in England and Wales*
38 Green Alliance (May 2021) *Jobs for a green recovery: Levelling up through nature*
39 *Ibid.*
40 World Bank (26 April 2022) "Food and Energy Price Shocks from Ukraine War Could Last for Years"

MAKING IT HAPPEN – TOP 3 SOLUTIONS:

1 **Support nature restoration and natural capital investment by strengthening and finalising the proposed targets under the Environment Act and putting in place a comprehensive first Environmental Improvement Plan (EIP).**

Restoring nature is an essential tool for supporting adaptation to climate change. Thriving natural capital can provide important ecosystem services, help us reduce emissions and mitigate the impact of extreme weather events like heatwaves and floods.

Currently, a lack of investable projects and unclear revenue streams for investors are deterring investment in natural capital that will be so integral in making the country more resilient to climate change. To enable the private sector to better contribute to reversing the decline in nature, government will need to provide a clear direction of travel and delivery plan for driving business investment. A significant opportunity to do so exists in the finalisation of long-term environmental targets (which should provide clarity on a 15 year + horizon), and the development of the first EIP, which should set clear milestones and supportive policies for the next five years.

On targets, greater ambition, addressing policy gaps, and close alignment with wider policy frameworks could see government secure a truly world-leading legal framework of environmental objectives. The priority should be filling the gaps in missing targets: an apex water quality target at the national level, a resource productivity target as committed to in the 25 Year Environment Plan, and a target to improve the condition of Sites of Special Scientific Interest (SSSI). To give coherence to businesses navigating these complex policy areas, the species abundance target baseline should be moved from 2030 to the present day – consistent with the baselines of the other targets.

In creating the first EIP, government has a unique chance to provide the meaningful policy, regulatory and legal underpinning for a range of policy areas – biodiversity, water quality, resource efficiency, agricultural reform and air quality. This could create a blueprint for developing a pipeline of nationwide natural capital projects that could create employment, contribute towards environmental targets and generate a range of public goods (e.g. more sustainable farming practices and a secure food supply, ecosystem restoration or flood resilience).

To further mobilise private finance into nature, **the use of instruments such as green bonds, co-investment, loans or guarantees through the UK Infrastructure Bank (UKIB)**[41] is essential for capacity building and growing the project pipeline. This blended finance could be targeted towards priority areas for natural capital restoration such as peat restoration, regenerative agriculture, urban green infrastructure or sustainable water management. In addition, tax relief for businesses investing in natural capital projects and regulation that allows for higher levels of nature restoration investment during price control periods for regulated utilities will be key in further building a project pipeline and showing proof of concept.

2 **Maintain and fully implement the Environmental Land Management Schemes (ELMS) without delay, which incentivise better agricultural practices to reverse soil degradation, improve crop yields, boost domestic food security and improve the environment.**

The UK began to set out an ambitious vision to link agricultural subsidies to nature improvement through the ELMS scheme following its departure from the EU, which will provide public money for public goods. Despite this, the CCC's 2022 Progress Report[42] labelled Agriculture and Land Use as one of the key sectors most significantly off track to deliver emissions reductions – 9% of the UK total emissions.

41 Aldersgate Group (June 2021) *Financing the future: driving investment for net zero emissions and nature restoration*
42 CCC (July 2022) *Progress in reducing emissions: 2022 Progress Report to Parliament*

The initial commitment to ELMS is a much needed step in enabling the delivery of the EIP and beginning to address various difficulties in the sector – helping to reverse soil degradation from overproduction, developing shorter producer-to-consumer models, creating more resilient supply chains and attracting investment in jobs and opportunities for local farmers whilst reducing emissions from the sector.

The co-benefits associated with achieving the 25 Year Environment Plan (e.g. clean air, clean water, more abundant wildlife) are not sufficiently reflected in existing market pricing mechanisms. **Delaying ELMS and continuing with the current basic payments scheme to farmers for even two years would leave a substantial gap in the UK's net zero plans and could cost at least £1.2bn with no guaranteed benefit in emissions savings.**[43] This is why it is key that the government does not renege on their initial ELMS plans. They now must be fully developed and communicated and rolled out as soon as possible, in coordination with other environmental priorities, such as those in emerging Local Nature Recovery Strategies, biodiversity and nature recovery goals, as well as the government's Food Strategy.[44]

Moreover, **ELMS payments should also be designed in such a way so that they crowd in private investment to achieve the outcomes above.** The use of outcome payments, revenue guarantees, favouring lower long-term maintenance over higher one-off capital support, providing development funding to support market access and funding market infrastructure such as standards, registries or trading platforms should be prioritised over unconditional grants that crowd out private investment.

This will ensure that businesses are incentivised to invest in practices enabling sustainable land management, through due diligence, capacity building within the farming community and fostering collaboration on upskilling across supply chains to ensure that the impact on soil quality through unsustainable farming practices is better understood and that genuine steps are taken to mitigate this.[45]

3 **Implement the 2018 Resources and Waste Strategy to accelerate the transition to a more circular economy, increase the UK's resource security and reduce exposure to volatile commodity prices and supply chain disruptions.**

Following the lack of progress since the publication of the 2018 Strategy, government should focus primarily on the development of mandatory product standards and the roll out of Extended Producer Responsibility schemes that go beyond packaging and also cover industrial products. This will be needed to **ensure products are designed in a way that maximises resource use through repairability and reusability** – it is estimated that 80% of a product's environmental impact is determined at the design stage.[46]

Mechanisms such as adjusting VAT on repair services or building retrofits will need to be pursued at the same time, so that **resource efficient products are competitive on upfront cost and product prices better reflect the lifecycle, economic and environmental benefits of resource efficient, materials and services.**

These measures will also be key in **driving greater retention of key materials in the economy (e.g. cobalt, lithium, copper, scrap metals) and levelling the playing field for companies investing in more circular business models.** This will be essential for growing sectors like battery manufacturing, where critical raw materials come in limited supply and have significant economic value: in 2019, the UK's electric vehicle fleet contained over 1,400 tonnes of lithium and 800 tonnes of cobalt, worth £26.3m and £31.5m respectively.[47] Retaining these materials will reduce bottlenecks in supply as battery production scales up, and they could also be used in the solar panel manufacturing sector or for stationary storage.

Currently, sorted waste tends to be exported for reprocessing due to lower costs abroad and lack of domestic infrastructure. This is why government should **invest in the appropriate infrastructure and offer tax relief for remanufacturing to grow demand for sorted waste in the UK** and utilise its position as an intermediary to facilitate collaboration between manufacturers and waste management and sorting companies on the model of the National Industrial Symbiosis Programme.

43 Green Alliance (April 2022) *Briefing: Delaying ELM would halve its carbon savings by 2035*

44 Wildlife and Countryside Link (November 2021) *Public access is a public good: Connecting people to nature through Environmental Land Management*

45 Earthwatch Institute (2019) *Soil health, biodiversity and the business case for sustainable agriculture*

46 Aldersgate Group (June 2018) *No time to waste: an effective resources and waste strategy*

47 Green Alliance (November 2021) *Critical Point: Securing the raw materials needed for the UK's green transition*

PART 4: MAINTAINING GLOBAL BRITAIN'S LEADERSHIP ON THE CLIMATE AND ENVIRONMENTAL AGENDA

Following its departure from the European Union, the UK has the opportunity to build a highly competitive economy, whilst setting an ambitious standard in terms of climate and environmental progress. The greater policy flexibility provided by the UK's departure from the EU provides the opportunity to introduce smart and ambitious regulations that can maximise affordable investment and job creation in low carbon goods, services and technologies.

The UK has already successfully decoupled economic growth from emissions and used its diplomatic leverage to deliver a successful COP26 summit, with an ambitious Glasgow Breakthroughs agenda, a finalisation of the Paris rulebook and important commitments on tackling deforestation and closing the international finance gap.

As COP26 President for the remainder of 2022, it is critical for the UK to demonstrate consistent progress domestically, using its climate and environmental frameworks to ratchet up ambition in other countries as well, for example through free trade agreements. This will help deliver the vision of an ambitious Global Britain on the ground. It will also ensure that the UK's enhanced flexibility in terms of policy making is utilised in support of achieving climate and environmental objectives in a way that is good for the economy and society.

MAKING IT HAPPEN – TOP 3 SOLUTIONS:

1 **Utilise greater policy flexibility post Brexit to promote the UK as the best place to invest in low carbon services and technologies.** The UK has already gone further than other countries in areas such as linking agricultural subsidies to environmental improvement through the Environmental Land Management Scheme, phasing out petrol and diesel cars by 2030 – a more ambitious timeline than other countries in Europe, or setting up the world-leading Contracts for Difference Scheme which has attracted record levels of investment into the UK renewables sector.

It is now essential to continue delivering on domestic progress and demonstrate the same level of ambition in areas like low carbon heating, carbon pricing or product standards (see appendix). This will create important export opportunities, with exports of UK goods and services contributing 30.01% of GDP.[48] As the low carbon economy is set to grow across the world, ensuring UK-based firms can capture a first mover advantage in technology, research and innovation will attract high levels of investment and boost competitiveness. A good example in this sense is green hydrogen, where the UK could leverage growing renewables generation to produce hydrogen through electrolysis, utilise the recently announced business models to enable costs to come down and become a net exporter of hydrogen, especially to the EU. Estimates show that UK's green hydrogen exports from offshore wind could reach £48bn annually with potential for £200bn of gross value added and up to 120,000 jobs from the production of green hydrogen and export of electrolysers to overseas markets.[49]

2 **Support the COP27 presidency in delivering a successful summit,** first of all by continuing to make progress at the domestic level through the implementation of the Net Zero Strategy and Environment Act. Secondly, it will be important for the UK to leverage its diplomatic networks to ensure progress is made on key areas such as closing the gap on international climate finance and ensuring that all nations honour their pledges in Glasgow to increase their emission reduction commitments at COP27. In addition, supporting COP CBD 15 negotiations to deliver greater international collaboration and commitments to protect biodiversity and restore nature will also be fundamental.

3 **Align trade and climate objectives by taking steps to grow low carbon exports, prevent carbon leakage, protecting of the UK's right to regulate, and fostering international cooperation.** Outside the EU, the UK has the opportunity to set an ambitious global precedent if its trade policy is aligned with climate and environmental targets. The absence of a concrete trade strategy has fostered a lack of policy coherence and robust governance between the trade and climate agendas. The new government should urgently remedy this. Such a strategy would provide the opportunity to address issues including consumption emissions and carbon leakage, the right to regulate, due diligence or phasing out fossil fuel subsidies. As part of this, government should consult on the role and implementation of carbon border adjustments, product standards and supply chain due diligence obligations.

48 Trading Economics (2020) https://bit.ly/2YcTETh
49 Catapult Network (2020) *Accelerating a UK hydrogen economy*

APPENDIX[50] – SECTORAL POLICY PRIORITIES FOR THE NEXT 2 YEARS

1. BUILDINGS

Representing 20% of UK total emissions in 2021, this sector has seen minimal progress in abatement given low levels of investment in energy efficiency improvements and low carbon heat rollout.[51] In the context of energy security concerns and the risk to large numbers of households of being pushed into fuel poverty following the price cap increases expected this winter, the main priority for government in the next two years should be to insulate as many buildings as possible and facilitate cost reductions and switches to more energy efficient heating solutions such as heat pumps.

a **Accelerate deployment of heat pumps** to support the installation of at least 600,000 heat pumps per year to 2028 in line with the ambitions of the Net Zero Strategy and the CCC recommendations. Currently, annual installation rates are at 55,000.[52] At scale deployment of heat pumps can also help cut demand for energy, essential given current security concerns: heat pumps are more efficient than other heating systems, with the amount of heat they produce exceeding the amount of electricity they use.[53]

> Government should support the installation of at least **600,000** heat pumps per year to 2028 in line with the ambitions of the Net Zero Strategy and the CCC recommendations. Currently, annual installation rates are at 55,000.

To this end, the Boiler Upgrade scheme should be complemented by: (i) removing levies on electricity so that heat pumps are less expensive to run than gas boilers; (ii) introducing obligations on manufacturers to sell a growing number of heat pumps each year as the market matures; (iii) running public awareness campaigns to increase the understanding of climate and economic benefits of installing heat pumps and build trust in the technology; and (iv) providing suitable training for installers. For heat pumps to deliver genuine savings in cost, it is paramount that deep energy efficiency retrofits are pursued in parallel.

b **Mobilise private investment in energy efficiency improvements** through the use of regulation and fiscal incentives. With a supportive policy and regulatory framework that drives demand as well as investment in skills and supply chains, private finance instruments can be rolled out at scale to plug the funding gap. This includes approaches like quick modular retrofits through Energiesprong or property assessed clean energy (PACE) financing.[54] For those unable to pay, ensuring that recent cutbacks to the Energy Company Obligation (ECO) scheme[55] are reversed and further funding is allocated to help insulate as many homes as possible and reduce bills will be key. An expansion of the ECO scheme will be particularly important given that, with rising energy prices and the leakiest housing stock in Europe, more people in the UK will be pushed into fuel poverty.

50 For further details on existing policy support for each of these sectors and additional policy gaps that need addressing, please see the Aldersgate Group briefing (October 2021) *Net Zero Strategy policy tracker: key announcements and next steps (October 2021)*

51 CCC (July 2022) *Progress in reducing emissions: 2022 Progress Report to Parliament*

52 *Ibid.*

53 Energy Savings Trust: https://energysavingtrust.org.uk/advice/in-depth-guide-to-heat-pumps

54 Further private finance instruments for energy efficiency investment available here: https://www.greenfinanceinstitute.co.uk/programmes/ceeb-europe

55 Bloomberg (29 July 2022) "UK Scales Back £1 Billion Funding to Help Homes Cut Energy Use"

2. TRANSPORT

Surface transport represents the largest emitting sector in the economy (23% of the total share of emissions), with the most significant reductions in the last two years attributable to behaviour change during the pandemic, rather than policy signals.[56] Whilst EV market penetration has been ahead of the curve (12% of the new car market sales in 2021 were EVs, ahead of the 8% trajectory required by CCC pathways),[57] investment in charging infrastructure, support for upfront cost and a more competitive second hand EV market will be required to drive further uptake.

Investment in public transport will be key to lowering emissions and congestion, but also to reducing exposure to rising fuel prices. Germany provides a good indication of the importance of promoting public transport as a response to rising fuel costs: its 3-month trial to sell €9 tickets for a month's unlimited travel on regional train networks, trams and buses saved about 1.8m tons of CO_2 emissions. Of the 52m tickets sold, a fifth were bought by people who did not ordinarily use public transport.[58]

a **Support the deployment of local on-street charging and rapid charging points along the strategic road network.** This should be achieved by starting the allocation of the Rapid Charge Fund as soon as possible, and by implementing the EV Infrastructure Strategy to support local authorities across the country to develop an integrated EV infrastructure, ensuring charging provisions are evenly distributed across the country. When installing chargepoints, especially along motorways, it is key to consider the needs for HGV charging too and expand the Fund appropriately, as this will save costs related to grid connections and capacity in the longer run, as well as incentivise greater take up of electric HGVs.[59]

In addition, government should drop the rate of VAT on electricity from public chargepoints from 20% to 5%, to align with the rate that domestic users pay. This is essential from a levelling up perspective too, as currently EV owners in more affluent neighbourhoods with dedicated off-road parking spots can use their domestic electricity (5% VAT-rated) to charge their vehicles, while potentially much less well-off people living in areas without off-street parking will be more reliant on the public charging infrastructure (20% VAT-rated).

> VAT on electricity from public chargepoints should be lowered from **20% to 5%,** so that people living in areas without dedicated off street parking can pay the same lower rate of VAT as those using domestic electricity. This is essential from a levelling up perspective.

b **Provide cost support for EVs through a successor for the Plug-in Car Grant and by growing the second-hand EV market through fiscal incentives and battery health certifications.** Following the scrappage of the Plug-in Car Grant, the UK is now the country with the most ambitious targets for phasing out ICE vehicles, which offers no cost support for purchasing cleaner vehicles. As early adopters of EVs tend to come from more affluent segments of the population, it is essential that those less well off are also able to access support for upfront cost when making the switch.

In addition, access to more affordable and reliable second-hand EVs will also be important. Second-hand EVs are currently not an attractive purchase, given the relatively small cost difference between used and new cars as prices of new models continue decreasing. Compared to used ICE vehicles, second-hand EVs tend to be more expensive (the average cost differential between the two is around £10,000), making low income households – who are most likely to buy second-hand – opt for an ICE vehicle.

Supporting the second-hand market is crucial to enable mass adoption, offering feasible and reliable options for lower income households and minimising the need for raw materials going into new batteries. Fiscal interventions such as interest-free loans, VAT rebates or grants to help meet the upfront cost will

56 CCC (July 2022) *Progress in reducing emissions: 2022 Progress Report to Parliament*
57 *Ibid.*
58 The Guardian (30 August 2022) "Germany's €9 train tickets scheme 'saved 1.8m tons of CO_2 emissions'"
59 National Grid (May 2022) *Supporting the growth of clean transport: Decarbonising Heavy Goods Vehicles on the Strategic Road Network*

be required. In addition, battery health certificates and investment in skills for battery repair technicians will be needed to instil confidence in the longevity of used EVs, especially as the bulk of an EV's value is dictated by the battery.

c **Invest in public transport routes and promote the uptake of bus and train journeys, as well as active travel** to reduce congestion and minimise household exposure to rising fuel prices. In addition, it will be key to promote measures aimed at increasing road vehicle occupancy, including incentives for pooled mobility and car sharing models or mobility hubs to support a shift from private vehicle ownership towards public mobility as a service.

3. POWER

More frequent CfD auctions, economies of scale and falling costs of generation have seen renewables capturing a growing share of the market and generating 42% of the UK's electricity in 2020.[60] To generate all electricity from low carbon sources by 2035, as per the government's target, it will be essential to maintain regular and predictable CfD auctions, but also invest in grid infrastructure and connections. Government must also review electricity market arrangements to ensure the renewable-dominated future system is cost-effective, secure and flexible.

a **Provide clarity on the frequency and volumes for future CfD auctions and Crown Estate leasing rounds,** with clear support for deploying Pot 1 technologies like solar and onshore wind, which are the cheapest forms of generation. Ensuring market access for onshore wind will help the development of the offshore wind industry; in other European countries like Germany and the Netherlands, simultaneous investment in both industries helped leverage innovation, skills and supply chains, which are similar.

b **Complete a review of the planning and consenting regime,** to ensure transmission infrastructure is delivered in a timely way and constraint costs are reduced. (see page 6 for further details)

c **Develop an integrated framework for delivering community benefits** to ensure areas hosting nationally significant or key infrastructure (such as transmission pylons or overhead lines) are incentivised to do so and are offered useful benefits. It will be particularly important to have this unified framework as certain communities could be required to host infrastructure developments from more than one sector, such as water and power.

d **Respond to the Review of Electricity Market Arrangements (REMA)** consultation as soon as possible, to offer clarity on next steps for delivering a net zero wholesale market, incentivise additional renewable generation through accurate price signals and reward flexibility of supply and demand. (see page 7 for further details)

60 The Guardian (27 January 2021) "UK electricity from renewables outpaces gas and coal power"

4. INDUSTRY

With the publication of the Industrial Decarbonisation and Hydrogen strategies, the pathway for decarbonising foundational industries and manufacturing is now much clearer compared to when the UK's net zero target was set. Whilst the clusters framework has been critical in accelerating investment in low carbon hydrogen and Carbon Capture and Storage (CCS), incentives to pursue emissions reductions through resource and energy efficiency, as well as greater electrification are more limited. In addition, pathways for decarbonising industrial locations outside of clusters are still unclear. Crucially, a challenging economic context, exacerbated by high energy costs, are rendering many energy intensive sectors unable to deliver the CAPEX investment required to decarbonise. Greater focus is needed to create a favourable climate for mobilising private investment into low carbon industry and manufacturing.

a **Implement key measures to reduce industrial electricity prices,** which even before the energy crisis were between 25%–44% above the EU average, deterring investment into the UK. This could be pursued through the REMA consultation – and even piloted before the reform package is finalised, by creating a market for long-term, zero carbon and tradable electricity contracts that can be sold to sectors like steel, cement or chemicals, that would benefit for urgent action on electricity prices.

In the medium term, standardised structures of long-term, tradeable zero carbon electricity contracts should be made available to business consumers, grounded in the declining cost of unsubsidised renewable electricity sources. Consumers holding these contracts would thereby avoid the indirect costs of carbon prices, and the volatility of fossil fuel prices. This could be facilitated through a **green power pool, operated in parallel to the electricity spot market.**[61] Matching supply in the green power pool with demand from energy intensive sectors like steel could provide a testbed for reforming market arrangements, as currently consulted on until October 2022 as part of REMA.

b **Develop a clear roadmap for decarbonising dispersed sites,** maximising the benefits of innovation and economies of scale in industrial clusters. This should be achieved by working with local authorities and local enterprise partnerships to ensure these locations are, over time, connected to CCS infrastructure and hydrogen production sites.[62] It is also essential to maximise the potential for these sites to reduce emissions through resource and energy efficiency by providing innovation funding that is not focused just on CO_2 reductions (and through measures outlined in section 6 below), as this will be essential to avoid backloading emissions reductions until key technologies like CCS or low carbon hydrogen become available.

c **Finalise the business models for hydrogen and CCS transmission and storage by introducing the required secondary legislation through the Energy Bill,** and commit to more ambitious allocation timelines to enable businesses to effectively plan investment. A roadmap for meeting the 10GW of low carbon hydrogen by 2030 will also need to accompany business models. In addition, providing clarity on the level of ambition and support for low carbon hydrogen production post-2030 will be key to ensure continuity of investment into the UK hydrogen market.

d **Develop demand-side measures to grow the market for low carbon and resource efficient industrial goods,** including by creating public procurement mandates to buy low carbon and resource efficient materials and assets. Developing mandatory product standards will also help to gradually drive down the permissible level of embodied carbon and lifecycle emissions in industrial products. To ensure these standards are achievable, close consultation with businesses across the value chain will be required.

e **Support industrial digitalisation through innovation funding and incentives,** to allow for at scale data collection on energy usage and enable energy demand reduction by optimising the use of existing assets, such as furnaces.[63] This data will also be critical in enabling industrial flexibility and permanent demand reduction, representing a key tool in balancing the system.

---

61 UCL (October 2021) *Delivering competitive industrial electricity prices in an era of transition.* In 2022, Aldersgate Group and UCL are doing further research to see how a green power pool could be implemented as soon as possible, to benefit industrial and domestic users in a challenging energy crisis context.

62 Further details on how both types of locations can be decarbonised effectively are included in our recent report commission: Frontier Economics for Aldersgate Group (September 2021) *Accelerating the decarbonisation of industrial clusters and dispersed sites*

63 This has yielded carbon reductions of 15.6 thousand tonnes a year for glass manufacturer Encirc, through the installation of a new, intelligent end-to-end process control system that optimises furnaces to run at minimum viable energy, saving emissions, costs and improving productivity. Further details available here: https://www.glass-futures.org/innovation-technology-has-deep-impact-in-carbon-reduction-for-encirc

5. NATURE RESTORATION

With the passage of the Environment Act, the new Office for Environmental Protection, and the development of the Environmental Improvement Plan for England we are seeing good steps in setting up a more joined-up framework for restoring nature and tackling pollution. Further policy detail is now needed to create the right incentives and market mechanisms to attract private investment into natural capital, and should be supported by clearer targets to set a floor for ambition in restoring key ecosystem services.

a **Ensure that the first Environmental Improvement Plan for England includes tangible policy and regulatory underpinning.** In order to provide a framework that mobilises private sector investment, it is vital that the government builds on the vision set forth in the 25 Year Environmental Plan and ensures that the first Plan provides a clear direction of travel and next steps for the delivery of key environmental objectives. The Plan should give businesses clear sectoral roadmaps, including across agriculture, water, infrastructure and manufacturing.

b **Finalise the long-term environmental targets on air quality, biodiversity, water, resources and waste** ahead of the October deadline. With some adjustments to ambition, filling-in of gaps, and close alignment with wider policy frameworks, government could secure a truly world-leading legal framework of environmental objectives.

c Ensure that the **Environmental Principles Policy Statement embeds environmental considerations** into the policymaking process **across all departments,** and look to implement the Statement as soon as possible.

6. RESOURCE EFFICIENCY

In spite of a suite of policy proposals dating back to 2018's Resources and Waste Strategy, policy progress in this area has been slow, with a lack of both cross-departmental collaboration to embed resource efficiency into policymaking and strategies targeted at decarbonising sectors like transport, industry or manufacturing.

a **Prioritise the implementation of measures in the Waste Prevention Programme and increase their ambition to embed resource efficiency at the early stages of the product lifecycle and the waste hierarchy,** with a particular focus on better product design, waste prevention, material re-use and remanufacturing. To achieve this, progress will need to be delivered on development of mandatory product standards and labelling schemes, ambitious fee modulation for Extended Producer Responsibility schemes focused beyond packaging to include industrial products and wastes,[64] and an escalator for the plastics tax.

b **Offer support so that resource efficient products can compete on upfront cost, to ensure prices better reflect the whole lifecycle of the product.** As part of this fiscal incentives for circular products and services will be needed, such as reduced VAT or business rates and reduced taxes on repair and reconditioning. In addition, developing resource efficiency criteria for public procurement will be essential to scale up more resource efficient business models and grow the market for circular products – a strong signal given the £290 billion a year spent by the UK government on public procurement.[65]

c Provide **targeted public finance** – such as through the UK Infrastructure Bank and future green sovereign bond issuances – **to support the development of critical infrastructure and facilities** for recycling, repair, remanufacturing and reuse.

d Conduct public awareness campaigns to build consumer confidence and **grow the demand for resource efficient products and business models** (such as those based on 'servitisation', i.e. leasing and subscription) and disincentivise demand for disposable business models such as fast fashion. Introducing a national repair standards will also be critical in boosting consumer confidence in second hand products.

64 Aldersgate Group (March 2022) *The Missing Link: Establishing Strong UK Supply Chains for Low Carbon Industrial Products*
65 Cabinet Office (2020) *Transforming public procurement*

7. GREEN FINANCE

New regulation under the new Sustainability Disclosure Requirements and the introduction of mandatory transition plans for listed companies represent important steps in helping the UK become the world's first net zero-aligned financial centre. In addition, the publication of the Net Zero Strategy and underpinning sectoral decarbonisation pathways have been instrumental in mobilising private capital into low carbon technology and infrastructure. Whilst a robust policy framework is already in place to start greening the financial system and direct finance towards green, the updated Green Finance Strategy expected later in 2023 should look at accelerating progress in this area and plugging some key gaps in policy.

a **Support businesses and financial institutions in better understanding the technicalities involved in the new reporting and disclosure requirements.** This should involve government, regulators and other relevant bodies (such as trade representatives) setting out guidance on, for example, how to produce a good net zero transition plan, and how to conduct scenario analysis to identify climate risks.[66]

b **Ensure, insofar as possible, that UK green finance reforms are internationally compatible** at the European Union and global level, to minimise reporting burden to businesses operating across jurisdictions. A degree of compatibility with EU standards is important given that the EU remains the largest investor into the UK ahead of the US, and the largest market for UK investors before the US.[67] A UK Net Zero-aligned Financial Centre may want to go beyond European and global standards when this is scientifically desirable, but must maintain a minimum amount of interoperability with EU and key global standards and regulations.

c **Utilise public finance tools to de-risk climate-related investments and crowd in private finance to the infrastructure, technologies and markets needed to accelerate the low carbon transition.** Government should look to issue an additional round of green sovereign bonds. This should be supplemented by continuing to strategically allocate capital available through the UK Infrastructure Bank in order to grow new markets in line with delivering the 6th Carbon Budget – in particular, building retrofits and natural capital markets.

8. SKILLS[68]

Setting up the Green Jobs Taskforce has been a welcome first step in putting skills development on the agenda of key departments as the net zero transition is underway. Ensuring that the recommendations of the Taskforce, which have received significant cross-sector business support, are implemented as a matter of priority will be key in helping transition those already in work into low carbon sectors, and prepare the future workforce for the needs of employers operating in a net zero economy.

A well-designed action plan on skills would also help mitigate skills shortages prevalent across the economy and which are already impacting businesses; even before the pandemic, skills shortages were affecting an estimate of 91% of UK organisations,[69] with costs of £6.3bn to businesses needing to cover additional recruitment fees, training or temporary staffing.[70] These skills shortages have also led to organisations being less agile and less able to adapt to a changing political, economic and technological climate. This is why developing a good match between skills supply and demand should be a key priority for government.

> Even before the pandemic, skills shortages were affecting an estimate of 91% of UK organisations, with costs of £6.3bn to businesses needing to cover additional recruitment fees, training or temporary staffing.

a **Develop a national low carbon skills strategy that embeds sustainability and net zero delivery across the whole education system,** including apprenticeship programmes, higher education and lifelong learning. This should be complemented by action to make the adoption of skills action plans mandatory for all educational providers, including further and higher education.

66 Aldersgate Group (June 2022) *Building a UK Net Zero-aligned Financial Centre: what next?*
67 Office for National Statistics (July 2021) *Foreign direct investment by ultimate controlling economy, UK trends and analysis: July 2021*
68 For further recommendations see Aldersgate Group (October 2020) *Upskilling the UK workforce for the 21st century*
69 Open University blog: https://business-school.open.ac.uk/news/ou-report-calculates-cost-skills-shortage-uk-business
70 *Ibid.*

b **Work with businesses and investors to accelerate the creation of partnerships between universities, advanced manufacturing institutes, and government research institutions all around the UK, to drive skills development and levelling up.** Many areas in the Midlands and the North of England have strong education institutions, established during the industrial revolution, and these will need adequate funding to ensure they can play their crucial role in skilling and reskilling as part of a coherent levelling up and net zero agenda.

c To support workers already in the job market and in need of reskilling, government should **continue to provide financial support for training, upskilling and retraining through the National Skills Fund.** This should be matched by Further Education Institutions offering a broader range of flexible, short-term courses focused on the climate and resource efficiency-related skills workers will increasingly need.

The Aldersgate Group is an alliance of major businesses, academic institutions, professional institutes, and civil society organisations driving action for a sustainable and competitive economy. Our corporate members, who have a collective turnover in excess of £550bn, believe that ambitious and stable low carbon and environmental policies make clear economic sense for the UK.

ALDERSGATE GROUP
LEADERS FOR A SUSTAINABLE ECONOMY

Email: info@aldersgategroup.org.uk
Tel: +44 (0)20 7841 8966
Suite 1, The Concourse, Waterloo Station, London, SE1 7LY

Aldersgate Ltd is a not-for-profit company
Company No: 6205552