

TIME TO DELIVER  **BUILDING
A COMPETITIVE AND INCLUSIVE
GREEN ECONOMY**

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AUTHORS

ANA MUSAT ➤ Policy Manager
NICK MOLHO ➤ Executive Director

ALDRSGATE GROUP

The Aldersgate Group is a politically impartial, multi-stakeholder alliance championing a competitive and environmentally sustainable economy.

Our members include some of the largest businesses in the UK, leading NGOs, key professional institutes and politicians from across the political spectrum. We believe that economic success, both now and in the future, depends upon a political and economic framework that delivers a

healthy environment and sustainable use of resources, good environmental performance at the organisational level, growth, jobs and competitive advantage in rapidly growing environmental sectors.

Our policy proposals are formed collaboratively and benefit from the expertise of our members who span a wide range of industry sectors and public interests. Our breadth and collegiate approach allows us to formulate progressive policy positions to benefit all organisations and individuals.

ORGANISATION MEMBERS



While members support this publication and provided extensive input, individual recommendations cannot be attributed to any single member and the Aldersgate Group takes full responsibility for the views expressed.



EXECUTIVE SUMMARY

An urgent and concrete step up in action is critical to put the UK on a credible pathway to achieving its commitment to a net zero emissions economy and to reverse the decline of the natural environment. A timely transition towards a net zero economy offers significant economic growth and industrial competitiveness opportunities, if supported by a comprehensive policy package.

The General Election represents an opportunity for a new government to set out a green vision for the UK, bringing together the environmental, economic and social agendas. It should aim to reduce emissions in line with the UK's target of achieving net zero by 2050 at the latest, radically improve the UK's resource efficiency and reverse the decline of the natural environment. It should also be about accelerating innovation, supporting the UK's economic competitiveness and driving job creation in evolving industries and new supply chains.

The following recommendations outline key areas that 1) require further policy detail from government and 2) will be critical in building a resilient, net zero and competitive economy. Key priorities for the new government include:



Putting the UK on track to deliver net zero. This requires a targeted update of the Clean Growth Strategy to introduce policies to accelerate emission cuts in the 2020s in priority and low regret sectors such as buildings and surface transport. It should also include at-scale trials of critical technologies needed to decarbonise industry, long-distance transport and the provision of heat. **Visible and credible action to put the UK on track for its net zero target will also be critical to the UK's ability to be an influential host of the COP26 climate summit** (Section 1).



Facilitating a just transition for workers and communities across the UK, ensuring that no groups are disproportionately affected by the transition to a net zero economy and that the workforce is adequately prepared for it. This should include developing a national low carbon skills strategy to ensure the current and future workforce is equipped with the skills needed to benefit from the employment opportunities involved in the transition to a net zero economy. This will also require collaboration between industry, local public bodies and government to help direct low carbon investment to parts of the country in need of economic regeneration and where transferrable skills are available (Section 2).



Passing an ambitious Environment Bill

that not only safeguards environmental protections currently enshrined in EU law but also goes beyond the status quo. This should include setting ambitious and legally binding environmental improvement targets and establishing delivery policies covering key areas such as air, water, soils, peatland, biodiversity and resource efficiency. Improving the resilience of the natural environment will be essential to the UK's efforts to adapt to climate change (Section 3).



Radically improving the UK's resource productivity by implementing the Resources and Waste Strategy.

Priority actions include introducing detailed regulatory measures (such as resource efficient product standards) and fiscal incentives (through extended producer responsibility schemes and tax rebates for resource efficient products) that drive greater resource efficiency and cut waste across the economy (Section 4).



Increasing the ambition and level of detail in the Green Finance Strategy,

to rapidly grow private capital flows into the green infrastructure required to deliver the UK's net zero target and its environmental objectives. This should involve introducing a mandatory requirement for businesses and investors to disclose their exposure to climate-related risks from the early 2020s in the line with the Taskforce on Climate-related Financial Disclosures (TCFD) recommendations (Section 5).



Being an influential voice on the global stage for more ambitious climate and environmental policy.

The UK's diplomatic strategy should use the UK's presidency of the COP26 climate summit and of the G7 in 2021 to encourage other large emitters to take on net zero emissions targets and increase their pledges under the Paris Agreement. **It will also be vital for the next government to put in place an international trade policy that supports growing trade in low carbon goods and services and provides the UK with the flexibility it requires to tighten its environmental standards over time** in line with its net zero target and environmental policy ambitions (Section 6).



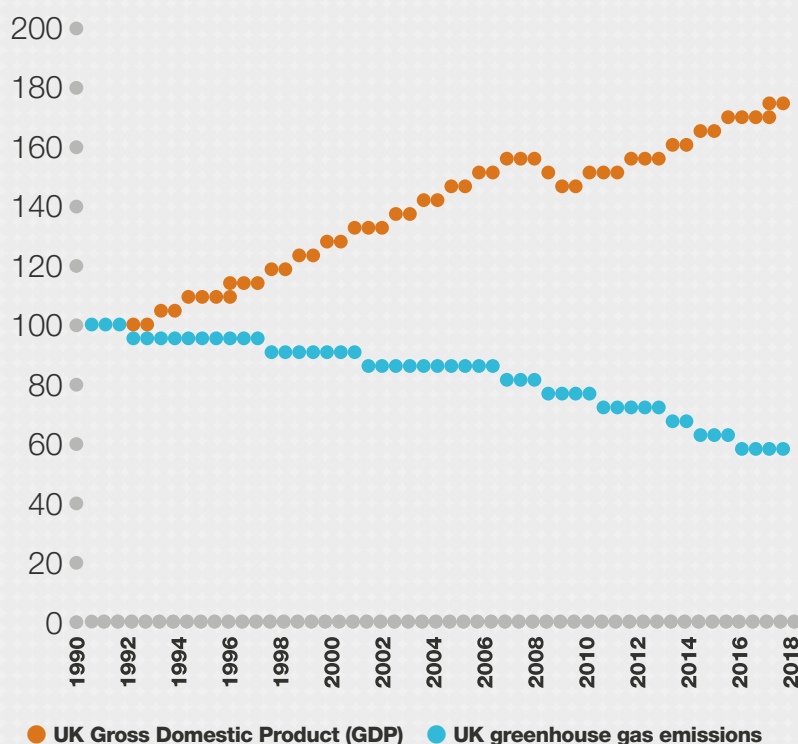
The business case for tackling the climate and environmental emergency

Building on the existing synergies between climate policy and economic growth

Well-developed climate policy, supported by ambitious and properly enforced regulations offers numerous economic opportunities including increased investment in skills, research and innovation¹ as well as market and job creation.² Indeed, this has been a key lesson from the adoption of the Climate Change Act in 2008, which shows that growing the economy is not incompatible with cutting emissions, and that, properly managed, tighter emissions and environmental standards can deliver significant economic and social benefits. For example, we have seen robust policies and regulations around low emissions vehicles, waste reduction, low carbon power and sustainable construction spurring innovation, creating new jobs and making UK industries more competitive in growing international markets.³

THE UK'S DECARBONISATION JOURNEY: FALLING EMISSIONS IN A GROWING ECONOMY (1990–2018)

1990 = 100



Source: BEIS (2019) Final UK greenhouse gas emissions national statistics 1990–2017; BEIS (2019) 2018 UK greenhouse gas emissions: provisional figures; ONS (February 2019) Gross Domestic Product: chained volume measures: Seasonally adjusted £m; CCC analysis.

¹ > Samuela Bassi and Chris Duffy (May 2016) *UK climate change policy: how does it affect competitiveness?*

² > BuroHappold Engineering (December 2017) *Help or Hindrance? Environmental regulations and competitiveness*

³ > Ibid.



The low carbon economy is already thriving in the UK: low carbon businesses have a direct and indirect combined turnover of £79.6bn, directly employing 396,200 people.⁴ The low carbon and renewable energy sector grew by 5% in 2016, outperforming the rest of the economy which grew by only 1.8%.⁵ Under the previous 80% emissions reduction target, it was estimated that the UK low carbon economy could grow from around 2% of UK Total Output in 2015 to up to around 8% by 2030, and around 13% by 2050.⁶ On a global level, further analysis shows that bold climate action could yield a direct economic gain of \$26 trillion through to 2030 compared with business as usual.⁷ Climate-driven policy could also generate over 65 million new low carbon jobs in 2030, equivalent to the UK and Egypt's workforces combined.⁸

However, the opportunities brought by a timely shift to a low carbon economy as well as the dangers of inaction are not adequately reflected in current economic models. The next few years represent a critical window, when many of the policies and investment decisions that shape the next ten to fifteen years will be taken.⁹ For example, infrastructure built under current regulations might quickly become outdated, when stronger provisions for reaching net zero come into force. To enable businesses to plan better, seize current opportunities and limit risk from stranded assets, it is imperative for government to start the work now by putting in place the foundation for achieving net zero.

There is significant evidence that demonstrates the risks posed by a delayed transition.¹⁰ These include a reduced ability to limit irreversible environmental damage and increased costs of tackling and adapting to climate change. Climate-related disasters, for instance, have already cost the world \$650bn over the last three years.¹¹ In the UK, the Committee on Climate Change (CCC) has warned that delayed policy decisions could lead to earlier scrapping of investments and make the decarbonisation of certain sectors such as industry harder to achieve. Failure to cut emissions in a timely manner leads, in turn, to increased reliance on emerging CO₂ removal technologies, which are significantly more expensive and have not yet been deployed at scale.¹²

⁴ ONS (January 2019) "Low carbon and renewable energy economy, UK: 2017"

⁵ BusinessGreen (31 January 2018) "Official: UK low carbon sectors growing at almost treble the rate of the wider economy"

⁶ Ricardo Energy & Environment (March 2017) *UK business opportunities of moving to a low carbon economy*

⁷ The New Climate Economy (2018) *The 2018 Report of the Global Commission on the Economy and Climate*

⁸ Ibid.

⁹ Ibid.

¹⁰ International Monetary Fund (IMF) (September 2019) *Macroeconomic and financial policies for climate change mitigation: a review of the literature*

¹¹ CNBC (14 February 2019) "Climate disasters cost the world \$650 billion over 3 years — Americans are bearing the brunt: Morgan Stanley"

¹² The Economist (21 September 2019) "The past, present and future of climate change"



Seizing the opportunities of the growing global low carbon economy

Investments in low carbon solutions are on the rise. In Europe, clean energy investment increased by 27%, totalling \$74.5bn in 2018.¹³ On a global scale, investment in clean energy exceeded \$300bn for the fifth year in a row in 2018,¹⁴ while investment in coal and gas power has been declining as a result of decreased spending in China and India, but also in the US and the MENA region.¹⁵ In the US, investment in clean energy hit a record \$64.2bn in 2018,¹⁶ and China is continuing to play a major role in the market dynamics of the energy transition, driving down costs for solar, growing its offshore wind and EV markets, and increasing venture capital and private equity investments.¹⁷

The UK is well-positioned to benefit from the global transition to a more resource efficient, resilient and low carbon economy and build on some of its existing comparative advantages.¹⁸ The following sectors present important growth and export opportunities from which the UK could benefit: the manufacturing of zero carbon building materials, batteries, the use of hydrogen for heating and industry, low carbon advisory and financial services, next generation offshore wind technology and the development of carbon capture and storage (CCS). Strengthening the UK economy's competitiveness in these areas and tapping into export opportunities requires the government to put forward clear targets, an ambitious innovation policy, comprehensive market creation policies and an ambitious diplomatic and trade strategy that is in line with the UK's climate and environmental policy goals.

With the UK acting as the host of COP26 in 2020 – the most important climate summit since the 2015 Paris Agreement – and having the presidency of the G7 in 2021, there has never been a more strategic time to strengthen the UK's climate and environmental leadership and ensure it is backed up by meaningful policies and domestic action.

¹³ > BloombergNEF (16 January 2019)
"Clean Energy Investment Exceeded \$300 Billion Once Again in 2018"

¹⁴ > Ibid.

¹⁵ > <http://bit.ly/2CKra7I> [accessed 30 July 2019]

¹⁶ > S&P Global (16 January 2019)
"US clean energy investment hits record \$64B in 2018 amid global decline"

¹⁷ > BloombergNEF (16 January 2019)
"Clean energy investment exceeded \$300 billion once again in 2018"

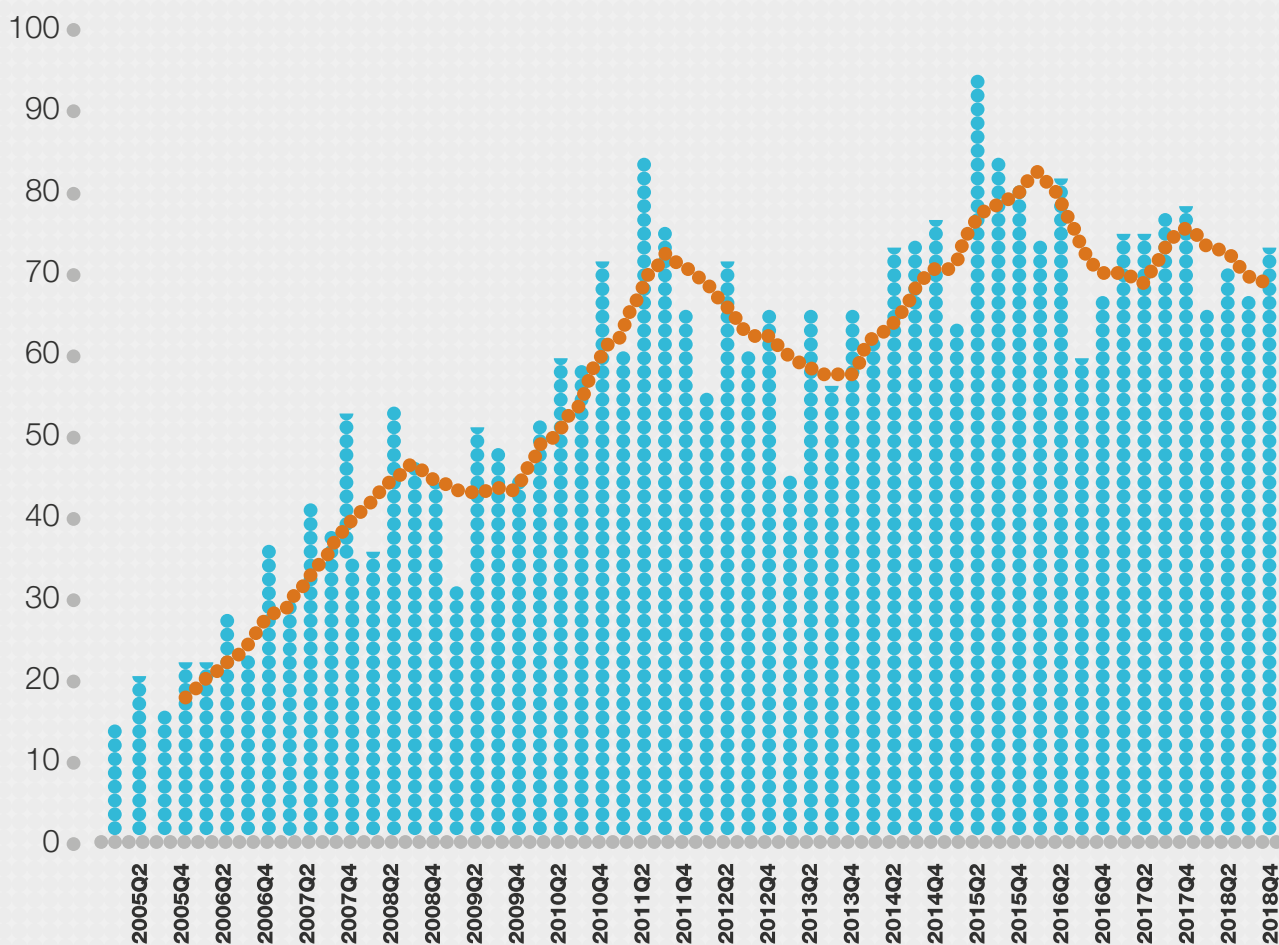
¹⁸ > Samuela Bassi and Chris Duffy (May 2016)
UK climate change policy: how does it affect competitiveness?



GLOBAL NEW INVESTMENT CLEAN ENERGY

Billions (\$)

● Four quarter running average



Source: BloombergNEF, Clean Energy Investment Trends, 2018



ONE GETTING ON WITH NET ZERO

The urgent need for an updated Clean Growth Strategy

Why?

The Clean Growth Strategy (CGS) published in 2017 recognises the intrinsic importance of climate change policy for economic development and industrial growth. However, it sets out measures for cutting emissions in the context of an 80% emissions reduction target and even so, a lot of the goals in the strategy tend to be aspirational and lacking in policy detail. If the UK is to hit its net zero target, the goals of the CGS will need to be significantly upgraded and turned into meaningful targets and delivery against these will need to be accelerated.

This is why the Aldersgate Group is advocating for a targeted update to the Clean Growth Strategy – both in terms of ambition and policy detail. This should first of all consist in urgently pursuing a series of low regret policies that will significantly reduce UK emissions in areas where solutions are readily available. These include sectors such as energy efficiency and low carbon heat for buildings, electric vehicle uptake and charging infrastructure roll out, completing the decarbonisation of the power sector and taking initial action to cut emissions in industry.

Secondly, an update to the Clean Growth Strategy should also consist of putting in place an ambitious innovation programme to accelerate the deployment of technologies that are critical for decarbonising complex sectors such as heavy industry (such as CCS and clean hydrogen), heat, long-distance transport and agriculture. Such an innovation programme would need to be complemented by the development of appropriate regulations and market creation policies to help these new technologies to be rolled out at scale in the latter part of the 2020s. It should also begin to explore the potential of different negative emission technologies such as Direct Air Capture, as these will have an important role to play in ultimately achieving net zero emissions.

The next section describes the measures needed across different sectors of the economy.

Decarbonising buildings

Heating UK homes and providing access to hot water amounts to 40% of national energy consumption and 20% of greenhouse gas (GHG) emissions.¹⁹ With the current policy mix, emissions from buildings are predicted to keep rising over the next few years, which is why this should be a key priority for achieving net zero. In spite of the urgency, a major barrier to decarbonising the housing stock is the disruption it entails and the upfront costs involved. This is a particularly acute issue for households already facing fuel poverty.

¹⁹ Committee on Climate Change (October 2016) *Next steps for UK heat policy*





The majority of UK residential and non-residential buildings rely on fossil fuel heating, so decarbonisation should focus primarily on:

1 Improving energy efficiency of all homes. For existing homes and commercial buildings, the aspirational targets relating to energy efficiency in the CGS represent the minimum level of ambition and should be made binding (e.g. getting as many homes as possible to EPC band C by 2035 at the latest and ideally earlier). These should be backed by fiscal incentives such as stamp duty adjustments and VAT rebates, as well as comprehensive government funds to support fuel poor homes in particular during this transition. Such an approach could build on the existing Minimum Energy Efficiency Standards (MEES) regime, which applies to privately rented homes and commercial buildings, but needs to be considerably tightened going forward. For new homes, this means developing new regulations that require buildings to be designed at high levels of energy and cooling efficiency and with a connection to a source of low carbon heating as part of the Future Homes Standards announced in the 2019 Spring Statement.

2 Trialling at-scale renewable-powered alternatives to fossil fuel heating (including electric heat pumps, low carbon district heating and hydrogen) **and developing a regulatory and incentive regime to support their rapid roll-out.** According to the CCC, alternative zero carbon heating technologies will need to be deployed at scale by 2030 if the UK is to meet its net zero target by 2050.²⁰ The government needs to collaborate closely with business and local authorities to assess the best technological choices based on cost, local specificities and existing infrastructure. Given the complexities involved, there will be a need for a government-backed or cross-industry body to coordinate the efficient nationwide roll-out of low carbon heat infrastructure. We have seen this approach yield positive outcomes in the past. For example, during the shift from town gas to the gas grid, the role of the Gas Council as a central coordinating body was essential in facilitating the development of bulk gas supplies at the same time as rolling out a gas network, and enabling the conversion to gas boilers and central heating in homes.²¹

3 The transition to low carbon heat requires changes to the vast majority of homes in the country, and therefore must be supported by **strong public engagement and high-quality protections, standards and advice services.**²² Given that rapid roll-out of unfamiliar technologies may elicit public concern, government should devise an appropriate communications strategy to address these from the get-go, especially for technologies such as hydrogen. However, government can learn best practice from successful at scale transitions involving new technologies: the Gas Council for instance, provides a good example of best practice on gaining consumer support for new technologies. The Gas Council invested time and significant resources in addressing consumer concerns regarding natural gas through initiatives such as the Conversion Strategy handbook and the 'Guaranteed Warmth' campaign.²³ Government should aim to do something similar to ensure that there are as few impediments as possible to the wide adoption of low carbon technologies.

²⁰ > Committee on Climate Change (May 2019) *Net zero: the UK's contribution to stopping global warming*

²¹ > A Vivid Economics & UKERC report (April 2019) *Accelerating innovation towards net zero emissions*, commissioned by the Aldersgate Group, looks at case studies of accelerated innovation in various industries and across different countries. It reflects on the policy, market and technological conditions that determine rapid innovation and adoption and talks about how the lessons learnt can be applied to technologies that are key to achieving net zero.

²² > Policy Connect (October 2019) *Uncomfortable home truths: why Britain urgently needs a low carbon heat strategy*

²³ > Vivid Economics & UKERC (April 2019) *Accelerating innovation towards net zero emissions*



Completing the decarbonisation of the power sector

The offshore wind sector is a good example of what can be achieved with the right combination of policy certainty, investment and market mechanisms, as has been witnessed recently with another round of impressive Contract for Difference (CfD) auction results. Beyond supporting the continued growth of offshore wind through regular and predictable auctions throughout the 2020s, it will be crucial to:

1 Secure a route to market for mature forms of renewable energy such as onshore wind, through a resumption of Pot 1 CfD auctions in the short term and the establishment of a market of zero carbon tradeable electricity contracts in the medium term. Greater access to mature renewables is an essential part of delivering competitive industrial electricity prices whilst completing the decarbonisation of the power sector.²⁴

2 Maintain good access in any event to the Internal Energy Market and support continued investment in interconnection, so that the UK remains plugged into the much larger EU market, thereby ensuring price competitiveness.

3 Grow the market for flexibility options, such as increased power storage capacity and greater use of demand side response to create a reliable and low carbon power network as more renewable energy is deployed.

4 Resume the carbon price escalator in the 2020s as coal is phased out to offer a clear direction of travel for businesses and offer long-term incentives for investment in low carbon alternatives. A continued focus on the future of carbon pricing will be crucial. As coal comes off the system government needs to ensure that the price of carbon does not go artificially low and continues to send an important investment signal.

Should the UK leave the EU and no longer form part of the EU Emissions Trading Scheme (EU ETS), action should be taken to set up a UK Emissions Trading Scheme (ETS) that is as closely aligned to the EU ETS as possible to avoid disruption and keep the costs of compliance low for businesses.

²⁴ A UCL report commissioned by Aldersgate Group looks at industrial energy prices and the market barriers for mature forms of renewable energy and shows how government can play a role in keeping prices competitive. UCL (February 2018) *UK industrial electricity prices: competitiveness in a low carbon world*



Decarbonising surface transport

Decarbonising surface transport²⁵ should be a priority for an updated CGS, given that it produces more greenhouse gas emissions than any other sector in the UK.²⁶ Emissions from vehicles have been rising since 1990 despite an increase in the number of more efficient cars, so a more radical policy approach is required to deliver reductions compatible with the net zero target. This requires not only incentivising a technological shift but also investing to improve the efficiency of the overall surface transport system. Key areas of focus should include:

1 Developing an integrated surface transport strategy, which brings together road, rail and bus strategies and supports investment towards infrastructure with the most efficient economic, passenger travel and emissions outcomes.

2 Accelerating the roll-out of electric vehicles by bringing forward the phase out date for the sale of petrol and diesel vehicles to 2030, guaranteeing the availability of plug-in vehicle grants until upfront cost parity is reached and introducing gradually tighter vehicle emission standards throughout the 2020s.

3 Continuing to support investment in charging infrastructure across the country, focusing public funding where market conditions are more difficult such as in rural areas.

4 Facilitate innovation to accelerate the roll out of low emissions Heavy Commercial Vehicles (HCVs). HCVs accounted for 4% of total GHG emissions in 2016,²⁷ but zero emissions technology is not yet deployed at scale to enable companies to upgrade their fleets. A more ambitious innovation approach to alternatives like hydrogen or biofuels should be a key focus for government. Shifting the cargo of HCVs from road to electrified rail can also play a key role in cutting these emissions.

5 Working with local government to introduce ambitious and consistent Clean Air Zones (CAZs) across the UK. Certainty around the location of CAZs, charging levels, exemptions and support packages will send a clear policy signal, driving the demand for cleaner forms of transportation.

6 Promoting key modal shifts to incentivise greater transport efficiency, such as through moving freight from road to rail and work with early movers in industry to develop business-friendly solutions to fleet decarbonisation.

²⁵ For more detailed policy recommendations on decarbonising surface transport, see Aldersgate Group (March 2019) *Shifting emissions into reverse gear: priorities for decarbonising transport*

²⁶ The Guardian (18 September 2019) "Road transport emissions up since 1990 despite efficiency drive"

²⁷ Aldersgate Group (March 2018) *Shifting emissions into reverse gear: priorities for decarbonising transport*



Decarbonising industry and developing an ambitious innovation policy for hard to treat sectors

Industrial decarbonisation presents a significant challenge for policy makers in that the required technologies and business models have not yet been tested at scale and are still some distance away from commercialisation.

It will therefore be essential for the new government to build on the Industrial Challenge Funds (such as the £170m dedicated to industrial decarbonisation) and put in place an ambitious innovation programme to trial critical technologies at scale and develop a regulatory and incentives regime that will allow these technologies to be rolled out. Such an approach should include Carbon Capture Usage and Storage (CCUS), the production and use of clean hydrogen, the electrification of some industrial processes and other low carbon fuel switching opportunities.

Whilst this section focuses primarily on industrial decarbonisation, a similar ambitious approach to innovation will be required for other hard to treat sectors such as the potential use of hydrogen in the gas grid to provide low carbon heat, the decarbonisation of aviation and shipping and the development of potential negative emission technologies such as Direct Air Capture plants (DACs).





Key priorities for industrial decarbonisation and innovation should include:

1 **Developing an ambitious and strategic innovation policy focusing on trialling critical technologies at scale.**

It is clear from Aldersgate Group engagement with a wide range of sectors that innovation funds in the UK have often been too small, too fragmented and regularly subject to change. The UK's innovation policy needs to move beyond the fear of failure, increase in ambition and be based on the recognition that successful and unsuccessful trials offer equally important lessons for good policy making. Both can improve our understanding of best practice and develop governance principles around new technologies.

2 **Prioritising large scale trials in technologies which could play a critical role in industrial decarbonisation,**

including: CCUS in industry (both in clusters and non-clusters), the production and potential use of clean hydrogen in industry, the electrification of some manufacturing processes and other fuel switching opportunities. For other hard to treat sectors, priorities include testing the potential use of hydrogen for heating

provision and long-distance transport, the development of sustainable waste-based biofuels for aviation and shipping and next generation of offshore wind turbine designs. Government should also begin exploring the potential of negative emission technologies such as Direct Air Capture plants which could play an important role in achieving net zero emissions economy-wide.²⁸

3 **A more ambitious innovation policy on industrial decarbonisation should be developed hand in hand with market mechanisms that grow the demand for new ultra-low carbon goods and services.**

This could include incentives aimed at accelerating the take-up of technologies like CCUS, for example by providing incentives for industry to capture and store carbon emissions. It should also include measures at the product level. For example, product standards driving down embedded carbon in building materials such as steel and cement could help grow the market for ultra-low carbon industrial goods whilst also protecting UK businesses from high carbon imports. **Establishing a robust carbon price alongside a carbon price escalator will also help improve the investment signal for industrial decarbonisation** (see power section above).

4 **Facilitate cross-sector collaboration to share innovation best practice.**

Some of the technologies that industries need to decarbonise may be tried and tested in other sectors.

It is essential that companies learn best practice in reducing carbon emissions and have a good overview of how sharing services and assets with other businesses can be instrumental in their own decarbonisation journey. Government can play a central role in facilitating cross-industry collaboration, such as by providing funding for industry initiatives or setting up organisations like the National Industrial Symbiosis Programme.²⁹

²⁸ Vivid Economics & UKERC (April 2019) *Accelerating innovation towards net zero emissions*

²⁹ Aldersgate Group (April 2019) *Zeroing in: capturing the opportunities from a UK net zero emission target*



INDUSTRIAL SYMBIOSIS: CO-PRODUCTION OF WASTE IN RUGBY

Suez and CEMEX have entered into a collaborative partnership to share their expertise in their related industries and supply the UK's largest cement kiln in Rugby with Climafuel®. This is a solid recovered fuel, produced from sorted and blended residual, municipal and commercial waste to meet CEMEX's strict specification needed to replace fossil fuels in the cement manufacturing process. It diverts 400 kilotonnes of waste from landfill each year and the process of co-processing, the combination of simultaneous material recycling and energy recovery in a thermal process, means that there is no residual ash to dispose of as it forms part of the final product. In addition, the use of Climafuel® helps CEMEX reduce its process emissions and its carbon footprint related to its use of fossil fuels providing a successful example of an effective industrial symbiosis practice.

Tackling land use and agricultural emissions

Tackling emissions in farming and land use will be essential in achieving net zero. Agriculture makes up 9% of UK GHG emissions, with no reduction achieved over the past seven years.³⁰ Decarbonisation requires a combination of policies and practices focused on three key areas:

- 1 Improving farming's productive efficiency**, supported by research and investment, bringing innovation and new technologies more rapidly into supply chains.
- 2 Incentivising land use change for GHG removals such as tree planting**, through the new environmental land management scheme as and when the UK is no longer part of the Common Agricultural Policy. Government must consider how best to **kickstart a private investment market in natural capital and nature-based GHG removal solutions**. Ramping up investment in these methods provides co-benefits, such as increased crop productivity and biodiversity, improved soil carbon sequestration and habitat restoration. Government also needs to ensure that subsidies to the sector are focused on delivering positive environmental and social outcomes, to help meet the net zero target whilst also delivering against environmental improvement targets.
- 3 Create a carbon trading scheme to encourage investment in nature-based solutions**, such as **GHG credits for avoided emissions and GHG removals** through BECCS and other processes.

³⁰ Committee on Climate Change (January 2018) *An independent assessment of the UK's Clean Growth Strategy: from ambition to action*



TWO SECURING A JUST TRANSITION

Investing in skills, jobs and supply chains

Why?

Reducing greenhouse gas emissions to net zero will entail significant changes in business models and production processes across the sectors. Ensuring that this transition is done in a way that has positive impacts on the economy and employment is critical to laying the foundations for a just transition for communities across the UK and their workforce.³¹

Evidence shows that the zero carbon transition can deliver a net job increase both globally³² and in the UK.³³ However, this will likely result in a change of the nature, required skills and location of some jobs in the UK, creating transition risks for the UK workforce – particularly workers in energy intensive industries. Research by the Grantham Research Institute has found that around 10% of workers in the UK have skills that could be more in demand in the green economy, while another 10% of workers, particularly in construction, transport and manufacturing are likely to need reskilling – making up around six million people directly

affected by the green economy, with impacts felt particularly in the East Midlands, West Midlands and Yorkshire and the Humber.³⁴

This is why government must adopt a just transition policy package which engages with workers and communities and guarantees their inclusion in a net zero economy.

Government must carefully consider how the UK workforce can be supported to benefit from the economic opportunities arising from a net zero target. This will have implications for skills development, with government, businesses and education providers taking the necessary steps to ensure that the provision of skills and education frameworks are aligned to the needs of the private sector and all sectors in the net zero economy. During roundtables with Aldersgate Group members several transitional risks were raised, including a lack of demand for training to develop skills required in a net zero economy, a lack of diversity, especially in emerging sectors, an insufficient pipeline of necessary skills and educational barriers. As most sectors of the economy will be exposed to these risks, **government needs to build a solid understanding of the role of different sectors in delivering net zero, the skills required to enable this and their regional distribution.**

To manage the risks associated with the transition, government should:

1 Develop a national low carbon skills strategy, which integrates sustainability at all levels of the educational system – in the national curriculum, apprenticeship programmes, higher education and particularly through lifelong learning. This will ensure the UK has an attractive pipeline of skilled workers for new and growing industries in the long run. More widely, everyone entering the workforce, irrespective of their sector, should be equipped with skills for the low carbon economy and basic net zero literacy, as all job roles will require this knowledge to ensure the step change needed by employers to get to net zero.

³¹ > Committee on Climate Change (May 2019) *Report to the Committee on Climate Change of the advisory group on costs and benefits of net zero*

³² > International Labour Organisation (August 2018) *World employment social outlook 2018*

³³ > Grantham Research Institute on Climate Change and the Environment (February 2019) *Investing in a just transition in the UK: How investors can integrate social impact and place-based financing into climate strategies*

³⁴ > Ibid.



2 Take a strategic approach to direct low carbon investment to regions in need of opportunities and with transferrable skill sets.


This will require identifying parts of the low carbon economy where the UK is particularly well placed to grow its supply chains, and in which geographic areas these jobs are likely to be created. This should be mapped against how sectoral transition pathways are likely to impact on employment, with plans made accordingly to support the growth of new industries with similar skill sets as declining industries in the same parts of the country. There are already successful examples of this transition, with over one third of marine engineers working in offshore renewables transitioning from the oil and gas sector.³⁵

3 Facilitate better dialogue with local government and Local Enterprise Partnerships (LEPs) to support low carbon businesses.

Local government and LEPs have a significant role to play in engaging businesses – in particular SMEs – on the net zero agenda and ensuring that they understand and can identify potential supply chain opportunities in the net zero transition. Where adequately funded and working in close co-ordination with national government, LEPs can support local businesses to successfully bid for supply chain contracts in low carbon sectors, as has been seen for example with offshore wind in the Humber and Solent regions.

4 Establish a national body along the lines of the Scottish Just Transition Commission

that develops strategies to maximise the opportunities brought by the transition in terms of fair work and tackling inequalities. The overall objective would be to ensure the protection of vulnerable workers and consumers.

³⁵  The Telegraph (11 September 2016)
“Former North Sea oil workers are finding a second wind in renewables”





A HUMBER CASE STUDY – INVESTING IN SKILLS

Ørsted and Siemens Gamesa have been instrumental in growing the Humber offshore wind cluster. Siemens Gamesa has invested £310m in their wind turbine blade manufacturing facility in Hull, supported by Ørsted's strong pipeline of projects off the Humber. Siemens Gamesa has recently celebrated the 500th blade off the production line. By the end of 2019, Ørsted will have invested well over £1bn directly in the Humber region and over £14m building its new East Coast Hub – the world's largest operations and maintenance base.

These investments are bringing significant economic benefits to the region, creating thousands of high-skilled jobs in building and operating offshore wind farms and catalysing investment in the supply chains around the North East.

At its Hull facility, Siemens Gamesa has created over 750 ongoing jobs in blade manufacturing, assembly and servicing facilities. Significant investments have also been made in education and training facilities, such as half a million pounds invested in the Hull College Group for a new state-of-the-art facility to train the wind turbine blade factory workforce and further investment in new University Technical Colleges in the region. In 2016, Siemens Gamesa made 14 four-year advanced apprenticeships available and in 2017, Ørsted announced it was partnering with the Grimsby Institute to deliver a three-year wind turbine technician apprenticeship scheme, comprising of one year of classroom-based learning followed by two years working on site.

In the recently signed Offshore Wind Sector Deal, skills and training formed a substantial part of the agreement. The industry committed to creating a new skills and training accreditation framework with a sector-wide standardised curriculum. This included developing an 'Offshore Energy Passport' that will enable offshore workers to move more easily between the renewable and extraction industries. The industry also agreed to develop a mechanism to more easily facilitate the transfer of former military personnel into the workforce.

In addition to facilitating the development of skills, Ørsted is also focused on supporting the development of a competitive and sustainable UK supply chain. Working closely with its strategic suppliers as well as business support organisations, Ørsted's Hornsea Two supply chain event attracted over 420 individual businesses, many of whom were new to offshore wind.

The Humber is just one example of an offshore wind cluster, with many more developing across the UK. Industry players like Ørsted and Siemens Gamesa are playing a leading role in the development of the Offshore Wind Sector Deal which promises to strengthen the UK's position as a world leader in renewable energy and unlock further opportunities.

THREE: PASSING AN AMBITIOUS ENVIRONMENT BILL

Securing much-needed environmental improvements

Why?

The UK is among the most nature-depleted nations in the world.³⁶ The decline in biodiversity and in the quality of air, water, soil and peatland throughout the UK must be reversed. Investing in the natural environment will deliver a wide range of benefits, including healthier communities, an improved ability to adapt to climate change and more resilient infrastructure and businesses. Improving the state of the natural environment is also essential to deliver the affordable negative emissions we need to get to net zero. Whilst all these objectives have strong synergies, progress on one front should not come at the expense of the others.

The 25 Year Environment Plan set out an ambitious vision to improve our natural environment. However, without underpinning legislation this commitment will have limited impact on business investment decisions. This is why the next government must reintroduce an Environment Bill to ensure that environmental protections are not weakened after Brexit and to drive a genuine step change in environmental action. The current crisis facing nature and the essential role that a healthy natural environment has to play in helping society adapt to a changing climate demands a Bill that is as robust and long-term as the Climate Change Act and has as its clear objective the reversal of the decline of our natural environment.



³⁶ State of Nature 2016 <http://bit.ly/2fNREx3>



Businesses have shown strong support for the creation of an ambitious environmental governance framework that includes legally-binding improvement targets.³⁷

The inclusion of a target-setting process in the recently published Environment Bill is a crucial step forward. Once in legislation, these targets can then genuinely shape delivery policies in the next couple of decades, provide long-term direction to business that helps drive much-needed private investment in the natural environment, both to deliver cost-effective ways of tackling residual emissions and to enhance existing habitats, woodlands, marine areas and build the resilience of coastal areas.

Strengthening ambitions

The Environment Bill must be reintroduced as soon as possible in the new Parliament having been strengthened in a number of areas. Key priorities should include:

1 Setting a clear objective to guide the target-setting process. We need to see a comprehensive range of environmental improvement targets developed – based on independent expert advice, subject to public consultation and parliamentary scrutiny and approval. In the Environment Bill introduced in October, it was proposed that the Secretary of State must retrospectively review whether the targets would significantly improve the natural environment in England. However, it would be more robust for individual targets to be set on the basis of achieving significant environmental improvement at the outset.

In addition, targets need to be accompanied by concrete delivery policies and appropriate adjustments to the regulatory regimes of key sectors (including the water sector) to make sure that business investments in environmental improvements are both encouraged and adequately rewarded by the regulatory framework.

2 Ensuring that action to deliver the environmental improvement targets is taken as early as possible.

The five-yearly interim targets in the recently published Bill do come with a framework of monitoring and review but they are not legally binding. In order to ensure that future governments are required to take early action towards meeting the targets, it is important that Environmental Improvement Plans introduced in the Bill set out steps that enable the targets to be met and that interim targets are made legally binding, similar to carbon budgets in the Climate Change Act.

3 Providing a firm legal basis for the environmental principles. Businesses would like to see the continued robust and consistent application of these principles across government decision making. This means the Bill must include a duty directly in relation to the environmental principles, which applies to all public authorities and not just ministers. The associated policy statement to guide the interpretation and application of the principles, and any future updates, should be subject to public consultation and presented to Parliament for scrutiny and approval.

4 Establishing a well-resourced and independent Office for Environmental Protection (OEP) with effective enforcement powers.

It is very welcome that under the latest version of the Environment Bill, the OEP will be able to enforce all environmental law including climate legislation, which will see it holding the government to account on its commitment to reach net zero.

However, provisions relating to the independence of the OEP need to be strengthened. The ability of the OEP to be set up and operate in a truly independent way from government will be fundamental to the success of the Environment Bill and provide businesses with confidence in the robustness of the UK's environmental regulatory regime. In particular, there should be an enhanced role for Parliament in the appointment process of the OEP's chair, as recommended by both the Environment, Food and Rural Affairs Committee and the Environmental Audit Committee in their pre-legislative scrutiny of the Draft Environment Bill. These committees should play a role similar to that played by the Treasury Committee in the process to appoint the chair of the Office for Budget Responsibility. This would see a pre-appointment hearing be held and the committees give their consent to the appointment of the proposed chair of the OEP.

³⁷ Letter to the editor of the Sunday Telegraph "Greener business" published 4 November 2018 and signed by 19 businesses <https://bit.ly/2DlwPwm>



FOUR RADICALLY IMPROVING THE UK'S RESOURCE PRODUCTIVITY

Implementing the Resources and Waste Strategy

Why?

The move to a more resource efficient economy is an essential part of building a competitive and net zero emissions economy. There is evidence that UK businesses could realise resource efficiency savings of at least £3bn per year at low or no cost.³⁸ In addition, business trials that the Aldersgate Group was recently involved in as part of the REBus programme show that the move to a more resource efficient economy can have significant positive impacts on the UK economy and could deliver an increase of up to £76bn in Gross Value Added by 2030, whilst also improving resource security.³⁹

Further evidence shows that resource efficiency also creates new job opportunities. For example, it has been estimated that implementing existing EU legislation on waste prevention and management could create more than 400,000 new jobs and the review of the waste legislation by the Commission could create an estimated further 180,000 jobs.⁴⁰ In the UK, it has been estimated that a move to a more circular economy could create over 200,000 gross jobs and reduce unemployment by about 54,000 by 2030. It could also offset 7% of the expected decline in skilled employment to 2022.⁴¹

However, the value of material resources is currently not fully exploited. In the UK, landfill is the second most used waste treatment, with 52.3 million tonnes of waste disposed at landfill in 2016.⁴² A further 29.8 million tonnes go to energy recovery, incineration or backfill. Addressing the obstacles that businesses have historically faced in driving resource efficiency – such as regulatory barriers (e.g. rigid interpretations of the definition of 'waste'), lack of supportive market signals (e.g. resource efficiency product standards and fiscal incentives) and lack of technical support needed to drive innovation – will be essential to drive progress in this policy area.⁴³

³⁸ > Oakdene Hollins for Defra (May 2017) *Business resource efficiency quantification of the no cost/low cost resource efficiency opportunities in the UK economy in 2014*

³⁹ > Aldersgate Group (19 June 2018) "No Time to Waste: the government must use Brexit to make the UK a world leader in resource efficiency"

⁴⁰ > European Commission (July 2014) *Green employment initiative: tapping into the job creation potential of the green economy COM (2014) 446 final*

⁴¹ > WRAP & Green Alliance (January 2015) *Employment and the circular economy: job creation in a more resource efficient Britain*

⁴² > Defra (March 2019) *UK Statistics on Waste*

⁴³ > The EU Life + funded REBus project, of which Aldersgate Group was a member, looked at the economy-wide benefits of resource efficiency and specific challenges that businesses face in attaining this. The project ran 30 pilot schemes to help businesses from different sectors in the UK and the Netherlands adapt their business model, making it more attuned to the principles of the circular economy. Aldersgate Group (January 2017) *Amplifying action on resource efficiency: UK edition*. All case studies can be found here: <http://bit.ly/2KqJOFY>






The government's Resources and Waste Strategy provided an encouraging sense of direction for future policy making but focus now needs to move to implementation.


Priorities should include:

1 Standardising waste treatment and recycling practices. Building on the recent consultation on standardising business and household waste collections, government should work with local authorities and the waste management industry to drive greater standardisation of waste and recycling policy across administrative borders. This would improve not only the efficiency of collecting waste but would also make recycling practices easier to understand for citizens.

2 Introducing regulations to drive greater resource efficiency in product design is essential, especially since 80% of a product's environmental impact is determined at the design stage.⁴⁴ Policy should create incentives for producing goods with lower embodied carbon, that require less water to produce and are durable, repairable and recyclable. This could be done through the introduction of resource efficient design criteria into products standards across critical product types such as batteries, tyres and electronic goods – as is currently done under the EU EcoDesign Working Plan⁴⁵ and for which enabling powers were introduced as part of the Environment Bill. Rolling out Extended Producer Responsibility schemes, whereby producers of less recyclable / reusable products pay more for the waste processing costs of their products (see below), could also send a strong pricing signal to producers to improve the design of their products.

3 Introducing tax adjustments to ensure upfront price competitiveness of resource efficient goods and services and to better reflect the higher waste processing costs of less recyclable or reusable products. Where resource efficient products, or products made with secondary materials struggle to compete on upfront cost, pricing mechanisms need to be adjusted to reflect the longer-term environmental and economic benefits derived from using more resource efficient methods of production. These should include:


 **VAT and other tax rebates** for resource efficient products – this could help make more durable products with a higher upfront cost more appealing to consumers.


 Resuming the **Landfill Tax escalator** to continue diverting waste from landfill and ensuring the police and the Environment Agency have adequate resources to tackle waste crime.

⁴⁴ > Aldersgate Group (June 2018) *No time to waste: an effective resources and waste strategy*

⁴⁵ > See: <http://bit.ly/379NyW8>




 We welcome the inclusion of powers to introduce **Extended Producer Responsibility (EPR) schemes** in the Environment Bill. We ask that the new government finalises work on the development of an EPR scheme for packaging and then focuses on rolling out similar schemes to other critical types of products such as batteries, tyres, vehicles and electronic products. EPR schemes with fee modulation have an important role to play in ensuring that producers of products that are easier to reuse or recycle pay less towards end of life treatment costs compared to producers of goods that are harder to recycle and treat.

 **Adjusting public procurement rules to increase the size of the market for resource efficient goods.** With public procurement market valued at £284bn in 2017/18,⁴⁶ there is real scope for government to drive demand for more resource efficient infrastructure, goods and services and lead by example. To this end, government policy should embed sustainability factors and resource efficiency in procurement and commissioning guidelines and ensure that procurement teams have the necessary expertise to be able to identify more resource efficient business practices and assess their long-term benefits.

4 Supporting innovation in resource efficient business models by providing both public funding and free technical support. For example, government should offer funds for resource efficiency innovation trials, modelled on the Faraday Challenge, which was set up to provide UK manufacturers with sufficient innovation funding to improve the sustainability of vehicle batteries by making them fit for reuse. In addition to difficulties in accessing finance, lack of access to technical advice is also often a barrier for SMEs who require support in developing new business models. The new government should consider introducing a scheme similar to the Dutch Green Deal, whereby government-backed institutions provide free technical advice to businesses and other organisations to run more resource efficient business models.

5 Supporting knowledge sharing across economic sectors on the model of the National Industrial Symbiosis Programme (NISP). See Section one, Decarbonising industry for more details.

⁴⁶  The Institute for Government & Gowling WLG (December 2018) *Government Procurement: The scale and nature of contracting in the UK*

FIVE: MAINSTREAMING GREEN FINANCE

Accelerating private investment flows into green infrastructure

Why?

Meeting the UK's net zero emissions reduction target and developing the UK's low carbon economy will require significant investment over the next decade. Up to £693bn of investment in low carbon infrastructure will be needed by 2031 in the UK and \$90tn worldwide by 2030.⁴⁷

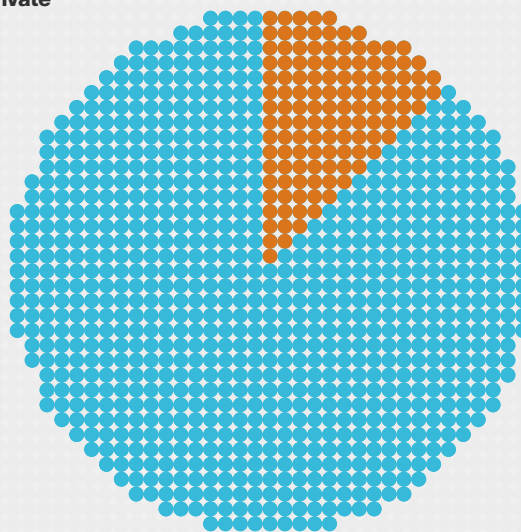
New regulations, fiscal incentives and market mechanisms will all have a vital role to play in delivering this. Several valuable initiatives such as Canada's Expert Panel on Sustainable Finance and the EU Sustainable Taxonomy have recently emerged in order to build confidence for investors looking to put their money behind low carbon projects. In the UK, the government recently published a Green Finance Strategy (GFS) that sets a welcome ambition to grow private sector investment in low carbon and climate resilient infrastructure.

However, the GFS must be accompanied by more ambition and policy detail to ensure that private sector investment in green infrastructure grows at a sufficiently fast rate to allow the UK to meet its environmental and climate objectives. Key next steps on green finance include:

£22BN ANNUAL INVESTMENT

Investment needed to meet the fifth carbon budget

● Public ● Private



Source: Committee on Climate Change (March 2017)
The infrastructure needs of a low-carbon economy prepared for climate change

⁴⁷ Aldersgate Group (March 2018)
Towards the new normal: increasing investment in the UK's green infrastructure



Strengthening the framework for 'greening finance'

1 The GFS took an important step forward by setting the expectation that all listed companies and large asset owners should disclose their climate-related risks and opportunities in line with the TCFD recommendations by 2022. However, to ensure a level playing field, provide meaningful and comparable information for investors and improve decision making, **TCFD-aligned reporting should be made mandatory on a comply or explain basis by the early 2020s** for all companies currently reporting to the Streamlined Energy and Carbon Reporting regime, with a view to making disclosures mandatory for all market players in the medium term. In parallel, government should support quality disclosures by providing economy-wide guidance and creating a safe forum for businesses and trade groups to develop the necessary sector specific guidance.⁴⁸

2 **Increase collaboration with international partners to grow nature-based disclosures through market-led action.** This will be an important complement to the natural environment improvement targets that will be developed under the Environment Bill.

3 Building on the clarification of the fiduciary duties of pension fund trustees, **government and financial regulators (PRA, FCA etc) should consider clarifying the fiduciary duties of other financial actors (such as credit rating agencies, intermediaries and other asset managers) to ensure they include consideration of material risks linked to climate change.**

4 To improve the attractiveness of investment in low carbon and energy efficient infrastructure, **government and financial regulators should consider introducing measures such as a green supporting factor to reduce capital weighting requirements for green relative to brown infrastructure investments.** This would help better reflect the risks associated with investment in high-carbon infrastructure, which contribute to climate change and could become stranded assets.

5 There should be **continued support for the British Standards Institute in developing sustainable financial standards** whilst ensuring consistency with the standards being developed as part of the EU Sustainable Finance Action Plan and other international standards.

6 The GFS acknowledged the need for the introduction of a **Green Finance Education Charter** developed in partnership with professional bodies. This charter should be rolled out across the public and private sectors to ensure that organisations are well equipped to identify and understand the benefits of green investment opportunities.

Establishing long-term policy frameworks for financing green and removing market barriers that stand in the way of greater investment

1 In order to ensure that measures to 'green' the financial system actually result in growing private investment in new green infrastructure, the GFS needs to be accompanied by a comprehensive set of regulatory drivers, fiscal incentives and market mechanisms that will **grow the pipeline of projects needed to put the UK on a path to achieving its net zero target and other key environmental policy objectives.** Some of the key policy measures needed are set out above in the sections on an updated Clean Growth Strategy, the Environment Bill and the Resources and Waste Strategy.

2 **Government needs to work closely with the Green Finance Institute to identify key market barriers and gaps to investment in green infrastructure and technologies.** This should lead to targeting public funding and demand to catalyse private sector investment in complex technologies or types of projects. The £5m Green Home Finance Fund is a good example of what needs to be done across key complex investment areas, albeit the scale of the fund is far too limited when compared to the scale and urgency of decarbonising the building stock.

⁴⁸ Aldersgate Group (10 October 2019) *Using TCFDs to manage climate risk: next steps for UK government, investors and businesses*



SIX: BRITAIN LEADING ON THE GLOBAL STAGE

Advancing climate ambition through diplomacy and trade

Why?

While the UK progresses the climate and environment agenda domestically, it is equally important to use its network of climate diplomats and upcoming trade deals to advance the same goals on the international stage. The way in which international trade policies are designed and conducted can have major implications for the environment, from the quality of the products we import to our global environmental footprint. Poorly designed trade policies could undermine the UK's objective to deliver net zero emissions by 2050 as well as to reverse the decline of the natural environment through the Environment Bill. It is therefore critical that the UK's trade policy is consistent with its domestic policy agenda but is also a vehicle through which the UK can build on its competitive advantages and grow its exports of low carbon goods and services. We urge government to:

1 Use trade policy to maximise low carbon trading opportunities for the UK. Today, close to half a million people are employed in the UK's low carbon economy, with much of that growth driven by existing UK and EU environmental standards. **Far from being a barrier to growth, high environmental standards represent an opportunity to promote growing trade in low carbon environmental goods and services.** It is estimated that the UK market size for this sector could grow by almost 15% every year to 2030.⁴⁹ The UK has solid advantages in several sectors such as climate finance, law and accountancy, with further strengths in IT and telecommunication services, engineering consulting and the development of standards.⁵⁰ All these skills are vital to supporting the low carbon transition and offer opportunities for export expansion.⁵¹

2 Ensure that future trade policy and Free Trade Agreements (FTAs) are consistent with the UK's net zero target and environmental policy goals and provide the UK with the flexibility needed to tighten its environmental standards over time. Gradually tightening standards will be crucial to drive the market for zero carbon infrastructure (such as buildings), goods and services and bring emissions down in line with the UK's net zero target. Ensuring that all infrastructure and components of that infrastructure (such as steel and cement) produced for use in the UK comply with these low carbon standards will support business innovation and help ensure that investment in low carbon solutions is not undermined by unregulated competition.

If the UK is to successfully deliver positive outcomes through trade policy and promote the interests of its growing environmental and low carbon economy, environmental terms in trade agreements will need to be as enforceable as economic terms – and not simply an expression of intentions or non-binding aims.

⁴⁹ > Committee on Climate Change (March 2017) *UK business opportunities of moving to a low carbon economy*

⁵⁰ > Grantham Research Institute on Climate Change and the Environment (April 2017) *UK export opportunities in the low-carbon economy*

⁵¹ > London School of Economics and Political Science (August 2017) "Low-carbon services can enhance the UK's economic prospects". Available at: <http://bit.ly/2OgagTV>



3 Guarantee parliamentary and stakeholder scrutiny of FTAs. The development and ratification of trade deals should be subject to timely and close parliamentary and stakeholder scrutiny as recommended in a recent report from the House of Commons International Trade Committee. The government should ensure that sustainability impact assessments form a key feature of the process by which all new trade agreements or amendments to existing trade agreements are decided. The impact of trade deals on the environment should also be regularly reviewed throughout the life of an FTA. Following ratification, the sustainability impact assessment process must be complemented by periodic assessments on the impact of the terms of trade on the environment to determine whether modifications should be made.



4 Utilise the UK's diplomatic network of climate attachés and its position as host of COP26 and G7 presidency in 2021 to encourage other emitters to take on net zero targets and to agree to more ambitious pledges under the Paris Agreement. The UK can also use its diplomatic influence when striking FTAs to promote a race to the top on environmental and climate standards. It is crucial that FTAs with countries less ambitious on climate action do not lead to an erosion of UK standards.

