Beyond COP26: The UK’s Green USPs

Harnessing the UK’s strategic strengths to boost jobs at home and environmental progress around the world.

By Rt Hon Andrea Leadsom MP and Rt Hon Amber Rudd
Contributing authors: Ed Birkett, Stephen Booth, Benedict McAleenan and William Nicolle
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The authors would like to thank those who provided input and views into this report, including Laura Emily Dunn, Luke Graystone, Julia Mizen and Will Heaven.
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About the Policy Exchange team

Policy Exchange is the UK’s leading think tank with experts in a wide range of areas including energy and environment, economics, technology, urban space, transport, international affairs, space and security policy. Our in-house researchers are complemented by a network of experts and high-profile thought leaders.

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William Nicolle is a Research Fellow in the Energy and Environment Unit. William joined Policy Exchange in 2019 having previously worked as a Graduate Analyst for Centrica and most recently as a Researcher focusing on energy and environmental policy at another London-based think tank. He has a BA in Geography from the University of Oxford.
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Foreword from our Co-Chairs

Rt Hon Andrea Leadsom MP and Rt Hon Amber Rudd

“[C]hange in future is likely to be more fundamental and more widespread than anything we have known hitherto. It is comparable in its implications to the discovery of how to split the atom. Indeed, its results could be even more far-reaching.”

Margaret Thatcher on climate change, 1989

“Our problems are man-made, therefore they may be solved by man. And man can be as big as he wants. No problem of human destiny is beyond human beings.”

John F Kennedy, 1963

In 2021, the UK is at the forefront of global climate policy. In many ways it has been for years: the UK has led the way in decarbonising its own power system, created institutions like the Climate Change Committee, developed new ‘green finance’ tools and led the world in targeting ‘net zero emissions’ by 2050. It is showing how advanced economies can set high environmental ambitions, retain democratic systems and most importantly keep growing our jobs and economy.

We were on different sides of the Brexit debate, but we are in full agreement that a key strength of the UK’s post-Brexit future is the opportunity to build our green economy and export our know-how and our values around the world to tackle climate change.

Each of us has, since 2015, held the role of Secretary of State for Energy and Climate Change, and we are proud of our work to build the foundations of modern climate policy in the UK. But we also know that, as a country and as an international community, we all must go further, faster.

The UK has the chance to lead the world in tackling climate change, beginning with our presidency of the G7 and COP26 this year, but also through our wider influence and soft power.

When the UK hosts COP26 in November, it will be an important milestone in the journey towards a ‘Net Zero’ world. To make this a reality, there need to be clear strategies for the financial sector, for the energy sector, for transport and for ensuring sustainable commodities and ‘Nature Positive’ supply chains. There will be technological innovations in virtually every sector and political innovations to enable societal shifts towards sustainability. Many of these sit under the purview of the UNFCCC and its ‘COP’ conferences. Many do not or cannot, and call for leadership via other channels. These are the focus for this programme.
We are excited to be partnering with Policy Exchange to co-chair its programme in the run up to COP26, which will explore a wide selection of ideas and innovations that will take us ‘Beyond COP26’ and towards a sustainable future.

Throughout the programme, we will draw on leading thinkers from across the world to provide commentary, policy analysis and thought leadership. Through events, keynote speeches, media interventions and written reports, we and Policy Exchange’s award-winning team will be encouraging debate on the most important question of modern times. We hope you will join us.
Introduction

The Government’s policy paper, *Global Britain in a Competitive Age*, also known as the Integrated Review states that climate change is the UK’s top foreign policy priority.¹ Our presidencies of the G7 and COP26 are fantastic opportunities to showcase the UK’s world-leading achievements; from decarbonising our electricity supply to creating institutions like the Climate Change Committee and developing new ‘green finance’ tools.

Our success in decoupling economic growth from emissions should give us confidence that Net Zero is compatible with rising living standards; since 1990 the UK economy has grown by 75%, whilst domestic greenhouse gas emissions fell by 41%.²

Despite our outsized contribution to cumulative global emissions of greenhouse gases, the UK is now responsible for just one percent of annual global emissions and about 2.4% of global GDP. Whilst our own progress is laudable, we must harness our national strengths to accelerate our work with others if we are to build a truly sustainable global economy. As part of this programme, we have identified three areas where the UK’s unique strengths can make an outsized contribution to global action on climate change whilst also benefitting people at home.

**The UK’s ‘Green Unique Selling Points’:**

1. **Science and technology**

The UK’s brilliance in scientific discovery and our world-leading universities put us at the forefront of developing and commercialising the technologies needed to decarbonise the global economy.

For example, British expertise in satellites and artificial intelligence are helping to map and manage climate risks across the world. This is an area that will only grow. We also have the potential to lead on clean energy technologies like offshore wind and green hydrogen, and we can harness the expertise of our North Sea oil and gas industry to reduce emissions, including through carbon capture and storage technology.

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2. Financial services

UK financial services are the jewel in the crown of the UK economy, and we are quickly becoming a leader in the field of ‘Green Finance’, helping large companies and financial institutions to reduce their climate impact whilst enabling developing countries to access the finance needed to transition to low-carbon technologies. This is still a nascent part of the financial sector, but must eventually become ubiquitous.

Our expertise makes UK companies and regulators well-placed to develop global standards for green financial services. For example, we should use the G7 and COP26 to develop a global standard for carbon markets and carbon offsets, as well as international standards in green-friendly regulation, and our knowledge of patient capital and long-term investing to finance global decarbonisation projects.

3. Political leadership on climate action

The UK’s hard-won political leadership on climate change is often taken for granted. But it puts us in an unparalleled position to encourage and coordinate global climate action. Nor was it accidental – it is the result of cross-party cooperation and institutional design.

Ever since Parliament passed the Climate Change Act in 2008, the UK has enjoyed a high degree of cross-party consensus. Successive Governments have introduced increasingly ambitious policies and targets, including the ‘Net Zero’ law in 2019 and the Prime Minister’s 10 Point Plan for a Green Industrial Revolution last year. The UK has put in place powerful institutional and governance frameworks for tackling climate change, for example through the Climate Change Committee (CCC) and by setting ‘Carbon Budgets’.

We have already seen how UK leadership encourages others to act; for example, our Net Zero target has been adopted by the EU, Japan, South Korea and others; and New Zealand has also established a ‘Climate Change Commission’, modelled on the UK’s CCC.

We must continue to work with Governments and opposition parties around the world to show how action on climate change can be consistent with jobs and economic growth, as well as political bipartisanship.

Harnessing correctly, these Green USPs will create export opportunities for UK companies and workers, whilst accelerating the global transition to Net Zero. In the next section, we explore ten examples of ‘green export opportunities’. These opportunities present just a selection of ways in which the UK can take advantage of the coming industrial revolution and help to lead the way.
Ten green export opportunities

By capitalising on the UK’s three ‘Green USPs’, the Government will maximise green export opportunities for UK companies and workers, whilst accelerating global decarbonisation. As part of Policy Exchange’s COP26 programme, we will explore these green export opportunities in more detail.

We have identified ten examples of ‘green export opportunities’, each of which is an example of the Green USPs identified above.

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1. Offshore wind

The UK leads the world in installing offshore wind. British companies have the expertise to accelerate the global deployment of offshore wind, which will help to create jobs at home.

The UK has installed one third of global offshore wind capacity (Figure 1). Over the next decade, installed capacity is expected to triple, reaching 40 gigawatts (GW) by 2030 (Figure 2).

The UK’s Contracts for Difference (CfD) subsidy scheme has played a major role in reducing the cost of offshore wind, with prices falling by three-quarters in real terms over the last five years. The next CfD auction, due in late-2021, is expected to support up to 12 GW of new renewable energy projects, particularly offshore wind.

Figure 1: Share of global installed offshore wind capacity by country (2020)

![Figure 1: Share of global installed offshore wind capacity by country (2020)](chart)

Source: Global Wind Energy Council®
1. Offshore wind

The UK’s offshore wind industry estimates that the sector currently supports 26,000 jobs (of which 15,000 are direct jobs). By 2026, the industry forecasts that UK offshore wind will employ 70,000 people (of which 41,000 will be direct jobs). Over three-quarters of these jobs are forecast to be outside of London and the South East, supporting the Government’s ‘Levelling Up’ agenda.

To ensure that UK offshore wind farms support domestic jobs, the Government and industry have agreed a ‘Sector Deal’. In the deal, the industry has set a target for 60% lifetime UK content in domestic projects by 2030, compared to around 50% today.

The Government has also committed to investing £160m in new and upgraded port infrastructure; this will promote offshore wind manufacturing in the UK. In March 2021, the Government awarded the first £95m of the fund, split between ports in the Humber and Teesside. As part of this funding, GE Renewable Energy announced plans to build a new blade manufacturing plant in Teesside.

However, we believe that the Government can and should do more to develop an end-to-end UK supply chain for the offshore wind sector. Back in 2015, when calling for the full carbon footprint of the manufacturing processes to be taken into account when deciding eligibility for subsidies, we were told that EU procurement rules stood in the way. Now there are no such limitations. Yet we continue to allow the purchasing of wind turbine components manufactured using coal-fired power stations and delivered via diesel-fuelled shipping.

To address this, the Government should introduce a Carbon Border Adjustment Mechanism, which would levy a charge on imports from countries with a higher carbon footprint. It will take time to design and implement a carbon border adjustment; in the interim, future subsidy auctions for offshore wind should be amended to include the full carbon footprint of the manufacturing process. Once the cost of carbon is

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5. Offshore Wind Industry Council (OWIC) (February 2021). Offshore Wind Skills Intelligence Model Report. [Link](#)
6. BEIS (March 2021). Offshore wind sector deal. [Link](#)
7. BEIS (March 2021). Second wind for the Humber, Teesside and UK energy industry. [Link](#)
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properly accounted for, UK manufacturers will be able to compete on a level playing field with overseas competitors.

A carbon border adjustment will have more impact with international cooperation, and the G7 is the natural forum to do this. The Chancellor Rishi Sunak has already secured a historic agreement from G7 Finance Ministers to ensure that digital services are taxed fairly, something that many argued was unachievable.\(^9\) The G7 has also agreed reforms to the financial system that will require companies to report their exposure to the risks posed by climate change.

In this context, the stage is set to for the G7 to agree an ambitious system of carbon border adjustments to ensure that the global transition to Net Zero is compatible with thriving low-carbon manufacturing sectors in developed and developing countries alike.

**UK expertise can accelerate the global uptake of offshore wind.**

The UK’s world-leading position in installing offshore wind farms means that UK companies have the expertise to accelerate the global uptake of offshore wind. Whilst the UK is not currently considered a manufacturing powerhouse for wind turbines, there are several areas where the UK is a world leader:

- **Wind farm design and engineering:** The large pipeline of UK offshore wind projects supports a growing industry of offshore wind engineers working on all stages of the project lifecycle (design, construction and operations).\(^10\) Many of these companies have their heritage in providing engineering services to the offshore oil and gas sector, in the UK and abroad. These engineering companies are therefore well-placed to provide services to offshore wind projects in new markets.

- **Offshore services:** In addition to design services, the UK is home to several companies that specialise in installing and maintaining offshore wind farms.\(^11\) Some of these companies have received support from UK Export Finance to enable them to provide services to projects in Taiwan.\(^12\)

- **Law and finance:** UK legal and financial services companies have a long history of supporting renewable energy projects including offshore wind. These companies are well-placed to support projects in nascent offshore wind markets.

Other countries are now quickly ramping up deployment of offshore wind, including the United States, Taiwan, Japan, South Korea and Vietnam. There is a window of opportunity for UK firms to embed themselves in nascent offshore wind markets, accelerating deployment of offshore wind whilst expanding green jobs at home.

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9. HM Treasury (May 2021). G7 Finance Ministers agree historic global tax agreement. [Link](#)
10. For example, see ODE Ltd (Offshore Development Engineering Limited). [Link](#)
11. For example, see Seajack - an owner of “jack-up vessels” used to installed offshore wind turbines [Link](#)
12. UK Export Finance (February 2021). UKEF supports offshore wind deal in Taiwan and UK green jobs with £200m. [Link](#)
1. Offshore wind

Questions for the Government

1. How will the Government support UK companies to embed themselves in international supply chains for the design, construction and operation of offshore wind farms?

2. How will the Government support the development of an end-to-end UK manufacturing supply chain for offshore wind and other renewables, for example by implementing a Carbon Border Adjustment Mechanism?

3. What expertise can the UK Government offer to other countries to accelerate their offshore wind programmes?
2. Software and technology

The UK’s public and private sectors are innovating to meet the rising demand for technical solutions to climate and environmental issues.

Digital technology and software have an incredibly important role to play in reducing carbon emissions, in improving energy efficiency and in constructing a green global economy. Given the UK’s role as a leading digital economy, the UK Government must work with its international partners to establish international frameworks and partnerships to promote new technical solutions to environmental issues. This is particularly important when it comes to monitoring, reporting and verification. For instance, the Government’s drive to mandate climate-related risk disclosures for large companies and financial institutions by 2022, as set out in the 2019 Green Finance Strategy, requires innovative ways to measure, model and act on climate risk across billions of pounds worth of capital investment.  

If UK software companies are to help achieve Net Zero, the UK government must also do more to enable the cross-border flows of data (without compromising data protection standards) and to establish global cooperation on the regulation of emerging technologies relating to climate and environmental technology. Examples are very wide-ranging, including:

- Intelligent energy systems that improve efficiency and reduce energy demand. For example, UK energy companies Octopus Energy and OVO Energy have developed software platforms that can manage the energy use of thousands of homes and businesses simultaneously, improving efficiency and energy demand through smart devices (e.g. turning down fridges or heaters slightly to respond to the weather or energy markets). Such systems have clear climate and financial benefits. Such technologies require compatible data standards and energy network codes, which government can help through cross-border cooperation.

- Public-private initiatives like the Satellite Applications Catapult and the Spatial Finance Initiative are working to popularise the use of satellite technologies in climate and environmental issues across different industries by linking academic and technical expertise with commercial capacity and demand. For instance, the UK satellite telecoms company Inmarsat offers monitoring services for the shipping and aviation industry through their satellites, helping track and reduce emissions by using software to plot the most efficient travel paths. Such operations can
support earth observation, tracking environmental factors that affect the value of assets or performance against environmental commitments. The outputs of these partnerships could provide significant export opportunities for the UK, but will require further investment in R&D, with an important role for government in such a regulated and semi-nascent sector. Partly as a result of this rising demand for climate and environmental technology services, the UK’s space industry is aiming to capture 10% of the global market and create over 15,000 green jobs by 2030.16

The UK has a comparative advantage in the software sector and must develop it in environmental services.

Questions for the Government

1. How can the UK use COP26 and the G7 to accelerate the adoption of the most promising sustainable technologies, such as applying remote sensing technologies and Artificial Intelligence (AI) methods to supply chain monitoring?

2. Global demand for technological solutions to climate change are set to grow. What can the Government do to support the UK technology sector in maintaining its position as a global leader in sustainable innovation?

3. Oil and Gas sector

The UK has one of the most mature oil and gas sectors in the world. UK expertise can help the global oil and gas sector to reduce the carbon intensity of production.

Since peaking around 2000, UK oil and gas production has declined by over half and could decline by a further 33% by 2025 (Figure 3). In the long term, UK demand for oil and gas is expected to drop significantly; by 2050, the CCC expects demand for oil to fall by 85% and demand for natural gas to fall by 70%. However, it’s clear that the oil and gas sector will contribute to UK energy needs for longer than some might think.

Figure 3: Actual and projected UK oil and gas production.

![Figure 3: Actual and projected UK oil and gas production.](image)

As part of the UK’s commitment to Net Zero, remaining oil and gas installations must reduce their carbon emissions. The UK’s ‘North Sea Transition Deal’ calls on the industry to reduce emissions from production by 50% by 2030, for example by electrifying offshore platforms and by reducing flaring and venting. The UK’s oil and gas industry is also a major contributor to employment, supporting an estimated 170,000 direct and indirect jobs.

There will be opportunities for oil and gas workers and companies to contribute to Net Zero. Offshore wind is an obvious example, where much of the design, installation and operations require similar specialist skills; in the UK, specialist vessels developed for the oil and gas industry are already being used to support the installation of offshore wind turbines. The oil and gas industry is also well-placed to develop and

18. Oil and Gas Authority (March 2021). OGA projections of UK Oil and Gas production and expenditure (Feb 21). Link. Total oil and gas production is expected to fall from 1.61 million boe/day in 200 to 1.06 million boe/day by 2025.
deploy carbon capture technology and low-carbon hydrogen.  

Three ways that the UK’s Oil and Gas sector could accelerate global decarbonisation.

#1: Reducing flaring and venting: Natural gas is flared (burnt) or vented (released unburnt) from gas production fields for operational or safety reasons. In 2019, around 3% of natural gas produced on the UK Continental Shelf (UKCS) was flared and 0.06% was vented. Vented natural gas has an outsize impact on the climate because methane (unburnt natural gas) is a particularly potent greenhouse gas. As part of the North Sea Transition Deal, the sector has committed to reduce flaring, aiming to comply with the World Bank’s ‘Zero Routine Flaring’ initiative ahead of the 2030 target. If the UK takes the lead in reducing flaring and venting, then there will be more opportunities for UK companies and workers to help overseas producers to reduce their emissions.

#2: Electrifying offshore platforms: Electricity generation on UK oil and gas production sites generates approximately 10 million tonnes of CO₂ emissions each year. The Climate Change Committee advises that electrification should reduce UK emissions by 4 MtCO₂ per year by 2035. The UK is well-placed to electrify oil and gas production, building on skills acquired by the domestic offshore wind sector and experience with electricity interconnectors. For example, the UK is home to the world’s first floating offshore wind farm, Hywind Scotland. Similar technology is now being deployed in Norway to electrify offshore oil and gas production facilities.

#3: Repurposing existing assets for carbon capture and low-carbon hydrogen: Oil and gas infrastructure is designed to transport liquids and gases, and as such could be reused to transport carbon dioxide or low-carbon hydrogen. In addition, depleted oil and gas reservoirs could be used to permanently store carbon dioxide, for example from the production of ‘blue hydrogen’, or to temporarily store low-carbon hydrogen. The UK Government has already consulted on which existing oil and gas assets could be reused, including assets in North East Scotland, as part of Project Acorn, and in North West England, as part of the HyNet project. If the UK’s upcoming CCS Infrastructure Fund brings forward projects that reuse existing infrastructure, then UK companies and workers will gain experience that could be applied internationally.

Questions for the Government

1. How will the Government ensure that the UK oil and gas sector keeps pace with international competitors such as Norway on lower carbon production methods?
2. How will the Government support UK oil and gas firms to reduce the carbon intensity of oil and gas production overseas?
3. How will the Government promote UK expertise globally in managing end-of-life assets, including decommissioning and repurposing existing assets for carbon capture?
4. AgriTech

AgriTech describes a class of technologies focused on the farming and land management sectors. Through the use of data science, satellites, robotics, biochemistry and other innovations, AgriTech is helping to revolutionise the way we manage our land. As a leader in these areas, AgriTech is an obvious green export opportunity for the UK.

The UK is currently in the process of creating new farm subsidies to replace the EU’s Common Agricultural Policy, known as the Environment Land Management System (ELMS). ELMS is a pioneering approach, because it pays landowners to provide public goods, such as improvements to water, soil and air quality, rather than ‘private’ goods such as food production. This means a fundamentally different business model for a sector that supports 430,000 jobs in the UK. This new model will depend on major advances in research and radically new production techniques.

Most of the world’s agricultural subsidies are based supporting private goods, i.e. they support farmers for doing the commercial business of farming, and this often leads to perverse outcomes. For example, by subsidising farmers based on the area of land that they manage, which can incentivise agricultural expansion, which can cause deforestation and other habitat disruption. The UN’s biodiversity body (the IPBES) states that the biggest driver of biodiversity loss is land use change, converting habitats to urban or agricultural use. The second biggest is over-exploitation of organisms. These are both regrettable supported by subsidies.

By focusing on environmental outcomes, the UK is attempting to turn the tide and support lower use of pesticides, improvements to biodiversity, afforestation, peatland restoration and many other public goods. If this approach were adopted globally, it could provide a key solution to climate change and the decline in nature.

AgriTech has a central role in making this work. For example:

- Satellites and other data collection will be essential for ensuring public subsidies are not wasted but are paid based on real-world results without intensive and intrusive bureaucracy. Satellites combined with AI and data science can ensure that afforestation is occurring as declared by the landowner.
- Precision farming, which uses agricultural robots to apply pesticides and remove weeds, can reduce pollution and thereby support biodiversity. Crop-harvesting machines can also help to improve farm productivity, thereby lowering the costs of sustainable farming.
- Genetically modified organisms (GMOs), when ethically and
appropriately developed, will likely have a crucial role to play in protecting food supplies from the changing climate, whilst also creating pest- and blight-resistant crops that lower waste and the need for chemical treatments.

- Vertical farming, aquaculture, lab-grown proteins, entomophagy and other innovations can help to produce food that reduces the geographical and carbon footprints of food production, which reduces our impact on the environment as well as costs.

As a leader in robotics, satellites, data science and bioscience, the UK should aim to create the most advanced, productive, and innovative farm sector in the world, then sell its expertise and innovations alongside exporting food and commodities. The ELMS scheme could provide an important international model for turning the tide on depletion and pollution of natural resources.

Questions for the Government

1. How can the UK promote its ELMS subsidy system as a more sustainable model for land sectors around the world?
2. How can the UK use technology to ensure the cost-effectiveness of ELMS?
3. How can the UK create the most productive and innovative agricultural sector in the world?
5. Carbon offsetting and carbon markets

The UK should promote the use of high-quality carbon offsets, as well as using its unique diplomatic position to make progress on agreeing rules for a global carbon market.

There are two broad types of carbon markets: the voluntary carbon market, consisting of private companies buying and selling carbon offsets, and regulated carbon markets, created by government policies.

Over the last decade, the voluntary carbon market has increased significantly. Demand for voluntary offsets has been driven by Net Zero announcements from companies, particularly in hard-to-abate sectors such as aviation. Information group Ecosystem Marketplace reports that, in 2019, around 100 million tonnes of voluntary carbon offsets were traded across a range of sectors (Table 1).

Table 1: Voluntary carbon offsets traded, by category, in 2019.

<table>
<thead>
<tr>
<th>Category</th>
<th>Volume (million tonnes CO₂ equivalent)</th>
<th>Average price ($/tonne)</th>
<th>Value ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable energy</td>
<td>42.4</td>
<td>$1.40</td>
<td>$60m</td>
</tr>
<tr>
<td>Forestry and land use</td>
<td>36.7</td>
<td>$4.30</td>
<td>$159m</td>
</tr>
<tr>
<td>Waste disposal</td>
<td>7.3</td>
<td>$2.50</td>
<td>$18m</td>
</tr>
<tr>
<td>Household devices</td>
<td>6.4</td>
<td>$3.80</td>
<td>$25m</td>
</tr>
<tr>
<td>Chemical processes / industrial manufacturing</td>
<td>4.1</td>
<td>$1.90</td>
<td>$8m</td>
</tr>
<tr>
<td>Energy efficiency / fuel switching</td>
<td>3.1</td>
<td>$3.90</td>
<td>$12m</td>
</tr>
<tr>
<td>Transportation</td>
<td>0.4</td>
<td>$1.70</td>
<td>$1m</td>
</tr>
</tbody>
</table>

Source: Ecosystem Marketplace, via S&P Global.\(^{31}\)

The UK Government operates a regulated carbon market, the UK Emission Trading System (ETS), which is limited to sectors like electricity generation and domestic aviation. The Government also supports various voluntary carbon markets, such as The Woodland Carbon Code, which sets a standard for forest-based offsets that individual woodland creation projects can sign up to and generate credits against.\(^{32}\) The UK is also planning to require airlines to offset their emissions from spring 2022 as part of the industry’s CORSIA programme.\(^{33}\)

One of the major challenges for COP26 will be making progress on agreeing rules for a global carbon market. Article 6 of the Paris Agreement,

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which deals with these rules, has plagued international climate negotiations for years, and it was a key stumbling block of COP25 in Madrid in 2019. COP26 already identifies furthering agreement on carbon markets to create a system of ‘robust carbon credits’ as one of the crucial elements for finalising the Paris Rulebook.\(^{34}\)

Three ways that the UK can accelerate global decarbonisation by promoting stable and reliable carbon markets.

**#1: Diplomatic leadership**: The UK can use its unique diplomatic position as a host nation of COP26 and the Presidency of the G7 to further consensus on issues left over from COP25 in Madrid. It could also demonstrate leadership by proactively engaging countries outside of the UNFCCC process, such as by developing a common framework for a carbon market in the Commonwealth. This would show that it is possible to reach international agreement on carbon markets between very different economies.

**#2: Innovation in monitoring, reporting and verification (MRV) and accessibility**: UK companies are innovating in the voluntary carbon market by applying technology to improve the reliability of offsets. For instance, one UK company is increasing the reliability of offsets by monitoring projects that sell carbon credits using satellites, remote sensing data and Artificial Intelligence.\(^{35}\) Another UK company focuses on making carbon offsetting a seamless experience through its app and web platform, allowing individual consumers to offset their emissions.\(^{36}\) These innovations are examples of the contribution that the UK can make to increasing the credibility of carbon markets.

**#3: Regulating emerging offset products**: New types of carbon offset products are emerging in the voluntary market that could be more reliable than existing ones. For instance, ‘soil carbon’ offsets are based on changing agricultural practices to save emissions, such as increasing the soil’s ability to naturally absorb carbon. These emission savings are uncertain because any change in land use could reverse any increase in soil carbon, undermining any credits sold. The UK could set new regulatory standards for such activities and associated research into best practices. For instance, the Environment Agency has explored the validity of different offset projects to inform its own offsetting strategy.\(^{37}\)

**Questions for the Government**

1. What can the UK do ahead to COP26 to prepare the ground to make progress on agreeing global carbon market rules, particularly through its role as G7 President?

2. How can the UK lead the way in developing first-of-a-kind domestic regulations on carbon offsets that other countries can emulate? Can the innovative efforts by UK companies in the voluntary market be used to improve domestic policy?

\(^{34}\) UNFCCC (2021). COP26 goals: Collaboration (Link).
\(^{35}\) Sylvera (undated). Our mission (Link).
\(^{36}\) Ecologi (undated). About (Link).
6. Transition finance and climate finance

The financial system must provide the tools for the wider economy to transition to a sustainable footing. This means providing a wide variety of products and services that will help organisations and individuals to reduce their carbon emissions to zero and adopt ‘nature positive’ ways of working.

For example, financial institutions can link the cost of capital to climate-related risks, thereby pricing in such risks and lowering the potential for stranded assets. Such products and services in the financial sector are known collectively as ‘transition finance’, and in due course all financial services will need to become ‘transition finance’.

UK financial services lead the world in green finance. As jurisdictions around the world implement ever more ambitious and rigorous policies for reaching Net Zero by mid-century (and related targets for 2030 under the Nationally Determined Contributions of the Paris Agreement), there will be a growing demand for financial services that comply with such policies. The government must therefore continue to support financial institutions in their development of transition finance services.

Examples of transition finance include:

- **Sustainability-linked loans.** Dynamic mortgages that offer lower interest rates if homeowners invest in energy efficiency measures, adaptation and renewable energy. This helps to reduce the climate-related risks in the lender’s loan book. For example, the customer may have lower energy costs due to these energy efficiency measures, and therefore pose a lower credit risk. NatWest has already launched a ‘green mortgage’ that operates in this way, and the bank proposes to use the product to finance improvements as part of the mortgage arrangement.

- **Insurance services.** Insurance premiums that more explicitly account for actions to limit climate-related risks. This will increasingly apply to virtually all assets – Mark Carney has suggested that climate-related risks “will prompt reassessments of the value of virtually every financial asset”. Therefore, actuarial firms will increasingly need to support customers in calculating their exposure to such risks, using information products and consultancy services.

- **Auditing for climate-related risks.** Compliance with increasingly strict environmental policies will require a wide range of assurance...
services. This will include auditing services, tracking things like emissions declared in emissions trading schemes, or to the sustainability credentials of commodities procured through international supply chains.

- **Digital services.** The confluence of financial and digital sectors (‘FinTech’) means that advanced financial tools can be placed in the hands of individuals to assess their emissions and exposure to climate-related risks. Such tools include platforms for SMEs to assess more easily Scope One, Scope Two and Scope Three emissions with greater accuracy, which is currently the preserve of larger and better-resourced firms. MSCI, for example, offers automated ESG ratings for investments.\(^{39}\)

Across the wide range of such services, there are three broad roles for government: standardisation, monitoring and enforcement. In each of these, the UK has a leading role to play, working closely with allies and competitors, to set high standards and expectations of the financial sector. By doing so, the UK’s financial sector will continue to lead the world in the development of sustainable finance.

### Questions for the Government

1. How can the UK set the best environment for financial institutions to innovate in the provision of transition finance?

2. What steps will the Government take to promote UK innovation around the world in order to set a competitive standard?

\(^{39}\) MSCI (undated). ESG Ratings. [Link](https://www.msci.com/sg/en/home)
7. Principles-based regulation

Generally speaking, there are two approaches to financial regulation: principles-based (PBR) and rules-based (RBR). PBR lends itself well to the development of sustainable finance. It also fits well within the UK’s ‘common law’ system, which we share with many nations around the world, especially the Commonwealth. The UK should work to promote PBR as an important foundation for green finance development.

In simple terms, ‘principles-based regulation’ means setting broad-based standards of behaviour, rather than focusing on prescriptive rules (though rules can and do still exist within such a framework). It tends to focus more on outcomes than inputs and therefore is more conducive to creating a corporate culture that reflects the intentions behind the regulations, rather than ‘box ticking’. The approach has been adopted over recent decades by the UK, Australia and Canada, among others.

After the 2008 financial crisis, PBR was criticised and often associated with ‘light touch’ regulation, though later analysis suggests this was misplaced, because PBR in the UK had in fact begun to morph into overly prescriptive guidance more reminiscent of a rules-based systems. It is also worth noting that RBR systems in other jurisdictions also failed in the lead-up to the crisis.

The leading proponent of rules-based regulation is the European Union, which borrows significantly from France’s ‘civil law’ system. Both systems have their advantages and drawbacks. The most obvious advantage of rules-based regulation is clarity, since it has prescriptive and well-defined rules against which a manager or company can be judged – it is easier for a regulator or judge to tell whether a manager or company has broken a clear rule, as opposed to contravening a more general principle.

However, there are several reasons why principles-based regulation is preferable in financial regulation and, in particular, why it is best-suited to encouraging a transition to sustainable finance:

- **Utilising market efficiency**: PBR allows firms to respond to clear market signals in the most efficient way that they can, rather than following prescriptive instructions from regulators. This lowers the costs of regulation, making the shift to a sustainable economy more cost-effective. It also enables innovation in products, services and business models, which can be hampered by prescriptive rules.
- **Simplicity**: PBR allows simpler regulation, which requires that firms meet the spirit of the law as well as the letter. This lowers the risk of loopholes and regulatory arbitrage across borders. This is especially important given the global nature of both finance and climate change.
- **Broader reach**: Rather than trying to anticipate every possible activity and business model, PBR allows regulators to set broad expectations, which capture all market operations, rather than just those specified in the rules. This is important when regulating complex or less mature
markets and issues, such as finance and sustainability.

- **Culture:** Whereas rules-based regulation can tend to create a culture of ‘box ticking’, PBR helps to set cultural expectations with outcomes in mind.

- **Adaptability:** The rapidly evolving nature of sustainability policy, science and technology means that the market and regulations must keep pace. PBR can set an expectation that companies will reflect ‘best available methods’ and therefore it adapts to such evolution. Rules-based systems require the rules to keep up with change, which can mean they are quickly outdated.

- **Lower vulnerability to capture:** Rules and regulators can more easily be influenced by lobbyists and lawyers, whereas principles are less open to such capture. An example of the vulnerability of RBR systems is the EU’s green taxonomy, which has been heavily influenced by special interests.

- **International applicability:** To support a global response to climate change, it is important that jurisdictions have similar approaches to regulation (in part to prevent the regulatory arbitrage mentioned above). It is easier to apply principles across borders than it is to apply specific rules, since rules tend to be more context-based.

The UK has already led the way in applying PBR for sustainable finance reforms: the Prudential Regulation Authority’s Senior Managers Regime includes expectations of senior managers on climate change policies. The UK should seek to promote its principles-based regulation internationally alongside like-minded partners, with the objective of creating a dominant model of financial regulation. The benefits of this are twofold.

- Firstly, as set out above, PBR is best-suited for the evolution of sustainable finance services and products. This area is fundamentally innovative and therefore needs the best regulatory environment in which it can thrive. PBR offers the emerging sector the space and flexibility to do so whilst also setting the high ambitions required for a rapid transition.

- Secondly, there is an obvious advantage to the UK if the world pursues the UK’s model of regulation. This would support the pre-eminence of UK financial services, reducing trade frictions with other markets and boosting opportunities for financial services exports.

**Questions for the Government**

1. Which plurilateral alliances could be formed to promote Principles-Based Regulation for sustainable finance? Which channels and forums provide the best opportunities to promote this model?
2. What are the regulatory policies that should be implemented to encourage a principles-based approach to sustainable finance?
3. How can the UK position its financial sector to take advantage of a shift towards PBR and sustainable finance around the world?
8. Net Zero institutions and regulations

The UK’s climate change policy framework is supported by several institutions, including the Climate Change Committee (CCC) and the independent energy regulator, Ofgem. These models could be adopted internationally.

The Climate Change Committee (CCC)
The UK’s Climate Change Act 2008 established a legally-binding target to reduce domestic greenhouse gas emissions. Just as importantly, the Act also established an independent advisory body, the Climate Change Committee (CCC). The CCC advises the UK Government and Devolved Administrations on emissions targets and reports on progress made in reducing emissions and adapting to climate change. This separates the science, which is complex and requires specialists with appropriate resources, from the democratic politics, which balances democratic tensions and is responsible for deciding on policy.

The CCC plays a key role in advising the Government on its decarbonisation targets, known as ‘Carbon Budgets’. For example, in December 2020, the CCC advised the UK Government to set a target in the Sixth Carbon Budget to reduce domestic emissions by 78% by 2035, compared to the 1990 baseline. The CCC also recommended including emissions from international aviation and shipping, emissions that are excluded from the UN’s Paris Agreement. In April 2021, the UK Government accepted the CCC’s recommendations and put the Sixth Carbon Budget into law.

Independent regulators
The UK Government is supported by independent regulators responsible for different sectors of the economy. Examples include the Office for gas and electricity markets (Ofgem), the Oil and Gas Authority (OGA), the Environment Agency, the Marine Management Organisation (MMO) and more. These regulators operate independently from Government Departments, based on authority established in legislation. For example, Ofgem regulates electricity network companies to ensure value-for-money and regulates trading of electricity and gas to that the market is fair to all participants.

The UK’s independent regulators have a crucial role to play in delivering Net Zero quickly and cost-effectively. For example, Ofgem is responsible for ensuring that electricity network companies invest in the infrastructure required to accommodate new renewable energy generators such as wind and solar, whilst keeping costs affordable for customers.

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41. CCC (undated). About the Climate Change Committee. Link
42. CCC (December 2020). Sixth Carbon Budget. Link
43. BEIS (April 2021). UK enshrines new target in law to slash emissions by 78% by 2035. Link
Following Brexit, the UK is establishing new regulatory agencies to replace roles previously performed by EU bodies; these include the Office for Environmental Protection (OEP), which will provide independent oversight of the Government’s environmental plans, for example on air quality. As with many aspects of Brexit, the detail of the implementation will determine how the new system compares to the previous EU arrangements.

**Exporting UK institutions could accelerate global decarbonisation.**

The UK’s Climate Change Committee could act as a model for governments around the world that are seeking independent, specialist advice on climate change policy. In 2019, the Government of New Zealand established an independent Climate Change Commission to advise the Government and to monitor progress. The structure of the Commission is similar to the UK’s Climate Change Committee, providing an example of how UK leadership on climate change can aid global decarbonisation.

Whilst there are undoubtedly areas where the UK’s regulators could do better, they are typically well-developed compared to their international competitors. For example, the energy regulator Ofgem has developed a world-leading framework for regulating electricity network companies, known as RIIO. Under the RIIO framework, network companies are encouraged to reduce costs for customers by making better use of existing assets. In addition, the RIIO framework puts a major focus on innovation, with network companies competing for funding to trial innovative technologies that could reduce cost for customers. Whilst most countries have independent energy regulators, Ofgem could have a big role in increasing the capability of those regulators, particularly in Africa and South East Asia.

These regulators are not just models to be replicated. Where countries wish to develop capacity in particular areas related to energy or climate policy, the UK’s regulators might also be able to share capacity and expertise directly. This might be done on a commercial basis or as part of an ODA package. These arrangements have precedents, such as the ‘Nudge Unit’, which was a unit in No.10, but has provided services to other governments, as well as the Met Office and Ordnance Survey – both spin-outs from state departments.

### Questions for the Government

1. Will the UK Government use COP26 to encourage international partners to establish independent advisory bodies on climate change, potentially modelled on the UK Climate Change Committee?

2. Will the UK Government offer financial assistance for countries to develop their independent regulators, for example through overseas development spending coordinated by the Foreign, Commonwealth and Development Office (FCDO)?

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44. DEFRA (March 2021). Interim Office for Environmental Protection (OEP) to be launched. [Link](#)

45. Ministry for the Environment, Government of New Zealand. Establishing the Climate Change Commission. [Link](#)

46. Ofgem (October 2010). RIIO – a new way to regulate energy networks. [Link](#)

47. Ofgem (undated). Electricity Network Innovation Competition (NIC). [Link](#)
9. UK climate and trade policies working together

A key question facing the UK Government is whether, and how, it can be world-leading in promoting free trade and in achieving Net Zero.

There is an apparent tension between free trade and Net Zero. Increasing domestic climate ambition increases the risk of offshoring greenhouse gas emissions to countries with lower climate ambition. For example, the UK is already a major exporter of carbon emissions (Figure 4), mainly because the UK is a net importer of goods — the emissions from our imports are emitted overseas. Further domestic policies to achieve Net Zero risk accelerating this process, shifting global emissions rather than reducing them.

Figure 4: Annual UK greenhouse gas emissions and GDP (1990=100)

Efforts to liberalise trade could exacerbate this problem, as reducing tariff and non-tariff barriers would make it easier for UK companies to purchase carbon-intensive goods from overseas. To counter this risk, developed economies are increasingly looking to a Carbon Border Adjustment Mechanism, which would require all goods consumed in a market to pay the same carbon price, achieved through a ‘tariff’ at the border.

Opponents of CBAMs argue that they are protectionist and risk harming developing countries, which may not be well-placed to adopt lower-carbon production methods. Advocates of CBAMs argue that ultimately
they are about managing these competing risks equitably, both between countries (developed vs. developing) and to some extent within them (CBAMs provide a degree of protection for traditional industries to adapt).

This trade-off is at the heart of the debate over the design of the EU’s proposed Carbon Border Adjustment Mechanism (CBAM). The debate over CBAMs is particularly relevant for the UK, given our new, independent trade policy, and our historical and ongoing links with Commonwealth countries.

The UK should participate in international discussions on the design of carbon border adjustments to ensure that they actively contribute to reducing global carbon emissions.

**UK trade and climate policies must work together.**

In addition to the UK-EU Trade and Cooperation Agreement, the UK Government is seeking bilateral and plurilateral deals around the world, including accession to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). In these negotiations, managing risks of carbon leakage should be an increasing priority. There is the potential for the UK and partners to develop new frameworks in this area, which could then be adopted more widely.

The design of climate mitigation policies that are likely to affect trade, for example regulation of carbon-intensive products or carbon border adjustments, should be coordinated with other jurisdictions to ensure they do not unfairly penalise developing countries, particularly in the Commonwealth. Such policies should include direct support for the green transition in developing countries.

FTAs and wider trade policy instruments can also remove barriers and lower tariffs to grow trade in low-carbon goods, technologies and services. FTAs should ensure ambitious and enforceable trade and sustainable development provisions, such as elimination of fossil fuel subsidies. We note that the Government is currently considering whether the UK should join the Agreement on Climate Change, Trade and Sustainability (ACCTS), which includes New Zealand, Costa Rica, Fiji, Iceland, Norway and Switzerland.49

Perhaps most importantly, the Government must ensure the trade policy is joined up with domestic policy. Our trade policy should reflect our priorities and should facilitate the export of green technologies and expertise.

### Questions for the Government

1. How will the UK ensure that trade incentives help emerging economies make the transition to the green economy?
2. What are the UK’s priorities for removing barriers and lowering tariffs on low-carbon goods, technologies and services?
3. How will the UK use FTAs to ensure ambitious and enforceable trade and sustainable development provisions, such as elimination of fossil fuel subsidies?

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48. Centre for European Reform (April 2021). The EU’s CBAM: How to make it work for developing countries. Link
49. UK Parliament. Written questions, answers and statements (May 2021). Agreement on Climate Change, Trade and Sustainability. Link
10. Market-based solutions to climate change

The UK has pioneered market-based solutions to climate change, which have the potential to command support from across the political spectrum.

In many countries, policies to tackle climate change have been contentious. In general, right-leaning parties have been reticent to implement climate policies, fearing the impact of regulations on the economy and personal freedom. Partisan divides on climate policies have led to flip-flopping as the fortunes of political parties rise and fall, damaging investor confidence and ultimately slowing action on climate change.

For example:

- The Australian Government introduced a carbon tax in July 2012 under a left-leaning Labor Government. Two years later, Australia’s carbon tax was removed under the new Liberal-National coalition Government.  

- The United States Government played a major role in securing the 2015 Paris Agreement on climate change, under President Obama. In 2017, President Trump announced his intention to withdraw the United States from the Paris Agreement citing the impact on American companies and workers. Earlier this year, President Biden committed the US to re-entering the Paris Agreement on his first day in office. US Administrations have also flip-flopped on rules to reduce emissions from vehicles and power stations.

- The Canadian Government’s carbon tax policies have proved a major dividing line between the ruling Liberal Party, led by Prime Minister Trudeau, and the opposition Conservative Party. At the last two elections, the opposition campaigned on a platform of repealing the carbon tax, although they were unsuccessful. In April this year, the opposition Conservative Party announced that they would no longer oppose carbon pricing in principle, although they would make changes to the current system.

This is in stark contrast to the UK, where climate policies have generally passed through Parliament with cross-party support. This cross-party support dates back to the UK’s Climate Change Act in 2008, where only five Members of Parliament voted against the legislation. Similarly, the UK’s Net Zero target was passed in 2019 with cross-party support. The UK’s political parties still have different views on how to achieve Net Zero, for example the 2019 Labour Party Manifesto included a commitment to...
nationalise the energy sector, a major departure from the UK’s liberalised model.\textsuperscript{54}

\textbf{Market-based solutions can command support from across the political spectrum.}

One reason the UK has maintained a cross-party consensus on climate change action is the Government’s use of market-based policies. These policies have helped to deliver affordable emissions reductions whilst avoiding straying into more politically contentious areas of domestic policy.

For example:

- The UK’s \textbf{Carbon Price Support (CPS) tax} is levied on fossil fuel generators in the electricity sector.\textsuperscript{55} This tax increases the cost of high-emitting technologies like coal-fired power stations relative to lower-emission technologies like gas-fired power stations. The CPS tax, along with the Government’s commitment to phase out coal power by 2025, were the major drivers in the collapse of coal power in the UK. When the tax was introduced in 2013, coal generated 35\% of UK electricity; by 2019, the market share of coal had fallen to 2\%.\textsuperscript{56} This market-based policy reduced emissions significantly faster than expected and at a relatively low cost.

- The UK’s \textbf{Contracts for Difference auctions} are the Government’s main mechanism for allocating subsidies for low-carbon electricity generators such as offshore wind.\textsuperscript{57} The auction system drives down costs through competition between projects and between technologies; for example, the ‘Pot 2’ auctions for less-established technologies showed that offshore wind is currently significantly cheaper than other less-established technologies such as wave, tidal and advanced waste conversion. By using auctions, the Government has retained flexibility to procure the different technologies as costs fall.

Other examples of market-based policies include the UK’s upcoming Environmental Land Management scheme that will replace the Common Agricultural Policy.\textsuperscript{58} These market-based policies could be adopted by many countries, including those who have so far been reticent to implement major climate policies.

\textbf{The UK needs to implement market-based solutions to meet the Government’s new Net Zero commitments.}

The relative stability of UK climate policy means that, when the UK Government says it’s going to do something, other countries can have confidence that it will be delivered, regardless of who’s in power. This gives the UK additional credibility as a broker at COP26 and beyond. At COP26, the UK is expected to seek commitments from international partners either to match or exceed the UK’s ambition in areas like export finance for fossil fuels, phasing out coal in the electricity sector, and

\begin{itemize}
  \item \textsuperscript{55} HM Revenue and Customs (published May 2016). Climate Change Levy rates. \texttt{Link}
  \item \textsuperscript{56} BEIS (Updated May 2021). Energy Trends: Table ET 5.1. \texttt{Link}
  \item \textsuperscript{57} BEIS (Updated March 2020). Contracts for Difference. \texttt{Link}
  \item \textsuperscript{58} DEFRA (March 2021). Environmental Land Management scheme: overview. \texttt{Link}
\end{itemize}
Beyond COP26: The UK’s Green USPs

ending the sale of new petrol and diesel cars and vans. This is the right approach, as evidenced by the many international announcements on Net Zero that followed the UK’s commitment in 2019.

Table 2: UK climate commitments

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<thead>
<tr>
<th>Year:</th>
<th>2021</th>
<th>2024</th>
<th>2030</th>
<th>2035</th>
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However, there is one area where the UK Government needs to redouble its efforts to maintain its status as a climate leader and power broker, which is in reducing the gap between the UK’s increasingly ambitious targets and the policies to deliver them. For example, the upcoming Transport Decarbonisation Plan should put in place the market-based policies needed to deliver the phase-out of new petrol and diesel cars and vans, which is just 9 years away.

Our experience with the phase-out of coal power shows that, once the Government sets the challenge, private sector businesses will deliver. However, it is also important that the Government implements supportive policies. With coal, the phase-out date was complemented by the UK’s Carbon Price Support tax, which made coal power more expensive compared to renewables and compared to lower-carbon alternatives like gas-fired power stations.

For transport, the Government should implement a California-style Zero-Emission Vehicle mandate (‘ZEV mandate’), which would require car manufacturers to sell an increasing proportion of electric and other zero-emission vehicles each year, or to buy credits from those who do. As Policy Exchange has previously argued, a ZEV market is a cost effective, market-based policy that can deliver the phase-out.

A highlight of 2021 will be the publication of the government’s Net Zero Strategy, due to be published before COP26. If the Government gets this right, then the UK can cement its place as a powerful force in international climate policy. We believe that market-based policies need to be at the heart of the Net Zero Strategy.

Questions for the Government

1. What will the Government do to promote market-based solutions to climate change to our international partners?

2. Where can the Government learn from international leaders that have implemented innovative, market-based policies to reduce emissions? For example, will the Government adopt California’s Zero-Emission Vehicle mandate?

59. Policy Exchange (July 2020). Route ‘35. Link
Conclusion

This launch report sets out how the UK’s green unique selling points can accelerate global decarbonisation whilst growing jobs and investment at home. Throughout the Beyond COP26 programme, we will explore in more detail how the Government can make the most of these green export opportunities.

As former Energy Secretaries, we have seen how new technologies like offshore wind can create new jobs for British workers and new export opportunities for British businesses. However, we have also seen the need for Government intervention to ensure that British workers benefit. In setting a strategy beyond COP26, the Government should focus on areas where we have something great to offer, whilst also something to gain.

For example, the UK’s offshore wind jobs boom could have been greater had the Government focused more on creating domestic supply chains; something that is now partially addressed in the Offshore Wind Sector Deal. If the Government gets this right, then we will see a new wave of apprentices, retraining opportunities and good-quality jobs in the towns and regions that the Government rightly wants to level up.

Many were concerned that Brexit would knock the UK’s green revolution off course. However, despite or because of Brexit, depending on your view, the UK continues to lead the way. We may have been on the opposite side of the Brexit debate, but we can both see a great opportunity that takes back control, shows global leadership and makes us all stronger, safer, and better off.