Brexit and Decarbonisation, One Year On: Friction, fish and fine tuning

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1. Introduction and key insights

The UK–EU Trade & Cooperation agreement was finally agreed in December 2020 and we are now a year on from the end of the transition period. This is an opportune time to re-visit Brexit and its implications, in particular for the UK’s ability to put itself on a clear pathway to meeting legally binding emissions reduction targets at a vital time for sustainable energy policymaking.

This paper outlines what we see as being the main implications of Brexit for UK energy and climate policy and politics, which we separate out into three main sections: markets and interconnectors; UK in a global context; and policy capacity and Brexit opportunity costs. It is based on analysis of key government and think tank documents, a survey of 85 UK and EU based stakeholders, and is further supported by supplementary semi-structured interviews.

Key Insights:

- The UK has managed to operationalise its emissions trading system in record time, whilst, although volatile, the UK carbon price per ton has remained similar to the EU’s.
- The impact of Brexit on new electricity interconnector capacity has not been as significant as some commentators feared, albeit three cable projects have been suspended and existing links are being used less efficiently due to default trade rules.
- Net zero remains a binding target, but concerns persist about net zero policy delivery in the UK and EU. The development of joint projects and infrastructure for offshore wind is a clear opportunity and a necessary win-win for the EU and UK.
- Brexit is still, in practical terms, far from ‘over’ – (re-)negotiations are ongoing and details of new agreements and regimes are, as yet, unresolved but may still be masked by the Covid pandemic.
- Energy and climate renegotiations continue to be caught in the cross-fire of Brexit friction between the UK and EU, largely on Northern Ireland and fishing issues. At the same time, the UK has lost abilities to influence the considerable amount of new climate and energy policy emerging from the EU.
- ‘Doing’ Brexit has taken up civil service and political capacity, at a time when new climate policies are urgently required to enable the UK to get back on track to meeting ambitious legally binding emissions reduction targets. This has been exacerbated by Covid-19.
2. Markets and interconnectors

When the UK left the EU it also left the Internal Energy Market (IEM), which has been developed over decades, with the result that electricity, natural gas and carbon were traded largely frictionlessly across borders bounded by common rules and standards. Northern Ireland, however, has remained part of both the IEM, through the Single Energy Market (SEM) operating across the island of Ireland and also remains part of the EU Emissions Trading System (ETS).

Key to the functioning of the new relationship in energy is Title VIII of the Trade & Cooperation Agreement. It sets out the principle that each party has the right to pursue measures to ensure public policy objectives can be met, such as environmental protection, security of supply, and protecting society. Title VIII notably includes the establishment of a Specialised Committee on Energy, which is tasked with monitoring the effectiveness of the relationship and making recommendations for future action. As of December 2021, the only Committee meeting recorded was in July 2021.2,3 As with other sectors, overall rules for the relationship are time-limited – although an extension is possible – until 30 June 2026.

In a bizarre twist, agreements on new gas and electricity trading and interconnection principles are expected to be tied to agreements on fishing, a far more contested sector,4 and they are both up for review at the same time, in 2026. Linkages between fishing and electricity have also been made by the French Government during rows over access to water around the island of Jersey.5

2.1 Interconnectors

There had been some fears expressed that Brexit might delay, or even cancel, new electricity interconnectors between the UK and EU member states.6 The evidence from the past year is mixed, but progress has been made in completing some projects and accelerating the development of others. Most significant has been the commissioning, in January 2021, of the IFA-2 (Interconnexion France-Angleterre 2) cable, and, in October, the completion of the 1.4 GW connection between the UK and Norway, as can be seen in Figure 1.

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3 The July meeting suggested that a second meeting would occur in November.
4 John Lichfield. 2020. Brexit deal gives EU right to cut off energy supplies if UK tries to ‘take back control’ of fishing in 2026. Access here.
The new connection to Norway is particularly significant as it creates greater diversity of electricity supply for the GB market. Development plans for the Gridlink connector to France were also accelerated over the past year, with an investment decision now scheduled for late 2022 and operation expected three years later. Consequently, since the referendum, the UK has physically increased its interconnector capacity with the EU by 3.4 GW, nearly doubling capacity, with a further 5.2 GW expected in the next four years, including a first connection to Germany. In relation to plans prior to the referendum, however, it is noteworthy that three interconnector projects, totalling 3,900MW, remain suspended or delayed—two between the UK and France, and one between the UK and Ireland. See Table 1 on the following page.

Table 1: UK-EU electricity interconnectors, operating, contracted or planned

<table>
<thead>
<tr>
<th>Name</th>
<th>Connects to</th>
<th>Capacity</th>
<th>Key date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFA</td>
<td>France</td>
<td>2,000</td>
<td>Operational since 1986</td>
</tr>
<tr>
<td>BritNed</td>
<td>Netherlands</td>
<td>1,200</td>
<td>Operational since 2011</td>
</tr>
<tr>
<td>EWIC</td>
<td>Ireland</td>
<td>505</td>
<td>Operational since 2012</td>
</tr>
<tr>
<td>Nemo</td>
<td>Belgium</td>
<td>1,000</td>
<td>Operational Feb 2019</td>
</tr>
<tr>
<td>IFA2</td>
<td>France</td>
<td>1,000</td>
<td>Operational Jan 2021</td>
</tr>
<tr>
<td>NSN</td>
<td>Norway</td>
<td>1,400</td>
<td>Operational Oct 2021</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>7,105 MW</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Under construction/permitting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ElecLink</td>
<td>France</td>
<td>1,000</td>
<td>Commissioning mid-2022</td>
</tr>
<tr>
<td>Viking Link</td>
<td>Denmark</td>
<td>1,000</td>
<td>Completion end 2023</td>
</tr>
<tr>
<td>NorthConnect</td>
<td>Norway</td>
<td>1,400</td>
<td>Completion end 2025</td>
</tr>
<tr>
<td>GridLink</td>
<td>France</td>
<td>1,400</td>
<td>Completion by 2025</td>
</tr>
<tr>
<td>NeuConnect</td>
<td>Germany</td>
<td>1,400</td>
<td>Completion end 2024</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>6,200 MW</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Suspended</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FABLink</td>
<td>France</td>
<td>1,400</td>
<td>Suspended</td>
</tr>
<tr>
<td>Greenlink</td>
<td>Ireland</td>
<td>500</td>
<td>Delayed</td>
</tr>
<tr>
<td>Aquind</td>
<td>France</td>
<td>2,000</td>
<td>Suspended$^{10}$</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>3,900 MW</strong></td>
<td></td>
</tr>
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Natural gas is also traded between the continent, GB and Ireland, and there are three main interconnectors to EU Member States, including Belgium (BBL), Netherlands (IUK) and Ireland (IC-1 and -2), in addition to the Langeled pipeline that links the Norwegian Continental Shelf to GB markets. The UK also imports liquified natural gas, with shipments particularly from Qatar, the US, and Russia.$^{11}$

When the UK left the EU, trading across electricity interconnectors changed and reverted to less efficient explicit trading, whereby the capacity and electricity are sold separately. However, the TCA sets out the basis for a future return to implicit – market coupled – trading.

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It was proposed that technical details of the trading model will be developed by relevant EU and UK TSOs, with a new trading model in operation from April 2022.\textsuperscript{12} However, this timing was highly optimistic at the time and, given the status as of the end of 2021, this now seems improbable and is more likely to occur in 2023 if not later. In the meantime, electricity continues to trade under less efficient, ‘default’ trading rules. This has implications for energy trade but also for the development of North Sea Offshore Wind, see page 8.

### 2.2 North Sea offshore renewable development

The TCA agreement included a specific Article (321) encouraging parties to create a forum to enable technical discussions on offshore renewable grids to replace the UK’s membership of the North Seas Energy Cooperation (NSEC).\textsuperscript{13} The UK is a leading developer of offshore wind, with over 10 GW currently installed, and its importance to the EU’s offshore grid is likewise recognised by ministers in the EU.\textsuperscript{14}

In the run up to COP 26, both the EU and the UK submitted more ambitious carbon reduction plans to the UNFCCC that are heavily reliant on the rapid development of renewables. The EU’s offshore renewable energy strategy proposes increasing Europe’s offshore wind capacity from its current level of 12 GW to at least 60 GW by 2030 and 300 GW by 2050.\textsuperscript{15} At the same time, the UK has proposed that it intends to build 40 GW of offshore wind by 2030.\textsuperscript{16}

A number of interviewees reinforced the high importance, for both the EU and UK, of offshore wind from the North Sea, and the necessity for co-ordination, joint strategies and implementation. However, agreement still needs to be reached on how best to co-operate on questions such as where to construct, trade and connect this significant new volume of electricity, as well as over maritime spatial planning. This may be more important as new regulatory regimes are developed for multipurpose interconnectors, which will eventually allow clusters of offshore wind farms to connect all in one go, and then inputting into the energy systems of neighbouring countries.

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\textsuperscript{12} BEIS. 2021. Electricity trading arrangements. Access here.

\textsuperscript{13} UK Parliament. 2020. Trade and cooperation agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland, of the other. Access here.

\textsuperscript{14} REVE. 2021. Ministers meet to discuss North Sea offshore wind energy developments. Access here.


Some of those interviewed strongly suggest that an integrated North Sea grid will be required which, in turn, also infers the need for a return to an implicit trading relationship. The EU will codify their offshore approach and, whilst the UK will not now have any direct input into the process, it is also reviewing its own offshore transmission network.¹⁷

2.3 UK Emissions Trading Scheme

On leaving the EU, the UK also left the European Emissions Trading System (EU ETS), and established a stand-alone system, known as the UK ETS. However, it is essential to note that the power sector in Northern Ireland remains part of the EU ETS, which covers about 80% of the territory’s emissions.¹⁸

This raises issues about having two carbon prices operating within Northern Ireland, but this will potentially become even more complicated if Carbon Border Taxes are introduced – see the following page.

The UK ETS retains the same cap and trade approach of the EU ETS, with the UK cap tighter than the EU’s, being 5% below the EU’s limit. This was supposed to be a temporary limit and updated to correspond to the UK’s set carbon budget. According to the Climate Change Committee, the Government had committed to consulting by September 2021 on a cap for the UK ETS consistent with the Sixth Carbon Budget;¹⁹ however, in October in its ‘Net Zero Strategy’ the government said it would consult, ‘in the coming months’ on an appropriate cap consistent with net zero.²⁰

The first auctions of the ETS were held in May 2021, and the price of carbon has tended to be in line with, or slightly above, that of the EU (see Figure 2).

¹⁷ BEIS. Offshore transmission network review. Access here.
Some interviewees were surprised at how smoothly the UK ETS has so far operated, given that it is no mean feat to establish a new carbon trading regime. However, in October, the impacts of operating in a smaller pool of credits were highlighted when a shortage of natural gas led to the increased operation of the remaining coal plants in the UK. Consequently, there was a spike in the carbon price, up to £20/tonne higher than the EU price. It has been calculated that there are more than one billion EU emission allowances in circulation, which can be sold to soften price spikes, compared to 68 million allowances in the UK market, which is to the disadvantage of UK companies.

Given the UK’s stated intention to re-visit the UK ETS, to bring it more in line with net zero, a number of issues continue to dominate discussions about carbon pricing. Firstly, when will the reformed UK ETS be in operation? Estimations are that market participants will know what the new regime will look like by January 2023, or January 2024 at the latest. Meanwhile, there is already greater transparency on the EU ETS. Secondly, will the next version of the UK ETS be linked (back) to the EU? The UK’s net zero strategy does not rule this out in the future, but negotiations may be difficult due to the wider UK-EU relationship.

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23 Fiona Harvey. 2022. Brexit decision left UK firms paying 10% more than EU rivals for emissions. Access here.
This issue of linkage could have potential repercussions for the EU’s proposed, landmark Carbon Border Adjustment Mechanism (CBAM), which is designed to prevent the risk of carbon leakage to jurisdictions with (far) less effective climate legislation. Notably, third countries who participate in the EU ETS, or have an emission trading system linked to the EU’s, will be exempted. So far, this is the case for members of the European Economic Area and Switzerland. The TCA allows for this possibility, and the vast majority of interview and survey respondents thought this would be the best and most logical way forward, but there is no indication that this will happen anytime soon due to the strained political relationship between the UK government and the EU.

Lastly, questions remain about the scope of both schemes and whether they will develop in parallel or diverge. Were divergence to occur this could lead to additional fiscal barriers, such as through the CBAM. One potential area of divergence might be on the role of engineered or nature-based greenhouse gas removal technologies, and the UK Government has said it will launch a consultation on the eligibility of technologies in the UK ETS in the first half of 2022.  

Whilst in the EU policies are under development to: enlarge the EU ETS to include maritime transport from 2023; introduce a separate ETS for emissions from buildings and road transport from 2025; and to use 100% of revenue raised from auctioning carbon allowances for climate-related purposes. In order to avoid vulnerability, the UK will have to maintain similar price levels and market design. Figure 2 shows that has been the case so far, but issues remain. These include the UK ETS’ immaturity and its smaller size, making it susceptible to greater uncertainty and volatility; the additional red tape associated with any import of UK goods into the EU; and the fact that the EU has already deemed the CBAM protocol relevant in Northern Ireland. This means that it could need to be implemented in Northern Ireland, which in turn would require the consent of the UK government. In theory, CBAM could result in an additional regulatory border between Great Britain and Northern Ireland, with CBAM goods moving across the sea that are subject to EU controls.

3. UK energy in a global context

The UK’s decarbonisation objectives and policies are not formulated in a vacuum, but rather in a highly dynamic and changing geo-political and geo-economic context. The UK’s domestic policies impact other countries and, as we have seen with the CBAM example and vice-versa.

One starting point for an analysis of the global context is COP26, which the UK jointly hosted in November 2021 with Italy. The co-presidency by and large succeeded in its central aim to keep the Paris Agreement’s 1.5 degrees Celsius warming “alive”, albeit Alok Sharma admitted that “the pulse [of 1.5] is weak”.

Analysis shows that although progress was made, the world is still on course for 2.4 degrees Celsius warming by the end of the century. Not all signatories to the Paris Agreement have submitted more ambitious Nationally Determined Contributions (NDCs) under the Agreement’s ‘Ratchet Mechanism’. Disappointment with current NDCs contributed towards the adoption of the Glasgow Climate Pact.

The UK Presidency secured the first-ever COP decision that explicitly calls for action against fossil fuels, through a “phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies”, although it did not have a (formal) mandate to negotiate this. Finally, the Paris Rulebook, the guidelines for how the Paris Agreement is delivered and how countries are held accountable for delivering on their NDCs, was also completed. This includes the Agreement’s Article 6, which establishes a robust framework for the international trade of carbon credits.

The UK retains the co-presidency until the start of COP27, and will have a vital diplomatic role to play, together with co-president Italy and next host Egypt, in encouraging all countries to scale up ambition to close the remaining “emissions gap”. The UK’s presidency also partly served as a means to (re-)assert its position as a global climate leader, post-Brexit, and it has cautiously succeeded in that. Although it is important that COP success or failure should not only be assessed in terms of the presidency’s performance, but also on whether the UK meets its own ambitious targets, particularly given the ongoing controversy over future exploration licenses for North Sea oil and gas.

UK decarbonisation is also taking place in a context of increased political friction between the UK and EU. All interviewees agreed that this heated political environment – exemplified by recent political quarrelling over fishery, Northern Ireland and migration – is a serious impediment to solving outstanding issues that would make sense from a decarbonisation or energy market perspective. Most significant here are whether the UK ETS might be linked (back) to the EU, or what the new terms for natural gas and electricity trading and interconnection will be. Furthermore, the EU has progressed a number of important decarbonisation measures in the past year, including the Commission’s “Fit for 55” package, over which the UK has had little direct influence. The package includes a dozen or so legislative tools and policy initiatives, comprehensively aiming to reduce the EU’s emissions by 55 percent by 2030, with CBAM as one of its signature proposals.

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To avoid significant impact from CBAM, the UK may consider joining existing bilateral decarbonisation initiatives that target one or more of the CBAM-covered sectors. One of which is the Global Arrangement on Sustainable Steel and Aluminium struck by the US and EU in October 2021, which is “open to like-minded economies”. The establishment of such “climate clubs” have been hailed by economists and policymakers as an effective response to collective action issues still associated with internationally coordinated climate action. Although it has been noted that they could adversely impact developing countries that lack the technical and political capacity to join such clubs.

As one interviewee pointed out, as US-UK relations are currently rather cool, the chances of an imminent bilateral trade deal have been downplayed by both President Biden and the UK Prime Minister. The alternative option, i.e., joining the US-Canada-Mexico trade deal, is unlikely to be easier than striking a bilateral deal, so it is reasonable to expect US-UK trade negotiations will continue in the coming years without tangible results.

Lastly, it is useful to consider the ongoing energy crunch that has led to energy supply and affordability concerns, both in the UK and beyond. First, the UK government should recognise that it has little to no immediate impact on this global crisis. Although prices on the futures market suggest high prices will persist for in the short-term; longer term, the market is likely to rebalance.

For natural gas, it has been suggested that it “is not the outcome of Brexit that poses a threat to UK gas security, but the failure of the Government to provide a clear roadmap for the role of gas in the low-carbon transition.” Brexit was not the cause of UK and EU gas and electricity gas price spikes, but it could affect future UK gas emergencies in particular, since it is no longer part of the single European Energy Market. The EU’s solidarity mechanism prescribes that EU Member States should help others in times of a supply crisis, but this does not apply to third-party states.

Moreover, although domestic demand has fallen in recent years, natural gas production has fallen faster, making the UK increasingly dependent on Liquefied Natural Gas (LNG) and pipeline imports. Fortunately, the UK is far less dependent on natural gas imports from Russia than the EU (5% of total imports, compared to 40% in the EU), so the UK’s “security of supply” would be far less exposed should Russia decide to use its exports as an ‘energy weapon’ in times of crisis and conflict.

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4. UK policy capacity and Brexit opportunity costs

In this section, we further develop the argument, briefly outlined in our June briefing paper, that there are certain opportunity costs for UK sustainable energy policy of having to negotiate and implement Brexit agreements over an extended time period. Indeed, the UK Government, and associated stakeholders, have been engaged in ‘doing’ Brexit for over five years now. Staffing and capacity costs featured highly in our survey as one of the clear negatives of Brexit for UK energy and climate policy and politics.

The wider political context is that the UK is not on track to meet legally binding emissions reduction targets and this explicitly infers a need to research, design and implement significant amounts of new sustainable energy policies. For example, the UK now has: a 2035 net zero electricity goal; huge plans for renewable expansion (especially offshore); considerable regulatory issues around integrating greater demand flexibility and system balancing; unresolved issues with energy poverty and unnecessary winter deaths; and few concrete plans regarding the management of the phase out of oil and gas.

This, in turn, requires considerable amounts of civil service policymaking capacity – indeed some have suggested that nothing less than a ‘transformation’ of policy capacity is now required given the scale of the task, and the degree of technical, policy and innovation learning that will be needed. Decarbonising developed economies, whilst maintaining energy security and affordability, is an unprecedented task – much of the relatively easy work has been done. Thinking more specifically, there are considerable capacity requirements in expertise, science, research/analysis, innovation (policy and regulation), knowledge sharing, and institutional design.

Instead, however, of focusing maximum capacity on these crucial areas of policy innovation over the past five years, the UK has had to dedicate government capacity to ‘getting Brexit done’.

Context is important here. In 2016, the UK civil service was still in austerity mode – i.e., at its lowest levels in personnel terms since 1939. When it became clear that ‘doing’ Brexit was going to require new capacity, civil service numbers were added. This is not surprising given that Brexit required new departments to be formed, a redesign of existing departments, new skill sets, as well as analysis, co-ordination, legislation and implementation. However, the overall size of the civil service remained below 2009 levels, despite numbers also added to respond to Covid-19.

Clearly Covid-19 has placed a significant additional burden on the UK civil service, although arguably relatively less so in sectors such as energy and climate change. This does not negate the fact that Brexit has also added considerable administrative burdens.
If we consider this extra burden for an under-resourced civil service, in relation to the scale of the task of decarbonising energy, we get closer to understanding this more nuanced aspect of Brexit implications. For example, 532 BEIS civil servants were seconded to work on Brexit.\(^{41}\) As a number of interviewees pointed out, staff that had been focused on devising net zero compliant policies, had to be ‘re-purposed’ to: negotiate the energy and climate sections of the withdrawal deal and TCA; design UK ETS and other replacement regimes and institutions; and day to day administrative work. In effect, this took BEIS civil servants away from their ‘day jobs’, figuring out how to sustainably and securely transition UK energy.

There are, indeed, examples of delayed and ‘disappointing’ UK sustainable energy policies during this time period, further exacerbated perhaps by Covid-19. The Clean Growth Strategy was delayed by the referendum and 2017 general election and the Net Zero Strategy was delayed until late 2021.\(^{42}\) Some have suggested that new sustainable energy policies, including in energy efficiency and heating, were rushed and therefore insufficient to fill the policy gap.\(^{43}\) One specific example is the Green Homes energy efficiency scheme, announced only in 2020, but which by March 2021 was already being wound down.\(^{44}\)

To make matters more complicated, as we have seen above, some UK-EU negotiations are still ongoing and do not appear close to resolution. Of course, as mentioned already, wider Brexit conversations remain fractious, and this creates a difficult backdrop for agreeing vital new electricity trade rules and decisions on whether to link the UK to the EU ETS. Such negotiations matter to the UK’s ability to meet targets. For example, a return to implicit trading in electricity is important to the development of North Sea offshore wind, as well as to the UK’s ability to balance low carbon electricity markets.

Lastly, it seems ironic that although billed as a route to reducing ‘administrative burdens’, Brexit has caused the UK to have to establish new departments of government and governing bodies (e.g. the Specialised Committee on Energy); develop new regimes (e.g. the UK ETS and new nuclear regime); as well as open new offices in Brussels and major European cities to seek to lobby and influence. This gives the impression that the UK has had to do a huge amount of running to, at best, stand still overall in sustainable energy policy.

5. Conclusions

Overall, Brexit has had some quite considerable implications for UK energy and climate change policy and politics – albeit not as significant as some had feared. On the plus side, the UK ETS is up and running, whilst fears of a greater slowdown in UK electricity interconnectors have not fully been realised. Further, it could be argued that the UK’s raised international climate profile, as a COP president outside the EU, contributed towards the adoption of an ambitious UK NDC.

By the same token, some of the policies needed to meet targets remain elusive and Brexit has done little to help on this particularly important issue. Indeed, one of the over-arching issues is opportunity costs of Brexit. Essentially, new policy regimes and institutions are largely just a replacement of capacities previously provided by the EU as part of membership. In particular, the entire ‘administrative scaffolding’ – the system of legal and practical implementation of the EU regime, has disappeared for the UK.

A second, over-arching issue is that Brexit continues to take up business and policy capacity, and may continue to do so whilst the UK-EU negotiating context remains so divided. What this means is that energy policy agreements, which make sense from a net zero and/or energy market perspective, may take longer to reach agreement on, or even be discussed in sufficient detail. As one interviewee noted, continued lack of improved co-operation on North Sea offshore wind would place at risk both UK and EU capabilities to deliver its considerable potential which, in turn, is so key to meeting emissions reduction targets.

Finally, whilst the UK remains a trading partner for energy and energy consuming goods, EU policies such as CBAM, will need an enforcement mechanism to ensure that climate policies remain ultimately aligned.