

Brexit Implications for UK Decarbonisation Objectives

Policy brief

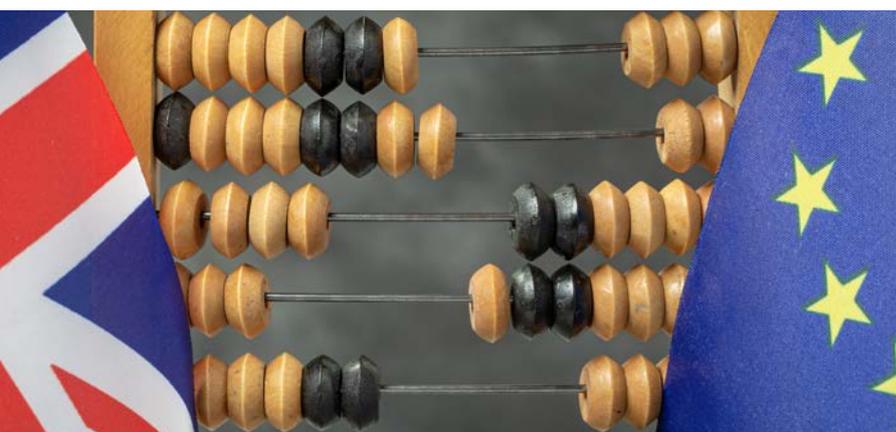
Authors: Antony Froggatt and Caroline Kuzemko

DOI: 10.5286/ukerc.edc.000945



Key findings and policy recommendations

- The Trade & Cooperation Agreement (TCA) provisions on the UK's climate and energy policy are significantly less binding or specific than the rules that applied when in the EU. While the TCA creates a 'policy floor' for the UK, its enforcement internationally is questionable. The UK Government must ensure the rigor and scope of domestic agencies balance this.¹
- Establishment of the UK emissions trading scheme (ETS) has highlighted problems associated with protracted TCA negotiations. The scope of the system may be expanded and the establishment of a link to the EU ETS remains a possibility. In its first auctions in May 2021, prices in the UK's Emissions Trading System reached £50 per tonne, but questions remain about the efficacy of this interim system. The Government needs to more clearly define the scope of the system if it is to support the whole economy 'net zero' objective.
- It is impossible to unplug the UK from the EU's energy market. The UK Government and the EU have until 30 June 2026 to decide the new terms and conditions of their energy relationship. In the meantime trading has reverted to 'explicit' rules with potential implications for electricity pricing, system balancing and interconnection.
- Being outside of ENTSO-E and ENTSO-G, the Agency for the Co-operation of Energy Regulators (ACER) and the Council of European Energy Regulators (CEER), is to the detriment of UK energy actors. Relevant organisations and Government departments will need to spend considerable time and effort trying to influence future EU choices that affect them now they are outside of the EU.
- The UK civil service has had to dedicate much capacity to 'doing' Brexit. There may be opportunity costs of doing so at this important time for climate change.



¹ The UK, through the 2008 Climate Change Act, modified in 2019 to increase its ambition from an 80% reduction by 2050 to Net Zero, creates binding domestic legislation and effectively a policy floor.

Introduction

The last five years in UK politics have been tumultuous: Brexit and the COVID-19 pandemic have had, and will continue to have, huge impacts on the country's economy and society as a whole. The Government also introduced new targets and associated legislation on climate change in June 2019, which, if successfully implemented will lead to a net zero carbon economy by 2050. For the first time, all sectors of society will be required to transform towards no- or low-carbon activities – inferring a need for all policy departments to explicitly work towards climate change mitigation goals. The implications of the Government's net zero targets on the UK's economy and society will be as far reaching as Brexit or COVID-19, if not more.

In December 2020 the UK published its Nationally Determined Contribution (NDC) under the UNFCCC, and has pledged to reduce greenhouse gas (GHG) emissions by at least 68% compared to 1990 levels by 2030.² This is the first time the UK has proposed its own NDC as it was previously included within the European Union submission. The 2030 target is the most ambitious of any developed country, and not only reflects the UK's long standing commitment to climate action, but is also a product of the UK hosting the UNFCCC Conference of the Parties (COP26) jointly with Italy in November 2021. Furthermore, in April 2021 the Government announced an ambitious 2035 mitigation target, pledging that the UK would reduce GHG emissions by 78%.³

The UK Government also published a long awaited Energy White Paper to coincide with the release of its NDC.⁴ The focus of the new energy strategy is on transforming energy, supporting a green recovery and creating a fair deal for consumers. However, it should be noted that energy decarbonisation whilst maintaining energy affordability and resilience is a fine line to tread.

Remarkably, the paper is extremely UK focused and contains no discussion of the UK leaving the EU, or the impact this might have on net zero targets. In March 2021 the Government also published an Industrial Decarbonisation Strategy, which aims to show how the UK can have a thriving industrial sector aligned with the net zero target, without pushing emissions and business abroad.⁵

Given the important role that the EU has had in setting much of the UK's energy and climate policy and standards, Brexit will have an undeniably important impact on net zero commitments and policies. This paper seeks to highlight these impacts in the wider context of the UK's efforts to meet binding emissions reduction targets, whilst maintaining energy affordability and security, and makes some suggestions on how the UK Government can remedy the gaps.



The UK's NDC pledges to reduce GHG emissions by 68% by 2030

² HM Government. 2020. United Kingdom of Great Britain and Northern Ireland's Nationally Determined Contribution. [Access here.](#)

³ HM Government 2021. UK enshrines new target in law to slash emissions by 78% by 2035. [Access here.](#)

⁴ BEIS. 2020. Energy White Paper. [Access here.](#)

⁵ HM Government.2021. Industrial Decarbonisation Strategy. [Access here.](#)

Climate change

In his first remarks as Prime Minister to the House of Commons in July 2019, Boris Johnson said ‘we place the climate change agenda at the absolute core of what we are doing’.⁶ In November 2020, the Prime Minister released a Ten Point Plan for a Green Industrial Revolution and pledged to set up a ‘Task Force Net Zero’ committed to making net zero targets and their achievement, a national priority.⁷ Such ambitious domestic targets are a result of climate change’s current political relevance, and the UK’s desire to be seen as a serious international player as it hosts COP26. While the UK Government’s 2021 Integrated Review states that ‘tackling climate change and biodiversity loss will be the UK’s international priority through COP26 and beyond’.⁸

While many of these statements, consultation processes and new policies have been largely welcomed, there remain considerable, and grounded, concerns over the specificities of the Government’s plans. For example, the House of Commons’ Public Accounts Committee (PAC) noted that ‘there is no coordinated plan with clear milestones towards achieving the [2050] target, making it difficult for Parliament and the general public to understand or scrutinise how the country is doing in its efforts to achieve net zero emissions’.⁹ This is in line with the Climate Change Committee’s view that there is a considerable policy gap between legally binding emissions reduction targets and UK policy, including in energy.¹⁰

There are also doubts around the enforcement of climate commitments in the TCA. The opening paragraph reaffirms UK and EU ‘commitment to... the fight against climate change, which constitutes essential elements of this and supplementing agreements.’¹¹ In addition, the TCA states that ‘each Party commits to respecting the internationally recognised environmental principles to which it has committed’, including the UNFCCC (Article 7.4). But it is up to each party to ensure these commitments are met. For example, the Agreement notes that ‘nothing in this Section shall affect the right of a Party to define or regulate its own levels of protection in pursuit or furtherance of its public policy objectives in areas’ including on climate change.¹²

Emissions trading

During the Brexit negotiations, it became clear that the UK would leave the European Emissions Trading System (EU ETS), which has been a key instrument for reducing emissions in the UK. The UK put forward two replacements: either establishing a domestic trading system or introducing a carbon tax. In December 2020, days before the Brexit transition period was due to end, the UK announced that it would introduce a UK-wide emissions trading system.

Although the UK ETS began formal operation on 1st January 2021, the price wasn’t set until May, leading to a period of uncertainty over the UK’s carbon price.¹³

⁶ Parallel Parliament. 2019. Debate between Boris Johnson and Anneliese Dodds. [Access here.](#)

⁷ HM Government. 2020. The Ten Point Plan for a Green Industrial Revolution. [Access here.](#)

⁸ HM Government. 2021. Global Britain in a competitive age. [Access here.](#)

⁹ House of Commons Public Accounts Committee. 2021. Achieving Net Zero. [Access here.](#)

¹⁰ Climate Change Committee. 2020. Sixth Carbon Budget: the Road to Net Zero. [Access here.](#)

¹¹ European Union/European Atomic Energy Community and the United Kingdom/Northern Ireland. 2020. Trade and Cooperation Agreement. [Access here.](#)

¹² The Parties reaffirm their commitments to effectively implement the UNFCCC and the Paris Agreement, done at Paris on 12 December 2015 by the Conference of the Parties to the UNFCCC at its 21st session.

Foreign, Commonwealth and Development Office. 2020. Agreement between the United Kingdom/Northern Ireland and Japan for a Comprehensive Economic Partnership. [Access here.](#)

In the Energy White Paper, the Government stated that the UK ETS will be ‘the world’s first net zero emissions trading scheme’ and that they will ‘consult in due course on how to align the cap with an appropriate net zero trajectory.’¹⁴ This would require the expansion of the scheme to cover all sections of the economy.¹⁴ It has subsequently been announced that the UK ETS would not be ‘tightened’ to align with net zero until 2023, if possible, and no later than 2024.¹⁵

Under the UK ETS, each scheme year is to run from 1 January to 31 December, with the first phase in place from 2021-25, and the second running from 2026-2030. Draft regulations governing the UK ETS auctioning system were published in February 2021 and an auction calendar for 2021 set with fortnightly auction dates from 19 May 2021.¹⁶ On 19 May 2021 the UK ETS opened for trading with a carbon price of £50 per tonne, slightly higher than the EU’s at the time.

The UK system is not, for now at least, linked to the EU ETS. Many had hoped the UK would link its system to the EU ETS in the same way Switzerland has, and the UK is open in principle to linking the system internationally. There are some suggestions that the UK and EU ETS could be linked once the UK system is up and running, and possibly before COP26, to highlight the importance of international climate change collaboration and carbon pricing.

Trade and climate change

The TCA recognises and proposes the promotion of goods and services of particular relevance for climate change mitigation and adaptation.

However, the TCA does not include any language on the introduction of Carbon Border Adjustment Mechanisms (CBAM). This is a levy or tax on imports if the country of production has lower climate change commitments and/or carbon prices, and is seen as an important step in creating a global level playing field.

The European Commission has put forward new legislative proposals on the CBAM – some of the more critical new initiatives for 2021. This legislation is likely to be introduced sector by sector in the EU, starting with those that have a significant carbon footprint, such as cement and steel. The UK stated in October 2020 that it ‘recognises the importance of addressing carbon leakage. A range of approaches could potentially help to address this, of which carbon border adjustments are one. HMG is undertaking further analysis on the issue of carbon leakage across relevant departments.’¹⁷ In February 2021 it was reported that the UK Government was considering using its presidency of the economic grouping of the G7 in 2021, to ‘try and forge an alliance on carbon border taxes’.¹⁸

The UK is likely to introduce a comparable carbon price and have similar climate policies and so a CBAM is unlikely to affect products manufactured in the UK, were it to be introduced by the EU. However, it is possible that this may become relevant for the re-exporting of materials or goods imported to the UK and then sold on the EU market. This would create additional barriers around rules of origin requirements, making the exporting process even more complicated and potentially expensive and the subsequent relocation of manufacturing.

¹³ Legislation.gov. 2020. The Greenhouse Gas Emissions Trading Scheme Order 2020. [Access here.](#)

¹⁴ Energy Monitor. 2021. At one month old, the UK ETS remains a mystery. [Access here.](#)

¹⁵ Herbert Smith Freehills. 2010. The UK ETS after Brexit. [Access here.](#)

¹⁶ CMS Cameron McKenna Nabarro Olswang LLP. 2021. The UK Emissions Trading Scheme – What’s new? [Access here.](#)

¹⁷ HM Government. 2020. The Government Response to the Committee on Climate Change’s 2020 Progress Report to Parliament. [Access here.](#)

¹⁸ Al Jazeera. 2021. UK PM to push allies to agree on carbon border taxes: Report. [Access here.](#)

Energy

Title VIII of the TCA is devoted to energy and sets out the principles according to which each party has the right to pursue measures to meet public policy objectives, such as environmental protection, security of supply and protecting society. The TCA provisions explicitly relating to energy only take up 16 pages, and are limited in scope and detail – though what happens in other areas of trade, like fisheries, could impact the UK-EU energy deal. This could be partly explained by the fact that energy is one area where law-making power is shared between the EU and member states. For example, it is still up to EU Governments to determine their energy mix.

As the UK has left the Internal Energy Market (IEM), it has also left the European institutions that oversee the functioning of the EU's energy market. Therefore, the UK has, in simple terms, moved from being a rule maker to becoming a rule taker. For example the UK's Transmission System Operators will leave both the ENTSO-E and ENTSO-G (European Network for Transmission System Operators – Electricity and Gas). Equally, OFGEM will no longer be part of the Agency for the Cooperation of Energy Regulators (ACER) and the Council of European Energy Regulators (CEER).

There are important decisions the UK and the EU must still make about their energy relationship. As with a handful (16) of other areas, the TCA establishes a Specialised Committee on Energy, where UK and EU officials will regularly meet to oversee and manage the energy relationship so as to make recommendations to ensure effective implementation.

In September 2020 the then Business Secretary Alok Sharma confirmed that the UK will stick to World Trade Organisation (WTO) subsidy rules once the UK had left the transition period and EU State Aid rules.¹⁹ The scope of the WTO rules are much narrower than those of the EU and so the Government is likely to have greater freedom to provide state support for the UK's energy sector if it chooses to do so.²⁰ However, it should be noted that when in the EU, the UK had approval for the support systems that it put in place both for renewable energy and nuclear power, the latter of which was for Hinkley Point C resulting in a high cost for consumers,²¹ and therefore the constraints of the EU's State Aid rules have not been that restrictive.



¹⁹ BEIS. 2020. Press release: Government sets out plans for new approach to subsidy control. [Access here.](#)

²⁰ Norton Rose Fullbright. 2021. The impact of Brexit on the energy sector. [Access here.](#)

²¹ National Audit Office. 2017. Hinkley Point C. [Access here.](#)

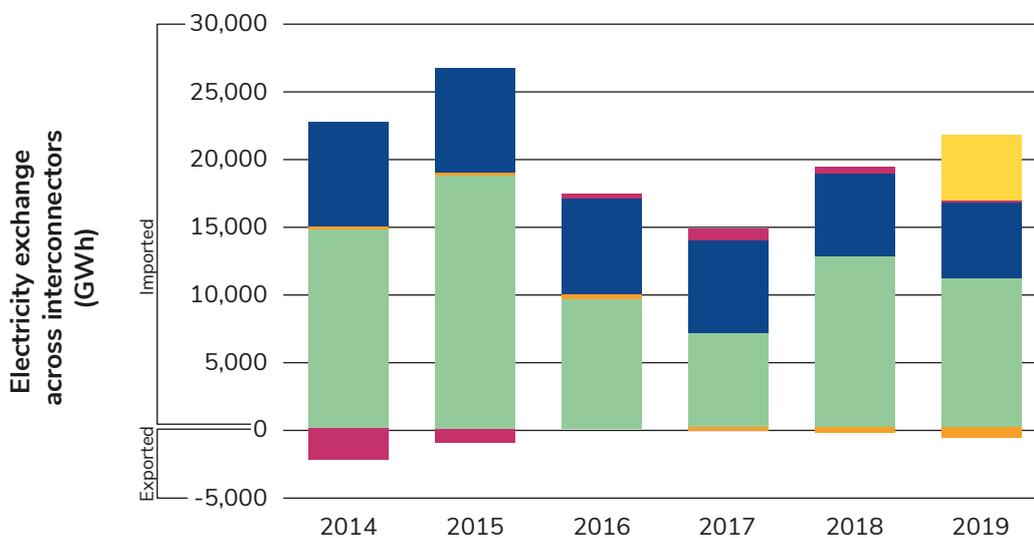
Interconnectors

Electricity and gas will continue to flow through the pipes and wires that connect the UK's energy network to those in continental Europe and the Republic of Ireland. Currently, the UK has 5.7 GW of electricity interconnectors connecting the GB market to both the Republic of Ireland and continental Europe. The volume of energy exchanged varies each year, but for power, as can be seen in Figure 1, it is around 25 TWh, less than 10% of total consumption, while nearly half of the country's gas is imported via pipes and a further 9% via liquified gas (in ships).



The UK has 5.7 GW of interconnectors connecting the GB market to both the Republic of Ireland and continental Europe

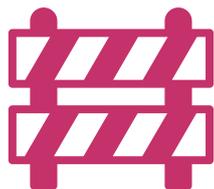
Figure 1: Electricity exchange across interconnectors



Key

- France – GB
- Ireland – N Ireland
- Netherlands – GB
- Ireland – GB
- Belgium – GB

Source: BEIS



Brexit has had a materially negative impact on interconnector development

Interconnectors are an important part of the UK's security of supply strategy and market approach, enabling reduced storage or backup systems and aiding price stability. Furthermore, electricity interconnectors 'enhance the flexibility of our energy system and has been shown to have clear benefits for decarbonisation'.²²

Being outside of the IEM has also changed the operating regime that enables energy to flow. In particular, the EU-GB interconnectors are no longer market coupled; consequently, interconnector capacity cannot be sold together with energy in the day-ahead markets, thereby moving from implicit to explicit trading, a regime that is less efficient. This will lead to marginally more expensive electricity according to several economic models.²³ Early indications are of UK electricity price spikes and divergence between UK and EU prices.^{24,25}

This is, however, a temporary arrangement. The Agreement commits both the UK and

EU to develop and implement revised trading arrangements by April 2022, to be undertaken under the auspices of the Specialised Committee. However, this may not match what the UK had when it was still a member.

Increased interconnection, and the flexibility this brings, will bring benefits to customers. Modelling undertaken by Aurora Energy Research for BEIS concluded that assuming both the EU and UK have high decarbonisation ambitions, then greater interconnection will reduce renewable energy curtailment by enabling excess power to be distributed across larger markets and it will reduce the price of baseload power. They therefore concluded that 'total system costs decrease with more interconnections, up to a certain point'.²⁶

Brexit has had a materially negative impact on the development of interconnectors, with two new links to France (Fab and Aquind) suspended, at least in part due to the uncertainty over future demand and operating conditions.²⁷

UK-EU interconnectors: Operating, contracted or planned

| Status | Name | Connects to | Capacity (MW) | Key date |
|-----------|--------------|-------------|---------------|------------------------|
| Operating | IFA | France | 2000 | Operational since 1986 |
| | BritNed | Netherlands | 1200 | Operational since 2011 |
| | EWIC | Ireland | 505 | Operational since 2012 |
| | Nemo | Belgium | 1000 | Operational Feb 2019 |
| | IFA2 | France | 1000 | Operational Jan 2021 |
| | Total | | 5705 | |

| | | | | |
|--------------------------------|--------------|---------|-------------|------------------------|
| Under construction/ permitting | NSN | Norway | 1400 | Commissioning 2021 |
| | ElecLink | France | 1000 | Commissioning mid-2022 |
| | Viking Link | Denmark | 1000 | Completion end 2023 |
| | NorthConnect | Norway | 1400 | Completion end 2023 |
| | Total | | 4800 | |

| | | | | |
|-----------|--------------|---------|-------------|-----------|
| Suspended | FABLink | France | 1400 | Suspended |
| | Aquind | France | 2000 | Suspended |
| | Greenlink | Ireland | 500 | Suspended |
| | Total | | 3900 | |

Renewable energy

The TCA has specific articles on support for renewable energy, and both the EU and the UK have reaffirmed their targets for renewable energy for 2030 as set out in specific legislation (the 2018 EU Renewable Energy Directive and the UK's National Energy and Climate Plan).²⁸ There are particular requirements that 'each Party shall clearly define any technical specifications which are to be met by renewable energy equipment and systems to benefit from support schemes', potentially defining, if rather loosely, the type of support allowed.

Significantly, the TCA calls on the continuation of the North Seas Energy Cooperation initiative. The UK has been a key actor in this initiative, which will enable ongoing collaboration on offshore grid development and exploitation of the large renewable energy potential of the region.

Nuclear

The UK's commitment to nuclear electricity is clear. In addition to the TCA, an additional agreement was signed, 'The EU-UK Agreement for cooperation on the safe and peaceful uses of nuclear energy'.²⁹ This is due to the UK having a separate legal arrangement with the EU through the Euratom Treaty for civil nuclear issues. The 18-page document outlines how the flow of nuclear information and materials, as well as the continuation of joint research activities, can continue. In addition, the UK will continue to be party, as a third country, to the Euratom Framework programme and will continue its membership of Fusion for Europe. The Agreement will remain in force for an initial period of 30 years.



²² Aurora. 2020. The impact of interconnectors on decarbonisation. [Access here.](#)

²³ Chatham House. 2017. Staying Connected. [Access here](#)

²⁴ Cornwall Insight. 2021. Divergent electricity prices in the wake of Brexit. [Access here.](#)

²⁵ Current News. 2021. House of Lords sub-committee weighs in on post-Brexit electricity trading. [Access here.](#)

²⁶ Aurora Energy Research. 2020. The impact of interconnectors on decarbonisation. [Access here.](#)

²⁷ Andreas Darmawan. 2021. Message in a (word) cloud. [Access here.](#)

²⁸ It should be noted that the target of the 2018 directive has been subsequently revised and within the UK's National Energy and Climate Plan there is no single figure for gross final energy consumption, rather there are targets for the individual nations and/or sectors within the UK.

²⁹ EUR-Lex. 2020. Agreement Between the United Kingdom/Northern Ireland and the European Atomic Energy Community for Cooperation on the Safe and Peaceful Uses of Nuclear Energy. [Access here.](#)

Conclusions and recommendations

While it should be recognised that climate change issues have been given priority in the overall agreement, when it comes to how this cooperation will work in practice there is much that still needs to be resolved, as there is in many other sectors. Although initial uncertainties, for example about the price of carbon and energy trading rules, have been resolved there remains a degree of uncertainty as some new rules are temporary.

The UK has had to dedicate a large amount of civil service capacity to negotiating and implementing Brexit in energy and climate-facing departments. At the same time the CCC notes that the UK is missing its targets and that much policy work needs to be undertaken to address the climate policy gap.

The clear indication from the energy and ETS provisions of the TCA is that negotiations about how to set up replacement regimes and rules will be ongoing for some years to come. The UK needs to recognise this, and ensure that there is sufficient civil service capacity in place to concentrate on the complex questions of how to meet legally binding Climate Change Act and net zero carbon targets whilst maintaining system resilience and affordable energy prices. It is also important that the new systems and rules, when they do come into effect, will provide greater assistance to the UK in its efforts to meet targets.

The challenge of creating a UK policy framework that is aligned with legally binding net zero targets, whilst retaining UK global economic competitiveness and remaining within the intent of the TCA, is significant. The EU may resist any changes that it sees as giving UK industry a competitive advantage to the detriment of EU industry. It is therefore imperative that the ongoing negotiations and dialogues continue.

UK Energy Research Centre,
Central House, BSEER,
14 Upper Woburn Place,
London, WC1H 0NN
T: +44 (0)20 3108 7564
T: @UKERCHQ