

DELIVERING NET ZERO

The UK Energy and Infrastructure Market: Reviewing 2021 and What's to Come in 2022

To describe the pace of change in 2021 as dizzying is an understatement. Whilst changes to laws and policy in the UK energy and infrastructure sectors have been shaped by global issues such as decarbonisation, innovation, protectionism and resource scarcity, the effects of these changes will be felt very much at the national and regional levels.

In this review we consider some of the significant UK energy and infrastructure market developments of 2021 and look forward to what this might mean for businesses in 2022.

Brexit: the end of the beginning

The start of 2021 saw the end of the Brexit implementation period. As a result of this and the continuation of the COVID-19 pandemic, 2021 saw significant challenges for supply chains. From an energy perspective, the end of the Brexit implementation period meant the withdrawal of the UK from the EU's Internal Energy Market. Northern Ireland, however, continued to participate in the Integrated Single Electricity Market, which operates on the island of Ireland, by virtue of the application of the Protocol on Northern Ireland to the UK-EU Withdrawal Agreement. During 2021, work was carried out under the terms of the UK-EU Trade and Cooperation Agreement to re-couple the UK and EU electricity markets, with new mechanisms subject to consultation and expected to enter into operation in 2022.

The National Security and Investment Act

Most aspects of the UK's new trade agreements progressively liberalise foreign access to UK markets. In signing these agreements, the UK government is at pains to ensure the UK remains an attractive destination for foreign direct investment. However, the new National Security and Investment Act ("NS&I Act") may work against this trend. The regime became operational on 4 January 2022, and is widely regarded as the "biggest shakeup of the UK's national security investment screening powers for 20 years". It permits the UK government to scrutinise and potentially prohibit, unwind, or impose conditions on transactions, based on national security concerns.

The NS&I Act requires mandatory notifications for qualifying transactions in 17 sensitive areas of the UK

economy. These areas include advanced materials and robotics, civil nuclear, communications, computing hardware, data infrastructure, energy, space technologies, and transport. The government must approve share transactions that occur in any of these sectors. Otherwise, the transaction will be void. Failure to notify can also carry potentially wide-ranging civil and criminal penalties.

Alternatively, investors may make voluntary notifications about non-qualifying share transactions in sensitive sectors, as well as for certain share transactions or investments in assets outside of those sectors. The UK government has powers to "call in" for review qualifying investments—which are live for five years from completion, or six months from the date on which the Secretary of State is made aware of the transaction—where there is a reasonable suspicion that it may give rise to a national security risk. Remedies may include blocking the transaction, and limiting shareholdings or access to either sensitive information or operational sites.

The regime is not limited to foreign investors (although the UK government expects that this will be its focus), or investments in UK companies or assets. In contrast to many other foreign investment screening regimes, the NS&I Act catches investment in both UK and non-UK companies, provided that the latter carry on activities in the UK or otherwise supply goods or services to people in the UK.

With all but three Member States of the European Union recently establishing or in the process of updating their foreign investment regimes, investors can expect to face regulatory scrutiny in 2022, particularly in respect of acquisitions in potentially sensitive sectors. Therefore, investors should give close consideration to all applicable regimes and possible measures to address regulatory concerns. Investors should also consider the structure of transactions, the identity of consortium partners, their relative proposed stakes, and the overall political context.

The path to COP26 and beyond

Having been delayed a year due to COVID, November saw over 200 governments meet to discuss furthering the fight against climate change at the 26th Conference of the Parties to the UN Framework Convention on Climate Change ("COP26").

Several key climate reports, published in the lead-up to COP26, helped galvanise widespread support for the conference and the UK COP26 Presidency. The UK Climate Change Committee’s 2021 Progress Report highlighted a shortfall in the UK’s mitigation efforts. HM Treasury also released a Net Zero Review, outlining the costs and trade-offs of reaching Net Zero. Added to this, the UK government published its long-awaited [Net Zero Strategy](#). The Strategy set out, for the first time, the government’s plan to achieve net zero emissions by 2050 across all sectors of the economy. The Strategy included carbon capture, usage and storage (“CCUS”), hydrogen, heat, nuclear, electric vehicles, as well as sustainable aviation and shipping measures.

Key developments from COP26 included countries submitting updated Nationally Determined Contributions (“NDCs”) towards reducing greenhouse gas emissions, the launch of the IFRS’ International Sustainability Standards Board, which will help standardise climate-related reporting, and an agreement to phase down coal and phase out inefficient fossil fuel subsidies. Countries also reached a landmark agreement on international carbon markets (which we discuss in the section entitled ‘Carbon Pricing’ below).

Moreover, the UK government made side commitments that will impact supply chains, production methods, and procurement strategies. These include, firstly, a Global Methane Pledge to reduce methane emissions by at least 30% by 2030. Secondly, a Global Coal to Clean Power Transition Statement commits to ending investment in new coal power generation and scaling up clean power generation. Thirdly, a Declaration on Forests and Land Use aims to halt, and reverse, deforestation and land degradation by 2030.

The conference also saw investors, businesses and institutions collaborate on tackling climate change, in an unprecedented way, through initiatives such as the Race to Zero campaign and a raft of Net Zero alliances. New government measures announced on [how to green the financial system](#) and [other measures](#) will mean the economic and legislative environment in the UK relating to climate will be significantly more stringent by 2025. Increasingly, truly ingrained sustainability efforts and effective reporting of climate impacts will become prerequisites for accessing finance, undertaking procurement, and thriving in a low-carbon future.

Looking ahead, COP27 will take place in Cairo in November 2022, where we can expect parties to revisit and tighten their NDCs. We expect the incoming Egyptian COP27 presidency to focus on climate adaptation, resilience, low-carbon development, and finance issues. Our [Path to COP26](#) campaign offers further analysis.

Carbon pricing

All properly functioning markets rely to some extent upon regulation. Carbon markets are no different. Anticipation

of COP26, combined with an end to the UK’s participation in the European Union Emissions Trading System (“EU ETS”) following Brexit, provided the impetus for significant regulatory developments in carbon pricing in the UK and globally during 2021.

The UK government established a separate UK ETS after exploring alternative policy options. Launched on 1 January 2021, the UK ETS covers power generation, energy-intensive industries, and aviation. An almost identical replica of the EU ETS, the UK ETS sets a declining economy-wide cap on emissions. Within this cap, tradeable allowances are distributed through auctions or free allocations. Following several auctioning regulations, the government proposed further technical and operational amendments in December 2021, primarily aimed at improving the scheme’s monitoring and reporting regimes. These changes are likely to be in force by Q1 2022. With the UK and EU committing to ‘give serious consideration’ to linking their ETSs, we anticipate that the core policy architecture of both schemes will continue to align.

Given this convergence, the European Commission’s proposed carbon pricing amendments in July 2021—as part of its “Fit for 55” legislative package—may foreshadow similar upcoming UK policy changes. Firstly, the Commission intends to increase carbon prices by tightening the EU emissions cap. Secondly, it suggests extending the EU ETS to cover maritime transport. Thirdly, it proposes to implement separate—but adjacent—ETSs in the road transport and buildings sectors. Fourth, a proposed [carbon border adjustment mechanism](#) aims to apply an equivalent carbon price to selected goods—iron, steel, cement, fertiliser, aluminium, and electricity—imported into the EU. The UK government is considering measures to replicate these EU policies. Consequently, we may expect to see further UK ETS amendments in 2022 to ensure continued alignment with the EU ETS.

Finally, new rules on Article 6 of the Paris Agreement, which were agreed at COP26, offer added clarity and guidance on [international carbon markets](#). With many public and private actors intending to participate as investors, project operators, purchasers, or sellers in these markets, this certainty may represent a crucial step toward achieving net zero.

North Sea Transition Deal

The UK oil and gas industry operates within a hard-to-abate sector. Industry participants typically lack technological options, or face prohibitive costs, to reduce their emissions. At the same time, this sector is exposed to carbon leakage risks (the transfer of production to countries with laxer emissions constraints). Against this backdrop, the [North Sea Transition Deal](#) (“NSTD”) sets out a plan for how the UK’s offshore oil and gas sector and the government will work together to meet the UK’s emissions reduction targets.

Under this deal—agreed in March 2021 between the UK oil and gas industry, regulators, and the government—the

sector will reduce its emissions on the UK Continental Shelf by 60Mt, including 15Mt by 2030. The government will support this commitment by lowering the commercial and regulatory barriers to the electrification of offshore platforms. Simultaneously, the deal aims to deliver £14-16 billion in investment by 2030 to scale up new energy technologies (such as CCUS deployment and hydrogen production). Moreover, the industry commits to applying a voluntary 50% UK local content target to any new energy technology and oil and gas decommissioning projects.

In support of this, the Scottish government launched a [consultation](#) to identify areas for future offshore wind development in Scottish waters, aimed at helping to decarbonise the oil and gas sector. An anticipated Innovation and Targeted Oil and Gas (“INTOG”) offshore leasing round, which will fund commercial-scale innovation projects and oil and gas electrification projects, could add a further 4GW of offshore wind by 2033.

Therefore, the NSTD’s focus in 2022 will be on delivery. At the same time, this year will likely bear witness to increasing M&A activity in the oil and gas sector, particularly as industry participants seek to restructure their portfolios and adopt new decarbonisation policies.

Tangible progress for carbon capture, usage and storage

CCUS has been identified as a necessary component in the government’s toolkit to reduce emissions and achieve its net zero 2050 target. Following a history chequered by false starts, 2021 saw robust progress in the sector. The [Net Zero Strategy](#) strengthened commitments, made initially in the Prime Minister’s Ten Point Plan, to increase the level of ambition to capture and store emissions from 10 to 20-30 MtCO₂ a year across the UK economy by 2030. Further detail was also added to the proposals for [CCUS business models](#) for transport & storage (“T&S”), industrial carbon capture, hydrogen (see below), and power with carbon capture and storage (“CCS”). Updates to the T&S business model were recently released earlier this month. These are expected to be finalised in 2022.

Perhaps most significant was Greg Hands’ announcement in a [written statement to Parliament](#) in October that the HyNet and East Coast Clusters are being taken forwards for delivery by the mid-2020s, with the Scottish cluster held as a reserve cluster. After identifying the T&S networks to be brought forward into negotiations, a [phase 2 selection process](#) is ongoing to identify projects to use these networks and capture emissions across various applications (industry, power and hydrogen). These projects are expected to be announced in May 2022 and then taken forwards into negotiations, with support decisions anticipated from Q2 2023 (depending on the progress of negotiations).

Government policy on [greenhouse gas removals](#) (“GGRs”) was published, including the ambition to deploy at least 5MtCO₂ per year of engineered removals by 2030 and £100

million of innovation funding for direct air capture and other GGRs. Further policy development is expected in 2022. These forthcoming policies may include a consultation on business models to incentivise investment in GGRs. A much-trailed Biomass Strategy also promises to build on the principles outlined in a recent [biomass policy statement](#) and set out how negative emissions technologies such as Bioenergy with Carbon Capture and Store (“BECCS”) might be deployed. The success of these technologies is dependent on the availability of T&S networks, amongst other things, making the [risk allocation between the T&S network and users](#) of critical importance.

Hydrogen policy published

Hydrogen continued to generate significant interest in 2021, and the UK was no exception. August saw the long-awaited publication of the UK’s [Hydrogen Strategy](#), outlining policy to support the UK’s ambition of 5GW of low-carbon hydrogen production capacity by 2030. A variety of hydrogen production methods will have a place in the UK energy mix, including blue hydrogen (produced from gas with CCUS), green hydrogen (produced by electrolysis of water using renewable electricity), and possibly also biomass gasification with CCUS.

The UK strategy includes proposals for support for low-carbon hydrogen production, part of a wider package termed the Industrial Decarbonisation and Hydrogen Revenue Support (“IDHRS”) scheme. Industry broadly welcomed proposals for a [hydrogen business model](#). However, many also called for greater clarity on the UK’s ambition beyond 2030, a more robust policy to stimulate demand for hydrogen end-users, and clarity on the allocation process for electrolytic hydrogen production projects (which will be allocated separately to the CCS enabled hydrogen production projects). Further details on the design of the support regime are expected in Q1 2022. Support will be available in the UK for both new build low-carbon hydrogen production projects and retrofitting existing grey hydrogen production capacity with carbon capture capability (the latter will be supported under an Industrial Carbon Capture business model). Although both regimes are being developed in parallel, the level of support, terms and timing for award differ, depending on the technology used and whether the project is a new build or retrofit project.

The design of support schemes will be largely finalised during 2022, to enable allocation in 2023. Support for production involving CCS (new build and retrofit) will be allocated as part of the CCUS cluster sequencing programme mentioned above. In relation to electrolytic hydrogen, the government has indicated that up to 250MW of electrolytic hydrogen production capacity will be allocated support in 2023, with further allocation in 2024.

Transport decarbonisation plan

The domestic transport sector poses a crucial challenge to decarbonisation efforts. This sector represents the largest

share of UK emissions (around 27% in 2019). While engine efficiency continues to improve, increasing journeys and vehicle numbers have led to stable transport emissions over the last three decades.

With this, the UK government published its [Transport Decarbonisation Plan](#) in July 2021. This Plan proposes banning sales of new large diesel trucks by 2040, and smaller diesel trucks from 2035. It follows the Prime Minister's commitment to end the sale of new petrol and diesel cars and vans by 2030. The Plan further proposes a Zero Emission Vehicle Mandate, whereby manufacturers will need to sell a minimum number of electric vehicles. Moreover, the government proposes to consult on a net zero target by 2040 for UK domestic aviation, and a 2040 target for decarbonising airport operations in England. In terms of rail transport, the government's ambition is to deliver a net zero railway network by 2050, and remove all diesel-only passenger and freight trains by 2040. The government's plan for the maritime sector is to consult on a planned phase-out date for new non-zero emissions vessels sales. It will also set out indicative targets, from 2030, for the maritime sector to achieve net zero 'as early as is feasible'.

As ever, much of 'the devil will be in the detail' of these policies, says Mike Thompson (Chief Economist of the Climate Change Committee). So, we can expect to see more granular transport sector policies over the coming year. These may include many new public consultations and legislative measures in the road, rail, aviation, and maritime sectors.

UK Infrastructure Bank established

The UK Infrastructure Bank ("UKIB") was launched in mid-2021 as part of the UK government's [National Infrastructure Strategy](#). It is a private company, wholly owned by HM Treasury, which has earmarked £22 billion for investment in significant infrastructure projects and new infrastructure technologies through the initiative. Slaughter and May provided legal support to set up this important initiative. The UKIB, partnering with the private sector and local government, will invest in projects that boost productivity, economic growth and contribute to the country's 2050 net zero emissions targets.

The UKIB is a promising initiative, not only because of the size of HM Treasury's initial financial commitment. It was established to be operationally independent from the government and function largely as a private sector company. Prospective projects will be assessed within the UKIB, approved by its internal Investment Committee, and then approved by the UKIB's board. The UKIB's leadership team has also been drawn from the highest levels of the financial services industry. Its structure and leadership will be important where the UKIB invests in projects as co-financier to private sector and local government investors.

The UKIB has made a strong start with a recent £100 million investment into Gigaclear, crowding-in private sector funding that will enable high-capacity broadband to be

accessed in remote regions of the UK and enhance the digital connectivity of people in hard-to-reach places. While it is early days for the UKIB, the bank is expected to play a tangible and sustainable role in enhancing Britain's critical infrastructure.

Offshore wind scales up

The Crown Estate Leasing Round 4 in February 2021 saw six sea-bed areas with the potential for 8 GW of offshore wind capacity tendered at record prices, demonstrating the appetite for offshore wind development to meet the UK government's 2030 ambition to deliver 40 GW of offshore wind by 2030, including 1 GW of floating offshore wind. Further sites will be awarded as part of the ScotWind and the Celtic Sea leasing rounds in 2022 and 2023, respectively.

Given the timescales required to deliver projects offshore, the contract for difference ("CfD") allocation round 4 ("AR4") will be vital to the delivery of the UK's 2030 offshore wind goals. AR4 opened to applicants in December 2021 with a total budget of £285 million, £200 million of which is allocated to conventional offshore wind. AR4 is likely to see renewable technologies supported such as onshore wind, solar and dedicated biomass with CHP, and includes a ring-fenced budget for tidal stream and floating offshore wind technologies. Depending on the progress of the allocation round, AR4 may conclude as early as April or as late as July 2022.

To support the scale of development needed, the government added to the £160 million of funding previously pledged to upgrade ports and infrastructure for conventional offshore wind, announcing a further £160 million to support floating offshore wind ports and manufacturing capacity. 2021 also saw continued work to ensure the requisite electricity grid networks will be developed to bring power generated offshore to market. Two consultations by [Ofgem](#) and [BEIS](#) explored options to bring about more coordination in the development of offshore electricity transmission networks. The 2022 year will see these policies develop, and integrate with, a new [interconnector policy](#) published in December 2021. Greater coordination will be required, increasing co-dependency between offshore assets.

New nuclear power

In an innovative policy shift as part of the UK government's commitment to bring at least one large-scale nuclear project to the final investment decision by the end of the current Parliament, 2021 saw the introduction of new legislation into Parliament in October proposing a new [Regulated Asset Base](#) ("RAB") model to fund future nuclear power stations. Under this RAB model, which is still being debated in Parliament, consumers will help pay for the cost of both constructing and operating new nuclear power stations. The government anticipates this will provide more investment certainty and lower, more reliable rates of return for nuclear companies in the early stages of these

projects, compared to the existing CfD model. While designed to be UK-specific, the new nuclear RAB model may offer a viable model for financing nuclear—and other large-scale low-carbon infrastructure—projects in other jurisdictions.

Energy market crisis

A steep increase in global gas demand, coupled with low wind speeds and electricity interconnector outages, conspired to push wholesale gas and electricity prices to unprecedented levels in 2021. According to [Ofgem](#), 27 suppliers exited the market in 2021, leaving over 2.629 million customers to be transferred under the Supplier of Last Resort mechanism. In addition, Bulb Energy, with over 1.6 million customers, entered an energy supply company administration in November, the first time that the special administration procedure had been used in the market. In late November, Jonathan Brearley told the [House of Lords Industry and Regulators committee](#) that a “very different way of regulating the retail sector” would be needed in future, together with a review of the structure of the energy price cap.

With inflation rising and pressure on household budgets increasing, 2022 will see the on-going discussions on proposals to reform the retail energy market harden into decisions, with the outcome of consultations published mid-December on [retail financial resilience](#), [reporting and assessment of suppliers](#), [design of the retail price cap](#) and [short term measures to protect consumers](#) expected early in the year. A BEIS Committee inquiry into [Energy pricing and the future of the Energy Market](#) will also formally

examine the extent to which the policy and regulatory environment has contributed to the crisis, the impact on consumers of rising energy prices, and the operation of the energy price cap. BEIS has also re-opened its [energy retail market strategy for 2020](#), in order to incorporate learning from the current crisis.

Notwithstanding these, 2022 may see more fundamental market design changes if policy-makers have the appetite to intervene further, including a decision on the need for an [independent system operator](#) in Great Britain. The government is also likely to examine the fitness of the UK wholesale market price to deliver its decarbonisation objectives.

2022 and beyond

The start of this decade has set the tone for 2022. We can expect further significant policy, regulatory and legislative developments in the energy and infrastructure markets, as the government continues to respond to global issues and seeks to navigate market challenges and capture opportunities for growth. In 2022, we expect to see crucial policies finalised and new opportunities emerge. The challenge for the UK government will be to manage these changes in the context of persistent global challenges, including the COVID pandemic, supply chain disruptions, rising energy costs, inflation, geopolitical tensions, and the effects of climate change. Maintaining a robust market for investment and ensuring the UK remains an attractive proposition will be necessary as the UK seeks to navigate these risks throughout 2022 and beyond.

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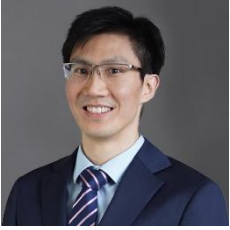


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