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Practical cross-border insights into renewable energy law

Renewable Energy 2023

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1 Overview of the Renewable Energy Sector

1.1 What is the basis of renewable energy policy and regulation in your jurisdiction and is there a statutory definition of 'renewable energy', 'clean energy' or equivalent terminology?

The Promotion of the Use of Energy from Renewables Sources Regulations 2011 (SI 2011/243) applies the definition set out in Directive 2009/28/EC (**Renewable Energy Directive**) on the promotion of the use of energy from renewable sources. This defines "*energy from renewable sources*" as "*energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases*", each of which is then defined separately.

This legislative framework required the government to ensure that renewable energy comprised 15% of the UK's total energy mix by 2020. The Renewable Energy Directive has now been superseded by Directive (EU) 2018/2001 (**RED II**). Although the UK has now been released from the renewable energy targets under RED II following Brexit, the UK-EU Trade and Cooperation Agreement includes a commitment to promote energy efficiency and the use of energy from renewable sources and reaffirmation of the EU's 2030 "targets" and the UK's 2030 "ambitions" for renewable energy and energy efficiency.

Ongoing policy and regulation of renewable energy is currently derived from retained EU law and UK statute, notably the UK's binding commitments to:

- cut greenhouse gas emissions by 78% by 2035 compared to 1990 levels in the Carbon Budget Order 2021 (SI 2021/750); and
- achieve a 100% reduction of greenhouse gas emissions by 2050 compared to 1990 levels (the "net zero" target) in the Climate Change Act 2008 (2050 Target Amendment) Order (SI 2019/1056).

There are various other policies, incentives, requirements and regulations that are detailed throughout this chapter below.

1.2 Describe the main participants in the renewable energy sector and the roles which they each perform.

Governmental participants

The Department for Business, Energy and Industrial Strategy (**BEIS**) is responsible for overseeing the electricity sector, including in relation to renewable energy. BEIS was formed in 2016 following the merger of the Department of Energy and Climate Change and the Department for Business and Innovation.

BEIS is supported by other public bodies, including:

- **The Gas and Electricity Markets Authority (GEMA)**: GEMA has primary responsibility for regulation of the energy sector. Its powers and duties are derived from UK statute (including the Gas Act 1986, the Electricity Act 1989 (**Electricity Act**), the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Acts of 2004, 2008, 2010 and 2011), together with directly effective European Community legislation that was retained by the UK after its exit from the EU.
- **The Office of Gas and Electricity Markets (Ofgem)**: GEMA delegates regulation of the renewable energy sector to Ofgem, a non-ministerial government department. Ofgem administers environmental programmes and sustainability schemes on behalf of the government under its E-Serve business unit (see question 3.10 for more detail). Key duties and functions concerning electricity include:
  - regulating distribution and transmission networks;
  - granting licences;
  - protecting the interests of existing and future electricity (and gas) consumers;
  - ensuring that electricity wholesale and retail markets are competitive; and
  - managing the commercial tender process for offshore transmission projects.

The Energy Security Bill, introduced to Parliament on 6 July 2022, includes measures that would (if enacted as law) establish a new independent body, the Future System Operator (known in the Bill as the Independent System Operator or ISO), which will be tasked with strategic oversight across the UK's electricity and gas systems.

Private participants

- **Generation companies**: following privatisation of the generation industry in the 1990s, an increasing number of generating companies have been established, including the "big six" – British Gas, e.on, EDF, RWE npower, Scottish Power and SSE. However, Ofgem has announced that it will no longer use the term "big six" (who once controlled 98% of the domestic supply market), now that their market share has shrunk to under 57%, after acquisitions, mergers and a customer exodus to smaller challengers.
- **Transmission companies**: the transmission network is owned and maintained by regional transmission companies: National Grid Electricity Transmission plc for England and Wales; Scottish Power Transmission Limited for southern Scotland; Scottish Hydro Electric Transmission plc for northern Scotland and the Scottish islands groups; and Northern Ireland Electricity for Northern

Ireland. The National Grid Electricity System Operator (**NGESO**) is responsible for controlling the stable and secure operation of the national electricity transmission system as a whole.

- **Suppliers**: Energy is purchased from the wholesale market by suppliers and then sold to customers.

1.3 Describe the government's role in the ownership and development of renewable energy and any policy commitments towards renewable energy, including applicable renewable energy targets.

Renewable energy assets will continue to be owned and developed by the private sector with the support of the government in order to satisfy its binding commitments to reduce UK greenhouse gas emissions, as described in question 1.1.

In December 2020, BEIS published a white paper titled "Powering our Net Zero Future" (**Energy White Paper**), setting out how it intends to meet these targets and building on the government's "Ten Point Plan for a Green Industrial Revolution" (**Ten Point Plan**) published in November 2020. Key features of the Energy White Paper and the Ten Point Plan include:

- targeting 40GW of installed offshore wind capacity by 2030 through £20 billion of private investment;
- investing £1 billion in the UK's energy innovation programme to develop future renewable technologies such as green hydrogen, with the aim of 5GW of low-carbon production capacity by 2030;
- developing a biomass strategy, particularly in relation to biomass with carbon capture and storage; and
- increasing the funding available to study the use of hydrogen in homes and consulting on the role of "hydrogen-ready" appliances.

In October 2021, the government published its Net Zero Strategy: Build Back Greener (**Net Zero Strategy**) setting out how it proposes to meet the 2050 net-zero target. One of the principal ways in which the UK proposes to achieve this is by increasing the use of renewable energy and for the biggest polluters to pay the most for the transition through fair carbon pricing. The English High Court has recently declared that the Net Zero Strategy fails to meet the government's obligations under the Climate Change Act and that it must be updated by March 2023.

The Energy Security Bill, among other things, aims to leverage private investment in clean technologies. The government states that the Bill will help drive £100 billion of private sector investment by 2030 into industries to diversify Britain's energy supply. Whilst most of this investment is expected to be made in offshore wind, the government also wishes to promote investment in emerging technologies such as green hydrogen production and carbon capture, use and storage.

2 Renewable Energy Market

2.1 Describe the market for renewable energy in your jurisdiction. What are the main types of renewable energy deployed and what are the trends in terms of technology preference and size of facility?

The UK is particularly well placed to take advantage of wind power, with some of the best conditions in Europe and high average wind speeds. As a result, onshore and offshore wind farms together are the largest source of renewable energy in the UK, with 14.9% of aggregate UK generation (including from fossil fuels) coming from offshore wind projects and 13.9% from onshore wind projects in Q1 2022. Examples include Orsted's Hornsea One, located 120km off the Yorkshire coast in England, which is currently the world's largest offshore wind farm with a capacity of 1.2GW, and the Dogger Bank project which, when completed, will be the world's largest offshore wind farm with a capacity of 3.6GW.

Bioenergy (biomass or waste-fuelled plant) projects are the UK's second-largest contributors to renewable energy generation after wind, providing 11.6% of UK electricity generation in Q1 2022. These include the Drax Power Station in Yorkshire, formerly the UK's largest coal-fired power station, where four of the six boilers have been converted to biomass, with a combined capacity of 2.6GW. The two remaining coal units ceased commercial operations in March 2021 and the plant is piloting a carbon capture and storage scheme in order to create negative-emissions power generation.

Hydropower and solar photovoltaic (**PV**) projects contribute a smaller (but still significant) percentage of UK renewable energy and tend to be smaller in scale (the majority being less than 10MW).

2.2 What role does the energy transition have in the level of commitment to, and investment in, renewables? What are the main drivers for change?

In 2019, following Parliament's declaration of a "climate emergency" and recommendations from the independent Committee on Climate Change, the government legislated for net-zero greenhouse gas emissions by 2050, as discussed in question 1.1. The Energy White Paper, and Net Zero Strategy discussed in detail in question 1.3, sets out how the UK will invest in renewable energy in order to support the energy transition.

2.3 What role, if any, has civil society played in the promotion of renewable energy?

Civil society has been key to the promotion of renewable energy in the UK, with the environment consistently polling as one of the top three issues for the British public. This can be seen by the strong environmental, social and governance (**ESG**) movement in the UK, with investors putting almost £1 billion a month on average into investment funds that apply ESG criteria in 2020. The rise of responsible investing, together with a strong activist shareholder culture in the UK, benefits renewable energy in the UK.

In addition, at a community level, there has been a noticeable growth of on-site distributed renewable generation projects in recent years (both residential and commercial), which is underpinned by general environmental concerns and technological innovation, as well as by government policy.

2.4 What is the legal and regulatory framework for the generation, transmission and distribution of renewable energy?

The Energy Act 2013 (**Energy Act**) is the principal legislation relating to renewables, establishing a legal framework with a key aim to secure affordable and low-carbon electricity. The central provisions of the Energy Act relating to renewable energy include the introduction of:

- provisions to enable the Secretary of State to set a decarbonisation target range in secondary legislation (as discussed in question 1.1);
- a statutory framework for Contracts for Difference (**CfD**) (see question 3.2 for more detail);

- the Capacity Market, being a market to ensure the security of electricity supply based on the government's forecast of electricity demand;
- renewables obligations certificates (see question 3.7 for more detail); and
- access to markets via long-term contracts for independent renewable generators (including power purchase agreements (**PPAs**)), and through liquidity measures to enable the government to improve the liquidity of the electricity market.

The Electricity Act is the principal legislation governing electricity generation generally, including from renewable sources. Subject to applicable exemptions, an electricity generator requires a generation licence from Ofgem to operate. See question 4.1 for more detail.

2.5 What are the main challenges that limit investment in, and development of, renewable energy projects?

The challenges include:

- Uncertainty as to the long-term laws, policies and the associated incentives relating to the renewable sector that may be adapted by successive governments is a challenge to any investment modelling. For example, onshore wind projects benefitted from certain government subsidies that were then removed in 2016, and then, in early 2020, onshore wind subsidies were revived.
- Intermittency of output (given that renewable sources, by their nature, will vary and not be continuous) presents an issue for renewables integrating into a stable power supply. This can be mitigated, to some extent, with energy storage systems. However, whilst the technology is developing rapidly and the costs are falling, such storage systems can be expensive (particularly on large-scale projects).
- Much of the technology involved with renewables projects is new or rapidly evolving and there is an investment risk associated with any nascent technology, including in respect of deployment issues and risk of obsolescence.
- Grid inflexibilities mean that integration of variable renewable sources into grid infrastructure creates increased complexity, including with respect to balancing supply and demand.

2.6 How are large utility-scale renewable power projects typically tendered?

The CfD scheme is the government's main mechanism for supporting low-carbon electricity generation (see question 3.2 for more detail).

CfDs are awarded in a series of competitive auctions, which drives efficiency and cost reduction. To date, there have been four successful CfD allocation rounds. 10.8GW of UK onshore and offshore wind, solar, tidal stream and other renewables were awarded CfDs in the recent fourth allocation round announced by BEIS in July 2022 (99 contracts in total). These projects are due to come online in 2023–24. The fifth allocation round, planned to open in March 2023, is expected to be the beginning of annual allocation rounds (rather than every two years).

2.7 To what extent is your jurisdiction's energy demand met through domestic renewable power generation?

The share of UK electricity generated from renewable sources has increased dramatically in recent years, with a 500% increase in the amount of renewable capacity connected to the National Grid from 2009 to 2020.

In Q1 2022, the renewable share of total electricity generation was 45.5%. This is the second-highest quarterly share on record (since Q1 2020).

3 Sale of Renewable Energy and Financial Incentives

3.1 What is the legal and regulatory framework for the sale of utility-scale renewable power?

The Energy Act and related secondary legislation provide the main legal and regulatory framework for the sale of utility-scale renewable power in the UK and implement the UK's Electricity Market Reform policy. The Energy Act supplements the Electricity Act and the Utilities Act 2000, which provide a legal and regulatory framework for the wholesale electricity market generally in the UK.

3.2 Are there financial or regulatory incentives available to promote investment in/sale of utility-scale renewable power?

The primary incentive schemes related to renewable energy include:

The CfD scheme: the CfD scheme is the primary mechanism to incentivise new low-carbon electricity generation. The CfD is a quasi-PPA between an eligible generator and the Low Carbon Contracts Company (**LCCC**), a wholly government-owned company established under the Energy Act. Generators with a CfD sell their electricity into the wholesale electricity market in the typical way; the CfD then pays the difference between an estimate of the market price for electricity and the generator's lowest estimate for the costs of developing, financing and operating the given technology (the strike price). When the market price is below the strike price, the generator receives a top-up payment from the LCCC for the additional amount. However, when the market price is above the strike price, the generator must pay back the difference to the LCCC. Although a CfD is a private law contract between a low-carbon electricity generator and the LCCC, it is issued under a detailed statutory framework under the Energy Act.

The Offtaker of Last Resort (OLR) scheme: the OLR scheme aims to promote the availability of PPAs. It is intended as a last resort to help independent renewable generators who cannot get a PPA through the usual commercial means by providing eligible generators with a guaranteed "back-stop" route-to-market at a specified discount to the market price.

Green Gas Support Scheme (GGSS): the GGSS provides financial incentives for new anaerobic digestion biomethane plants to increase the proportion of green gas in the gas grid. Participants will receive quarterly payments over a period of 15 years, based on the amount of eligible biomethane that a participant injects into the gas grid. The GGSS is open to applicants for four years from 30 November 2021.

3.3 What are the main sources of financing for the development of utility-scale renewable power projects?

The offshore wind sector currently represents the primary source of financing activity for large-scale renewable projects in the UK. In recent years, a low interest rate environment coupled with a large number of lenders looking to participate in this sector has provided project developers with favourable conditions to finance their projects in recent years. To date,

the main source of debt financing has been commercial banks; however, we have seen participation from export credit agencies and also new entrants to the market such as pension funds and infrastructure investors. A new development in the market has been the limited recourse financing of battery storage projects, although the (relatively) small scale of these projects combined with the lack of "bankable" long-term offtake solutions has impacted the commercial banks' appetite to finance these assets.

3.4 What is the legal and regulatory framework applicable to distributed/C&I renewable energy?

Distributed and C&I renewable energy facilities are subject to the same legal and regulatory framework as utility-scale renewable energy facilities with respect to the sale of electricity, participation in the wholesale market and connection to distribution and transmission networks.

3.5 Are there financial or regulatory incentives available to promote investment in distributed/C&I renewable energy facilities?

Available incentives include:

Feed-in Tariffs (FiT): the FiT scheme supports investment in small-scale renewable and low-carbon electricity generation projects up to 5MW capacity. It offers long-term support to projects and provides generation and export tariffs based on the costs of generation for the following technologies: solar PV; onshore wind power; hydropower; anaerobic digestion; and micro combined heat and power (up to 2kW). The FiT scheme closed to new entrants on 31 March 2019 but continues to support existing generation for up to 25 years.

Smart Export Guarantee (SEG): following the closure of the FiT scheme to new installations, supplier-led SEG was introduced on 1 January 2020. Under the SEG, licensed electricity suppliers (with 150,000 domestic customers or more) are required to offer small-scale low-carbon generators a price per kWh for electricity exported to the National Grid. Remuneration is available to solar PV, wind, anaerobic digestion and hydro generators of up to 5MW in capacity, and micro combined heat and power installations up to 50kW. Mandated suppliers are required to provide at least one SEG-compliant tariff. They are free to determine the price and length of the contract, provided that remuneration is greater than zero at all times.

3.6 What are the main sources of financing for the development of distributed/C&I renewable energy facilities?

The majority of smaller-scale distributed and C&I renewable energy facilities have been financed on balance sheet; however, project finance has grown in importance for investments in this sector. To date, the majority of this project finance debt has been provided by commercial banks, either on a standalone project or portfolio basis.

3.7 What is the legal and regulatory framework applicable to the development of green hydrogen projects?

Currently, there is no UK regulatory regime specifically tailored to hydrogen. Existing regulations pre-date the advent of hydrogen as a viable commercial energy source. However, in August 2021, the government published a hydrogen strategy and subsequent supporting materials including, in April 2022, the Hydrogen Investor Roadmap, which prioritises working with the government and regulators to deliver a robust regulatory framework for the hydrogen industry.

The Energy Security Bill also introduces a state-of-the-art business model for hydrogen projects and aims to enable the delivery of a large village hydrogen heating trial by 2025 to inform the government's decision on the role of hydrogen in the UK's heat decarbonisation.

However, the current regulations applicable to hydrogen projects consist of a mixture of more general energy regulations. As hydrogen is a gas, it is regulated by Ofgem as part of the gas network under the Gas Act 1986. These regulations include the requirement for a licence to transport or supply hydrogen. Gas licensees must comply with a breadth of industry codes and detailed health and safety regulations.

3.8 Are there financial or regulatory incentives available to promote investment in green hydrogen projects?

As described in question 3.7, the regulatory incentives for hydrogen are currently under development. As to other financial incentives, the Ten Point Plan sets out the government's commitment to a £240 million Net Zero Hydrogen Fund for the development and deployment of new low-carbon hydrogen production to de-risk investment and reduce lifetime costs.

3.9 What are the main sources of financing for the development of green hydrogen projects in your jurisdiction?

The financing of green hydrogen projects in the UK remains at a nascent stage. However, in June 2022 the new publicly owned UK Infrastructure Bank announced its strategic plan to deploy £22 billion of capital to tackle climate change and boost regional growth and a central pillar of that plan was to accelerate the deployment of new technologies such as hydrogen. In addition, in July 2022 the UK government announced the opening of the Net Zero Hydrogen Fund, which will provide up to £240 million of grant funding for low-carbon hydrogen production projects.

3.10 What is the legal and regulatory framework that applies for clean energy certificates/environmental attributes from renewable energy projects?

The Renewable Obligation scheme applies to large-scale renewable electricity projects in the UK creating a market for the sale of environmental attributes. The scheme obliges UK electricity suppliers to source an annually increasing proportion of the electricity supplied to customers from renewable sources.

Ofgem issues Renewable Obligation Certificates (**ROCs**) to qualifying renewable generators in respect of the electricity they generate. Such generators can then sell those ROCs to suppliers or traders as tradeable commodities. Different renewable types receive different numbers of ROCs depending on their costs and size. Suppliers are then obligated to meet individual targets by purchasing ROCs either from renewable generators directly or from traders and brokers in the ROCs market. Ultimately, ROCs are used by suppliers to demonstrate that they have met their annual obligation.

This scheme closed to all new generating capacity on 31 March 2017. Projects that have been accredited before this date will be supported until 20 years from the date of accreditation or 31 March 2037, whichever is earlier.

3.11 Are there financial or regulatory incentives or mechanisms in place to promote the purchase of renewable energy by the private sector?

The Renewable Heat Incentive (**RHI**) is a financial incentive to encourage the uptake of renewable heat by businesses, public sector and non-profit organisations and homeowners. The non-domestic RHI was introduced in 2011, with the domestic RHI following in 2014. The schemes are designed to help bridge the gap between the costs of fossil fuel heating technologies and low-carbon alternatives. Participants receive a tariff, set in pence per kilowatt hour of heat used, for either seven (domestic RHI) or 20 years (non-domestic RHI), which is set at a level to cover the additional costs of the renewable heating system. However, the non-domestic RHI scheme closed to new applicants on 31 March 2021 and the domestic RHI scheme closed to new applicants on 31 March 2022.

4 Consents and Permits

4.1 What are the primary consents and permits required to construct, commission and operate utility-scale renewable energy facilities?

In England, utility-scale projects with more than 50MW of capacity, or 100MW for offshore wind, are subject to the Planning Act 2008 (**Planning Act**) and are deemed "nationally significant infrastructure projects" requiring specific consent from the Planning Inspectorate, which acts on behalf of the Secretary of State for BEIS. This excludes electricity storage projects (except for pumped hydro), which were recently carved out of this regime.

Consent is required under the Electricity Act for utility-scale projects that are not subject to the Planning Act or the Town and Country Planning Act 1990 (**TCPA**), such as offshore wind projects with a generating capacity of greater than 1MW but less than 100MW. Applications under the Electricity Act are considered by the Secretary of State for BEIS.

The installation of the project will need to comply with development regulations, including the Construction (Design and Management) Regulations 2015, which sets construction requirements and restrictions.

The Electricity Act provides that it is an offence to generate electricity for the purposes of supply to any premises without a licence or exemption. Licences are granted by Ofgem. The Secretary of State for BEIS may grant specific or class exemptions to this requirement.

The Electricity (Class Exemptions from the Requirement for a Licence) Order 2001 (SI 2001/3270) (**Class Exemptions Order**) provides a number of class-based exemptions to the general licensing requirements under the Electricity Act. Smaller utility-scale generators may benefit from the "Class A" exemption, for facilities that do not at any time provide electric power in excess of 10MW (for facilities with a declared net capacity of greater than 100MW) or 50MW (for facilities with a declared net capacity of less than 100MW).

In addition, generators must comply with relevant health and safety legislation and industry codes in order to operate their facilities, such as the Balancing and Settlement Code, the Connection and Use of System Code (**CUSC**) and the Distribution Use of System Agreement.

4.2 What are the primary consents and permits required to construct, commission and operate distributed/C&I renewable energy facilities?

In England, distributed and C&I renewable energy facilities are likely to fall beneath the 50MW threshold under the Planning Act and will instead be subject to approval under the TCPA. Onshore wind farms, including facilities with generating capacity in excess of 50MW, are subject to the TCPA planning regime due to the perceived increased local impact caused by their construction and operation. Planning applications under the TCPA are made by generators to the local planning authority.

Certain microgrids with a generating capacity of 50kW or less may benefit from permitted development rights where planning permission is deemed to have been granted without the need for an application to the local planning authority.

The requirement for a generation licence under the Electricity Act applies equally to distributed renewable energy facilities, although distributed renewable energy facilities are likely to benefit from the Class A exemption under the Class Exemption Order.

Generators of distributed renewable energy must also comply with relevant industry codes in order to operate their facilities, as described in question 4.1.

4.3 What are the requirements for renewable energy facilities to be connected to and access the transmission network(s)?

In England, the Conditions of Electricity Transmission Licences (**CETL**) provides the standard terms of the licence, and the CUSC provides the commercial framework between NGESO and users of the National Grid.

Generators seeking access to the National Grid must make an application under the CETL to NGESO. If the application meets the requirements of the CETL and CUSC, NGESO must make an offer to the applicant as soon as practicable, offering connection to the National Grid. The offer of connection comprises:

- a construction agreement in respect of the relevant connection facilities;
- a connection agreement governing the relationship between the generator and NGESO; and
- an accession agreement to CUSC.

4.4 What are the requirements for renewable energy facilities to be connected to and access the distribution network(s)?

The UK's distribution networks are operated by two sets of operators: 14 distribution network operators (**DNOs**), who operate larger distribution networks; and independent distribution network operators (**IDNOs**), who operate smaller networks within areas covered by DNOs.

In order to be connected to and access distribution networks, the renewable energy facility must apply to the relevant DNO or IDNO in accordance with the requirements of the Electricity Act. The DNO or IDNO must then offer connection terms to the facility as soon as practicable, subject to certain exemptions.

4.5 Are microgrids able to operate? If so, what is the legislative basis and are there any financial or regulatory incentives available to promote investment in microgrids?

Microgrids may operate in the UK and are subject to the same

legal and regulatory regime as distributed renewable energy facilities.

Until 2019, generators using microgrids were able to benefit from the FiT scheme, now replaced by the SEG scheme (see question 3.5 for more detail).

4.6 Are there health, safety and environment laws/regulations which should be considered in relation to specific types of renewable energy or which may limit the deployment of specific types of renewable energy?

The development of renewable energy projects requires infrastructure, and all construction projects in the UK must comply with the Construction (Design and Management) Regulations 2015, which form the key health and safety framework for the construction industry. More generally, the UK also has extensive health and safety regulations to ensure employers are responsible for the health and safety of their employees and those impacted by their business.

Whilst environmental laws generally encourage renewables development (see question 1.1), the planning consent process (see question 4.1) requires the consideration of environmental and social matters, and most utility-scale projects will also require an environmental impact assessment to assess the environmental risks of the project. Applications for large-scale projects will not be permitted if in an Area of Outstanding Natural Beauty or in a National Park, and wind projects are subject to further scrutiny in respect of protecting wildlife and (for offshore projects) marine conservation.

5 Storage

5.1 What is the legal and regulatory framework which applies to energy storage and specifically the storage of renewable energy?

Electricity storage (including the storage of renewable energy) is currently treated as a type of electricity generation. Accordingly, the applicable legal and regulatory framework that applies to electricity storage is currently the same as that applicable to electricity generation. However, the Electricity Act does not currently include a specific definition of electricity storage (although see below for further details in the Energy Security Bill).

The provisions relating to generation licences (and exemptions), planning permission and construction described at question 4.1 also apply to electricity storage projects.

All electricity storage projects will also need a completed lease on satisfactory terms in relation to the land in which it is located and, in respect of battery storage projects, must comply with various UK, European and international standards on battery matters.

The Energy Security Bill contains measures to establish a licensing framework and regulatory system carbon dioxide transport and storage infrastructure, and which seek to remove obstacles for developers of battery-based and pumped hydro energy storage projects, including by clarifying storage as a distinct subset of generators under the Electricity Act.

5.2 Are there any financial or regulatory incentives available to promote the storage of renewable energy?

Energy storage systems benefit from the FiT scheme (provided applications have been submitted prior to 31 March 2019) and the RHI scheme as described at question 3.11 as well as, for storage co-located with a renewable asset, SEG payments.

Additionally, in March 2021, BEIS launched the Longer Duration Energy Storage Demonstration competition for up to £68 million to be awarded to technologies that can demonstrate the capability of first-of-a-kind energy storage facilities with a longer duration.

6 Foreign Investment and International Obligations

6.1 Are there any special requirements or limitations on foreign investors investing in renewable energy projects?

There are no particular restrictions on foreign investment of UK renewable energy projects.

However, Ofgem, currently together with the European Commission (subject to any Brexit-related developments), is required to undertake an assessment as to whether foreign ownership or control of a renewable power project poses a risk to security of supply.

Additionally, in January 2022, the National Security and Investment Act 2021 came fully into force, strengthening the government's powers to scrutinise transactions and projects on national security grounds, particularly in key areas (including certain parts of the energy sector, and specifically organisations owning large-scale power generation of greater than 1GW). Following voluntary notification or "call-in" by the government, a full national security assessment may be made, which may result in the transaction or project being blocked or permitted, subject to certain conditions.

6.2 Are there any currency exchange restrictions or restrictions on the transfer of funds derived from investment in renewable energy projects?

No exchange control restrictions affect inward or outward investment (direct or portfolio), the repatriation of income or capital, the holding of currency accounts, or the settlement of currency-trading transactions.

6.3 Are there any employment limitations or requirements which may impact on foreign investment in renewable energy projects?

No sectors of the economy are restricted to UK nationals or require majority equity holdings or other specified holdings by UK nationals. In practice, foreign companies can obtain work permits for foreign employees by demonstrating that their skill level or experience cannot be found among UK nationals.

6.4 Are there any limitations or requirements related to equipment and materials which may impact on foreign investment in renewable energy projects?

In respect of imports from outside the UK, there may be an obligation to comply with import licensing requirements and customs tariffs.

Aside from general restrictions applicable to materials that are harmful to health and safety and the environment, there are no other legal restrictions that apply to equipment or materials required to construct or operate renewable energy projects.

7 Competition and Antitrust

7.1 Which governmental authority or regulator is responsible for the regulation of competition and antitrust in the renewable energy sector?

The relevant authorities are:

- the UK Competition and Markets Authority (**CMA**); and
- Ofgem.

Under the Enterprise and Regulatory Reform Act 2013, both the CMA and Ofgem have concurrent powers to apply competition law in the renewable energy sector.

7.2 What power or authority does the relevant governmental authority or regulator have to prohibit or take action in relation to anti-competitive practices?

The CMA and Ofgem have a broad range of powers in respect of actual or suspected anti-competitive behaviour. These include the ability to:

- conduct market studies and, if appropriate, make a market investigation reference under which the CMA conducts an in-depth investigation into any feature, or combination of features, of a market in the UK;
- investigate suspected infringements (including by conducting "dawn raids");
- give specific directions to end anti-competitive behaviour;
- impose financial penalties of up to 10% of an undertaking's annual group worldwide turnover; and
- apply to the court for an order to disqualify an individual from acting as a director for up to 15 years.

In addition, the CMA has the power under the Enterprise Act 2002 to prosecute for criminal cartel offences (which covers agreements relating to price-fixing, market/customer sharing, output limitation or bid-rigging).

7.3 What are the key criteria applied by the relevant governmental authority or regulator to determine whether a practice is anti-competitive?

UK competition law prohibits anti-competitive agreements and conduct that amounts to an abuse of a dominant position.

Anti-competitive agreements

Agreements and concerted practices that, by object or effect, appreciably prevent, restrict or distort competition are prohibited. This captures formal written agreements as well as informal oral agreements and even tacit understandings between businesses.

Some agreements, such as price-fixing or market-sharing cartels, are considered anti-competitive by nature, regardless of their actual effect. Other arrangements, such as exclusive purchasing or supply obligations, will only be prohibited where there is an actual anti-competitive effect. An exemption is available in certain circumstances where it can be demonstrated that the anti-competitive effects of a particular agreement or conduct are outweighed by the pro-competitive benefits for consumers.

Abuse of a dominant position

An undertaking will be considered to hold a dominant position where it has the ability to behave independently of competitive pressures. Factors such as market share, size and number of competitors, barriers to market entry, and customer buyer power are all relevant to assessing dominance.

Examples of abuse of a dominant position include charging unfair prices (either excessively high for consumers, or excessively low to drive out competitors), imposing other unfair trading conditions or refusing to supply existing customers without justification.

8 Dispute Resolution

8.1 Provide a short summary of the dispute resolution framework (statutory or contractual) that typically applies in the renewable energy sector, including procedures applying in the context of disputes between any applicable government authority/regulator and the private sector.

Judicial review in the national courts may be available to challenge decisions made by the government or other public bodies (including Ofgem). The Judicial Review and Courts Act 2022 has made changes to the judicial review procedure; however, an application for judicial review must be made promptly and in any event within three months of the decision being challenged (subject to a few exceptions, where a shorter time limit applies). A number of judicial review challenges have been brought in relation to renewables.

Where the rights and obligations of the participants in a renewables project are governed by contract, the agreed dispute resolution mechanism will apply. For example, the CfD standard terms and conditions provide for disputes to be finally resolved via the London Court of International Arbitration (**LCIA**) or, for certain types of dispute, expert determination.

8.2 Are alternative dispute resolution or tiered dispute resolution clauses common in the renewable energy sector?

Yes. For example, the CfD standard terms and conditions provide for most types of dispute between the LCCC and the generator to be referred first to their senior representatives. If no amicable resolution can be achieved within a minimum period of 30 days, the dispute can then be referred to expert determination or LCIA arbitration as appropriate.

8.3 What interim or emergency relief can the courts grant?

The English courts have a broad discretion to grant interim or emergency relief. Such relief may take the form of: (i) interim injunctions ordering a party to carry out a specific act or to refrain from carrying out a specific act (such as commencing proceedings in a foreign court); (ii) freezing orders preventing the dissipation of assets; (iii) orders for the preservation of evidence; (iv) orders for the disclosure of documents; and (v) orders in support of arbitral proceedings.

Some contracts related to the development of renewables projects provide for disputes to be resolved by arbitration. Where that is the case, the possibility of interim or emergency relief under the applicable institutional rules (if any) should be considered.

8.4 Is your jurisdiction a party to and has it ratified the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards and/or the Convention on the Settlement of Investment Disputes between States and Nationals of Other States and/or any significant regional treaty for the recognition and enforcement of judgments and/or arbitral awards?

The UK has signed and ratified both the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards (**New York Convention**) and the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (**ICSID Convention**).

Its ratification of the New York Convention is subject to the reciprocity reservation (meaning it will only recognise and enforce awards made in the territory of another contracting state).

Following expiry of the Brexit transition period (on 31 December 2020), the Recast Brussels Regulation and the 2007 Lugano Convention ceased to apply to the UK. On 1 January 2021, the UK acceded to the 2005 Hague Convention on Choice of Court Agreements (**Hague Convention**) in its own right. However, the Hague Convention is narrower in scope than the Recast Brussels Regulation or the 2007 Lugano Convention. The UK has also applied to join the 2007 Lugano Convention in its own right; a decision on its application is awaited.

8.5 Are there any specific difficulties (whether as a matter of law or practice) in litigating, or seeking to enforce judgments or awards, against government authorities or the state?

Neither the UK government nor UK public bodies are immune to litigation in the UK. Both frequently appear as defendants in UK litigation and are often held to account by the national courts.

8.6 Are there examples where foreign investors in the renewable energy sector have successfully obtained domestic judgments or arbitral awards seated in your jurisdiction against government authorities or the state?

Various judicial review proceedings have been brought against the government to challenge decisions it has made in relation to renewable energy policy and specific projects. These have included challenges to the government's Net Zero Strategy and challenges to decisions to reject applications to participate in the RHI scheme. We have not, however, seen examples of foreign investors in the renewable energy sector obtaining domestic judgments or awards against government authorities or the state in civil actions.

9 Updates and Recent Developments

9.1 Please provide a summary of any recent cases, new legislation and regulations, policy announcements, trends and developments in renewables in your jurisdiction.

The government published its Ten Point Plan and the Energy White Paper in Q4 2020, the Smart Systems and Flexibility Plan in July 2021 and the Net Zero Strategy in October 2021, setting out its plan for the energy transition, including developing a smart system framework to build a flexible grid and allocating further funding for offshore wind, hydrogen and other renewables investments – all to drive its net-zero energy system. The Ten Point Plan and the Energy White Paper are discussed in detail in question 1.3.

However, the government's commitment to renewables is currently subject to geopolitical strains including following the Russian invasion of Ukraine, changing the debate to whether energy security should be prioritised over energy transition. Furthermore, in July 2022, the English High Court ruled that the government's Net Zero Strategy was unlawful because it provided insufficient detail on how the target would be met. The court ordered ministers to publish an updated strategy by the end of March 2023.

The case of *R (on the application of Gravis Solar 1 Ltd) v Gas and Electricity Markets Authority* [2021] EWHC 490 concerned Ofgem's decision to withdraw a company's Renewable Obligation accreditation. The company in question had provided inaccurate information to obtain the accreditation. The English High Court ruled that, in the circumstances, Ofgem had acted proportionately in deciding to withdraw the accreditation.

In *Havant Biogas Ltd & Ors v Gas & Electricity Markets Authority* [2021] EWHC 84, the claimants succeeded in their judicial review claim to quash a decision by Ofgem not to register them as part of a subsidy scheme promoting renewable energy.

Renewable energy made up 45.5% of the UK's electricity generation in Q1 2022, breaking all previous UK quarterly records. If the UK government continues to promote investment in renewable energy technology, we expect this record to be broken repeatedly in the short term. We also expect that electric vehicles, residential solar and battery storage will continue to gain prominence in the UK as a medium for the ongoing transformation of the energy sector.

Oliver Irwin advises lenders and sponsors on the development and financing of cross-border projects across a broad range of industries, many of which are the first of its kind in their industry. He has significant experience advising on multi-sourced project financings involving export credit agencies, multilaterals and development finance institutions. He is also a regular speaker at industry conferences. *IFLR1000* has identified Oliver as a "Rising Star" or "Highly Regarded" every year since 2013, and he has been ranked by *Chambers UK* each year since 2012. He is ranked as a "Next Generation Partner" for Projects, Energy & Natural Resources: Infrastructure in *The Legal 500 United Kingdom* (2018–2021) and was nominated by in-house counsel and peers to appear in Euromoney's 2015, 2016 and 2017 "Rising Stars" Expert Guides. Oliver was recognised by *Law360* as a 2019 MVP for Project Finance and serves on *Law360*'s 2020 Project Finance Editorial Advisory Board (2020–2021).

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Robert Meade acts on international disputes in the energy sector, as well as disputes related to infrastructure, construction and international trade. His experience includes representing clients on construction disputes concerning renewable power projects and in relation to issues arising under CfDs. He has also acted on UK public procurement disputes and related judicial review challenges. Robert was recognised as a "Rising Star" in *The Legal 500*'s 2019 International Arbitration Powerlist: United Kingdom and described as "*one of the most promising young counsel on the London scene*".

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