

THE RENEWABLE
ENERGY LAW
REVIEW

Editor
Karen B Wong

THE LAWREVIEWS

THE RENEWABLE
ENERGY LAW
REVIEW

Reproduced with permission from Law Business Research Ltd
This article was first published in September 2018
For further information please contact Nick.Barette@thelawreviews.co.uk

Editor
Karen B Wong

THE LAWREVIEWS

PUBLISHER

Tom Barnes

SENIOR BUSINESS DEVELOPMENT MANAGER

Nick Barette

BUSINESS DEVELOPMENT MANAGERS

Thomas Lee, Joel Woods

SENIOR ACCOUNT MANAGER

Pere Aspinall

ACCOUNT MANAGERS

Sophie Emberson, Jack Bagnall

PRODUCT MARKETING EXECUTIVE

Rebecca Mogridge

RESEARCHER

Keavy Hunnigal-Gaw

EDITORIAL COORDINATOR

Gavin Jordan

HEAD OF PRODUCTION

Adam Myers

PRODUCTION EDITORS

Anne Borthwick and Robbie Kelly

SUBEDITOR

Janina Godowska

CHIEF EXECUTIVE OFFICER

Paul Howarth

Published in the United Kingdom
by Law Business Research Ltd, London
87 Lancaster Road, London, W11 1QQ, UK
© 2018 Law Business Research Ltd
www.TheLawReviews.co.uk

No photocopying: copyright licences do not apply.

The information provided in this publication is general and may not apply in a specific situation, nor does it necessarily represent the views of authors' firms or their clients. Legal advice should always be sought before taking any legal action based on the information provided. The publishers accept no responsibility for any acts or omissions contained herein. Although the information provided is accurate as of July 2018, be advised that this is a developing area.

Enquiries concerning reproduction should be sent to Law Business Research, at the address above.

Enquiries concerning editorial content should be directed
to the Publisher – tom.barnes@lbresearch.com

ISBN 978-1-912228-05-8

Printed in Great Britain by
Encompass Print Solutions, Derbyshire
Tel: 0844 2480 112

THE LAWREVIEWS

THE ACQUISITION AND LEVERAGED FINANCE REVIEW
THE ANTI-BRIBERY AND ANTI-CORRUPTION REVIEW
THE ASSET MANAGEMENT REVIEW
THE ASSET TRACING AND RECOVERY REVIEW
THE AVIATION LAW REVIEW
THE BANKING LITIGATION LAW REVIEW
THE BANKING REGULATION REVIEW
THE CARTELS AND LENIENCY REVIEW
THE CLASS ACTIONS LAW REVIEW
THE CONSUMER FINANCE LAW REVIEW
THE CORPORATE GOVERNANCE REVIEW
THE CORPORATE IMMIGRATION REVIEW
THE DISPUTE RESOLUTION REVIEW
THE DOMINANCE AND MONOPOLIES REVIEW
THE EMPLOYMENT LAW REVIEW
THE ENERGY REGULATION AND MARKETS REVIEW
THE ENVIRONMENT AND CLIMATE CHANGE LAW REVIEW
THE EXECUTIVE REMUNERATION REVIEW
THE FINANCIAL TECHNOLOGY LAW REVIEW
THE FOREIGN INVESTMENT REGULATION REVIEW
THE FRANCHISE LAW REVIEW
THE GAMBLING LAW REVIEW
THE GOVERNMENT PROCUREMENT REVIEW
THE HEALTHCARE LAW REVIEW
THE INITIAL PUBLIC OFFERINGS LAW REVIEW
THE INSOLVENCY REVIEW
THE INSURANCE AND REINSURANCE LAW REVIEW
THE INTELLECTUAL PROPERTY AND ANTITRUST REVIEW
THE INTELLECTUAL PROPERTY REVIEW
THE INTERNATIONAL ARBITRATION REVIEW
THE INTERNATIONAL CAPITAL MARKETS REVIEW
THE INTERNATIONAL INVESTIGATIONS REVIEW

THE INTERNATIONAL TRADE LAW REVIEW
THE INVESTMENT TREATY ARBITRATION REVIEW
THE INWARD INVESTMENT AND INTERNATIONAL TAXATION REVIEW
THE ISLAMIC FINANCE AND MARKETS LAW REVIEW
THE LABOUR AND EMPLOYMENT DISPUTES REVIEW
THE LENDING AND SECURED FINANCE REVIEW
THE LIFE SCIENCES LAW REVIEW
THE MERGER CONTROL REVIEW
THE MERGERS AND ACQUISITIONS REVIEW
THE MINING LAW REVIEW
THE OIL AND GAS LAW REVIEW
THE PATENT LITIGATION LAW REVIEW
THE PRIVACY, DATA PROTECTION AND CYBERSECURITY LAW REVIEW
THE PRIVATE COMPETITION ENFORCEMENT REVIEW
THE PRIVATE EQUITY REVIEW
THE PRIVATE WEALTH AND PRIVATE CLIENT REVIEW
THE PRODUCT REGULATION AND LIABILITY REVIEW
THE PROFESSIONAL NEGLIGENCE LAW REVIEW
THE PROJECTS AND CONSTRUCTION REVIEW
THE PUBLIC COMPETITION ENFORCEMENT REVIEW
THE PUBLIC-PRIVATE PARTNERSHIP LAW REVIEW
THE REAL ESTATE LAW REVIEW
THE REAL ESTATE M&A AND PRIVATE EQUITY REVIEW
THE RESTRUCTURING REVIEW
THE SECURITIES LITIGATION REVIEW
THE SHAREHOLDER RIGHTS AND ACTIVISM REVIEW
THE SHIPPING LAW REVIEW
THE SPORTS LAW REVIEW
THE TAX DISPUTES AND LITIGATION REVIEW
THE TECHNOLOGY, MEDIA AND TELECOMMUNICATIONS REVIEW
THE THIRD PARTY LITIGATION FUNDING LAW REVIEW
THE TRADEMARKS LAW REVIEW
THE TRANSFER PRICING LAW REVIEW
THE TRANSPORT FINANCE LAW REVIEW

www.TheLawReviews.co.uk

ACKNOWLEDGEMENTS

The publisher acknowledges and thanks the following law firms for their learned assistance throughout the preparation of this book:

ASSEGAF HAMZAH & PARTNERS

BAKER & MCKENZIE

BIRD & BIRD

BROAD & BRIGHT

CLEARY GOTTLLIEB STEEN & HAMILTON LLP

CMS RUSSIA

COVINGTON & BURLING LLP

DETAIL COMMERCIAL SOLICITORS

HFW

LEE & KO

LEXCOMM VIETNAM LLC

MATTOS FILHO, VEIGA FILHO, MARREY JR E QUIROGA ADVOGADOS

MILBANK, TWEED, HADLEY & MCCLOY LLP

NAUTADUTILH

SHAHID LAW FIRM

WOLF THEISS RECHTSANWÄLTE GMBH & CO KG

CONTENTS

PREFACE.....	v
<i>Karen B Wong</i>	
Chapter 1 AUSTRALIA.....	1
<i>Simon Adams and Jo Garland</i>	
Chapter 2 AUSTRIA.....	11
<i>Stefan Lampert</i>	
Chapter 3 BELGIUM.....	18
<i>Laura De Deyne, Roeland Van Cleemput and Vera Van Thuyne</i>	
Chapter 4 BRAZIL.....	28
<i>Pablo Sorj, Fabiano Ricardo Luz de Brito and Ana Carolina Katlauskas Calil</i>	
Chapter 5 CHINA.....	43
<i>Libin Zhang</i>	
Chapter 6 EGYPT.....	55
<i>Donia El-Mazgbouny</i>	
Chapter 7 INDONESIA.....	64
<i>Kanya Satwika, Tracy Tania, M Insan Pratama and Theodora Saputri</i>	
Chapter 8 ITALY.....	76
<i>Marco D'Ostuni, Luciana Bellia and Giuliana D'Andrea</i>	
Chapter 9 JAPAN.....	88
<i>Naoaki Eguchi, Naoki Ishikawa and Fei Zhou</i>	
Chapter 10 KOREA.....	100
<i>Tong Keun Seol, Dong Eun Kim and Tom Shin</i>	

Contents

Chapter 11	NIGERIA.....	108
	<i>Dolapo Kukoyi and Adeyemi Esan</i>	
Chapter 12	RUSSIA.....	124
	<i>Thomas Heidemann and Anastasia Makarova</i>	
Chapter 13	SOUTH AFRICA.....	134
	<i>Lido Fontana and Sharon Wing</i>	
Chapter 14	SPAIN.....	142
	<i>Hermenegildo Altozano</i>	
Chapter 15	UNITED KINGDOM.....	154
	<i>John Dewar and Kilian de Cintré</i>	
Chapter 16	UNITED STATES.....	162
	<i>Karen B Wong and Henry T Scott</i>	
Chapter 17	VIETNAM.....	174
	<i>Nguyen Viet Ha and Nguyen Hong Hai</i>	
Appendix 1	ABOUT THE AUTHORS.....	185
Appendix 2	CONTRIBUTING LAW FIRMS' CONTACT DETAILS.....	199

PREFACE

I am incredibly honoured to be the editor of the first edition of *The Renewable Energy Law Review*. Little did I know, working as a young associate in the ‘early days’ of renewable energy projects, that, fast-forward to 30 years later, the industry would be as large and as active as it is today across the globe. As a US-based partner at Milbank practising in the energy industry, I see different political environments, tax and other incentives in place in our 50 states and, having worked on multiple international projects on four different continents, I know that the regimes across the world are equally unique. This compendium has been formulated to provide you with a good overview of the legal framework and current status and challenges in structuring, financing and investing in renewable energy projects in the selected jurisdictions.

Whether you are someone already active in this sector or merely interested in learning more about the policies, legal structures and state of play in the renewable energy industry globally, I hope that this guide will aid you in your efforts as a participant in an industry that is increasing new sources of energy projects with fewer carbon emissions. As a young, naive and idealistic student applying to law school, I had a genuine desire to acquire the necessary skills and tools of a profession that would empower me to change the world. Frankly, I never imagined that I would have a legal career – to date spanning over three decades – that would offer me the opportunity to do just that in my capacity as an attorney facilitating transactions that literally help to keep our skies bluer and our air cleaner globally.

Karen B Wong

Milbank, Tweed, Hadley & McCloy LLP

Los Angeles

July 2018

UNITED KINGDOM

*John Dewar and Kilian de Cintré*¹

I INTRODUCTION

The UK's energy sector continues to undergo significant change. The 2009 Renewable Energy Directive set a target for the UK to achieve 15 per cent of its energy consumption from renewable sources by 2020. To bolster the UK's efforts in achieving this, the Energy Act 2013 (the Energy Act) implemented key aspects of Electricity Market Reform (EMR) – a policy initiative pioneered by the UK government to mobilise £110 billion of capital investment required by 2020 to ensure a reliable and diverse supply of low-carbon electricity. Such reforms are vital, as the UK has seen significant power plant closures in recent years; the Energy Act was aimed at ensuring both investment in infrastructure, alongside decarbonisation as more power plants are decommissioned in the UK. Around a fifth of the capacity that was available in 2011 will close by the end of this decade, and demand for electricity is set to increase as major sectors such as transport and heat are electrified.

To allay fears that the EMR target would be lost on the UK's exit from the EU, in June 2016, the Conservative government announced the ambitious (but legally binding) target of reducing carbon emissions by 57 per cent by 2030. These targets are informed by the UK's need to develop approximately 59GW of new net capacity by 2025, with as much as 33GW coming from renewables and the remaining 26GW coming from conventional thermal power. In an effort to promote private investment in the development of large-scale infrastructure projects (and in particular, the development of low-carbon technology) in the UK, the UK government has instituted a series of programmes that are specifically designed to stabilise the economics of financing for such projects.

II THE YEAR IN REVIEW

The UK's current electricity mix has changed substantially, and rapidly, over the past couple of years. Most notable is an increase in renewable-generated electricity (a trend in line with global patterns). In 2017, for the first time, Britain generated more electricity from renewable energy than from gas and coal. Renewable sources (wind, solar, hydro and biomass) together contributed just over 29 per cent of electricity generation, up from a quarter in 2016. In comparison, only 21 per cent came from nuclear power. The latest Digest of United Kingdom Energy Statistics, published in 2017, reported that in 2016, 8.9 per cent of total energy consumption came from renewable sources (up 8.2 per cent in 2015). Renewable

¹ John Dewar is a partner and Kilian de Cintré is a senior associate at Milbank, Tweed, Hadley & McCloy LLP.

electricity represented 24.6 per cent of total generation, renewable heat 6.2 per cent of overall heat, and renewables in transport 4.5 per cent. And, for the second year running, solar photovoltaics was the leading technology in capacity terms at 11.9GW, representing a third of total electricity capacity.

During November 2016, the government published its plan to upgrade UK energy infrastructure, reaffirming its commitment to spend £730 million of annual support on renewable electricity projects, also setting out proposals for the next steps to phase out electricity generation from unabated coal-fired power stations within the next decade. This long-term plan is intended to provide confidence to investors that the UK is open to investment in new, cleaner energy capacity.

The second allocation process for the Contract for Difference (CfD) scheme for renewable generators began in April 2017, aiming to provide support for projects to be delivered between 2021 and 2023. There will be no allocation of CfD budget for onshore wind or solar, consistent with the government's view that these are mature or politically undesirable technologies that should no longer be provided with subsidies. The only technologies supported will be offshore wind, certain forms of biomass or waste-fuelled plant (e.g., advanced conversion technologies, anaerobic digestion, biomass with CHP), wave, tidal stream and geothermal.

In June 2016, the UK voted to leave the European Union. Since then, the Conservative government has been negotiating with the EU, and has tabled the European Union (Withdrawal) Bill, which will replace the European Communities Act 1972 and make other provisions in connection with the withdrawal of the UK from the EU. It is the primary piece of legislation that will determine the UK's position in relation to current EU legislation post exit. It also aims to remove the jurisdiction of the European Court of Justice over the UK courts. It will transfer all current EU law into UK domestic law, so that as smooth a transition as possible is achieved in the immediate aftermath of exiting the EU. It is seen as 'one of the largest legislative projects ever undertaken in the UK' by the House of Commons. In addition to the legislative overhaul and regulatory uncertainty, the vote to leave the EU creates uncertainty over the continued access of the UK to European Investment Bank funding, which until the vote had been an important source of funding for smaller-scale UK projects. During the transition period, it is likely that the UK will continue to be subject to EU procurement directives (such as the Public Contracts Regulations 2015 SI 2015/102). This means that organisations under the rules must continue advertising and awarding public contracts in accordance with the EU directives. It is unclear what the position will be regarding procurement post exit and post transition period, but it is unlikely that Parliament will repeal the relevant legislation unless a pressing need arises.

III THE POLICY AND REGULATORY FRAMEWORK

i The policy background

Ofgem E-Serve administers several environmental schemes and consumer and social programmes on behalf of the government, including schemes related to renewable energy.

The Feed-in Tariffs (FIT) scheme is a government programme designed to promote the uptake of renewable and low-carbon electricity generation technologies. Introduced on 1 April 2010, the scheme requires participating licensed electricity suppliers to make payments on both generation and export from eligible installations. The FIT scheme is

available for anyone who has installed, or is looking to install, solar photovoltaic, wind, micro combined heat and power, hydro or anaerobic digestion technology types up to a capacity of 5MW, or 2kW for micro combined heat and power.

The provision of CfDs are one of the key policy measures to incentivise new low-carbon electricity generation. The provision of CfDs is intended to stabilise revenues for investors in low-carbon electricity generation projects such as renewables, by helping developers secure the large upfront capital costs for low-carbon infrastructure. The CfD is a quasi-power purchase agreement. Generators with a CfD will sell their electricity into the market in the normal way and remain active participants in the wholesale electricity market. The CfD then pays the difference between an estimate of the market price for electricity and an estimate of the long-term price needed to bring forward investment in a given technology (the strike price). When a generator sells its power, if the market price is lower than needed to reward investment, the CfD pays a top-up. However, if the market price is higher than needed to reward investment, the contract obliges the generator to pay back the difference. In this way, CfDs stabilise returns for generators at a fixed level, over the duration of the contract. This removes the generator's long-term exposure to electricity price volatility, substantially reducing the commercial risks faced by these projects. The Energy Act includes a provision whereby a new UK government-owned company (the Low Carbon Contracts Company, or LCCC) will act as the counterparty to eligible generators under the CfD. This mechanism was in direct response to concerns about the 'credit' behind the CfD economics. Although a CfD is a private law contract between a low carbon electricity generator and the LCCC, the cost of CfDs will ultimately be met by consumers via a levy on electricity suppliers. Two offshore wind projects were awarded CfDs at £57.50/MWh in the 2017 round. A third round of CfDs is planned for spring 2019, where up to £557 million will be made available for investment.

The Renewable Obligation (RO) scheme is one of the main support mechanisms for large-scale renewable electricity projects in the UK. Smaller-scale generation is mainly supported through the FIT scheme. The RO came into effect in 2002 in England and Wales, and Scotland, followed by Northern Ireland in 2005. The scheme places an obligation on UK electricity suppliers to source an increasing proportion of the electricity they supply from renewable sources. The RO scheme closed to all new generating capacity on 31 March 2017.

The Climate Change Levy (CCL) was introduced in 2001 and is a tax on UK business, collected by energy suppliers, designed to encourage energy efficiency, reduce carbon emissions and promote energy from renewable sources. Businesses were previously able to claim an exemption if they could show a levy exemption certificate, showing that they bought energy from qualifying renewable energy sources. In the July 2015 budget, the UK government announced the removal of CCL exemption for electricity generated from renewable sources from 1 August 2015.

The Offtaker of Last Resort (OLR) is a government scheme that aims to promote the availability of power purchase agreements (PPA). It is intended as a last resort to help renewable generators who cannot get a PPA through the usual commercial means. The OLR scheme is part of the government's wider programme on EMR.

ii The regulatory framework

The Department of Energy and Climate Change (DECC), formed in 2008, was the ministerial department responsible for making decisions, setting policy and implementing legislation affecting the electricity sector. The corresponding government ministry in Northern Ireland

is the Department of Enterprise, Trade and Investment. Following the EU Referendum held on 23 June 2016, DECC was merged together with the Department for Business and Innovation to create the Department for Business, Energy and Industrial Strategy (BEIS).

The BEIS works closely with and is supported by other agencies and public bodies, including the Gas and Electricity Markets Authority (GEMA) and the Office of Gas and Electricity Markets (Ofgem).

GEMA has primary responsibility for regulation of the energy sector. GEMA's powers and duties are largely provided for in statute (such as the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Acts of 2004, 2008, 2010 and 2011), as well as arising from directly effective European Community legislation. GEMA's principal objective is to protect the interests of existing and future consumers in relation to gas conveyed through pipes, and electricity conveyed by distribution or transmission systems. The interests of these consumers are their interests taken as a whole, including their interests in the reduction of greenhouse gases in the security of the supply of gas and electricity to them. GEMA is constituted of individuals who are appointed by the Secretary of State for specified terms of not less than five years.

GEMA delegates its functions to Ofgem and provides it with strategic direction and oversight. Ofgem is also a non-ministerial government department and an independent national regulatory authority recognised by EU Directives. Ofgem states that its principal objective is to protect the interests of existing and future electricity and gas consumers. Ofgem E-Serve, which introduces itself as the 'delivery arm of Ofgem', administers environmental schemes and consumer and social programmes on behalf of the government, including schemes related to renewable energy such as the FIT scheme, CfDs, RO, the CCL and the OLR scheme (see Section III.i for more details).

The Environment Agency is responsible for protecting and improving the environment, as well as promoting sustainable development. The role of the Environment Agency regarding electricity is limited to matters related to pollution and therefore mainly relates to conventional generation and nuclear energy.

The Energy Act (together with secondary legislation) implements key aspects of electricity market reform and is a policy initiative pioneered by the UK government to mobilise £110 billion of capital investment required by 2020 to ensure a reliable and diverse supply of low-carbon electricity. This is the applicable regulatory framework for the developing, financing, operating and selling of power and environmental attributes from renewable projects, and the regulation of CfDs.

The RO scheme has created a market for the sale of environmental attributes. Through the RO scheme, the government places an annual obligation on licensed electricity suppliers to source a proportion of the electricity they supply to customers from renewable energy sources. These suppliers are required to meet their individual obligation target by purchasing Renewable Obligation Certificates (ROCs) from renewable generators directly, from the ROCs market or by paying a set amount to government by way of a penalty. Through this mechanism, ROCs have a monetary value (the buyout price for the 2018–2019 ROCs is £47.22 per ROC) and generators have been able to sell (among other things) the electricity generated by their renewable generating stations (and associated ROCs) to licensed electricity suppliers.

A generation licence is required for the sale of electricity and this stipulates compliance with the relevant industry codes. In particular, all licence holders (for example, transmission, generation, supply and distribution) must be registered within the Balancing and Settlement

Code. Certain environmental, health and safety, and electricity quality measures must also be in place for the construction and operation of systems that generate and supply electricity (Electricity, Safety, Quality and Continuity Regulations 2002 (as amended)); these will depend on the relevant renewable project in question.

IV RENEWABLE ENERGY PROJECT DEVELOPMENT

i Project finance transaction structures

As with all energy and infrastructure projects, the financing structure for renewable energy projects depends on the nature of the client and the type of project. In a straightforward project, for example, the funding may come from a combination of equity investment or debt finance (including in some cases, mezzanine finance), through a single lender or multiple lenders and on a non- or limited-recourse basis. Senior lenders can include commercial banks familiar with project financings, export credit agencies, multilaterals such as the European Investment Bank or IFC and the Green Investment Bank. The UK Green Investment Group was launched in October 2012 (at the time, as a non-departmental public body of the BEIS and was sold to Macquarie Group Limited in August 2017) and has since committed over £15 billion of financing to 100 green infrastructure projects, committing £3.4 billion to the UK's green economy. It is the first investment bank worldwide to invest solely in green infrastructure. The funds have been used to leverage private-sector capital to fund projects in priority sectors from offshore wind to waste and non-domestic energy efficiency.

Private equity funds may be willing to take construction risk and provide additional funding ranking senior to pure equity, which can be contributed at a senior or mezzanine level (depending on the particular project).

Where there are unproven technologies or other uncommon risks that traditional financiers are not willing to take, or where the use of traditional project financing would prove too expensive, certain other sources of funding have been available, such as the EU NER300 fund, direct grants from the government and, in Scotland, the Renewable Energy Investment Fund administered by the Scottish Investment Bank.

Once the 'risky' construction phase period has ended and projects are operational, further financing structures become available in addition to those described above. Examples of these are refinancing of construction-phase bank financings by way of capital market instruments and institutional investors such as pension and insurance funds, who do not customarily have an appetite for construction risk, but who look favourably at long-term debt financings with proven and stable cash flows.

In domestic UK project financings, the intention of the parties (and the usual requirement of all types of lenders) is to create security over all, or substantially all, of a project company's assets. Project finance borrowing vehicles are normally special purpose vehicles (SPVs) with no pre-existing businesses, rights or liabilities beyond those associated with the project. Security is normally granted by way of a general security agreement, such as a debenture, which covers all the SPV's rights and assets (both pre-existing and after-acquired) or (less commonly) by way of separate security agreements for each type of asset. Lenders will look to achieve 'going concern' security on a UK-based project or asset. This is aimed at putting them in a position of default, stepping in if necessary and operating (or selling) the relevant asset as a going concern. Basic legal security is normally insufficient to achieve this type of outcome; conventional legal security is often supplemented by bespoke contractual arrangements providing lenders with specific notice, 'cure' and 'step-in' rights. Where (as

is very often the case) the viability of a project as a going concern is dependent upon the continuing availability to an operator or owner of permits and licences, special attention will need to be paid to the consequences of default in the wider sense – by way of example, breach of licence conditions or change of control can result in permits and licences being breached or becoming terminable. Certain types of licences and permits are, in effect, personal to the initial licence holder; contractual rights can be expressed to be non-assignable in the absence of consents. A careful analysis of the regulatory and practical conditions applicable to the application for, and maintenance of, permits, licences and key contracts is necessary and will differ on a case-by-case basis.

The main types of securities under English law are mortgages (equitable and legal), charges (fixed and floating), assignments (broadly equivalent to charges), pledges and liens. Mortgages, charges and assignments are the most frequently used forms of security. Assignments may be legal or equitable; the process for enforcement of the two types of security differs. A debenture will include a range of mortgages, charges and assignments depending on the nature of the security assets. Debentures can create legal mortgages and fixed and floating charges over all the borrower's assets, if agreed, and as set out in the debenture. The debenture is executed as a deed.

ii Distributed and residential renewable energy

Underpinned by general environmental concerns, technological innovation and government policy, the growth of on-site distributed generation projects has been noticeable in recent years. In particular, an uptake in residential use has been seen, with very small-scale projects operated and maintained by residential end users evident across the country. Similarly, businesses and public sector institutions continue to install their own generation projects, whether that be high-street stores, office blocks or public-sector services buildings, such as hospitals.

The types of technologies seen in the residential sector include solar photovoltaic panels, small wind turbines, natural-gas-fired fuel cells and emergency backup generators. In the commercial and industrial sectors, the same technologies exist in addition to hydropower, biomass combustion, municipal solid waste incineration, natural gas or biomass-fuelled fuel cells and reciprocating combustion engines. The uses of such distribution generation projects and the ownership and offtake structure depend largely on the user and their needs. For example, if a hospital has a system, it will seek high reliability and thus high quality, perhaps at the expense of cost. On the flip side, industrial plants may prioritise a low cost system over other factors.

Recently, microgrids have emerged as part of a number of solutions for the UK's transition from a conventional energy system to one fit for the 21st century and beyond, responsive to changing needs and desires, namely the pursuit of low-cost, efficient energy that has minimal environmental impact. The UK government in particular has encouraged microgrids because, as they work locally, they can be disconnected from the national grid to operate independently where necessary. The importance of their independence cannot be understated, namely because, in the event of a disturbance, microgrids can be isolated to minimise greater disruption. For that reason they are an attractive option for small communities. An example of a scheme is the Flexible Plug and Play initiative, introduced in 2012. This three-year programme delivered cheaper and faster distributed generation connections, as well as enabling such distribution schemes to become active, where previously they were thought to be unfeasible.

The nature of distributed generation is that it allows for self-consumption, offering significant consumer benefits in terms of economics. However, it is particularly important in this context that consumers fully understand the legal backdrop of any electricity generated, especially if they intend to sell the excess electricity generated (e.g., gaining FIT payments). Not only is compliance with the applicable regulations imperative, but there are a number of agreements and contracts that need to be put in place by the distributor, meaning in the residential sector legal and professional advice must be sought, adding to expense. In terms of property rights, it may be advisable for those involved to ensure they are sufficiently protected by obtaining options for leases and options for easements. In addition, the effect of Brexit is unknown, and this uncertainty has a particular impact on distributed generation, an area partially regulated by the European Union.

At the end of 2016, there were 27 installed energy storage projects in the UK, with a total capacity of around 33GWh. These storage projects consist in the majority of lithium-ion battery, lead-acid battery, open-loop pumped hydro storage, closed-loop pumped hydro storage and modular compressed storage. Electricity storage is treated as a form of electricity generation and, as such, the applicable legal framework to electricity storage is currently the same as that applicable to electricity generation.

The classification of electricity storage as generation (and therefore the application of the legal framework applicable to generators) has been seen to be a significant hurdle to the development of energy storage projects in the UK; this has been acknowledged by Ofgem, which has committed to work together with the government to provide greater regulatory clarity. Some of the key concerns are that certain licensed operators, such as distribution licence holders, are restricted from holding a generation licence and therefore from operating electricity storage. The requirement for electricity storage operators to hold a generation licence is administratively burdensome for the operators, as it imposes on them all the regulations and codes that apply to electricity generators. In addition to the above, the current regulatory regime also treats electricity storage operators as consumers as well as electricity generators, resulting in electricity storage operators being charged double for using the electricity grid – once as a consumer when electricity is taken from the grid for storage and again as a generator when exporting electricity to the grid (they also potentially face double-charging of various government levies to fund low-carbon incentive schemes where the levies are themselves added to electricity costs).

iii Non-project finance development

In the UK, the divide between conventional project finance and the bond and leveraged finance markets continues to narrow. The market saw a continuation of diversification of both sources and types of project-related debt. As with the project bonds market, the trend comes in part from the United States; 2016–2018 has seen a number of infrastructure and energy sponsors experimenting with Term Loan B structures – sometimes as refinancing tools, sometimes to sit alongside conventional financings or less conventional financings – for example, inventory and receivables financings.

There are no legal requirements that apply exclusively to project companies seeking to issue bonds or similar capital markets instruments. Any project company seeking to issue debt instruments (securities) on the London Stock Exchange (LSE) must comply with the Listing Rules of the UK Listing Authority (UKLA) (the Listing Rules). The UKLA, a division of the Financial Conduct Authority, is the body responsible for regulating all securities listed on the LSE. The Listing Rules contain (1) the rules and regulations for listing debt

securities, and (2) the continuing obligations that apply to issuers and bondholders for the duration of the listing. The Listing Rules cover principles ranging from corporate governance and executive remuneration to accounting standards and full disclosure of information to prospective investors. Debt securities admitted to the Main Market of the LSE must be listed in accordance with Chapters 2 and 17 of the Listing Rules. Debt securities admitted to the Professional Securities Market must be listed in accordance with Chapter 4. All debt securities admitted to trading must comply with the LSE's Admission and Disclosure Standards and the relevant Disclosure and Transparency Rules.

Rules may differ according to the issuer's market sector. Rules may also differ according to the issuer's investor base. For example, an issuer will be subject to more stringent obligations if marketing its securities to retail investors as opposed to solely professional investors.

V RENEWABLE ENERGY MANUFACTURING

As the EU is a customs union, UK companies can buy most goods from other member countries without restrictions – although VAT and excise duty will normally still apply. If a UK company imports from outside the EU, it may have to comply with import licensing requirements and with common customs tariffs that apply across the EU. Apart from the general restrictions concerning materials that are deleterious to health and safety and the environment, there are no legal restrictions or controls that apply exclusively to importing construction equipment. It is not yet known whether the UK will remain part of the EU Customs Union following the UK's exit from the EU on 29 March 2019.

VI CONCLUSIONS AND OUTLOOK

As the UK emerges from the economic slowdown and moves into a period of economic growth, there is considerable demand for upgrading existing infrastructure or investing in new, greenfield projects. The Conservative government expects that over the next decade to 2027, total public and private investment in the sector is expected to reach around £600 billion. Already, public and private infrastructure investment has gradually increased over the past three decades (since 2010, 4,500 infrastructure projects have been delivered). The two largest sectors, energy (which boasts investment of £191,338.5 million from 2017/2018 to 2020/2021) and transport (£135,276.9 million from 2017/2018 to 2020/2021), account for 70 per cent of the infrastructure pipeline's total value.

The UK government's commitments under the Paris Climate Agreement, together with its obligations under the 2009 Renewable Energy Directive, coupled in turn with the political and legislative uncertainty resulting from the UK's referendum vote to exit the EU, are likely to be biggest drivers of change in the renewables energy market in the short and medium term.

ABOUT THE AUTHORS

JOHN DEWAR

Milbank, Tweed, Hadley & McCloy LLP

John Dewar is a partner in the London office of Milbank, Tweed, Hadley & McCloy LLP and a member of the firm's global projects, energy and infrastructure finance group. John is widely recognised as a leading individual in his field by a number of journals, among them: *Chambers UK* (which designated him among the first tier of project finance lawyers in the UK), *Chambers Global*, *The Legal 500*, and *Who's Who Legal: Project Finance*. He has built an extremely broad practice and outstanding reputation for advising on the most innovative and significant 'market-first' transactions around the world. His practice focuses on advising parties in the development and financing of oil and gas, natural resources, independent power, telecommunications, satellite and other infrastructure projects. John has advised on many renewable energy projects, onshore and offshore wind, PV and CSP solar, biomass and waste-to-energy. He has particular expertise in multi-sourced financings, including those involving multilateral and export credit agencies and Islamic institutions.

KILIAN DE CINTRÉ

Milbank, Tweed, Hadley & McCloy LLP

Kilian de Cintré is a senior associate in the London office of Milbank, Tweed, Hadley & McCloy LLP and is a member of the firm's global projects, energy and infrastructure finance group. He has advised lenders and sponsors on a number of international projects and energy and infrastructure financings specialising in multi-sourced financings involving export credit agencies, multilaterals and commercial banks. Kilian has been involved in many 'market-first' and 'first-in-country' deals across many industries, such as renewables (including solar, wind and biomass projects), natural resources, oil and gas, independent power and infrastructure.

MILBANK, TWEED, HADLEY & MCCLOY LLP

10 Gresham Street
London EC2V 7JD
United Kingdom
Tel: +44 207 615 3000
Fax: +44 207 615 3100
jdewar@milbank.com
kdecintre@milbank.com
www.milbank.com

Law
Business
Research

ISBN 978-1-912228-05-8