

THE PROJECTS AND
CONSTRUCTION
REVIEW

SEVENTH EDITION

Editor
Júlio César Bueno

THE LAWREVIEWS

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The Projects and Construction Review

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For further information please email
Nick.Barette@thelawreviews.co.uk

PUBLISHER
Gideon Robertson

SENIOR BUSINESS DEVELOPMENT MANAGER
Nick Barette

BUSINESS DEVELOPMENT MANAGERS
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PREFACE

La meilleure façon d'être actuel, disait mon frère Daniel Villey, est de résister et de réagir contre les vices de son époque. Michel Villey, *Critique de la pensée juridique modern* (Paris: Dalloz, 1976).

This book has been structured following years of debates and lectures promoted by the International Construction Law Committee of the International Bar Association (ICP), the International Academy of Construction Lawyers (IACL), the Royal Institution of Chartered Surveyors (RICS), the Chartered Institute of Arbitrators (CIArb), the Society of Construction Law (SCL), the Dispute Resolution Board Foundation (DRBF), the American Bar Association's Forum on the Construction Industry (ABA), the American College of Construction Lawyers (ACCL), the Canadian College of Construction Lawyers (CCCL) and the International Construction Lawyers Association (ICLA). All of these institutions and associations have dedicated themselves to promoting an in-depth analysis of the most important issues related to projects and construction law practice and I thank their leaders and members for their important support in the preparation of this book.

Project financing and construction law are highly specialised areas of legal practice. They are intrinsically functional and pragmatic and require the combination of a multitasking group of professionals – owners, contractors, bankers, insurers, brokers, architects, engineers, geologists, surveyors, public authorities and lawyers – each bringing their own knowledge and perspective to the table.

I am glad to say that we have a contribution from yet another new jurisdiction in this year's edition: Uzbekistan. Although there is an increased perception that project financing and construction law are global issues, the local flavour offered by leading experts in 22 countries has shown us that to understand the world we must first make sense of what happens locally; to further advance our understanding of the law we must resist the modern view (and vice?) that all that matters is global and what is regional is of no importance. Many thanks to all the authors and their law firms who graciously agreed to participate.

Finally, I dedicate this seventh edition of *The Projects and Construction Review* to SCL International, a worldwide federation or alliance of national or regional Society of Construction Law (SCL) organisations that aim to foster the academic and practical legal

aspects of the construction industry. We celebrate the success of SCL International's Biennial Conference in São Paulo in September 2016, but also the upcoming conferences in New Delhi (2017) and Chicago (2018). I thank the leaders of SCL International for all their support in the organisation of these events.

Júlio César Bueno

Pinheiro Neto Advogados

São Paulo

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PINHEIRO NETO ADVOGADOS

Rua Hungria 1100
01455-906 São Paulo
Brazil
Tel: +55 11 3247 8667
Fax: +55 11 3247 8600
Mobile: +55 11 98214 7443
jbueno@pn.com.br
www.pinheironeto.com.br

JÚLIO CÉSAR BUENO

Pinheiro Neto Advogados

Júlio César Bueno has been a partner at Pinheiro Neto Advogados since 2001. He is based in São Paulo and has considerable national and international experience focusing on the practice of construction law and engineering contracts (including the use of FIDIC standard forms), project finance, public procurement, as well on arbitration and mediation proceedings, and dispute boards.

He represents some of the world's largest organisations (owners, multilateral agencies, financial institutions, contractors and developers) in their global infrastructure and construction projects located throughout Brazil and the rest of Latin America, and in Africa. He assists clients across the entire project spectrum and recent examples include gas facilities, power plants (nuclear, coal-fired, gas-fired, combined cycle and hydro), wind farms, steel manufacturing facilities, copper mining facilities, coal mining facilities and ports.

He is the president of the Brazilian Society of Construction Law. He is also a member of the board of directors of Region 2 of the Dispute Resolution Board Foundation, and a former officer of the International Bar Association's Latin American Forum and the International Construction Projects Committee. He is also a fellow of the Chartered Institute of Arbitrators and the Royal Institution of Chartered Surveyors. He is a fellow of the International Academy of Construction Lawyers, the coordinator of the Dispute Board Commission of the Center for Arbitration and Mediation (CAM/CCBC), a co-coordinator of the Brazilian Arbitration Committee's working group dealing with arbitration in infrastructure contracts, a board member of the International Construction Law Association and a member of the Mediation and Arbitration Chamber of the Institute of Engineering of São Paulo and the Brazilian Institute of Civil Procedure Law.

He holds a law degree from the University of São Paulo Law School (LLB, 1991), a master's degree from the University of Cambridge (LLM, 1995) and a doctorate from the University of São Paulo Law School (PhD, 2001). He has published several articles on matters relating to civil procedure law, energy, engineering contracts, infrastructure and construction law.

He is recommended in *Who's Who Legal* (for construction, project finance, government contracts and public procurement); *Chambers Latin America* (for construction and projects, and dispute resolution); *IFLR1000* (for project finance); by Practical Law Company (for construction and projects); and Brazilian directory *Análise Advocacia 500* (for construction and projects, dispute resolution and contracts).

INTERNATIONAL PROJECT FINANCE

*Phillip Fletcher and Andrew Pendleton*¹

As the population of the world continues to grow, global consumer demand for a full range of products increases commensurately, notwithstanding the storm of other macro-economic events and forces at play. The foundations for satisfying this demand are built in the oil and gas, natural resources, petrochemicals, telecommunications, transportation and power sectors. Recent oil and other commodity price volatility – brought about in part by a confluence of the slowdown in the Chinese economy, political disruptions in Russia, the Middle East and elsewhere, and an extraordinary expansion in oil and gas production as a result of fracking and shale technology – may give investors and developers cause for reflection, at least in the short term, but large-scale investment remains very much necessary across a broad spectrum of industries on an ongoing basis. Neither governments nor private sources on their own can meet that need in full. To be successful, investment projects have to amass funding and other commitments from a combination of public and private sector participants, and involve increasingly sophisticated financing arrangements.

As the speed of development accelerates, the scale of individual projects has had to keep pace. At the same time, uncertainty of supply has driven exploration for resources to more remote locations, often requiring innovative technology, and the cost of extracting and processing resources has therefore risen. The development of ‘mega projects’ has exacerbated the competition for funding. The result? Ever larger financings occurring at a time when traditional commercial bank sources continue to face market and regulatory constraints. As any successful sponsor must call on a widening variety of finance sources, there is a continuing need for lawyers capable of structuring the most innovative and complex transactions.

Before examining the role of project finance (and project finance lawyers) in this context, it is useful to consider the more basic question of what we actually mean by the term ‘project finance’.

I WHAT IS PROJECT FINANCE?

In essence, project finance is simply a form of secured lending involving intricate (but balanced) risk allocation arrangements, and much of the legal expertise is drawn from the discipline of banking. Transactions are characterised by lenders extending credit – often, very large amounts – to newly formed, thinly capitalised companies whose principal assets at the time of closing consist of little more than collections of contracts, licences and ambitious plans: hence the focus on prudent legal analysis.

¹ Phillip Fletcher is a partner and Andrew Pendleton is a senior associate at Milbank, Tweed, Hadley & McCloy LLP.

To reduce the discipline to its constituent parts is, however, to miss the magic – or alchemy if you prefer – of project finance: the conversion of an assortment of paper assets into a viable economic undertaking. The process is akin to creating an economic ‘ecosystem’ in which inputs are sourced and processed, and outputs are sold and consumed, with the resultant revenues allocated carefully to predetermined uses, all pursuant to contracts generally entered into before the project has even been constructed.

Project financing has evolved significantly since it emerged in its modern incarnation in the 1980s. Then, it was a tool used principally by commercial banks to finance the construction of natural gas extraction projects and power plants, largely in North America and Europe. Even when projects were financed in the southern hemisphere, lenders and sponsors were generally based in (or near) London, New York or Tokyo. In recent years, this concentration has diluted, with the increased pressure on traditional sources of credit (which is likely to be amplified by the application of the Basel III standards) providing an opportunity, and a need, for commercial lenders across Asia, the Middle East and Latin America, together with export credit agencies, multilateral development organisations and (for stronger projects) the capital markets, to plug the resultant gap. Similarly, more geographically diverse sponsors are now driving the development of projects, in some cases to provide their home markets with access to natural resources and, in others, because they are often able to supply equipment and skilled labour at competitive prices.

In virtually all regions of the world, concerns over climate change are leading to investment both in low carbon power and in energy efficiency. In some countries, such as the United Kingdom, Finland, the UAE and Turkey, this involves a renewed focus on nuclear power, but elsewhere, such as in Japan and Germany, reactions to the Fukushima Daiichi nuclear disaster are driving other types of power arrangements, with resulting demand for new gas pipeline and liquefied natural gas supply arrangements. Meanwhile, ever-increasing urbanisation globally necessitates investment in utilities as well as infrastructure. In recent years, economic growth has been particularly rapid in Brazil, India and China, leading to demand for a broad range of commodities, goods and services. Significant investment has also been seen over recent years in the CIVETS group (Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa) and other emerging economies. As has been the case throughout history, emerging markets will frequently, of course, face cyclical variances in growth and shorter-term, event-driven, volatility. Although these disruptions to stability and economic growth are inevitable, the long-term outlook for at least many emerging markets remains strong. Moreover, as the more established economies of North America and Europe come out of recession, and as US industry continues to benefit from the ‘shale revolution’ in domestic natural gas prices, one can anticipate that focus will turn again to addressing their long-postponed infrastructure needs, thereby offsetting disruptions in the emerging markets.

II THE ROLE OF A PROJECT FINANCE LAWYER

Since the nature of project financing is document-intensive, project finance lawyers play a key role in managing the process of closing deals. This entails the identification of key risks, securing consensus among the interested parties on how they are best mitigated and then properly reflecting what has been agreed in the underlying documentation.

With the expansion of project finance into new industries and regions, the attendant legal issues have become increasingly complex and the prediction of potential difficulties correspondingly more challenging. Ever-shifting market standards, coupled with the absence

of standard form documentation for projects, contribute variety. The result of this is a need for project finance lawyers with a real understanding of the borrower's business (including its susceptibility to a range of external risks – be they political, geological, economic, meteorological or anything else) and the practical detail of all aspects of the underlying project, from the security of feedstock and fuel supply to the liquidity and volatility of offtake markets to the ecological and social impact of the project on the environment in which it operates.

Even after the relevant financing and project documentation has been executed, the parties must sustain relationships and address problems through economic, political and legal change. No matter how extensive or well-drafted the legal documentation, virtually every project encounters technical or commercial problems over its life, and the solutions must fit within the agreed legal framework. Two parties can have a legitimate disagreement over the meaning or effect of a few of the words contained within a mountain of documents governing their relationships (whether simply because they have different perspectives and interests or because they have different recollections of why things were phrased as they were). Moreover, issues not contemplated at the time of signing (and not addressed in the documentation) can and do arise, often necessitating creative solutions to balance conflicting interests. The underlying economics of a project may also change when, for example, market volatility proves more extreme than originally anticipated. The secret to minimising the frequency with which any project encounters problems is a careful initial assessment of the most salient risks and a sensible approach to mitigating them.

III RISK ASSESSMENT AND ALLOCATION

Thoughtful lawyers will consider the technical, political and legal risks of an individual project before they negotiate how contentious issues should be treated. This requires degrees of familiarity with a number of different disciplines, including civil procedure, contract, property, trust, tort, equity and conflicts of laws, and with a range of financial instruments, from commercial bank loans and conventional capital markets instruments, through domestic government-funded loans and export credit and multilateral agency loans and guarantees, to a host of shariah-compliant financing structures. Using this expertise, a project finance lawyer can help the parties structure their project and its financing (and negotiate the implementing contractual documentation) in a way that is likely to be sufficiently robust to withstand long-term volatility.

Although many risks can be structured, contracted or insured away, projects, as with other commercial endeavours, are exposed to many events and circumstances that may adversely affect their economic performance, stability and even viability. In considering these matters, the lawyer will need to liaise with myriad specialist advisers, take guidance from the lenders (and sometimes the project's sponsors) and work closely with local lawyers in relevant jurisdictions – efforts that will usually culminate in the production of a comprehensive due diligence report that pulls together the key risk assessments, often presenting them with an accompanying commentary that includes ideas (drawn from past experience) for possible solutions to any problems identified.

At the inception of a project, there will, inevitably, be differing views on both the likelihood of future adverse events and their potential impact. An essential element of the lawyer's role in helping the parties to assess a project involves the analysis of the potential risks associated with the project, the way in which those risks have been allocated among the

parties and the extent to which that allocation is appropriate in the circumstances (having regard to, but without slavishly following, precedents set in comparable circumstances). This assessment may depend on whether the most material risks have been allocated sensibly to parties able to bear them under contracts that will withstand legal challenge. For example, construction risk is often allocated to engineering and equipment manufacturing firms under market-tested contractual forms featuring detailed testing and liquidated damages regimes; supply and offtake risk is generally managed through a range of firm capacity contracts, 'take or pay'-style commitments or mere supply or purchase undertakings with limited quantity or price commitments. Which of these many options makes sense in any particular context is often the key to determining the 'bankability' of a particular project.

The risk profile of a project will itself have a number of consequences in relation to the structuring of the project company's overall debt and equity arrangements. For example, power-generation projects are often awarded to sponsors by utilities or governments (who generally lower the generator's risk profile by guaranteeing to purchase both the project's power capacity and actual generation) through a competitive tendering process and are structured to ensure the lowest electricity tariffs possible. This is achieved because the lower-risk profile allows lenders to accept a higher leverage ratio and relatively low debt service coverage ratios, and agree to both longer maturities and lower margins. These features serve to offset the effects of the lower tariff and so preserve healthy equity returns for the sponsors. At the same time, however, low debt service coverage ratios and higher gearing mean that the ability of these projects to absorb the risk of increased costs or reduced revenues is limited, with the result that the parties will focus more attention on the risk allocation effected through the project contracts.

Many other projects are designed to produce products or commodities, such as oil, gas and other minerals, sold on global markets where, for well-positioned companies that are able to access global markets, profit levels may be significant. The sponsors may then be prepared to fund the project with a greater proportion of equity in exchange for increased contractual flexibility in the management of the business. As a result, the approach to risk adopted in various project contracts is often less comprehensive than in other projects, the consequence of this being that the lenders to such projects are likely to require more robust overall project economics in mitigation.

IV ENVIRONMENTAL AND SOCIAL ISSUES

The construction and operation of a project will have an environmental and social impact on the project's locale. Lenders will generally require, at a minimum, that the project company undertakes to comply with all applicable domestic environmental and social laws and regulations. Credit institutions financing a project may also require compliance with World Bank or similar standards, including the voluntary set of guidelines known as the Equator Principles, not only to insulate the project from the risk of penalties and other sanctions, but also to preserve the lenders' reputations. Among other things, those standards require the development of, and compliance with, an agreed environmental and social management plan. The principal areas of focus include labour and working conditions, pollution prevention and abatement, community health, safety and security, biodiversity conservation, sustainable natural resource management, and protection of indigenous peoples and cultural heritage. Virtually every large-scale project seeking access to the financial markets will therefore need to evidence a high level of environmental and social compliance.

V THE CONCERNS OF SECURED CREDITORS

The willingness of a lender to extend credit to a project is likely to depend on the degree of comfort it takes from the viability of the underlying security 'package'. Lenders focus particular attention on whether local law recognises the rights of secured creditors and whether their claims will be dealt with equitably in circumstances where the project company becomes insolvent.

Not all countries have express insolvency regimes, and those that do often have very different approaches when it comes to balancing the interests of debtors and creditors (and in particular secured lenders).

One of the principal reasons that a lender takes security over a borrower's asset is to ensure that, if its loan is not repaid when due, it will be entitled to require the sale of the underlying asset and the application of the resulting proceeds in repayment of the loan (to the exclusion of the borrower's unsecured creditors). It is likely, however, that the process of enforcing security will be expensive, disruptive to the operation of the project, time-consuming and uncertain in outcome. In practice, therefore, enforcement of security is something of a last resort. In the context of project finance, it is probably correct to say that the more practical reason for a lender taking security is to maximise the strength of its bargaining position as against other interested parties (notably the project's trade creditors, the host government and the project company's shareholders). The fact that the lender is entitled to enforce its security (with limited obligations to share the benefits of the enforcement with others) ultimately means that holding security puts it in the best possible position from which to negotiate suitable restructuring arrangements for the project.

Whether a security interest has been validly created and whether it has priority over competing interests are questions that are, in most instances, governed by the law in which the charged assets are located. While the bulk of a project company's assets will for these purposes be located in the jurisdiction of the project, its bank accounts and receivables may well be located elsewhere, as may its shares (or the shares of its holding company).

There are often problems with taking security in jurisdictions where there are no clear procedures for the creation and perfection of security (such as registration or filing) or where the enforceability of 'step-in' rights granted to the lenders is uncertain. The location and nature of the asset may also be such that the efficacy of the security is uncertain, orbiting satellites and undersea pipelines being particular cases in point. Uncertainty may also arise where the law of the jurisdiction in which the asset is located lacks uniformity. Where the cost of filing or registering security is significant, sponsors may regard the creation of security (particularly in jurisdictions with little experience of complex financings) as unduly burdensome and argue that the practical value of the security does not warrant the related expense. Although in some cases it may be possible to negotiate exemptions from the rules giving rise to these costs in the underlying concession agreement or enabling legislation, the extent of the security granted will be a matter for negotiation between the lenders and the sponsors.

The efficacy and enforceability of security interests are also likely to be affected by the relevant insolvency regime. Whether the court, trustee in bankruptcy or administrator (or equivalent officer) is bound by a grant of security (or is able to prevent or delay its enforcement) must be assessed in light of the applicable insolvency law (or, where the charged assets are located in a number of jurisdictions, the insolvency laws of all those jurisdictions). Insolvency laws vary significantly, from those that readily recognise the rights of secured parties to take possession or force a sale of charged assets, to those that permit debtors to

retain possession of its assets pending a court approved plan of reorganisation, to those that provide very little guidance as to how the courts would treat the rights of a creditor relative to an insolvent debtor.

VI HOST COUNTRY RISK FACTORS

i Location

The one feature of a project that no amount of structuring can avoid is its location. The political, judicial, economic and social stability of the country in which a project is situated will generally be of some concern to both investors and lenders. At the extreme, structuring a deal in an active conflict zone is likely to be challenging (at best). However, there is much that can be done to mitigate the levels of political risk encountered in most countries, and in a case where a project's lenders and investors have particular concerns as to the stability of the host state, they may be able to address their concerns through political risk insurance and credit support.

When a project is located in an impoverished or developing country, the lenders and investors to the project will often seek to mitigate the resulting risks through the involvement of multilateral and other public sector lending institutions whose participation may act as a deterrent to adverse interference by the host government for fear of cutting off access to international credit sources. Where this is the case, these institutions will seek to confirm that the project satisfies their specific development and other policy mandates. For example, they may need to determine that the project benefits the local population and not just a limited number of well-positioned investors and government officials. To accomplish this, they may require that diligence be undertaken to confirm the absence of inappropriate payments related to the award of the project's licences and concessions. They may also seek clarity on how the host government will invest the tax and other revenues derived from the project.

ii Corporate governance

Because host governments often require that project companies be established under local law, investors will wish to pay particular attention to how that law affects the governance of the project company. Crucially for investors, the project company's ability to distribute the project's surplus funds to its shareholders must not be unduly constrained by corporate law and local accounting practices. Foreign investors who participate in the equity alongside local investors will wish to be certain that their rights in relation to the control of the project company will be respected. Lenders will also need to assess the degree of flexibility that local law allows in such matters, not least because, in the worst-case scenario, they may need to replace the original investors in the project.

iii Regulation and authorisations

The construction and operation of a project generally requires the project company to obtain a broad range of permits and consents in relation to matters ranging from environmental and social impact to land use, health and safety and industrial regulation. The analysis of the risks arising from the need for permits turns, in the first instance, on the identification of the consents that will be required and ensuring that they have been issued (or will be issued in the ordinary course without undue expense, delay or conditionality) and that any permit conditions can be complied with. Also important in this context are the related questions of

whether an enforcement by a secured lender of its security interests in relation to the project will (or could) trigger a revocation of a permit and whether a person to whom the lender sells the project on an enforcement of its security would be entitled to the benefit of the permits.

Many projects operate in regulated industries that require ongoing compliance with detailed laws and regulations. The vast majority of countries, whatever their level of economic and political development, impose regulatory oversight on, at least, their public utilities (power, water and telecommunications) and infrastructure sectors, and may also extend regulatory oversight to their natural resource sectors. Regulation can encompass a licensing regime, under which permission to operate is granted to specified companies or classes of companies and may (and often does) extend further to dictate the manner in which a project company is to operate and, in many cases, the prices it may charge for its services or output.

The manner in which regulation is imposed can vary significantly. For most projects, the analysis of the regulatory environment involves two basic areas of investigation: to determine the rights that are granted to, and the obligations that are imposed on, the project company; and to assess the risks associated with the introduction (over the life of the project) of changes to the regulatory regime that could operate to the detriment of the project company, its investors or its lenders.

iv Taxation

All projects are subject to some form of taxation, and the tax regime will generally have a significant impact on the project's economics. The project company is likely to be subject to corporate taxes, often calculated on the basis of the profits that it generates. It may also be required to account for value added or sales taxes. In some cases, it may be obliged to pay royalties to the host government calculated on the gross value of its sales or of raw materials that it uses in its production processes. Stamp taxes, registration taxes and notarial fees may also be payable. The laws of the host state may also require the project company to make withholdings on account of tax on interest and dividend payments it makes to overseas lenders and shareholders. Where interest payments made by a project company to its lenders attract withholding tax, the project company will usually be required to gross up the payments to the lenders so that they receive the amount of interest that they would have received in the absence of the withholding tax. In such cases, it is likely that some degree of relief from the effects of the withholding requirement will be available under an applicable double taxation treaty or the domestic tax laws of the country in which the investors or lenders are situated, with the result that the financing documentation will be structured to minimise the impact of the withholdings regime.

v Duties and trade restrictions

Whenever goods or individuals cross a border, they will be subject to the laws of both the country they are leaving and the country they are entering. Key concerns include the project company's ability to import into the host state key goods, equipment and raw materials and to employ expatriate managers, engineers and labour. Although customs restrictions are often limited to the imposition of simple import duties, in some cases they extend to an absolute prohibition on imports. Likewise, immigration laws usually permit the employment of qualified expatriates on a limited basis, but they are likely to prohibit the employment of expatriates without particular skills or qualifications and to require the training and employment of local nationals. In some cases, the project company may find that restrictions

apply on the export of its output, either generally or to specific destinations. The project company may, however, be able to negotiate exceptions to import, immigration and export restrictions.

vi Legal certainty and change in law

Countries with well-developed laws and an established and independent judiciary are often more attractive jurisdictions for investment than countries with little clarity as to their laws or certainty as to their application. Concerns over legal and regulatory certainty are perhaps more acute in relation to projects operating in regulated industries or those that have significant social or environmental impact, but the concern is common to all projects, wherever located. Newly independent countries, in particular, may seek to address this through regional harmonisation of disparate legal systems on the basis that so doing provides a means to attract foreign direct investment, eliminate barriers to cross-border trade and provide a platform that improves their chances of competing more effectively on the world stage. Although jurisdictions with more developed legal regimes and stable judiciaries may afford investors with a somewhat higher degree of legal certainty, investors in any jurisdiction have to acknowledge that it may not always be possible to predict how specific problems or conflicts will be resolved in practice.

Project finance loans are generally repaid over decades. Notwithstanding whether initial certainty may be achieved as a result of the assessment of the host country's laws, these laws are likely to change during the life of the project; it is an accepted prerogative of sovereign states to change their domestic laws on a largely unfettered basis. For example, public policy may evolve as governments change; where regime change is frequent and policy objectives vary widely, public policy will itself be volatile. Governments may also impose increased environmental compliance requirements on companies that operate within their borders to comply with new treaties and similar obligations (or even simply to improve their reputations). As their economies develop, host governments may be able to extract more favourable terms from new investors, and they may find it tempting to seek to renegotiate agreements reached earlier.

In circumstances where there is significant uncertainty as to the stability of the legal or regulatory regime, specific commitments from host governments may be enshrined in national law through some form of enabling legislation, thereby allowing greater certainty that the relevant commitments will have precedence over competing and often inconsistent laws and regulations. In other cases, it may be appropriate for the host state to enter into direct contractual undertakings with the project company (and, in some cases, its principal investors, including its lenders) for the purpose of providing appropriate investor protections.

Governmental commitments vary from legally binding undertakings, the breach of which will entitle the project company (or its investors) to damages or other specifically agreed levels of compensation, to 'comfort letters' that afford little, if any, certainty of remedy. A host government might also seek reciprocal undertakings from the project company, including commitments to (1) provide adequate service during the term of the agreement; (2) observe relevant safety and environmental standards; (3) sell its output at reasonable prices; and (4) particularly where the project company is under an obligation to transfer its assets to the host state at the end of the concession period, carry out prudent maintenance and repairs so that at the end of the concession period the state (or the applicable state-owned entity) will acquire a fully operational project. Breach by the project company of such reciprocal undertakings will invariably give rise to specific penalties, including those

involving forfeiture of its concession rights or termination of supply and offtake contracts with relevant government bodies. Ideally, these agreements should include provisions that recognise the role of lenders (including an entitlement to receive express notice of defaults on the part of the project company and cure and 'step-in' rights), but in cases where it is not possible to ensure the inclusion of such provisions, it is important that the agreements do not contain terms (such as prohibitions on assignments by way of security and change of control termination rights that could be triggered by an enforcement of security) that are likely to operate to the detriment of the lenders.

VII GOVERNING LAW ISSUES

Although most contracts describe the terms of a transaction reasonably clearly, the manner in which contracts will be interpreted or enforced is likely to differ (sometimes significantly) from one jurisdiction to another. The project finance lawyer's analysis in this context will involve an examination of (1) the effectiveness of the choice of the law of a particular jurisdiction to govern the various project agreements; (2) the extent to which contracts governed by the law so chosen are legal, valid, binding and enforceable; and (3) the choice of the forum for the determination of disputes arising from the transaction (including the extent to which judgments or arbitral awards that emanate from that forum will be enforced in other relevant jurisdictions).

The knowledge that the transaction is governed by the law of a familiar jurisdiction can be a source of significant comfort to investors and lenders. In the case of finance documents, this most frequently entails an election between English law and New York law. A preference of one over the other is not as substantive as it might appear. Each has well-developed case law providing clarity in relation to the way in which the law is likely to be applied in any given circumstance, and the material elements of each that are relevant to the enforceability of customary finance documents are broadly similar. However, lenders may have strong views in this area, particularly based on familiarity with customary forms and terminology.

In contrast, the choice of law can have particular significance in relation to a range of commercial contracts. For instance, parties may find it attractive that Article 2 of the Uniform Commercial Code as in effect in the state of New York allows key price terms in contracts for the sale of goods and certain commodities to be left open for resolution by future agreement among the parties (in the absence of which through resolution by a court). In contrast (subject to various exceptions), English law may find that such a contract fails for uncertainty.

In some circumstances, there is no real choice of law. Conflict of law principles, such as the doctrine of *lex situs* (i.e., the rule that the law applicable to proprietary aspects of an asset – whether tangible or intangible – is the law of the jurisdiction where the asset is situated), will very often dictate which law is to be applied for specific purposes (notably the transfer of title to, and the creation of security interests in, the assets). Although there may be no particular legal theory that stipulates that project contracts giving rise to personal claims (rather than proprietary interests) should be governed by the law of the jurisdiction in which the project is located, it is often a requirement of the host government that its own domestic law be specified as the governing law of such contracts (and in particular those with national agencies).

Not all contracts are in all respects enforceable in accordance with their terms. There will often be mandatory provisions of law that override the terms of the contract. Many

countries have civil or similar codes whose provisions will apply to a contract notwithstanding its express terms. Public policy considerations in a particular jurisdiction may also invalidate a provision in a contract that would be fully effective under the law of another jurisdiction. Legal uncertainty is likely to be more pronounced when the country in which the project is located has no tradition of reported case law (making it more difficult to establish how the rules are applied by the domestic courts in practice) or no system of judicial precedent, or where domestic law prohibits fundamental aspects of the transaction (a notable instance of this being obligations to pay interest being rendered unenforceable in some jurisdictions by virtue of general principles of shariah law).

VIII CHOICE OF FORUM ISSUES

The selection of a forum for the hearing of disputes in connection with a project may also have important implications. Pertinent questions in this context include:

- a* Will the forum be neutral in its decision-making?
- b* Will the chosen forum apply the law specified by the parties in the contract?
- c* Will the outcome differ if it does not?
- d* What evidential or procedural rules apply in the forum if the contract is silent in relation to such matters?
- e* Does the position change if the contract stipulates that hearings should be conducted on the basis of particular evidential or procedural rules?
- f* Will judgments or arbitral awards be enforced in the home jurisdictions of the parties to the dispute?

When considering the choice of forum, another important question is whether the dispute should be the subject of judicial or arbitration proceedings. There are obvious advantages to using the courts of a country with long histories of case law and a binding (and comprehensible) precedent system, and established procedural laws and unbiased judicial oversight are things that provide comfort to sponsors and lenders alike. In many jurisdictions, the courts can compel parties to disclose facts or documents and may be able to order interim relief, such as injunctions that prevent a party from moving assets out of the jurisdiction. Further, because arbitration is a product of contract, only parties that have specifically consented to the arbitration of a dispute can be compelled to proceed in that forum.

On the other hand, the speed and privacy of an arbitral process can be a significant benefit to some or all of the parties, and a specially designated arbitrator may well be better equipped to address complex technical issues than a judge with more general skills. Moreover, an arbitral award will, in some instances, be more likely than a judgment to be recognised and enforced in the home jurisdiction of the party against whom it is made without there being a review on the merits of the dispute. International treaty arrangements, such as the 1958 Convention on the Recognition and Enforcement of Foreign Arbitral Awards (the New York Convention), call for Member States to give effect to arbitral awards made in other Member States. However, there are often sufficient exceptions to even treaty-based rules that mean that awards can be reopened when they are being enforced.

Governmental entities may also be immune from proceedings before the courts of the host state or of other states (or both). Their assets may also be immune from the normal processes that apply in relation to the enforcement of judgments and arbitral awards, with the result that a successful judicial or arbitration proceeding can prove to be a distinctly

hollow victory. This immunity is widely acknowledged as a matter of international law, but there may be exceptions to its application. For example, a state entity acting in a commercial capacity may not benefit from immunity from suit or even enforcement against assets used in a commercial capacity, and under the law of many countries it is possible for a state entity to waive its rights to immunity.

IX CLOSING THE DEAL

The principal role of project finance lawyers, once they have identified and analysed the various risks applicable to the project, is to mitigate those risks so far as practical by documentation in the context of the negotiating leverage of the parties. This requires a combination of skills: the ability to negotiate artfully and effectively and the ability to draft sensitively (among other things, being able to retain a view of the bigger picture when crafting the detail and understanding which points really matter).

Project finance lenders will expect to manage the risks that they face through the credit documentation. There is no doubt that project finance loan agreements are characterised by a wider range of conditions precedent, representations, undertakings and events of default than other extensions of credit. Although lenders will be persuaded that these help minimise risk, sponsors may consider them to be unwarranted intrusions on their management capabilities and discretion. Finding a way to balance these competing perspectives is perhaps an additional aspect of the alchemy of project finance.

Project finance lawyers must also organise the documentation process and ensure that each of the parties understands sufficiently the issues in question. Closing a project finance transaction is often as much about process management as legal analysis and drafting. With assets, sponsors, lenders and their respective advisers based in a broad range of countries and time zones, organisational challenges can be significant. Managing the logistics of complex negotiations across the globe requires a mastery of communications technology. Although English is the dominant language of project finance, it can also be a significant hindrance to the closing of a deal if the lawyers responsible for orchestrating the closing are not conversant in at least some of the native languages of the key project participants.

The ability of international counsel to communicate with local counsel in a broad range of jurisdictions is absolutely crucial to an international transaction. Local lawyers who have trained at international firms will often be adept at conveying legal issues in terms that are readily understood by their international counterparts. However, guidance from books such as this is of particular value in ensuring that all of the lawyers on all sides of the transaction have a common view as to the key legal issues that must be considered by the parties.

UNITED STATES

*Carolina Walther-Meade, Karen Wong, Henry Scott and Miguel Duran*¹

I INTRODUCTION

The project finance market in the United States benefits from a well-developed legal framework and sophisticated financial markets. The US legal system is generally viewed as clearly codified, stable and efficient, as well as one that is enforced in a regular and open manner.² Contractual agreements between parties are recognised by law with few exceptions related to public policy concerns. The project finance sector has strong access to both the public and the private financial markets and is in some limited areas even supported – directly or indirectly – by government policies.

This combination of a strong legal framework and financial markets has facilitated the development of a robust project finance sector in the United States. Project finance is premised on the ability of the parties to contractually allocate risks among themselves and to enforce those contractual obligations in a reliable manner. A successful project finance regime is also dependent on commercial laws that allow developers to protect themselves through special purpose entities that benefit from non-recourse financing, and that, similarly, allow lenders and investors to obtain security in the project assets and to enforce their claims against the project. Likewise, a sophisticated private financial market has the flexibility to allow the developer and the financing providers to create complex financing structures and to tailor those structures to the specific needs of a particular project.

This chapter discusses various transactional structures available to projects and the legal documentation frequently used to implement them. It reviews the various risks associated with project finance transactions and how parties allocate these risks. It also examines how the US legal framework supports the ability of lenders and investors to protect their interests, including obtaining, perfecting and enforcing security interests in a manner that permits lenders to enforce their rights in the event that a project encounters financial problems. This chapter also considers how the legal framework is influenced and impacted by social and environmental considerations. The role of a complex legal framework and sophisticated private financing providers and the public sector is also addressed, followed by a summary of the impact of taxes on investment, which may be of particular interest to foreign lenders and investors. The framework for how dispute resolution is processed in the United States is discussed at the end of this chapter.

1 Carolina Walther-Meade and Karen Wong are partners, Henry Scott is a senior associate and Miguel Duran is an associate at Milbank, Tweed, Hadley & McCloy LLP.

2 See WJP Rule of Law Index 2015, by the World Justice Project available at the World Justice Project website: http://worldjusticeproject.org/sites/default/files/roli_2015_0.pdf.

II RECENT TRENDS

The nature and complexion of project finance in the United States has been shifting mostly as a result of the expiration of certain governmental incentives, regulatory changes related to power plant emissions, declining prices of distributed generation technologies and lower natural gas prices due to increased domestic production. Renewable energy projects remain a significant component of the market. After a few years of slow growth, the sector experienced a significant acceleration in 2015 and achieved a level of over 39 per cent of the total value of project finance transactions in the country in 2016 (almost on par with the peak levels in 2011).³ For example, 8,203MW of wind energy (similar to the amount in 2015)⁴ and 14,762MW (including over 10GW of utility-scale installations) (a 97 per cent annual increase) of solar energy were installed in 2016.⁵ Approximately 9,025MW of wind capacity is still under construction in 2017,⁶ and approximately 13,200MW of solar capacity is expected to be completed in 2017.⁷ Additionally, hydroelectric capacity could grow from 101GW to approximately 150GW by 2050, not only by constructing new power plants, but also by upgrading and optimising existing plants and by increasing the pumped storage hydropower capacity.⁸

The American Recovery and Reinvestment Act of 2009 made available certain cash grant, tax incentive and loan guarantee programmes for developers, especially in the renewable energy sector, and some of these incentives are still available. Throughout 2016, much of the project financing activity in the United States involved energy projects that were able to qualify for the production tax credit (PTC)⁹ or the 30 per cent investment tax credit (ITC)¹⁰ by meeting certain requirements. Additionally, developers of clean energy projects employing new or innovative technology that is not in general use yet were able to request loan guarantees pursuant to Section 1703 of the Department of Energy's Loan Guarantee Program.¹¹ In recent years the Department of Energy has published an US\$8 billion solicitation for advanced fossil energy projects that avoid, reduce or sequester greenhouse

3 These statistics do not include public-private partnership transactions and were researched and extrapolated from data available at the Infrastructure Journal website: www.ijonline.com/league-tables.

4 See American Wind Energy Association, 'US Wind Industry Fourth Quarter 2016 Market Report – AWEA Public Version', available at the American Wind Energy Association website: <http://awea.files.cms-plus.com/FileDownloads/pdfs/4Q2016%20AWEA%20Market%20Report%20Public%20Version.pdf>.

5 See the Solar Energy Industries Association website: www.seia.org/research-resources/solar-market-insight-report-2016-year-review.

6 See US Wind Industry First Quarter 2017 Market Report – AWEA Public Version, by the American Wind Energy Association, available at the American Wind Energy Association website: <http://awea.files.cms-plus.com/FileDownloads/pdfs/1Q2017%20AWEA%20Market%20Report%20Public%20Version.pdf>.

7 See footnote 5.

8 See Hydropower Vision, A New Chapter for America's 1st Renewable Electricity Source, prepared by the US Department of Energy Wind and Water Power Technologies Office, available at the US Department of Energy website: https://energy.gov/sites/prod/files/2016/10/f33/Hydropower-Vision-10262016_0.pdf.

9 Section 45 of the Internal Revenue Code of 1986, as amended.

10 Section 48 of the Internal Revenue Code of 1986, as amended.

11 Section 1703 of the Energy Policy Act of 2005.

gases,¹² and a US\$4 billion solicitation for renewable or efficient energy technologies,¹³ and in January 2017 both solicitations were supplemented to clarify that the deployment of infrastructure for alternative fuel vehicles that use alternative fuels may be eligible under those programmes.¹⁴ In December 2016, the Department of Energy announced a conditional commitment to guarantee up to US\$2 billion of loans to construct a methanol production facility employing carbon capture technology in Lake Charles, Louisiana, which would represent the first loan guarantee made under those solicitation programmes.¹⁵

Furthermore, the Protecting Americans from Tax Hikes Act of 2015¹⁶ extended the PTC programme for certain eligible facilities for which construction began before 1 January 2017 and for otherwise qualifying wind facilities for which construction began before 1 January 2020 (with a progressive phase-out reduction if construction begins after 31 December 2016) and the ITC programme for qualified solar facilities for which construction began before 1 January 2022. Despite these extensions, the proposed reduction in the corporate tax rate from 35 per cent to 15 per cent, recently announced by the Trump administration, could make these tax credits less attractive for investors and reduce the availability of tax equity financing in the market.

Propelled by extended federal incentives, advances in green technology that decrease investment costs, state incentives and regulatory policies implementing renewable energy portfolio standards (RPS) on utilities, and the positioning of renewable energy as a key component for strategic energy independence for the nation, the development of renewable projects is expected to continue moving forward. As of February 2017, 29 states, the District of Columbia and three US territories have enacted RPS programmes and eight additional states and one US territory now have voluntary goals for generation of renewable energy.¹⁷ For example, California's RPS programme, one of the most ambitious in the United States, required that utilities derive 20 per cent of their energy from renewable sources by the end of 2013, and established targets of 25 per cent by the end of 2016, 33 per cent by the end of 2020, 40 per cent by the end of 2024, 45 per cent by the end of 2027 and 50 per cent by the end of 2030.¹⁸ While all three of the largest California utilities satisfied the initial target and have enough renewable energy capacity under contract for 2020 to meet that year's and the 2024 threshold, only one of them already has enough contracted capacity to reach the 2027 target,¹⁹ and as a result there is a need for additional renewable energy generation.

Recent regulations from the US Environmental Protection Agency (EPA) aimed at limiting greenhouse gas emissions from existing fossil fuel-fired electric generating units also have the potential to spur substantial renewable project growth. The rules set state-specific

12 See the Department of Energy's Loan Programs Office website: <http://lpo.energy.gov/resource-library/solicitations/advanced-fossil-energy-projects-solicitation/>.

13 See the Department of Energy website: www.energy.gov/sites/prod/files/2014/07/f17/Renewable%20Energy%20and%20Efficient%20Energy%20Projects%20Solicitation%20FINAL.pdf.

14 See the Department of Energy website: https://energy.gov/sites/prod/files/2017/01/f34/FactSheet_Vehicle_Announcements_01_9_17.pdf.

15 See the Department of Energy website: <https://energy.gov/articles/energy-department-offers-conditional-commitment-first-advanced-fossil-energy-loan-guarantee>.

16 Pub. L. No. 114-113, Div. Q, 129 Stat. 2242 (2015).

17 See the NC Clean Energy Technology Center website: <http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2017/03/Renewable-Portfolio-Standards.pdf>.

18 See the California Energy Commission website: www.energy.ca.gov/portfolio/.

19 See the California Public Utilities Commission website: www.cpuc.ca.gov/RPS_Homepage/.

goals for reducing emissions from the power sector.²⁰ The wind and solar sectors are poised to help states meet the proposed compliance plans.²¹ The final rules were released in August 2015 (Clean Power Plan) but were confronted with immediate legal challenges by a large number of affected states and state agencies, utility companies and energy industry trade groups, and, after an emergency stay was granted by the US Supreme Court, the US Court of Appeals for the DC Circuit heard oral arguments on the merits of the case in September 2016. In March 2017, President Trump issued an executive order setting forth his administration's policy to promote energy independence and economic growth and ordering the EPA to review the Clean Power Plan for consistency with the new policy. Subsequently, upon request by the EPA, the US Court of Appeals held the case in abeyance for 60 days.²² The review of the Clean Power Plan by the EPA is currently under way²³ and a decision to initiate proceedings to revise, suspend or rescind the Clean Power Plan is expected soon. Revisions to the rules may delay anticipated retirements of coal-fired power plants.

Going forward, most renewable energy projects will increasingly rely upon commercial banks and capital markets to satisfy capital demands. For larger projects, mixed bank-private placement transactions with two or more tranches of funds may provide a preferred financing structure. New financing tools are also expected to become increasingly important for renewable energy projects, particularly in the field of structured finance. For instance, SolarCity Corporation has completed during the past years the securitisation of thousands of residential and commercial solar energy contracts in six separate offerings with an aggregate value of approximately US\$683 million, Sunrun completed its first issuance in 2015, and Mosaic and Sunnova closed their first securitisations during the first months of 2017. As other solar developers increase their portfolios, they may choose to follow this lead to secure financing.

The 'yieldco' model, which started achieving prominence in 2013 for energy companies and increased its presence exponentially through the beginning of 2015, has been under increased scrutiny during the past couple of years. A yieldco is a publicly traded corporation similar to a publicly traded master limited partnership (MLP) vehicle except that its assets do not qualify for MLP status. In the renewable energy sector, a yieldco is expected to obtain stable cash flows from ownership of operating projects that have entered into long-term power purchase agreements, and minimise corporate-level income tax by combining recently built projects that are still producing tax benefits with older projects. After the initial success of NRG's yieldco in 2013,²⁴ entities such as Abengoa, SunEdison, NextEra Energy and SunPower/First Solar created US-traded yieldcos. The yieldco boom fuelled competition for development assets, with yieldco sponsors actively seeking to acquire projects to include

20 See the US Environmental Protection Agency website: <https://www.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants>.

21 See 'A Handbook for States: Incorporating Renewable Energy into State Compliance Plans for EPA's Clean Power Plan, by the American Wind Energy Association and the Solar Energy Industries Association', available at the American Wind Energy Association website: <http://awea.files.cms-plus.com/FileDownloads/pdfs/Handbook%20for%20States%20final.pdf>.

22 See the Environmental Defense Fund website: https://www.edf.org/sites/default/files/content/2017.04.28_order_granting_abeyance_cpp.pdf.

23 82 FR 16329 (April 4, 2017).

24 NRG Yield was priced in July 2013 at US\$22 per share and the price increased to over US\$55 per share. See 'US Project Finance: Key Developments and Trends from 2014 and the Outlook for 2015', by Practical Law Finance, available at the Practical Law website: <http://us.practicallaw.com/3-585-7745>.

within their portfolios. Nonetheless, the downfall and recent bankruptcy filing by prominent sponsors of yieldcos such as SunEdison (TerraForm Power Inc and TerraForm Global Inc) and Abengoa (Atlantica Yield, formerly known as Abengoa Yield), have turned investors' attention to, and increased investors' concerns about, yieldcos. As a result, no new yieldcos have been formed recently and, since late 2015, shares of yieldcos have suffered significant declines.²⁵ Recently, First Solar and SunPower announced separate strategic reviews of their yieldco joint venture.

Outside the renewable energy space, retirements of coal and nuclear facilities generated renewed interest by sponsors in the development of new gas-fired power plants. The slump in oil and gas prices experienced since mid-2014 has increased the pressure on oil and gas producers, leading to bankruptcy filings by dozens of US oil companies and significant reductions in production. Nevertheless, energy generation by gas-fired power plants has continued to grow, albeit at a slower pace. In 2016, natural gas-fired generation in the United States surpassed coal generation on an annual basis for the first time in history.²⁶ By 2020, new natural gas-fired projects are expected to add 65,095.4MW of generating capacity,²⁷ and natural gas-fired electric generation is expected to grow by over 48 per cent through 2050, up to a forecasted level equal to 38 per cent of the total generation.²⁸ The introduction of new capacity markets may further spur investment in gas-fired projects, which in recent years have been challenged by lower wholesale electricity prices in some markets, such as Texas. Additionally, in recent years project developers have devoted increased attention to gasification facilities, which convert feedstock into a synthetic gas, which is used as fuel or further converted into a variety of products, including hydrogen, methanol, carbon monoxide and carbon dioxide. These projects have commonly used fossil materials like coal and petroleum coke as feedstock, although there are several gas-to-liquid projects in development and there is an intensified interest in the use of biodegradable materials, including municipal solid waste and forestry, lumber mill and crop wastes. The bankruptcy filing of Westinghouse Electric Company in March 2017 may be a harbinger of further headwinds in the nuclear sector.

In addition, constrained state and local fiscal budgets, limited federal transportation funding, decreased tax revenue and the considerable need for new infrastructure assets and the refurbishment, repair and replacement of existing assets may hasten the further use of the public-private partnership (PPP) project finance structure (further described below). While most large infrastructure projects in the United States, at least since the introduction of the interstate system in the 1950s, have been completed using public funds rather than through the participation of private entities, a confluence of factors may be creating a fertile ground

25 For instance, the following are the declines in stock prices experienced by certain significant yieldcos between 5 May 2015 and 5 May 2017: (1) over 68 per cent for TerraForm Power, Inc., (2) over 65 per cent for TerraForm Global, Inc (starting on 3 August 2015), (3) over 39 per cent for Atlantica Yield plc, (4) over 38 per cent for 8point3 Energy Partners LP, the yieldco formed by SunPower and First Solar (starting on 19 June 2015) and (5) over 19 per cent for NextEra Energy Partners, LP. These statistics were researched and extrapolated from data available at the Yahoo! Finance website: <http://finance.yahoo.com/>.

26 See the US Energy Information Administration website: <https://www.eia.gov/electricity/monthly/update/archive/april2017/>.

27 See the US Energy Information Administration website: https://www.eia.gov/electricity/annual/html/epa_04_05.html.

28 This is based on the 'reference case' scenario under the US Energy Information Administration, Annual Energy Outlook 2017 (January 2017).

for the development of increased governmental and public acceptance of PPPs. According to the latest report card by the American Society of Civil Engineers, the infrastructure of the United States has a D+ grade point average,²⁹ and it will require an estimated investment of over US\$1.3 trillion by 2025 and almost US\$5 trillion by 2040 to maintain a state of good repair.³⁰ The Trump administration has announced the intent to invest US\$1 trillion on infrastructure,³¹ although a specific plan has yet to be presented. Given that in recent years legislation has been insufficient to satisfy the country's needs for infrastructure funding, state and local governments started to turn to the private sector to fill the gap. Recent significant PPP projects include the almost US\$1 billion Vista Ridge water project in San Antonio, Texas, which recently reached financial close,³² the approximately US\$1.5 billion stadium for the Atlanta Falcons of the National Football League,³³ and the US\$4 billion redevelopment of the Central Terminal Building at the LaGuardia Airport in New York.³⁴ While in some jurisdictions developers will need to navigate uncharted legislative and regulatory waters, and may also have to overcome negative public perception regarding the private management of public infrastructure, the opportunities for growth may be unprecedented.

III TRANSACTION STRUCTURES AND DOCUMENTS

i Transaction structures

The one basic structural feature common to almost all project finance transactional structures is that the project is operated by a single, non-recourse special purpose vehicle (SPV) (the project company). Beyond that, the transactional structures are subject to a number of permutations based on the type of project, tax considerations, risk allocation, equity requirements and debt financing demands.

Limited liability companies (LLCs) have become the popular business organisation used for project companies. LLCs have the same limited liability protection that traditional corporations offer, but LLCs offer some advantages in the project finance area. LLCs have the option to be treated as a pass-through tax entity for US tax purposes, and gains, losses and depreciation can be passed through to its owners, which are known as 'members'. LLCs allow for considerable flexibility in management and ownership structure, which is advantageous for partnership or joint venture transactions. Management rights can be vested in the primary developer, but can be shifted to a co-sponsor or equity investor upon the occurrence of certain events. Gains and losses for tax purposes can also be allocated to suit the business deal, which is key to the 'partnership-flip' structure discussed further below.

29 A 'D' grade means that: 'The infrastructure is in poor to fair condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration. Condition and capacity are of significant concern with strong risk of failure.' See American Society of Civil Engineers, '2013 Report Card for America's Infrastructure', available at the American Society of Civil Engineers website: <http://2013.infrastructurereportcard.org/>.

30 See American Society of Civil Engineers, 'Failure to Act: Closing the Infrastructure Investment Gap for America's Economic Future', available at the American Society of Civil Engineers website: www.infrastructurereportcard.org/wp-content/uploads/2016/10/ASCE-Failure-to-Act-2016-FINAL.pdf.

31 See the White House website: <https://www.whitehouse.gov/the-press-office/2017/02/28/president-trump-working-rebuild-our-nations-infrastructure>.

32 See the San Antonio Water System website: www.saws.org/latest_news/NewsDrill.cfm?news_id=3298.

33 See the City of Atlanta website: www.atlantaga.gov/index.aspx?page=896.

34 See the LaGuardia Gateway Partners website: <http://laguardiagatewaypartners.com/project/>.

A common ownership structure involves a project sponsor owning the project company directly or indirectly through a holding company. In a joint venture structure, the ownership of the project company³⁵ is allocated between the project sponsor and another equity participant.

Developers will often be simultaneously developing multiple projects owned by different project companies. Most often, developers will arrange for separate financing transactions for each project. Some developers will seek to engage in a portfolio financing for multiple projects through a holding company. In these portfolio transactions, the projects are typically cross-collateralised and cross-default against each other.

Broadly speaking, there are two different sources of debt financing available in the United States: the bank market and the private placement market (including the bond market).

The bank market provides loan facilities and letter of credit facilities to a project company. Banks offer a broad variety of financial products. Most of the project finance transactions involve traditional construction and term loan facilities for the development, construction and operation of a project. Banks can also provide more specialised products. In the wind energy sector, some banks have offered turbine supply loan facilities to provide funds for the purchase of wind turbine generators from the turbine manufacturer prior to the completion of development and permitting of specific projects. These turbine supply loan facilities, which are sometimes provided on a portfolio basis, are extended with the expectation that they are refinanced by a construction and term loan facility. Banks have offered similar loans in respect of solar equipment. To the extent that project sponsors lack sufficient funds to meet their equity contribution commitments, some banks may be willing to provide equity bridge loans to support the project. Some project companies may qualify for reimbursements or repayments for the construction of network upgrades or for cash grant proceeds, and some banks have extended loans based on these expected cash receipts. In addition, back-leveraged term loans made to the holding company of a project company have been used in lieu of traditional term loans in some transactions, including the partnership-flip structure discussed below.

The private placement market is another potential source of debt financing. Institutional investors participating in a private placement will typically offer only a fixed interest rate and will not provide specialised financial products that are available in the bank market. Project financing can also be accomplished through issuances of bonds in the capital markets. Project bonds can be offered pursuant to Section 4(2) or Rule 144A of the Securities Act of 1933. Most private placements under Section 4(2) transactions are made to accredited investors, which are often insurance and pension companies. An offering under Rule 144A is only made to qualified institutional buyers – which are sophisticated purchasers with over US\$100 million of qualifying assets. Section 4(2) private placements are generally made directly to a very small number of accredited investors, but in mixed bank-private placement transactions, an administrative agent will be involved. Rule 144A transactions are typically sold to a larger number of investors and are administered by a trustee pursuant to an indenture, on behalf of the qualified institutional buyers. The covenant package and level of oversight and consent requirements under a Rule 144A transaction are often less onerous than either a Section 4(2) transaction or a standard bank transaction.

35 We note that investors sometimes prefer to own interests in the holding company that is the owner of the project company, rather than the project company itself, as another layer to limit their liabilities with respect to the project company.

In larger transactions, sophisticated arrangers may opt to use two or more tranches of funds for a mixed bank-private placement financing.

In the renewable sector, federal renewable energy tax credits, such as PTCs and ITCs, have helped shape transactional structures. PTCs offer designated tax credit amounts for certain classes of renewable projects that may be offset against income tax liability.³⁶ ITCs offer reductions in federal income taxes depending on the resource type that is placed in service, and primarily benefit solar and geothermal projects.³⁷ Developers have taken advantage of these tax-driven incentives to attract investors with sufficient taxable income who are able to utilise these federal renewable energy tax credits (tax equity investors). Prior to the inception of the Section 1603 programme that was established under the Recovery Act to fill the gap in the market place when the pool of tax equity investors dried up during the financial crisis of 2008 and 2009, these were the dominant drivers for the development of renewable projects. With the expiration of the Section 1603 programme, PTCs and the ITCs once again became increasingly important for the development of renewable projects.

The partnership-flip structure has been a popular vehicle for financing wind energy projects in which the project sponsors are unable to fully utilise the available tax benefits. As mentioned before, given the pass-through election available to LLCs, tax equity investors that are members, directly or indirectly,³⁸ of the project company are able to benefit from the tax credits. For projects in the construction phase, a tax equity investor will enter into an equity contribution agreement committing to acquire a membership interest in a project company at the time the project has been completed and placed in service, and the proceeds of the equity contribution are applied to repay the construction debt. A variation of the partnership-flip structure is the pay-as-you-go (PAYGO) structure in which the tax equity investor contributes roughly half of the initial equity that would be required under a traditional partnership-flip deal and, during the operational period of the project, will make periodic payments with respect to the remaining equity that would have been required under a traditional partnership-flip transaction. The PAYGO structure provides the tax equity investor with an ability to defer the timing of its equity contributions and ties its contributions to the amount of PTCs actually generated (rather than projected).

Another alternative financing structure is to utilise a single investor lease or a leveraged lease transaction. Many energy assets have been financed using lease structures whereby a tax equity investor acquires the power project and the tax attributes of ownership, such as depreciation and investment tax credits, and leases back the asset to the project developer who

36 Section 45 of the Code identifies a number of resource types, including wind, closed-loop biomass, open-loop biomass, geothermal energy, landfill gas, municipal solid waste and large scale marine and hydrokinetic projects and designates a credit amount for each type. To qualify, closed and open-loop biomass facilities, geothermal facilities, landfill gas facilities, trash facilities, qualified hydropower facilities, and qualified marine and hydrokinetic renewable energy facilities must meet the 'begun construction' requirement before 1 January 2017, and wind facilities must meet the 'begun construction' requirement before 1 January 2020 (subject to a phaseout of the credit between 2017 and 2020).

37 Section 48 of the Code provides credits that could offset 10 per cent to 30 per cent of federal income tax liability. Small wind projects, fuel cells, combined heat-power, solar, geothermal and microturbine technologies are covered under Section 48.

38 To the extent that the holding company is the investment vehicle, the holding company would also be an LLC and any intermediary companies would also need to be an LLC to allow the tax attributes to flow to an entity that is taxable under federal tax laws.

assumes operational responsibility. The lease structure has been popular with solar projects as it is complementary with the ITC mechanics,³⁹ and since 2010 there have been a number of single investor and leveraged lease transactions in the wind and solar sectors.⁴⁰

In some jurisdictions, utilities and developers have applied a build-transfer structure. This typically involves a developer agreeing to develop and construct a project that, upon commercial operation, would be transferred to the utility for a designated purchase price. Given the number of independent power producers (IPPs), however, utilities do not have as strong a need to own their electrical generation sources and have often elected to enter into economically feasible offtake agreements with IPPs.

ii Transaction documents

The transaction documents for a project finance deal can be classified broadly into three categories: project documents, financing documents and equity documents.

The project documents provide for the development, construction and operation of the project. The specific project documents depend on the type of project and how risks are to be allocated in the particular project. Project lenders typically prefer a turnkey engineering-procurement-construction (EPC) contract entered into with a creditworthy contractor that has the requisite resources, capabilities and experience to engineer and design the project, procure all the necessary materials and components and to construct and assemble the project. In certain sectors of the energy industry, a turnkey contract may not always be available and the project developers have sought to allocate responsibilities among parties who are capable of performing the relevant obligation most efficiently and at the lowest cost. For example, in wind generation projects, wind turbines are customarily procured directly from a turbine manufacturer under a turbine supply agreement and, in situations where the project sponsor does not have internal operating personnel, accompanied by a service maintenance agreement. The construction of the balance of the project, such as the turbine foundations, collection system, substation and transmission lines are performed by a contractor under a balance of plant contract.⁴¹ The operation and maintenance of the project may sometimes be performed by an affiliate of the project sponsor that is in the business of performing operations and maintenance services for all the project sponsor's projects. The offtake agreement is crucial for the viability of a project, as the lenders and investors rely principally on the revenues generated by the project. The offtake agreement mitigates the potential fluctuations of spot market transactions and allows for the project to provide a more reliable base case model to its lenders and investors. For electrical generation projects, an interconnection agreement will be required to interconnect the project to the relevant electricity grid. Projects that require fuel, such as coal-fired, biofuel, biomass or natural gas-fired plants, will need a reliable source of fuel that can be procured on a fixed-price basis under a long-term fuel supply or feedstock agreement.

39 To benefit from these federal tax credits, the tax equity investor must be an owner prior to the placed-in-service date.

40 These transactions include Terra-Gen's Alta Wind projects, Pattern Energy's Hatchet Ridge Wind project, the Ridgewind Wind project, the Lakefield Wind Project, the Pacific Wind project, and the Shiloh IV Wind Project.

41 In some instances, even the balance of plant obligations are sometimes even further subdivided to include an electrical installation or engineering and design contract for the balance of the plant.

The financing documents for a project finance transaction will generally depend on the type of financing structure being implemented. For a traditional bank financing transaction, the documents consist of a credit agreement that will provide a construction and term loan facility, often with a letter of credit facility or working capital facility, and the set of collateral security documents described below. A private placement transaction will include a purchase or subscription agreement entered into by the financial institutions for funding and an indenture to provide for the covenants that the project company must follow, along with the same set of collateral security documents typically utilised for bank financings. For transactions that combine bank and private placement sources, a master agreement or common terms agreement will typically govern the principal terms of the financing such as conditions precedent, covenants, representations and warranties, events of default, indemnities, and miscellaneous boilerplate provisions, with separate credit agreements and note purchase agreements or indentures for the respective tranches. A lease transaction will include a lease,⁴² and, for a sophisticated leveraged lease transaction, a financing agreement and a participation agreement, along with customary tax indemnity agreements. The security for a financing will be provided under the security or collateral documents, as discussed in further detail below. Lenders will also often seek to have direct agreements with the counterparties to the material project documents that provide for the consent by the counterparties to the collateral assignment of the particular project document, an agreement by the counterparty to deposit amounts payable under the project agreement to a designated collateral account, a right to receive default notices and other material notices, an ability to step in and cure events of default on behalf of the lenders, as well as an agreement not to amend, modify, assign or terminate the project document.

The equity documents represent the commitment of the sponsors and owners of the project to make equity contributions to the project company under a variety of circumstances. Basic equity contribution agreements cover cost overruns and provide for minimum equity required to maintain the debt-equity ratio prescribed by the lenders. A project company seeking tax equity will often enter into either a membership purchase and sale agreement (MIPA) or an equity capital contribution agreement (ECCA) with a tax equity investor. Tax equity investors do not typically assume construction risks and their investment is conditioned on the satisfaction of a number of requirements, including that the project has achieved, or is about to achieve, commercial operation as required under the offtake agreement and subject to satisfaction of performance and other testing requirements under the relevant construction contracts. For ITC transactions, it is important that the tax equity investor become an owner before a project has been placed in service and reached commercial operation. A form of revised limited liability company agreement for the project company will be negotiated at the time of execution of the MIPA or ECCA to govern the relative rights and obligations between the developer and the tax equity investor, and to set out the respective allocations of cash, distributions and tax benefits, as well as to detail the governance rights prior to and after the date on which the tax equity investor has received its net economic return on its investment.

42 Some lease transactions will separate the personal property and real property into a facility lease and a ground lease, respectively.

IV RISK ALLOCATION AND MANAGEMENT

Project finance ideally allocates risks to the party that is best able to manage and mitigate the particular risk, and the relevant risk allocation can vary from project to project depending on the specific details of a project and the relative negotiating leverage of each party.

A basic project finance transaction can be broadly divided into two different time periods: the construction period and the operational period.

To understand the construction period, it is helpful to understand the importance of the operational period and its associated risks. A lender or investor to a project finance transaction relies on the cash flow generated by the project during the operational period for repayment or recovery of investment, as applicable. To give lenders and investors some degree of certainty about cash-flow generation, lenders and investors analyse a project's base case projections based on the price of the offtake and the expected production, the two keys to generating cash flow.

An offtake agreement, between the project company and an offtaker, is the key project document that will mitigate the risk of fluctuating prices and give some degree of certainty as to what price is paid for the product generated by the project. A typical offtaker, however, requires some level of assurance that it will receive a minimum amount of product commencing by a date certain – essentially requiring minimum production guarantees. The offtaker will often obtain the right to receive liquidated damage payments for insufficient production. A production and performance guarantee is often provided under the equipment or construction contracts to provide the project company with some assurance that these minimum production levels can be met and are often evaluated as 'back-to-back' mitigation measures to protect the project company from failures by the contractor to complete the facility in accordance with technical specifications.

Each type of facility will also have a different risk profile. A baseload project, such as nuclear, coal or natural gas facilities, will be able to meet minimum production, but will be reliant on fuel supply, and project developers of these types of facilities attempt to mitigate the risk of commodity price fluctuations by entering into long-term fuel supply contracts. An intermittent project, such as wind or solar facilities, will require projections of wind resource or solar resource that are probabilities assessments based on historical resource reports for the specific region.⁴³ Equipment warranties from construction and supply contracts also play a key role in ensuring that the facility will be protected against defects in design and manufacture.

Although lenders will be granted a security interest in all assets of the project company, the lenders cannot fully rely on this collateral package to repay their loans given that at the inception of construction, the only real assets of the project company are the project documents and the rights in real estate, which in many transactions, are often only leasehold interests. As such, it is fundamental to project lenders that the facility is constructed on a timely basis and in accordance with expected and agreed-upon technical specifications. Given the reliance of lenders and investors on the ability of the project to produce enough energy or other product to generate sufficient cash flow, the risk allocation for the construction period is vital to the viability of a project and to ensure that the project sponsors are duly incentivised to

43 These resource reports provide metrics based on probability scenarios. A P50 production means that there is a 50 per cent probability that the facility will produce the amount expected in a P50 production scenario for the designated period, and a P99 production means that there is a 99 per cent probability that the facility will produce the amount expected in a P99 production scenario for the designated period.

complete the project. Lenders in debt transactions will typically require equity contribution funding obligations in the range of 10 to 30 per cent of total project costs,⁴⁴ depending on the perceived construction and operational risks of the particular asset being financed.

In addition to the need to cover the increased interest costs during construction caused by a delay in completion of the construction of a project, offtakers will often impose liquidated damages for delays in commercial operation and a termination date if the delay goes beyond a date certain. To offset the risk of delays in construction, developers will demand delay liquidated damages from suppliers and construction contractors to ensure that components are delivered on a timely basis and that the facility is erected and constructed on schedule. In certain cases, where new technology is being deployed, construction completion guarantees may also be required of project sponsors if the lenders are not comfortable with the allocation of risk to the EPC contractor, as well as in other cases where the completion deadline is critical (e.g., the delay may result in a loss of the offtake contract, key tax benefits or critical operating permits).

Standard project documents will contain limitations on liability to the project counterparties. These limitations will customarily exclude special, exemplary, indirect or consequential losses (including lost profits) and punitive damages from the scope of the counterparty's liability. A limitation on the aggregate liability of the counterparty under the project document will also be imposed and, to the extent liquidated damages are payable, there are often sublimits for delay liquidated damages and performance liquidated damages that are lower than the aggregate liability for liquidated damages.

Project documents are also negotiated to allocate the risk of *force majeure* events between the project participants. A *force majeure* event is generally defined as an event that is reasonably beyond the control of the party affected, such as acts of God, floods, wars, riots, and other similar events.

Depending on the nature and size of the project, the parties may also need to address political risks. Certain projects, such as nuclear projects, must overcome local political and public concerns about safety and handling of waste materials. On the other hand, even renewable projects, including wind and solar projects, have encountered public opposition for a number of reasons.⁴⁵ PPPs, as discussed below, face their own unique challenges in terms of public and political opposition.

44 For technology that is well-proven and construction risks that are not perceived to be high, the debt-equity ratio can be as low as 10 per cent; and for new technology that is being utilised or has not been fully commercialised, the level of equity contributions required can be even higher than 30 per cent.

45 Large wind and solar projects have significant 'footprints' across hundreds and even thousands of acres of land, even though the foundation for each individual wind turbine generator or solar module is not that substantial. Some members of the public have objected for aesthetic reasons, claiming that the wind turbines or solar arrays obstruct the residents' view of their surroundings. Others have raised concerns that wind turbines or solar arrays may affect endangered animals, particularly certain types of birds in the case of wind projects, and desert wildlife in the case of solar projects. The Shepherds Flat project in Oregon also faced an objection from the Department of Defense, which argued that, because of the proximity of the project to a military base, the blades of the wind turbines could interfere with radar. Similar objections have been raised with respect to solar projects near military installations and test facilities. We note that the objections of the Department of Defense in the Shepherds Flat project were settled. Most of these socio-political objections for wind and solar projects have not resulted in the closing down of projects, but these are risks that developers, lenders and investors must take into account.

As noted earlier, many renewable energy projects benefit substantially from federal tax grants or credits. These tax credits and benefits were designed to offer an incentive to developers, but these incentives are typically limited in time and subject to periodic renewal. Currently, PTCs will only be available for qualifying renewable projects that have begun construction before 1 January 2017 or, in the case of wind projects, before 1 January 2020. ITCs are available for solar facilities that have begun construction before 1 January 2022.

V SECURITY AND COLLATERAL

i Security interest and priorities

In the United States, secured transactions are primarily governed by state law. Given the potential variation among the 50 states, the National Conference of Commissioners on Uniform State Laws and the American Law Institute⁴⁶ have sought to harmonise the commercial laws among the states through the promulgation of the Uniform Commercial Code (UCC). Each state has more or less adopted the UCC with few substantive modifications.⁴⁷ Secured transactions with respect to personal property are covered under Article 9 of the UCC (Article 9). Real property transactions, however, have not been uniformly codified and are subject to the particular laws of the state and jurisdiction where the real property is located.

A lender or other secured party can obtain a security interest in the personal property of an obligor upon the execution of a security agreement, which will include a clause granting a security interest in favour of the secured party.⁴⁸ The personal property of the obligor will cover the 'hard' or physical and tangible assets (e.g., wind turbines, solar panels, transmission lines, substations) and 'soft' or intangible assets (e.g., rights under material project documents and accounts). To the extent that the owner of the obligor is required to pledge its ownership interests as security for the benefit of the secured party, it will be required to execute and deliver an equity pledge agreement.

To protect the position of a secured party against other creditors, the security interest must be perfected under Article 9. The vast majority of personal property can be perfected by filing a financing statement⁴⁹ in the 'location' of the obligor, and for an organisation registered under state law,⁵⁰ its location would be the state where it is registered. Article 9 provides that certain forms of personal property cannot be perfected merely by the filing of a financing

46 The National Conference of Commissioners on Uniform State Laws and the American Law Institute are private, non-profit institutions.

47 The State of Louisiana has enacted most of the provisions of the UCC, though we note that it did not adopt either Article 2 or 2A. See Cornell University Law School's Legal Information Institute's Uniform Commercial Code Locator at www.law.cornell.edu/uniform/ucc.html.

48 See Section 9-203 of the UCC. We note that for a security interest to be enforceable, the following conditions must be satisfied: (1) value must be given, (2) the grantor must have rights in the collateral, and (3) the debtor has authenticated a security agreement that provides a description of the collateral (or, with respect to certain assets that can be perfected by possession or control, the assets are possessed or controlled).

49 See Section 9-301 and 9-502 of the UCC.

50 For purposes of the UCC, a registered organisation means a corporation, limited liability company or limited partnership (see Uniform Commercial Code Comment #4). For entities registered with the federal government, including foreign organisations, their location is in the state that the law of the United States designates or the state designated by the registered organisation if the law of the United States so authorises; however, if neither of the foregoing apply, the default location would be the District of Columbia.

statement and applies a different rule to perfection of such property.⁵¹ For certificated securities, tangible negotiable documents, instruments, money or chattel paper, perfection is obtained by actual possession of the documents.⁵² At the closing of a project financing, the originals of the documents are delivered to the secured party. A security interest in deposit accounts or letter of credit rights may be perfected by 'control'.⁵³ Control of a deposit account is established pursuant to a tripartite agreement⁵⁴ among the obligor, the secured party and the bank where the deposit account is maintained. The most basic 'control agreement' is an acknowledgment by the depository bank that it will comply with the instructions of the secured party without further consent of the obligor. A project finance transaction will involve a more complex depository agreement that provides detailed instructions as to the application of construction loan proceeds and operating revenues. For letter-of-credit rights, control is obtained through a consent by the issuer to an assignment of proceeds.⁵⁵ In addition to Article 9, the choice of law for the validity, perfection and priority of a security interest in securities held by an intermediary is also governed by the Hague Convention on the Law Applicable to Certain Rights in Respect of Securities Held with an Intermediary, which came into legal force and effect in the United States on 1 April 2017.⁵⁶

Security interests in real property interests are obtained pursuant to the execution of a deed of trust or mortgage. Each state has its own special requirements, but generally requires that the obligor grants its rights in the real property to the secured party and clearly identifies the real property interests involved. The security interests in real property are perfected by filing a mortgage or deed of trust with the local county recorder's office.

ii Credit support

Project companies will often be required to deliver credit support in favour of third parties, including construction contractors, suppliers and offtakers. Likewise, project companies will sometimes be able to obtain credit support from such counterparties to the extent that the counterparties are not creditworthy. The credit support will often take the form of a letter of credit or a guarantee from a creditworthy entity.

Despite the non-recourse nature of project financing, lenders will typically seek a limited guarantee from the project sponsor. This limited guarantee will usually cover specified risks, such as cost overruns or minimum equity contribution amounts. For loan facilities that are contingent on the receipt of cash grant proceeds, reimbursement amounts or cash rebates from a governmental agency, a guarantee might be required to cover a potential shortfall. Also certain risks allocated to the project that are viewed as 'non-market' by lenders may be expected to be covered by a limited guarantee of the project sponsor.

For partnership-flip transactions, the tax equity investor is typically a special purpose entity and credit support from the tax equity investor's creditworthy parent will be required

51 This chapter discusses investment property, deposit accounts and letter-of-credit rights. Article 9 also imposes specific rules on the perfection of agricultural liens, goods covered by a certificate of title, electronic chattel paper and other narrow types of personal property.

52 See Section 9-305 and 9-313 of the UCC.

53 See Section 9-312 of the UCC.

54 See Section 9-104 of the UCC.

55 See Section 9-107 of the UCC.

56 See the Hague Convention on the Law Applicable to Certain Rights in Respect of Securities Held with an Intermediary, available at <https://assets.hcch.net/docs/3afb8418-7eb7-4a0c-af85-c4f35995bb8a.pdf>.

to backstop its capital contribution obligations. In some instances, a tax equity investor's capital contribution can be reduced under the terms of the ECCA and lenders will often seek a 'shortfall' guarantee by the project sponsors to cover any such reduction.

VI INSURANCE AND PERFORMANCE BONDS

Insurance represents a highly specialised and regulated area of contract law. The allocation of insurance requirements among the parties in a project financing transaction follows the general project finance proposition that the party that is best able to manage the risk that is covered by a particular insurance policy should procure and maintain such insurance.

The project company will be required under the terms of financing documents to carry at all times commercial general liability insurance, worker's compensation insurance, pollution liability and umbrella or excess liability coverage. Areas that are subject to floods, earthquakes or other natural hazards will also require appropriate coverage. During the construction period, the project company will typically maintain all risk builder's insurance, and delay in start-up insurance and, to the extent applicable, marine transit insurance. The project company will also be required to maintain business interruption insurance during the operational period. These insurance requirements represent a combination of standard industry practices and insurance requirements under project documents.

Lenders and investors will not carry their own insurance but rather will be added as 'additional insured' parties to the project company's insurance. Additionally, they will require that they are named the 'loss payee' and that the proceeds of insurance policies be deposited into collateral accounts.

Construction contractors will be required under the terms of the relevant construction contract to carry commercial general liability insurance, worker's compensation insurance, professional liability, contractor's equipment and pollution liability and umbrella or excess liability coverage. It is also customary for construction contracts to provide that the project company and its lenders be additional insured parties under these insurance policies.

During the operational period, to the extent an operator⁵⁷ is retained to operate the project, the operator will also be required to maintain commercial general liability insurance, worker's compensation insurance and umbrella or excess liability coverage.

Lenders and investors will retain an insurance consultant to review the insurance programme and to ensure that the insurance requirements for the project will meet market standards, the specific requirements of the project and the project company's obligations under project documents.

Unlike insurance, performance bonds are not always required for every project finance transaction. A performance bond is a contract between the contractor and a surety to provide assurance to the developer of a project that if the contractor defaults under its construction contract that the surety will perform the obligations under the construction contract. The surety also has a few other options available, including to buy back the bond, to substitute another contractor to perform the construction contract or to deny the bond if permitted under the terms of the performance bond. The owner must not be in default under the construction contract to make a claim under the performance bond. In addition, state law may impose certain statutory requirements for a performance bond. The cost of the performance bond is a project cost and is sometimes not required if the contractor is well

⁵⁷ In many instances, these operators are not third-party operators, but an affiliate of the developer.

established with a strong track record for completing projects on a timely basis. In addition, in certain geographical areas or markets, the availability of a number of proven construction contractors make substitution and replacement of a defaulting contractor an option with a strong developer. Some construction contracts may also be supported by payment bonds. In most construction contracts, liquidated damages for delays are payable by a contractor and a payment bond can be issued, in lieu of a letter of credit, to support the payment obligations of the contractor.

VII ENFORCEMENT OF SECURITY AND BANKRUPTCY PROCEEDINGS

Upon the occurrence and continuation of an event of default under the financing documents, the lenders, as secured parties,⁵⁸ may elect to exercise remedies against the project company and its assets. The remedies provided under a customary financing agreement will include the right to suspend making additional loans, to accelerate the outstanding obligations, to cure breaches of the project company under the project documents, to possess the project, to marshal the project's assets and to conduct a private or public sale of the project company and its assets. The financing documents will also provide that the lenders are also permitted to exercise all rights available to them under Article 9.

Chapter 6 of Article 9 is devoted to setting out the rights of creditors against personal property after a default in situations outside bankruptcy. A secured party may deliver notices to account debtors of the project company, including the counterparty to the offtake agreement⁵⁹ and enforce obligations of an account debtor to make payment or render performance.⁶⁰ The secured party may take possession of the collateral and dispose of the collateral with or without judicial process.⁶¹ The disposition of collateral may be conducted privately or publicly, but in all instances, must be undertaken in a commercially reasonable manner.⁶²

Foreclosure on real property is subject to individual state laws. A foreclosing lender must also be aware that each state may have a special or unique statutory provision with respect to enforcement proceedings. For instance, California has the 'one action rule' under

58 In most transactions, a collateral agent is appointed to act on behalf of the lenders and the other secured parties under the credit agreement. Under customary financing documents, a collateral agent may only undertake actions that have been consented to by the majority lenders.

59 As indicated above, it is typical for lenders to obtain consents to collateral assignment or direct agreements with counterparties to material project documents. A consent or direct agreement will set forth the collateral account to which payments must be directed, and as a result, a post-default notice is unnecessary since there is an existing agreement to deposit proceeds into the collateral account for which the secured party has rights to in an event of default.

60 See Section 9-607 of the UCC.

61 See Section 9-609 of the UCC. The taking of possession and disposal of collateral without judicial process may be done so long as it can be accomplished without a breach of the peace. A secured party may also agree with the debtor to have the debtor assemble the collateral and make it available to the secured party.

62 See Section 9-610 of the UCC. The factors for determining whether conduct is commercially reasonable is a function of statutory provisions, such as Section 9-627, and case law. The UCC provides for certain 'safe harbour' provisions to demonstrate that a secured party has acted in a commercially reasonable manner. Section 9-612 offers one such safe harbour: 'a notification of disposition sent after default and 10 days or more before the earliest time of disposition set in the notification is sent within a reasonable time before the disposition'.

Section 726 of the California Code of Civil Procedure,⁶³ which requires that a secured party exhaust all of its remedies against the debtor's collateral before suing a debtor for deficiency, and a failure to do so may result in the loss of the secured party's liens on both personal and real property.

The proceeds of foreclosure are applied as follows: first, to reasonable expenses of collection and enforcement, including reasonable attorneys' fees; second, to interest and bank fees; third, to principal; and fourth, to any remaining outstanding obligations.

Most lenders in project finance transactions prefer to enter into work-out arrangements with defaulting borrowers in lieu of exercising Article 9 foreclosure remedies because of the flexibility available under a workout arrangement coupled with the basic reality that in a non-recourse project deal, the principal source of repayment is revenue generation rather than asset disposition. Federal bankruptcy of a project company is generally the least attractive scenario for lenders; a debtor is more likely to obtain some sort of relief under a bankruptcy proceeding than private workouts or Article 9 foreclosure.

Federal bankruptcy law⁶⁴ pre-empts state law creditor laws, including Article 9. A bankruptcy case for a debtor may be voluntary (filed by the debtor) or involuntary (filed by creditors).⁶⁵ Once a bankruptcy petition is filed, it creates a bankruptcy estate and imposes an 'automatic stay' against creditors that prevents any creditor from taking action against the debtor or its assets.⁶⁶ The rights of a lender to exercise any of its remedies under the finance documents or Article 9 is prohibited after the imposition of an automatic stay notwithstanding its senior secured position. In addition, some liens, such as unperfected security interests, may be invalidated under Section 544(a) of the Bankruptcy Code.⁶⁷ There are two basic types of bankruptcy cases for corporations and other business organisations: Chapter 7 and Chapter 11 cases.

Chapter 7 of the Bankruptcy Code covers a liquidation bankruptcy in which all personal property⁶⁸ is converted to cash and distributed among the creditors. The bankruptcy court will appoint a bankruptcy trustee to oversee the liquidation of the debtor's estate.

Chapter 11 of the Bankruptcy Code applies to reorganisation of the debtor's assets, rather than liquidation. A debtor retains custody of its assets and is considered a 'debtor-in-possession'. A debtor will be subject to a Chapter 11 plan pursuant to which a debtor will operate in the post-petition period. The debtor initially has an exclusive period in which to propose a Chapter 11 plan, but if the debtor fails to propose a plan that is accepted by creditors, any party in interest may file a plan and more than one plan may be filed.⁶⁹ After

63 The purpose of Section 726 of the California Code of Civil Procedure was to protect defaulting debtors against multiple suits and harassment from secured parties by requiring 'one form of action for the recovery of any debt or the enforcement of any right secured by mortgage upon real property', but failing to comply with this provision has serious consequences for lenders.

64 Federal bankruptcy law is a composite of the Bankruptcy Act of 1898, the Bankruptcy Reform Act of 1978 and The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005.

65 Section 301 of the Bankruptcy Code addresses voluntary bankruptcy petitions and Section 303 of the Bankruptcy Code provides for involuntary bankruptcy filings.

66 See Section 362 of the Bankruptcy Code.

67 Section 544(a) may only invalidate the lien of a creditor, but does not extinguish the underlying claim. A creditor with an invalidated lien will be treated as an unsecured creditor.

68 There are exceptions for exempt property, but this generally does not apply in project finance.

69 See Section 1121 of the Bankruptcy Code. The substantive terms of the Chapter 11 plan are set out in Section 1123 of the Bankruptcy Code.

confirmation of the Chapter 11 plan, the debtor must perform under the approved plan. The liens of a pre-petition lender will not extend to personal or real property acquired after the filing of Chapter 11.⁷⁰ In some instances, where a debtor can obtain financing from a post-petition lender, that post-petition lender may be granted, by order of the bankruptcy court, priority over pre-petition lenders.⁷¹ A debtor-in-possession may continue to use, sell and lease encumbered property in the ordinary course of business in accordance with the Chapter 11 plan.

VIII SOCIO-ENVIRONMENTAL ISSUES

A number of licensing and permit requirements are relevant to project finance transactions in the United States. The project company will need to comply with federal permits as well as state, county and municipal permits applicable to projects in its jurisdiction. Permitting obligations are customarily spread among the project company and the counterparties to various project documents, ideally allocated to the parties best suited to perform and manage the obligations.

For the construction period, a number of permits will need to be obtained by the construction contractor in connection with the performance of its obligations, including building permits, air quality permits and construction permits with respect to any demolition, erection or construction of facilities. The project company will customarily obtain permits that will need to be issued in the name of the project owner during the construction period, as well as permits that may need to be in place during both construction and operational periods. These permits include local permits (such as any facility site permits and road use agreements) as well as federal permits (such as a Federal National Pollutant Discharge Elimination System permit if storm water is likely to cause discharge from a construction site). Certain types of projects will need to obtain specialised permits. For example, since wind turbine generators will exceed federal obstruction standards, a wind energy generating facility must demonstrate there is no substantial adverse effect to obtain a 'Determination of No Hazard to Air Navigation' from the Federal Aviation Administration for each of its wind turbine generators.

Certain permits will need to be obtained at or around the time of commercial operation. Emissions and noise permits in certain jurisdictions are obtained during the testing period based on the results of the test performance of the facility. Other permits for use and operation will need to be obtained by the project company or its operator. To the extent feedstock or other fuel is used to supply the facility, one or more permits will need to be obtained to allow the project company to transport and consume the fuel.

It is customary for lenders and investors to obtain a Phase I environmental site assessment (ESA) from an environmental consultant. A Phase I ESA will include a physical inspection of the site, examination of public records for environmental liens, prior land usage

70 To the extent that a security agreement includes a provision to cover property acquired after the execution of the security agreement, Section 9-204 provides that such after-acquired property will be part of the collateral covered under the security agreement. Section 522(a) of the Bankruptcy Code overrides this state law by making it clear that property acquired by debtor after the Chapter 11 filing will not be subject to liens pursuant to any pre-petition security agreement.

71 See Section 364(d) of the Bankruptcy Code. Section 364(d) sets out requirements as to when a post-petition lender can 'prime' the priority of a pre-petition lender.

and permits, and other investigations to determine whether any hazardous materials have been released or could potentially be released on the site. To the extent that a Phase I ESA reveals any recognised environmental condition or a potential environmental condition, a Phase II ESA will be undertaken and involve more intrusive sampling and measurements. In addition, a number of studies may be needed to demonstrate that the environmental and site impact does not adversely affect cultural resources or wildlife.⁷²

Importantly, compliance with the Equator Principles⁷³ may not be a legal requirement for financial institutions participating in project finance transactions, but it is an internal requirement for many banks participating in the project finance market. Accordingly, many financing agreements require that the borrower comply with the Equator Principles.

IX PPP

The PPP structure is used in a subset of the project financing transactions where a governmental entity and private sector entity are collectively engaged in the development, construction and operation of a public project. In the United States, the federal government does not usually engage directly in PPP transactions, but plays an important role through legislation and allocation of funding to states for infrastructure projects. The PPP market can be supported with legislation promoting infrastructure projects, together with funding to states. States and local governmental agencies are the principal players in the PPP market. Unfortunately, legislation for PPP projects is not uniform throughout the 50 states and private sector developers and investors must understand the differences in both process and substance in the state where they seek to bid for a PPP project. The bidding process itself varies from state to state, but the underlying tenet of establishing an open and competitive process is a common theme. The review and acceptance process for bids differs substantially as each state has differing statutory requirements as to the evaluation criteria.

One of the major considerations for PPP transactions is the level of public support for the project, the potential private investor and its corresponding bid. Public support can directly or indirectly affect both legislation with respect to PPPs and the bid and approval process for any potential PPP project.

The vast majority of PPP transactions in the United States to date has been primarily focused on transportation infrastructure projects.

X FOREIGN INVESTMENT AND TAX ISSUES

An investor in the United States must consider the application of federal, state and local income taxes, franchise taxes, transfer taxes, and intangible taxes. There is considerable variation in different state and local tax regimes, which makes it difficult to generalise about state and local tax considerations, which are therefore not addressed.

72 The nature of the studies needed will depend on the type of project. For example, bat and avian studies are needed to assess the impact of wind turbine generators.

73 The term 'Equator Principles' is described in 'An industry approach for financial institutions in determining, assessing and managing environmental and social risk in project financing', dated 4 June 2003 and developed and adopted by the International Finance Corporation and various other banks and financial institutions.

A non-US lender to a US project will generally be subject to US federal withholding tax at a rate of 30 per cent on interest payments. This withholding may be reduced if the lender is entitled to the benefits of an applicable income tax treaty, many of which provide for an exemption from, or reduction in, withholding tax on interest. However, almost all US tax treaties include fairly mechanical anti-treaty shopping tests, and there are a number of other anti-abuse rules that make it very difficult for a non-treaty lender to access the US treaty network. Nevertheless, certain non-bank lenders that are not treaty eligible may qualify for an exemption from withholding on interest if they are not otherwise related to the borrower, and the loan is in 'registered form' for US tax purposes (which is generally easy to ensure).

The tax consequences of an equity investment in a US project will depend on whether the investor invests in the project through a partnership or corporation for US tax purposes. In either case, project income will generally be subject to net income tax, although in the case of a partnership this may be imposed on the partners (collected by partnership advance withholding). In addition, where the investment is made through a corporation, distributions that constitute dividends will be subject to US federal withholding tax at a rate of 30 per cent. Where the investment is made through a partnership, an equivalent branch profits tax may be imposed on the non-US partners on amounts they are deemed to have repatriated. These withholding or branch profits taxes may be reduced or eliminated by an applicable income tax treaty. There can be substantial variation in tax consequences depending on the structure for the project and the relevant investment vehicles.

XI DISPUTE RESOLUTION

In US project finance transactions, the historical preference of lenders is to have the financing documents governed by the law of New York State and to require borrowers and other counterparties to financing documents to consent to the jurisdiction of the courts of New York. The comparatively straightforward issues raised in disputes involving loans and other credit facilities have been viewed as rendering those disputes more suitable to judicial as opposed to arbitral determination.

Nonetheless, US courts follow the strong policy in favour of arbitration to enforce agreements that have elected arbitration. There are a number of project documents that provide arbitration as the avenue for settling disputes. Parties choose from a large variety of institutions and rules, or *ad hoc* arbitration under rules of the parties' own design. Arbitral proceedings can be tailored by contract to modify the institutional rules and meet the specific needs of the particular transaction. Parties in US transactions typically designate the American Arbitration Association for their project finance disputes. Parties frequently choose New York as the place of arbitration.

The United States is also a party to the New York Convention and the 1975 Inter-American Convention on International Commercial Arbitration, which requires courts of contracting states to give effect to private agreements to arbitrate and to recognise and enforce arbitration awards made in other contracting states. Other enforcement mechanisms are available, including multilateral treaties, bilateral friendship, commerce and navigation treaties and traditional principles of comity among nations.

XII OUTLOOK AND CONCLUSIONS

Over the long term, project finance is expected to continue to be a popular vehicle to finance the necessary energy and infrastructure assets in the United States, particularly to replace the ageing fleet of coal-fired plants, nuclear plants and other public infrastructure, given the support of the strong legal framework and a strong, sophisticated private financing market (in addition to political support and other factors).

The US Energy Information Administration (US EIA) estimates that energy consumption, across all sectors, will increase by 5 per cent in the aggregate from 2016 to 2040.⁷⁴ While additions to power plant capacity are expected to slow from the construction boom years in the early 2000s, we expect to see more long-term growth in certain sectors, such as projects from renewable sources and natural gas.⁷⁵ For example, the US EIA projects that electricity generation from renewable sources will grow so that its share of total US energy generation will increase from almost 15 per cent in 2016 to 31 per cent in 2050 in the reference case, or as high as 34.6 per cent based on a high oil price case.⁷⁶ Additionally, projections from industry sources foresee that the United States may need close to US\$5 trillion to support its standard infrastructure needs in the coming years.⁷⁷ With the enduring need for energy and infrastructure, the United States will look to project finance structures as one of the tools for satisfying this need.

74 See footnote 28.

75 Ibid.

76 Ibid.

77 See footnote 30.

ABOUT THE AUTHORS

MIGUEL DURAN

Milbank, Tweed, Hadley & McCloy LLP

Miguel Duran is an associate in Milbank's global project finance group and is based in the Los Angeles office. He has experience representing both financing parties and sponsors in the development and financing of solar and wind power projects, gasification facilities and other infrastructure projects in the United States and Latin America.

PHILLIP FLETCHER

Milbank, Tweed, Hadley & McCloy LLP

Phillip Fletcher is a partner in Milbank, Tweed, Hadley & McCloy LLP's global project finance group. He focuses on representing parties in the acquisition, development and financing of oil and gas, natural resources, independent power, satellite and other infrastructure projects across Europe, the Middle East and Africa. He has particular expertise in multi-sourced financings, including those through official credit agencies, the capital markets and Islamic institutions. Mr Fletcher has been recognised as a leading project finance lawyer by a number of journals, among them *Who's Who Legal* (which has twice designated him the world's 'Most Highly Regarded' projects lawyer), *Chambers UK* (which ranks him among the first tier of projects lawyers in London), *Chambers Global* (which ranks him among the first tier of projects lawyers in the Middle East, and as a leader in African projects markets), *Euromoney* (which ranks him among the top 30 projects lawyers in the world), *Best Lawyers UK* (which designated him as the 'Project Finance Lawyer of the Year' for 2017) and *The Legal 500*. Mr Fletcher is a co-author of the Oxford University Press guide *International Project Finance: Law and Practice*, he serves on the advisory board of the *International Financial Law Review* and is a member of the Council on Foreign Relations. He is qualified to practise under both English and New York law.

ANDREW PENDLETON

Milbank, Tweed, Hadley & McCloy LLP

Andrew Pendleton is a senior associate in the project finance group based in the Tokyo office of Milbank, Tweed, Hadley & McCloy LLP. He has experience advising lenders and sponsors on a variety of international project financings. His sector and regional representations include petrochemicals, oil and gas, natural resources, power, satellites and other infrastructure

projects in Asia, Europe, the Middle East and Africa. Mr Pendleton has also contributed to various legal publications. He is a co-author of the Oxford University Press guide *International Project Finance: Law and Practice*. Mr Pendleton is qualified to practise under English law.

HENRY SCOTT

Milbank, Tweed, Hadley & McCloy LLP

Henry Scott is a senior associate in Milbank's global project finance group in the Los Angeles office. Mr Scott's experience includes project finance, asset-based financing and general corporate work. He has experience representing both financing parties and sponsors in debt and equity financing transactions involving wind, solar and geothermal generation projects, coal gasification facilities and onshore LNG terminals, as well as rail and road PPP infrastructure projects. He regularly advises buyers and sellers in the acquisitions, workouts and dispositions of energy and infrastructure assets.

AROLINA WALTHER-MEADE

Milbank, Tweed, Hadley & McCloy LLP

Carolina Walther-Meade is a member of Milbank's global project finance group and the firm's Latin America practice group in the New York office. A partner since 2007, Ms Walther-Meade has extensive experience in cross-border financings and international project finance and development, with an emphasis on infrastructure, mining and energy projects throughout Latin America. She has also been involved in numerous acquisition financings and structured financings in the region. Her practice includes representation of commercial bank syndicates, multilateral and export credit agencies and other lenders, as well as corporate developers and industrial groups. She spent one and a half years with Milbank based in Brazil and continues to spend a significant amount of time in Milbank's São Paulo office.

Ms Walther-Meade is consistently recognised as a leading project finance lawyer by *Chambers Latin America*. She grew up in Mexico and speaks Spanish and Portuguese fluently. She is an advisory board member of the Women in Law Empowerment Forum.

KAREN WONG

Milbank, Tweed, Hadley & McCloy LLP

Karen Wong has been a partner in Milbank's global project finance group since 1996 and is resident in the Los Angeles office. Ms Wong focuses on the representation of sponsors and financing parties in connection with the development, acquisition, financing and restructuring of power, petrochemical and other infrastructure facilities in Asia and North America. In the past few years, she has represented a number of financing parties in debt financings, leveraged lease and single-investor lease transactions involving wind, solar, hydro and biomass projects, as well as representing the project sponsor of several coal and petroleum coke gasification projects in the United States.

In 2014, Euromoney Legal Media Group named Ms Wong as 'best in energy, natural resources and mining' and she was selected as one of the *Daily Journal's* 'top 25 clean-tech lawyers' in California and also featured as one of the state's 'top 75 women lawyers'. She is listed as one of the leading project finance lawyers in *IFLR1000*, *Chambers USA* and *Chambers Global* for projects, and *Who's Who Legal*, and has been recommended in *PLC Which lawyer?* for banking and finance

MILBANK, TWEED, HADLEY & MCCLOY LLP

21F Midtown Tower
9-7-1 Akasaka, Minato-ku
Tokyo 107-6221
Japan
Tel: +813 5410 2801
apendleton@milbank.com

2029 Century Park East
33rd Floor
Los Angeles, CA 90067-3019
United States
Tel: 1 424 386 4000
Fax: +1 213 629 5063
kwong@milbank.com
hscott@milbank.com
mduran@milbank.com

28 Liberty Street
New York
NY 10005-1413
United States
Tel: +1 212 530 5000
Fax: +1 212 530 5219
cwalther-meade@milbank.com

1850 K Street, NW
Washington, DC 20006
United States
Tel: +1 202 835 7513
pfletcher@milbank.com

www.milbank.com