

Understanding Power Project Financing

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Understanding Power Project Financing – Version 1.1

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UNITED STATES DEPARTMENT OF COMMERCE
The Secretary of Commerce
Washington, D.C. 20230

In 2013, President Obama launched Power Africa to bring together technical and legal experts, the private sector, and governments from around the world to increase the number of people with access to power in Sub-Saharan Africa. Over the past three years, Power Africa has grown into a coordinated network of over 120 public and private sector partners working together to add 30,000 megawatts of new electricity generation and to reach 60 million new homes and businesses in Sub-Saharan Africa.

A key pillar of Power Africa's approach entails building the requisite capacity and understanding to help generate a sustainable power sector in Sub-Saharan Africa and to more readily attract private capital to develop necessary power infrastructure. To further these goals and in response to questions regarding how to expedite the development of power projects, Power Africa – under the leadership of the U.S. Department of Commerce, through the Office of the General Counsel's Commercial Law Development Program, and the African Development Bank, through the African Legal Support Facility – launched the "Understanding" series. This collection of technical handbooks is designed to enable African governments, Power Africa partners, and other stakeholders to expeditiously interpret, negotiate and develop power projects in Sub-Saharan Africa. In 2014, we produced "Understanding Power Purchase Agreements," a handbook explaining the terms, balance of interests, and structure of power purchase agreements, a key foundation in power project development. The reaction to the first handbook has been overwhelmingly positive, with over 15,000 copies distributed in print and numerous Power Africa partner governments using the handbook as a reference guide for power purchase agreement negotiations.

We produced "Understanding Power Project Financing," the second edition in the "Understanding" series, in response to the need to cultivate a better understanding of the expansive, and often confusing, universe of financing options for power project development. Like its predecessor, this handbook is the product of a consensus-based process involving African governments, multilateral institutions, and private sector stakeholders that encapsulates Power Africa's partnership-driven approach to facilitating the growth of the power sector in Sub-Saharan Africa.

As we work towards Power Africa's goal of doubling access to electricity in Sub-Saharan Africa, it is our hope that this handbook becomes a go-to resource for identifying and assessing the various options for financing power projects. I continue to take great pride in the U.S. Department of Commerce's leading role in Power Africa, and I remain convinced that the United States and Africa can work together to build a better future for the African continent.


Penny Pritzker
U.S. Secretary of Commerce

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Foreword

Foreword

Contributing Authors

Foreword

The critical role of access to power in economic growth is perhaps one of the few core elements of economic development that all economists can agree upon. There are few resources that can benefit the public as broadly and as effectively as access to power. From schools to hospitals and homes to offices, the existence of plentiful, affordable and reliable power is the cornerstone of growth in the modern era.

With this reality in mind, it should come as no surprise to you, the reader, that there is an intense effort by governments, international organisations, and the private sector to drive investment into power projects in both under-served power markets in developing countries and remote markets in developed countries. The intensity of the drive to electrify the world has taken on an even greater dimension in recent years with the realisation that access to power can also serve the equally important goal of a reduction in carbon emissions if much of the new investment is directed away from conventional fuel sources towards cleaner sources of power. The result is a world where power sector growth has the potential to improve the condition of both our lives and our planet.

Despite the tremendous potential that could be unlocked through greater investment in power projects, there are still significant barriers to their development. As was discussed in our previous publication "Understanding Power Purchase Agreements", one barrier to project development is the drafting and negotiation of the complex contract that sits at the core of private power projects, the Power Purchase Agreement (**PPA**). In that book, we noted that a PPA can only function if there is a mutually agreeable allocation of both risks and benefits between the government, the offtaker, the power project developer, and the project lenders. This new handbook is intended to serve as a companion to the PPA handbook and addresses another critical barrier to power project development, namely arranging the financing of a power project. The task of arranging financing for a power project, with its mix of investors, lenders, risks and mitigants, is in the eyes of our group of authors, as complex as the negotiation of the PPA, hence the need for an additional handbook.

FOREWORD

As with our previous handbook, the intent here is to share with you an overview of the challenges, strategies, and nuances of private financing of a power project. As explained in the chapter on power markets, many countries, including some developed countries, are still facing challenges in transitioning towards a more predictable and competitive power market. In addition to the market challenges, the chapter on finance structures explains how the ever growing burden on the national budgets in many developing countries has reduced the ability of the state to develop projects directly and has instead necessitated a shift towards privately developed and financed power projects. The issue of risk in power projects is again allocated its own chapter, with more attention given this time to the pricing and allocation of risk. The PPA continues to play an important role, with the chapter on financial obligations under the PPA setting the scope of financial commitments that are necessary for a power project. Perhaps the most critical insight provided by this handbook is contained in the final two chapters, which lay out the options for governments as they seek to support investors in power projects by reducing the credit risks that are often the single greatest barrier to financing.

This handbook is the product of months of consultations between stakeholders from both the public sector and the private sector. Those consultations helped to establish the understanding of the pitfalls of project financing in developing markets. The creative solutions developed through close cooperation between governments, international institutions, and the private sector, formed the mandate for the drafting of a handbook on power project financing. The fulfilment of that mandate through the handbook that you see before you is the fruit of the labour of a group of authors that is as diverse in its expertise as it is in its backgrounds and perspectives. Our group of authors came to the table as equals, each donating their time on a pro-bono basis and each ready to both share and listen in order to produce a resource that is greater than the sum of our experience. By sharing insights from governments, development banks, private banks, leading law firms and seasoned negotiators, we hope that we are able to provide you with a broad and balanced understanding of the complexities behind project financing.

FOREWORD

The monumental task of gathering, organizing and distilling the input from our distinguished group of authors could not have been possible if it were not for the brilliance of the Book Sprints drafting method (<http://www.booksprints.net>). The Book Sprints process allows for the developing of a fully conceptualised, drafted and edited book in just five days. You should find it as no surprise that those five days were filled with animated conversations, mad scribbles on an army of post-it notes, and endless hours scrutinising text to ensure its accuracy and accessibility. We were pleasantly surprised at both the level of commonality amongst us and the dedication we all shared to this important project. The outcome is a combination of information and insight that reflects our collective knowledge rather than the personal opinions of the authors or the institutions that they represent.

We would like to thank our Book Sprint facilitator Laia Ros Gasch for her persistent guidance and endless patience. We would also like to thank illustrator Henrik van Leeuwen for his unfailing ability to translate our scribbles into works of informational art. We are also deeply appreciative of Book Sprints' offsite team, including Raewyn Whyte (proofreader) and Juan Carlos Gutiérrez Barquero and Julien Taquet (Technical Support).

We are especially thankful for the strategic planners that helped conceive this project: Mohamed Badissy, Nnamdi Ezera, Sheryl Weisflog and Mohammed Loraoui (Commercial Law Development Program); Amir Shaikh and Toyin Ojo (African Legal Support Facility); and Adam Hyde, Katerina Michailidi and Mark Brokering (Book Sprints). The authors would also like to thank the generous funding and logistics support from Power Africa, the United States Agency for International Development and the African Legal Support Facility, without which neither the consultations nor the Book Sprint would have been possible.

In order to continue the tradition of open source knowledge sharing that was so well received after the publication of *Understanding Power Purchase Agreements*, this handbook is issued under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License (CC BY NC SA). In selecting this publication license, we welcome anyone to copy, ex-

FOREWORD

cerpt, rework, translate and re-use the text for any non-commercial purpose without seeking permission from the authors, so long as the resulting work is also issued under a Creative Commons License. The handbook is initially published in English with a French edition soon to follow. The handbook is available in both electronic form, at this address (go.usa.gov/c7tBx), and print format by contacting Mohamed Badissy (CLDP) at mbadissy@doc.gov or ALSF at alsf@afdb.org.

Bridging the gap between the promises of a more electrified world and the delivery on those promises is the core mission of every single person in our group of authors. Much as we brought together governments, private companies, private banks, development banks, and leading legal experts to share their best strategies for securing the financing necessary to go from dream to reality, we hope that others will leverage this handbook in their own drive to bring electricity to all who want it. We are honoured to contribute to this noble mission and thank you for taking the time to consider our contribution.

Sincerely,

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1. Introduction

1.1. Introduction

Bankable transactions are central to the development of the power sector in many emerging economies.

However, implementation of power transactions in these countries is sometimes protracted. The two key reasons cited most often for delaying negotiations to reach financial close are:

- equitable risk allocation (who takes the risk and why?); and
- shortage of credit enhancements (what can be done by parties, including governments, to mitigate the risks?).

For example, when the issue of a “sovereign guarantee” arises it can cause debate, leading to a potential impasse.

This handbook aims to serve as a practical resource for governments, utilities, investors, and other interested stakeholders by pointing to each party’s challenges and outlining what motivates the decision-making process. As such, this book seeks to provide a roadmap for navigating through this impasse.

The handbook starts out with an overview of the different financing alternatives for power transactions and the advantages and disadvantages of each. The text then proceeds into a deeper analysis of the mechanics of project finance and its relevance to implementing power projects.

Thereafter it delves into some of the key challenges which include:

- the role of and rationale for credit enhancement in mitigating perceived and actual risks in order to attract public and private sources of financing and;
- sovereign and non-sovereign forms of credit enhancement and their respective mechanics and implications. This further includes a discussion on risk scoping and assessment, risk allocation, and the impact of risk on pricing, as well as a detailed consideration of the key stakeholders.

The Critical Role of the Government in Delivering an Independent Power Project

The handbook focuses on a specific scenario in the power financing context: projects that involve an Independent Power Producer (**IPP**). While the party providing the power may be private, with interests and expectations distinct from the government, the government continues to play a fundamental role in the deal. The government may have initiated the project, through a tender process or otherwise, and one arm of government is usually the licensing and approval authority for construction, operation, and clearances. In addition, the government is often a contractual party to a power purchase agreement, as in the case of a state-owned offtaker, and is the party that maintains key requisite and related infrastructure, such as the transmission and distribution network or fuel supply. As a policy maker, the government sets the context for the ease and logistics of investment in many respects. Also, as this handbook will highlight, given the government's unique position and role in private power deals in challenging markets, the government is a central figure and well-positioned to provide support through credit enhancement.

This Handbook in Context

This handbook is a follow-on to a prior handbook titled "Understanding Power Purchase Agreements". Both handbooks address different aspects of power transactions. The first handbook focused on the mechanics and specifics of a power purchase agreement (**PPA**) and its role in attracting power financing for an IPP. In contrast, this handbook focuses on the financing structures and mechanisms that can be employed to finance IPP power projects.

2. Context

2.1. Introduction

2.2. Evolving Market Structures

2.3. Creating an Enabling Environment

2.1. Introduction

The power sector is a fundamental building block for economic advancement in any country. Power is a critical input for the successful growth and functioning of a country's economy, across all its sectors, and thus for job creation. Electricity demand is closely correlated with GDP growth and other socio-political advancements. As such, power investments demonstrate a clear and quantifiable economic return upon completion and commissioning of the financed power projects, with a resultant multiplier effect on the broader economy. Successfully financed power transactions will thus have broad-reaching development impact.

These transactions require substantial and long-term investments which have long repayment periods. They often require highly technical and specialised knowledge and expertise to prepare and implement. Furthermore, the power sector is uniquely reliant on physical transmission and distribution infrastructure, a costly undertaking to construct and maintain, as distinct from other infrastructure sectors, such as telecommunications. Therefore, there is a need to develop an enabling investment environment which will be sustainable in the long-run. This, in itself, can be a long-term endeavour. As such, projects undertaken in the near- to medium-term often necessitate the inclusion of certain credit enhancements.

In this context, even as governments begin to open the sector for private participation, they are relied upon for legislative support, regulation, licensing, oversight, and ancillary market functions such as fuel supply and/or transmission. They are relied upon to create an enabling environment that fosters the evolution of their power sectors. While a great deal of time and effort is involved in such endeavours, by creating an enabling environment, a government can increase the likelihood of reaping the benefits of independent power projects, with the main advantage being that the up-front cost of the project is provided through private sector-led financing and not from the sovereign's balance sheet.

2.2. Evolving Market Structures

Private Capital, Public Good

Competing demands on government funds and limited financial solvency in the power sector have constrained the ability of many emerging market governments to invest in additional power generation capacity. This has occurred against the backdrop of an unmet and growing demand for power.

Governments balance political, economic, and fiscal considerations while attempting to address the needs of their power sector. Governments are often unable to fund the necessary capital expenditures required to meet their power infrastructure needs. Partnering with the private sector offers governments the opportunity to access greater financial resources and technical expertise. The integration of the private sector into the power sector shifts not only the financing burden away from government, but also some of the risks such as project preparation, implementation, and operation.

Power markets typically start out as fully government financed, owned and controlled. As noted in Section 3.1 (Overview of Power Financing Alternatives), this model requires less coordination by the government with various third party funders, but it also requires the government to add more financing obligations to its balance sheet. This can limit the available cash reserves or external financing that a government can channel to other capital-intensive sectors that it may need to support. Consequently, many governments have deemed it beneficial to privatise certain revenue-generating power assets (primarily generation assets), as opposed to social sectors such as education and health. In this way, the government is able to benefit from financing structures encouraging private capital that help to free up its balance sheet for other priorities.

The provision of power, despite growing private participation, is a public good that often requires the active engagement of government. The level of engagement exists in varying degrees in different countries.

Towards a More Developed Power Sector

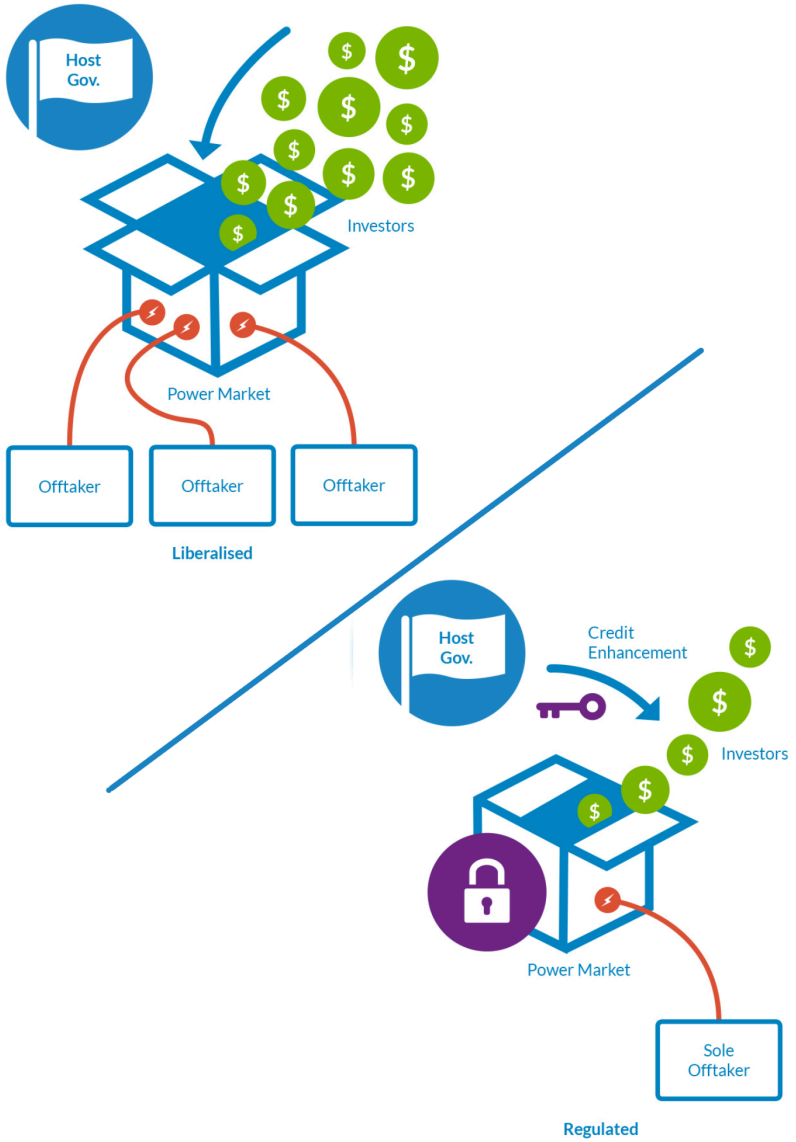
Within emerging markets, there is a wide continuum along which markets evolve. On one end of the continuum, there are markets that are tightly controlled by governments, with single offtakers and limited access to the grid. On the other end of the continuum, there are countries that allow for spot market auctions, wheeling arrangements and multiple offtakers. The more a government advances along this continuum, the less government support is required.

As the market structure evolves, private participants gain comfort that there is greater transparency and a more efficient allocation of resources. As the market matures, it will more likely attract greater private investment and be better positioned to weather most volatility that may be generated by macroeconomic events and trends. Eventually, the market will move towards becoming self-sustaining and financially solvent. As that happens, the government will still play a critical role, but may no longer be required to subsidise the cost of power production. However, until the full benefits of privatisation and liberalisation have, or are perceived to have, produced a relatively developed power market, the government may still be called upon to provide financial support or guarantees to that market in a number of ways.

In addition to the many macroeconomic factors to be considered, the following illustration describes a few key features of power markets that are further developed and require less government support.

CONTEXT

Evolving Power Markets



2.3. Creating an Enabling Environment

In order to maximise the efficiencies of private participation in power markets, there are certain measures that could be implemented to assist in cultivating a more mature private power market. Not implementing these measures could cause market inefficiencies, which may ultimately result in a cost to government (because the market will ultimately depend on the government to manage these inefficiencies). The more inefficient the market, the greater the cost to the government. Conversely, the application of certain key market reform measures should help ensure the best available price for power and allow for a greater transfer of risk and responsibility from government to private market participants.

Countries need a stable, consistent, and investment-friendly framework of laws and regulations in order to attract private investment. Governments have the primary responsibility to create such an environment.

Summarised below are some critical factors that private investors will review to understand a country's legal and regulatory framework. A review of the general enabling environment, as well as the project structure, will often be the starting point for investor negotiations that may result in the investor sometimes requesting additional comfort in the form of credit enhancements from the host government and/or the offtaker.

Power Sector Policy, Legislation and Regulatory Frameworks

Laws that clearly define the roles and rights of the various government entities and private parties involved in the power sector will enhance the attractiveness of the electricity market for potential investors. This often entails government parties clearly allocating certain rights and remedies to private market participants that they can rely on when evaluating potential investments. By firmly setting these rights and remedies in law and regulation, the government is limiting its flexibility but is also attracting private investment.

An independent regulator is also key to upholding and balancing the rights and interests of all stakeholders. An independent regulator provides comfort to investors that decisions regarding licencing, provisioning and tariffs will not be taken arbitrarily, whilst at the same time protecting end-users from sudden or disproportionate tariff increases.

Secure Ownership Rights

Having a system that allows for clear security of ownership rights is essential for any investor. In project finance, lenders would require certainty that they can exercise step-in rights and take over the project company and its assets in the event of loan defaults.

Commercially Viable Sector

Cost-reflective tariffs are an important requirement to ensure the off-taker (and other utilities) can retain margins to be independently financially viable and to, in turn, finance the growth of the sector. When the tariff paid by end-users of power accurately reflects the cost of producing that power, and transmitting and distributing it to the end-users (including the cost of capital commensurate with risk), no subsidy is required by the government for the power sector. If, however, the tariff is not an accurate reflection of such cost, the utility will be a loss-making entity unless alternative sources of funds are found to cover the deficit. This will impact in-

vestor confidence in the offtaker to meet its ongoing payment obligations over the course of a long-term purchase agreement. However, increasing electricity tariffs to cost-reflective levels in keeping with the realities of an emerging power market can be challenging, especially where supply is intermittent (i.e. brown-outs, black-outs), creating political pressures to maintain low electricity prices. This needs to be balanced against the consequence of having a financially insolvent power sector, which may otherwise necessitate additional financial support from the host government to attract additional investment. This makes it imperative for the government to manage the twin challenges of investor confidence and consumer confidence.

- Even if the offtaker benefits from a cost-reflective tariff, it will remain a loss-making entity if it is unable to collect from end-users and customers (including, in some jurisdictions, distribution companies). Having a robust system of metering and bill collections is of critical importance, in addition to cost-reflective tariffs, for the financial solvency of the power sector.
- With a cost-reflective tariff and a robust metering and bill collection system, if the electricity never reaches the end-user, the offtaker will lose money. Minimising the technical and particularly commercial losses from transmission and distribution is critical to ensuring proper cash management in the system.

The private sector also plays a key role in ensuring a commercially viable power sector. Sponsors who build and operate efficient plants that attain the end goal of providing electricity in a sustainable and cost-effective manner are required in this long-term partnership.

Competitive Tenders

Procuring power through a public and competitive tender process is often seen as the best way to ensure that value for money is achieved regarding power generation pricing. This process, however, will generally take more time to complete than procurement of power through unsolicited bids (including emergency power) and may not be appropriate in circumstances where the government needs to procure power on an expedited basis. However, this additional time allows prospective providers to formulate the best possible bid according to well-specified guidelines, and gives the government time to assess and compare bids against pre-specified criteria.

Alternative Offtake Arrangements

Power projects generally sell the power they produce to a bulk purchaser who coordinates the sale of power to the end-user (either directly or through a distribution company). If the arrangement between the power project and the utility is terminated for any reason, then the power producer will need to find an alternative way to monetise the power it is able to generate, unless it has rights to termination compensation. As a result, many markets have evolved to permit a power producer to directly sell to one or more customers through the grid, without the benefit of a sales agreement with the utility. The utility takes responsibility to evacuate and distribute the power (and may collect end-user payments on behalf of the power company) for a fee. Such wheeling arrangements will need to be clearly permitted by law and encouraged by the government. From a government's perspective, these arrangements may limit the government's ability to regulate the price paid by all end-users, and may also place an administrative burden on the utility that must evacuate the power. On the other hand, the fee charged by the utility should offset the cost. Perhaps most importantly, the existence of a viable wheeling alternative is seen as crucial to many project finance participants in ensuring that if, for whatever reason, a PPA with the utility is terminated, the power project they have helped to finance will nonetheless be able to sell its power and repay the project finance debt and equity funders.

3. Financing Structures

3.1. Introduction

3.2. Project Finance Essentials

3.3. Sources of Financing

3.4. Particular Aspects of Project Financing

3.5. Stakeholders

3.6. Summary of Key Points

3.1. Introduction

Principal Financing Models

Four financing structures are primarily used to finance power projects. They are distinguished by which party or parties bear responsibility for funding the upfront costs of a project. Each alternative presents its own advantages and disadvantages related to timing, cost and complexity of structuring and implementation. The four primary structures are **host government financing**, **developer financing**, **resource-based infrastructure financing**, and **project financing**. There are many variations of these four structures on transactions, but the core concepts remain similar.

Host Government Financing

In host government financing, the government of the host country will use the strength of its balance sheet to fund a project by lending funds to, or contributing additional equity to, the offtaker so that the offtaker may develop the project. The funds may be derived from the sovereign's cash reserves or from funds that a sovereign borrows for its own account from third parties (e.g. capital markets, multilateral development banks, bilateral institutions). Where a sovereign borrows for its own account, then on-lends the funds to an offtaker, the funding is sometimes referred to as an on-lending arrangement.

The cost of funding varies based on the source of the funding and the credit-worthiness of the sovereign. Development Finance Institutions may provide lower income countries with financing at significantly lower costs, and possibly at longer tenors, than financing provided by the private market. This financing is typically referred to as concessional financing.

Host government financing can be an attractive alternative where the host country has adequate funds on hand or can raise additional funds from lenders at attractive rates and does not have more pressing needs to which such funds must be applied. Host government financed projects generally involve fewer parties. This model offers the benefit of not having to coor-

INTRODUCTION

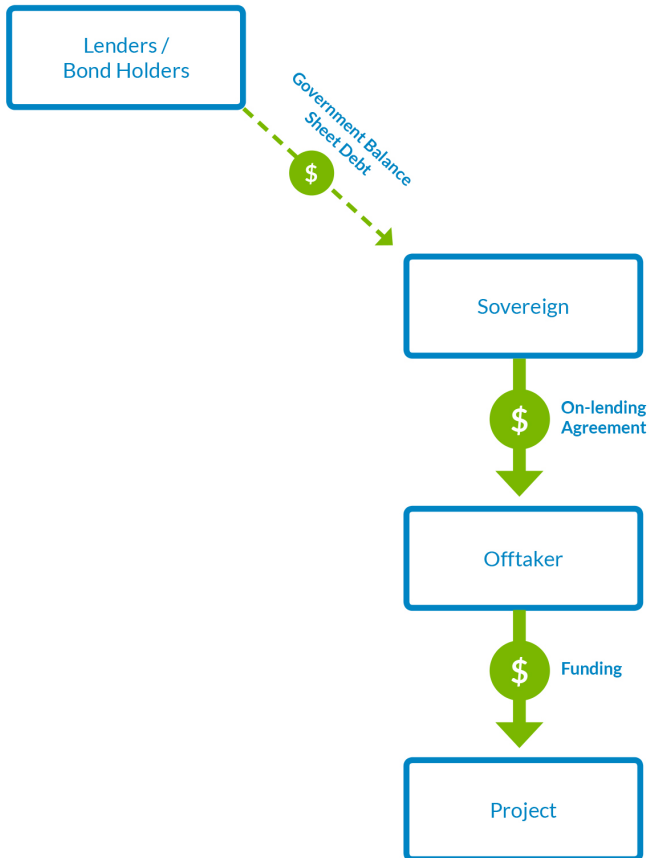
dinate with multiple funding parties and all of the complicated structures that such coordination can entail. Procurement is usually governed by national procurement rules so the parties selected to construct the project will usually be selected by the offtaker through a transparent and competitive process.

The challenges presented by host government financing relate primarily to opportunity cost. Given the limited capital available to many governments, they must weigh the need to fund a project on their balance sheet against the funding requirements of the many capital-intensive services and programmes that a sovereign must support (such as social programmes, national security, and other infrastructure projects). In essence, every dollar that a sovereign uses to finance a project is a dollar that it cannot use for education, public health, policing its streets, or defending its borders.

The diagram that appears below graphically depicts a host government financing structure.

FINANCING STRUCTURES

Host Government Financing Structure



Strengths:

- Lower financing costs, particularly if concessional financing is available or if the host country is able to raise funds by issuing bonds on international capital markets
- Fewer coordination challenges

Weaknesses:

- Opportunity cost of capital
- Significant cash required from government

Developer Financing

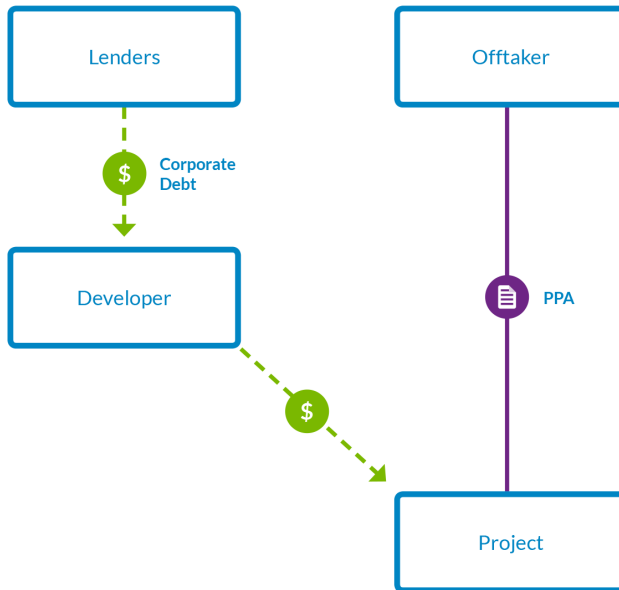
Some large multinational corporations – such as international oil companies and mining companies – can use the strength of their balance sheets to fund a project by contributing in the form of equity all of the funds that are required by the project company to develop the project. These funds may be derived from retained earnings or may be borrowed by the developer from banks or raised through the issuance of corporate bonds. Developer financing could be one component of a public private partnership (PPP) depending on the project structure.

Developer financing limits the number of funding parties which must be coordinated and avoids the complexity that is often associated with multi-party financings. Similar to host government financing, developer financing forces a developer to forego other uses of its funds, or its ability to borrow, in order to finance a project. In most cases a developer will not have the financial capacity to fund a sizeable project using developer financing alone. In practice, few utility scale projects are funded only with developer financing.

The diagram that appears below graphically depicts a developer financing structure.

FINANCING STRUCTURES

Developer Financing Structure



Strengths:

- Fewer coordination challenges
- No cash required from government

Weaknesses:

- Limited number of developers with appetite for this structure

Resource-based Infrastructure Financing

Resource-based infrastructure financing entails a host country retaining a third party contractor or developer to design, construct and implement a project in exchange for rights to natural resources granted by the host country to a foreign sovereign counterpart. In this structure, the third party contractor (typically a foreign state-owned enterprise) is obligated to fund its design, construction and implementation activities, ostensibly with the contractor's ultimate reimbursement coming from its sale or use of the natural resources it is able to extract.

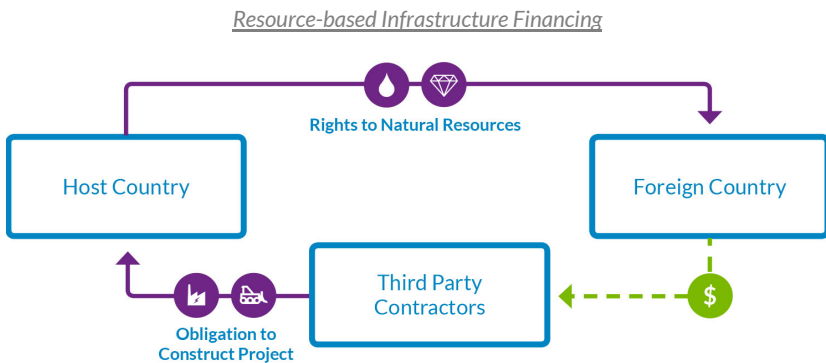
As with developer financing, this model limits the number of funding parties with which a host country has to deal, and avoids the complexity that is often associated with multi-party financing. This model reduces the complexity of dealing with third-party owners and operators during the life of the project, presumably speeding up the timeline of the development. It also presents the added benefit of not tapping into a sovereign's available cash reserves or its access to third-party lending, giving the appearance of avoiding the opportunity cost faced by many governments when contemplating sovereign financing.

The primary challenge with this model is how to accurately value the rights to natural resources that are exchanged for the infrastructure. Volatility of commodity prices, timing of planned extraction, and financial capacity of the governments to benefit from the natural resources, make it almost impossible to properly assess their value. The rights to natural resources (often non-renewable) are used to pay the foreign country. Host countries may not be able to calculate the true costs of the transaction for several years.

This structure also presents opportunity costs that may not be as readily apparent as those present in sovereign financing, but that are very real nonetheless. While not directly impacting the balance sheet of the host country, this financing structure does require a sovereign to give up potential future revenues from natural resources that could be used to pay for other products, services or initiatives for future generations.

In addition, because the sovereign is not required to make payments to the contractor in cash, there is a risk that less attention might be paid to the terms of the contract documents. In particular, because payments may not be made against the achievement of milestones, it may be hard to adequately incentivise the contractor to stay on schedule or deliver a certain quality of product. Likewise, this structure presents a risk that less attention may be paid to performance bonds or warranty obligations, increasing the risk of delays and compromised project quality. Finally, because no payments must be made to the contractor from the sovereign’s balance sheet, and given the absence of multiple funding parties that will be repaid from the long-term revenues of the project (e.g. senior lenders), there is an increased risk that a project’s economics and long-term viability (including social and economic impacts) will not be as thoroughly diligenced.

The diagram that appears below provides an example of how a resource-based infrastructure project financing is structured.



Strengths:

- Fewer coordination challenges
- Shorter time frame from concept to operations
- No cash required from government

Weaknesses:

- Actual costs to host country not known for several years
- Mortgages natural resources of future generations
- Difficult to monitor and enforce performance and warranty obligations of contractor

Project Financing

In project finance structures, the sovereign (or a government offtaker) grants certain concession rights related to the building, ownership, and operation of a project to a special purpose company whose sole business is the building, ownership, and operation of the project. The project company will often contract third parties to perform certain of these obligations (such as construction and operation). The project company is obligated to finance the project using:

- funds injected by its owners as equity investments or shareholder loans (funds borrowed from the shareholders that are subordinated to the senior lenders);
- loans provided by lenders such as commercial banks, export credit agencies, development finance institutions, multilateral development banks, export-import banks; and
- in some cases, funds made available by the sovereign or by donor parties either as concessionary loans or grants.

Lenders typically lend the majority of the funding required by the project company on a limited-recourse basis. This means that loans are secured by all of the assets of the project company (including their contractual rights under the project agreements) and by a pledge over the shares in the project company. In the event that the project company is not able to repay the loans, the lenders have no recourse against the investors.

Creating a separate project company ensures that the borrower's ability to repay the debt obligations will not be affected by lines of business that are unrelated to the project, but will instead be affected only by the performance of the project. This results in longer loan tenors and lower interest rates when compared to the tenors and rates that a developer would be able to achieve by borrowing using corporate finance techniques.

Project finance avoids capacity constraints, opportunity costs and balance sheet financing by a sovereign. In addition to being capital intensive, power projects require large scale long-term investment. A government may not have the resources to finance a power project on its balance sheet. Furthermore, even if a government has the financial means to finance a power project, it may have other preferred or more pressing needs for its finances so the opportunity cost of allocating resources to build a power plant can be high.

Multiple parties involved in the financing can facilitate more thorough or comprehensive due diligence as there will be multiple sets of eyes and minds focused on project fundamentals.

Structuring power deals as project finance transactions facilitates the apportionment of various transaction risks to those best placed, willing and able to assume them. For example, investors with a larger risk appetite may be willing to invest in a project pre-construction, when it is perceived to be riskiest. On the other hand, a risk-averse investor, such as a pension fund, may prefer to invest in a power project at a later stage or in a lower risk tranche of debt.

Project finance may be more affordable or more expensive than financing a project on the host country balance sheet. This is dependent on four factors: (1) government's cost of capital, (2) tenor, (3) availability of financing, and (4) amount of equity in the project. If a government is funding a project from proceeds of a bond issuance, it is possible that the coupon rate of the bond issuance may be higher than the rate given to the project company in a project finance transaction. If it is funding a project using concessional financing, it is possible that the rate may be lower. It is also possible

INTRODUCTION

that the funding sources available to the government may have shorter or longer tenors (which would impact the timing of the burden on government). If there is no alternative source of funding available, project finance will allow the project to move forward and the government to benefit from the wider economic benefits of having a power project.

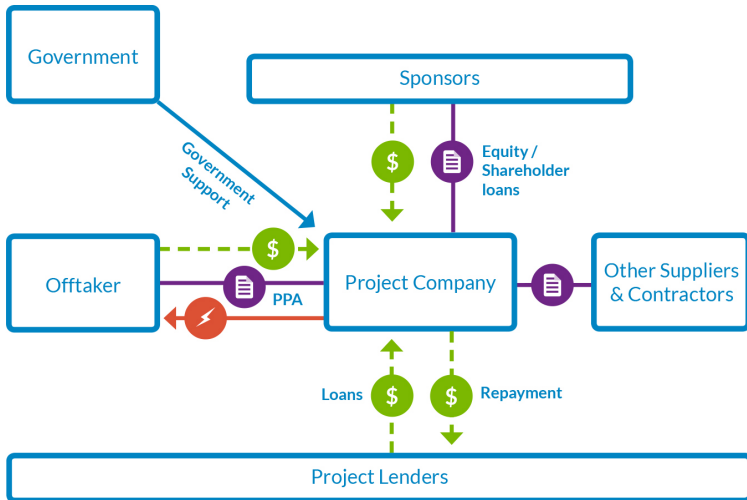
Project finance transactions may incur more up-front costs due to the multiple parties, financing documents, and legal documents involved as well as extensive due diligence required. There are costs associated with the multiple arrangers who structure the deal, legal fees associated with the various project agreements and financing documents, agent fees for the coordination of payments and the holding of the security, and other related costs.

Project finance adds layers of complexity to a transaction relative to balance sheet financing. This complexity often requires significant coordination of parties. This coordination can often cause delays. The upfront investment in both time and resources for a project finance transaction tend to be higher than some of the previously mentioned alternatives.

The diagram below illustrates a typical project financing structure. It is focused on the financing arrangements rather than the entire project structure.

FINANCING STRUCTURES

Project Financing Structure



Strengths:

- No cash required from Government
- Project risk efficiently and equitably allocated to parties willing and able to bear the risks
- Thorough due diligence and performance guarantees required by project company

Weaknesses:

- Complex coordination challenges
- Projects take more time to reach operations
- Higher up-front costs

3.2. Project Finance Essentials

As noted above, project finance is a means of financing a company created for the specific purpose of owning, constructing and operating a project, with **limited or no recourse** to that company's shareholders, in a way that enables financing from multiple sources of capital, or multiple investors, against repayment from the company's future cash flows.

The Role of a Project Company

The project company is a new, legally distinct and ring-fenced entity established specifically for the purpose of owning, constructing, and operating a project. This entity is often referred to as a special purpose company, special purpose vehicle or special purpose entity since it was created for a specific purpose. A project typically involves the construction of some form of infrastructure or another type of operating asset. In the power context, examples of projects could include power plants, transmission networks, or substations.

Limited or Non-Recourse Financing

Project finance is also known as limited or non-recourse financing. As the terminology suggests, in limited recourse financing, the shareholders have limited liability for the debts and obligations of the project company, and in non-recourse financing, they have no liability for the debts and obligations of the project company. The level of recourse required depends on the risks inherent in the project, arising from such elements as the technology, complexity of construction and operation of the assets.

The Debt and Equity Players

Sponsors / Developers

The sponsors and developers are the primary parties that initiate the project, performing feasibility studies, obtaining concessions, negotiating with project parties and sourcing the most appropriate mix of equity investors and debt providers for the project. The developers incur the initial development costs which are often refunded with some return, once the project financing is implemented. The developers and sponsors also provide equity, potentially alongside additional investors, and are referred to as project shareholders or equity providers.

Debt and Equity Providers

Sources of financing can include various debt funders (lenders) or equity investors. Equity investors typically assume a higher level of risk than the lenders and require a commensurate return on their investment. In large transactions, there may be a number of such investors and even groups or tiers of investors with distinct investment and/or ownership rights, and rights. Similarly, the lender group may consist of a combination of commercial banks (local and international), Development Finance Institutions, Multilateral Development Banks, Export Credit Agencies, pension funds, and others, with different tranches of debt having different repayment profiles, tenors, pricing and ranking in terms of repayment and security. Sources of financing for a power project are described in further detail in Section 3.3 below.

Transaction Advisor and Arranger

Determining the optimum blend of equity and debt funding required for a project may be quite complex and ultimately involves a matrix of legal and financial agreements. Transaction advisors assist the sponsors in optimising the capital structure and developing financial models reflecting the most appropriate funding structure, while debt arrangers assist in sourcing the most appropriate funding, negotiating the funding terms, coordinating the due diligence and the execution of the financing package. In some project finance transactions, there may be multiple such arrangers, each arranging a different tranche of funding.

Security Agent and Facility Agent

The lenders would require certain security to be in place before funds are disbursed. Where there are multiple lenders, the security will be shared amongst the lenders and, depending on the jurisdiction, is either held in a separate legal entity (security SPV) or held in a security trust. A security agent is usually appointed to manage the security granted by the borrower and coordinate requests between the lender and borrower with respect to any attempt by the lender to enforce matters.

In a transaction with multiple lenders, the role of the facility agent is to coordinate activities on behalf of the lenders, including requests for disbursement, repayments, monitoring of covenants and general communication between lenders and borrower.

Finance Documents

Common Terms Agreement

The common terms agreement contains all the financing terms common to all the different loan facilities, (for example, conditions to funding, financial covenants, events of default, representations and other undertakings). The common terms agreement is likely to be a lengthy document with several schedules and annexures. It is the key finance document between the project company and the lenders.

Facility Agreements

The specific terms and conditions applicable to each loan facility (tenor, repayment profile, pricing) are set out in loan agreements between the project company and the lenders.

Security Documents

Lenders will require security over the project company and all of its assets as a condition to lending. Security packages depend on the jurisdiction, but would usually include security over the shares in the company, over both moveable and immovable assets and overall project agreements and rights. Common types of security documents include mortgages, pledges, assignments, charges and liens. Depending on the jurisdiction, third parties (such as government entities and contractors) may need to be notified of, and in some cases either acknowledge or consent to, the granting of security by the project company.

Accounts Agreement

Lenders will seek to control the project company's cash flow by stipulating the order in which payments from project revenue can be made. This is commonly termed the "payment waterfall". Lenders also require that certain bank accounts be opened and that funds are moved between accounts in accordance with this waterfall. This movement of funds is regulated in the Accounts Agreement.

The payment waterfall ensures that there is a priority of payments established from inception to ensure that the project (i) pays its operational expenses such as taxes and salaries so that it can continue to operate; (ii) that lenders are paid back their debt; (iii) that there are sufficient maintenance and debt service reserves; and (iv) the release of distributions to the project sponsors as dividends or repayments of shareholder loans. Payment waterfalls can have up to ten or more levels of cascade before dividends are allowed to be released.

Intercreditor Agreement

Different financial institutions have differing objectives. DFIs may be more concerned with environmental, social and other policy guidelines. ECAs may be concerned about matters that affect the spending on equipment or other costs from their respective country. Commercial lenders may take a more conservative view on project company defaults. Mezzanine or subordinated lenders may have limited decision-making and/or security rights. Hedging banks will wish to ensure that in the event of an early termination of the project, they receive amounts due to them from the project company out of any sums available to creditors.

The Intercreditor Agreement regulates the relationship between the lenders and regulates voting rights of and decision-making by lenders. It will also deal with how any proceeds of security enforcement are apportioned amongst the various finance parties.

Hedging Documents

Lenders often require the project company to hedge risks relating to foreign exchange, interest rates and/or commodity price movements.

This can be documented in a number of ways, via swaps or other types of hedging instruments. The providers of these instruments to a project financing are very often the same financial institutions providing senior debt.

Direct Agreements

As the lenders are not a party to the key project agreements that the project company enters into, they do not have contractual relationships with the counterparties to such agreements. In order to acknowledge the lenders' rights in terms of the project, lenders require direct agreements between themselves and the parties to certain project agreements.

Direct agreements typically contain one or more of the following provisions:

- a. An acknowledgement by the counterparty (e.g. offtaker, host government, construction contractor, O&M contractor) of the security taken by the lenders over the project company's rights in and to the relevant contract (e.g. PPA, government support, EPC contract, O&M contract);
- b. Agreement by the counterparty not to terminate or suspend the relevant project agreement without prior notice to the lenders;
- c. An acknowledgement that the lenders may substitute the project company or otherwise "step in" to its shoes to continue the project company's obligations under the relevant project agreement, in the event of a default or other enforcement scenario; and/or
- d. Where project agreements have been signed before lenders have had the opportunity to comment or review, amendments required by lenders to the underlying relevant project agreement.

Direct agreements are sometimes referred to as third-party consents.

Shareholder Agreements and Equity Subscription Agreements

The shareholder agreements regulate the relationship of the shareholders and stipulate their rights and obligations and the equity subscription agreements regulate the equity movement and rights of each equity provider.

3.3. Sources of Financing

Projects are typically financed through a combination of debt and equity. The split between the debt and equity in a project is referred to as the level of gearing or leverage.

A gearing or leverage ratio is very much dependent on the amount of cash flow available to make debt payments (debt-carrying capacity) of the project as well as perceived project risks.

There are certain practical implications of a project's gearing to the host government. A lender's consideration of the level of gearing will include sector norms and the perceived risk of the project. If the sovereign is providing credit support for the debt obligations of a project (for example, by way of payment of a compensation sum that includes debt amounts after termination) then a prudent sovereign or offtaker will need to understand the gearing ratio as it will determine the level of contingent liability that needs to be set aside to meet the underlying obligation arising from the credit support instrument. On the other hand, a lower gearing ratio (i.e., less debt, more equity) will increase the cost of power, since equity holders will expect a higher return than debt providers.

Types of Financing

There are various types of financing available to a project company. These relate to the different tiers of funding structured within a project, which have differing repayment profiles and rates of return. Different lenders also have different objectives from a project and this governs both the level of and pricing of their participation in the financing.

The seniority of the debt (i.e. the priority when it gets repaid as against other sources of funding) is governed by the cash flow payment waterfall for the project.

Senior Debt and Mezzanine / Subordinated Debt

Senior debt is typically provided by a range of financial institutions participating in a project. It usually is the most substantial form of funding a project. For most power projects the requirement is for long-term senior debt with tenors of 10 years and beyond.

Similar to senior debt, subordinated debt is provided by a variety of institutions. This level of funding is typically subordinated to the senior debt tranches with respect to cash flow and certain contractual rights. Given its ranking, subordinated debt is typically more expensive.

The typical providers of such debt are:

Development Finance Institutions (DFIs)

DFIs are development-focused and most active in markets where there is limited access to alternative forms of private finance. DFIs can lower pricing, lengthen tenor, add transparency and offer coverage for investors in places of high risk. Their aim is to support government objectives and provide funding to projects that fall within their prescribed mandates. DFIs/multilaterals usually have comprehensive criteria around environmental and social issues that need to be fulfilled as a condition to their participation in the funding.

Prominent among them is the Overseas Private Investment Corporation (**OPIC**), the U.S. Government's development finance institution. OPIC achieves its mission by providing investors with financing, political risk insurance, and support for private equity investment funds, when commercial funding cannot be obtained elsewhere. OPIC's loans and guarantees are a political risk deterrent, mobilising private capital, commercial loans, and sponsor investments.

Most European countries have DFIs, including Proparco of France, FMO of The Netherlands, DEG of Germany, CDC of the UK, Cofides S.A. of Spain and smaller institutions like the Scandinavian FinnFund, Norfund, IFU and Swedfund. Other DFIs include the Development Bank of South-

ern Africa (**DBSA**) in Africa, and the China Development Bank, the Development Bank of Japan and the Korea Development Bank in Asia.

Multilaterals

Multilaterals are international institutions with governmental membership such as the World Bank, International Finance Corporation (**IFC**), Multilateral Investment Guarantee Agency (**MIGA**), Inter-American Development Bank (**IDA**), European Bank for Reconstruction and Development (**EBRD**), Asian Development Bank (**ADB**), African Development Bank (**AfDB**) and Inter-American Development Bank (**IaDB**), all of which conduct a significant part of their activities in favour of development.

Among multilaterals, the World Bank Group, through MIGA, the International Bank for Reconstruction and Development (**IBRD**) and the International Development Association (**IDA**), AfDB, IaDB and others provide guarantee support for projects by covering certain obligations of governments and/or sub-sovereigns, which may be deployed in various ways to protect lenders or payees against credit or political risk.

IFC and AfDB, among others, can provide a variety of credit enhancement products, including partial credit guarantees for private sector projects and companies to mobilise private sector financing. In addition, under their B-Loan programmes, other lenders can benefit from their respective preferred creditor status as loans syndicated by them receive *pro rata* and *pari passu* treatment through cross-default arrangements.

Political Risk Insurance Providers

There are also a number of institutions that provide political risk insurance (**PRI**) for project sponsors, commercial debt providers, and hedge providers. These PRI providers include the Multilateral Investment Guarantee Agency (**MIGA**), which is part of the World Bank Group, the Overseas Private Investment Corporation (**OPIC**), the African Trade Insurance Agency (**ATI**) and the European Investment Bank (**EIB**) of the European

Union. PRI policies may cover inconvertibility, transfer restriction, expropriation (including creeping expropriation), war and civil disturbance, and breach of contract, including arbitral award default and denial of recourse. PRI policies may cover a number of funding sources in a project. MIGA, for example, provides PRI covering both debt service and sponsor equity, and can also provide coverage for hedge breakage costs. PRI can also be viewed as a means of credit enhancement to the extent the payment obligations covered are those of government entities.

Commercial banks

Commercial banks are privately owned banks that participate and provide funding to projects. Typically these institutions are regulated by central banks and other international banking regulations which impact the level of liquidity, risk thresholds and pricing.

Export Credit Agencies (ECAs)

ECAs are established by a country's government to promote export of its goods and services. ECAs provide cover to a transaction by means of insurance or by means of a direct guarantee of payment. Such insurance cover or guarantees could be a combination of commercial and political risk cover or only political risk cover.

Where ECAs are involved, exporters are likely to offer more competitive business terms. ECAs can provide appropriate cover when commercial lenders are more reluctant to assume political risks.

Syndication

Syndication refers to a situation whereby there is a primary or initial group of lenders that provides funding for a project and thereafter sells portions of it to secondary lenders that were not involved in the initial lending process. Syndications are more prevalent in larger transactions. There could be various motivations for the sale including increasing headroom capacity for the initial lender and facilitating investments in the secondary market.

Equity (Strategic and Financial)

The debt providers in a project usually require an amount of equity from the sponsors based on the agreed gearing level and this will take the form of their own contribution. The typical providers of equity are:

Sponsor / Developer

The sponsor/developer typically takes a significant stake of equity in the project and would be required to subscribe for shares in the project company and meet any required ongoing equity obligations for successful completion of the project. Sponsors can provide enhancements through two methods: stand-by equity and corporate/parent guarantees. Stand-by equity serves as an enhancement to cover cost overruns on a project during construction. Corporate/parent guarantees are enhancements that allow the sponsor to utilise the balance sheet of its corporate or parent company to protect against cost overruns during the construction period. Sometimes, such guarantees may extend beyond the construction completion to backstop certain operational risks until certain pre-determined financial criteria are achieved. In addition, lenders may require claw-backs of dividends distributed to sponsors for a certain period during operation.

Private Equity Funds

This normally takes the form of investment funds that are constituted to invest equity in a project. The investors in the fund develop the investment parameters including the investment horizon and return parameters. Funds invest in specific projects based on the criteria spelt out in their investment charters/mandates. Usually, funds are run by a fund manager who reports to a group of investors and represents their interests.

Venture Capital (Community Funding)

This is an early stage equity investor that in exchange for investing in high-risk ventures will seek returns commensurate with the higher start-up risk taken. In smaller-sized investments, it may also be possible to source development capital from community or crowdfunding sources. These forms of

capital are not as common for larger investments and less relevant for on-grid power generation deals.

Impact Investors

These are private investors who will accept a lower market return in exchange for a social return, such as increased rural electrification rates or improvements in performance of the SME sector. In certain emerging markets, impact investors in the power sector may also be referred to as "angel investors". Examples of impact investors include family or corporate foundations. The benefit of impact investors is that they invest in projects where commercial lenders are hesitant to invest and facilitate proof of concept in newer untested structures.

Capital Markets

Domestic and international capital markets are a fourth source of financing for power project finance transactions. The term "capital markets" broadly refers to markets in which one can buy and sell securitized debt and equity instruments. In the context of power financing in Africa, capital markets include both international and local capital markets. The depth and investor interest in both markets will vary significantly. While the capital markets in emerging and frontier markets are still developing, there are several structured finance and equity products that have been relevant in financing power in other parts of the world. Those may become more prevalent on the African continent in the years to come, including project bonds, public offerings and yield companies. These are discussed further below.

Project Bonds

A **project bond** is a debt security that pays investors on a fixed schedule from the proceeds of the project, being the future cash flows of the project company. This financing tool has not been widely used in many emerging markets, but the potential exists for it to be a viable means of financing as energy markets mature and become more attractive to capital market investors. Many of them are often institutional investors with a lower risk

appetite. The reasons project bonds are not so prevalent include the relative inflexibility (in terms of repayment).

Sovereign and Sub-Sovereign Bonds

Another way in which fixed income debt instruments can finance power is through the issuance of sovereign bonds or sub-sovereign bonds. A sovereign bond is a bond issued by the national government for financing certain government objectives or needs. Sovereign bond issuances are an established way for countries, including countries on the African continent, to raise capital. To date, no clear trend of allocating capital raised in a sovereign bond offering to finance power has emerged, but sovereigns have the option of using capital raised for power financing.

Sub-sovereign bonds are bonds issued by any sub-sovereign entity, such as a municipality or state-owned utility. Quasi-sovereign bonds are bonds issued by a state-owned entity or parastatal and that may carry an implicit or explicit sovereign guarantee. A state-owned utility can be considered either sub-sovereign or quasi-sovereign depending on its ownership and operating structure. Sub-sovereign and quasi-sovereign bonds have been used to finance power projects across the world but are not yet a common means of financing for power projects in emerging markets.

Refinancing

As a project matures and becomes less risky, a project company may refinance its debt. Typically, refinancing implies replacing an earlier loan with a new loan that has more favourable terms, including, for example, an extension of debt maturity, or tenor extension. The more favourable terms reflect the reduced level of risk.

Yield Companies (Yield Cos)

Another structure that has emerged for financing, typically once a project or series of projects have reached their respective commercial operations date (COD), is a yield co. A yield co is a holding company that a developer/sponsor may form comprised of its interest in a project company or

companies that have reached COD and are earning revenues. They are not yet commonly seen in emerging markets, but this can change as markets mature.

Public Offerings

Finally, an initial public offering (**IPO**), is the first sale of equity interest, or stock, by a private company to the public. An IPO offers investors in a project company the chance to raise capital for the company from the public. Market conditions and cycles, as well as a company's particular financials and performance, play a large role in the perceived attractiveness and success of IPOs.

3.4. Particular Aspects of Project Finance

Tenor / Length of Loans

Given the large capital costs of a power project and the significant sums borrowed, it may take time for a project company to generate sufficient revenue to pay back the loan without compromising the operation of the project. Project finance, as a funding structure, lends itself to longer tenor financing with repayment periods ranging typically between 12 to 18 years in developing countries, which can vary depending on the depth of the capital market in the particular host country (i.e. the availability of long-term funds). This limits the number of commercial banks able to lend (particularly if any lending is in a local, as opposed to a reserve currency).

Refinancing Post-Completion

Financing risks on a project are broadly categorised into pre-completion and post-completion risks. The pre-completion phase refers to the period during which the project is being constructed whilst the post-completion period commences at the point that the plant is fully operational and producing cash flow.

A proportionately larger component of project risk is attributable to the pre-completion period leading up to successful commissioning and operation of the plant. Once a project is built and operating successfully, this element of risk is effectively removed. Project companies at this stage may seek to capitalise on this de-risking by seeking a refinancing of the remaining outstanding debt at potentially better rates and/or terms.

Lenders are aware of this and may build in early pre-payment penalties into their loan agreements to discourage refinancing. On the other hand, some lenders may be satisfied that they have received adequately priced returns during the riskiest phase of a project and be pleased that capital is

freed up for investment in other projects. This is particularly true for commercial banks who have a particular focus on re-allocating capital.

Loan agreements may contain built-in incentives for refinancing where interest rates ratchet up after the first few years of operations to entice the project company to refinance the project and pay lenders out. Equally, the project company may negotiate downward ratchets of margins at a pre-determined date certain during the operations period, meaning the interest rates will lower as the project continues to operate. Lenders will want to ensure that, if they agree to this, their total recovery over the life of the loan remains at a level commensurate with the risk profile for the given period (which may mean higher pricing during the early years of operation).

Tenor Extensions

Certain lenders, particularly commercial banks, may have limits on the length of time for which they are able to lend. Projects can be structured so that other finance parties (like Multilaterals or other DFIs) "buy" or guarantee the repayment of the existing debt at a point in time (e.g. after the second year of operations) at a pre-determined price. This effectively shortens the contractual lending period for the commercial bank, whilst retaining some flexibility on further extensions of tenor at the point of refinancing. This refinancing can often be at the project company's request (so that it can test the market at the time to see if other options are available).

When relying on local banks as lenders, however, the refinancing triggers often need to be mandatory as part of the financing, such that it implies a shorter contractual lending period for purposes of balance sheet constraints and regulatory restrictions on term borrowings. This type of structuring can be used particularly when local currency is financing a project but due to limited liquidity in the local capital markets, only limited tenors are available.

Reserve vs. Local Currency Financing Implications

Power projects can be financed in either local currency or reserve currency. Local currency is the currency of the jurisdiction in which the project is to be constructed and operate, and reserve currency is a currency held in significant quantities as part of governments' or institutions' foreign exchange reserves. Reserve currencies, like U.S. Dollars and Euros, are commonly used in power and infrastructure transactions. Reserve currencies are often interchangeably referred to as hard currencies, that is, currencies that are widely accepted as a form of payment around the world, typically originating from highly industrialised countries.

Reserve Currency Financing as the Status Quo

In emerging markets, including in sub-Saharan Africa, power projects are typically entirely, or mostly, financed in reserve currency. It is often not possible, due to liquidity constraints and market availability, to finance long-term debt in local currency in the magnitude required by many grid-scale power projects.

Specifically, debt providers, such as international commercial banks, DFIs, ECAs, and Multilateral Development Banks (**MDBs**) are often unable to lend in local currency in emerging markets. Certain DFIs are able to provide local currency financing, but typically, local banks are the best source of local currency-denominated debt. In the power sector, however, local commercial banks may not have the ability to finance a loan in local currency for the amount and tenor required.

To the extent local currency financing is an option, lenders tend to charge lower rates in reserve currency than in local currency, as local currency is typically more volatile and prone to depreciation vis-à-vis reserve currencies. Thus, reserve currency lending rates are lower. It has conventionally been presented as a "cheaper financing option." In truth, this assessment does not account for local currency depreciation or devaluation, as is currently rife in emerging markets during periods of global commodity and economic down cycles. Nonetheless, nominal rates for reserve currency

loans are almost always lower than for local currency loans in emerging and frontier markets.

In an emerging market, the developer typically insists on having a reserve currency denominated PPA (typically, U.S. Dollars) to match its reserved currency borrowings, due to perceived currency depreciation risk associated with the local currency.

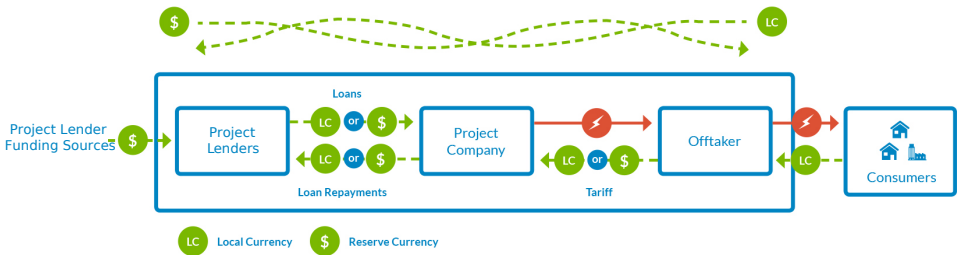
At the same time, an offtaker, like a utility, almost always charges an electricity tariff to local end-users, and thereby earns revenue in local currency. This results in a currency mismatch, whereby power finance and PPAs in emerging markets are denominated in a different currency than the revenue stream of the offtaker. This mismatch is significant and strains the overall risk profile of a power investment in the following ways:

- First, particularly in times of local currency depreciation and volatility, it reduces an offtaker's ability to meet its payment obligations to a power producer (in this instance, the project company) under a reserve currency-denominated PPA.
- Secondly, if a currency depreciation strains an offtaker's ability to pay the project company, it can result in the project company lacking funds to repay its reserve currency-denominated debt.

A lender investing in a power project in an emerging country will consider currency risk when evaluating the overall attractiveness of a project and may either be less inclined to lend to a project company in an emerging market without some risk mitigant or may demand a higher interest rate.

The diagram below represents the potential currency mismatch.

Potential Currency Mismatch



Hybrid Reserve/Local Currency Financing

While financing power investment exclusively in local currency may not be possible, it may be possible to develop a hybrid solution by financing part of a power project in local currency and the remainder in the reserve currency. The primary advantage of having a portion of a power project financing denominated in local currency is to avoid currency mismatch and the associated risks, at least for that portion of the project. Another key benefit is that local currency financing is more likely to attract local sources of financing, thereby helping deepen local markets, and helping develop local market liquidity.

Hedging Instruments

Hedging is used by the project company to protect it against movements in currency exchange rates and interest rates and often, commodity price fluctuations. Whilst hedging instruments can be highly complex, in a project finance context they are usually kept relatively simple in form. Typically, the financial institutions providing the hedging instruments are themselves senior lenders to the project company.

Foreign Exchange Hedging

A typical foreign exchange hedging agreement is where the project company agrees to purchase on a future date a fixed amount of one currency in exchange for another currency, at a prior agreed rate of exchange. This mitigates the risk of currency fluctuations for a period of time (depending on the currency) during the term of the project; crucial where for example, there are either costs and revenues in multiple currencies.

Commodity Price Hedging

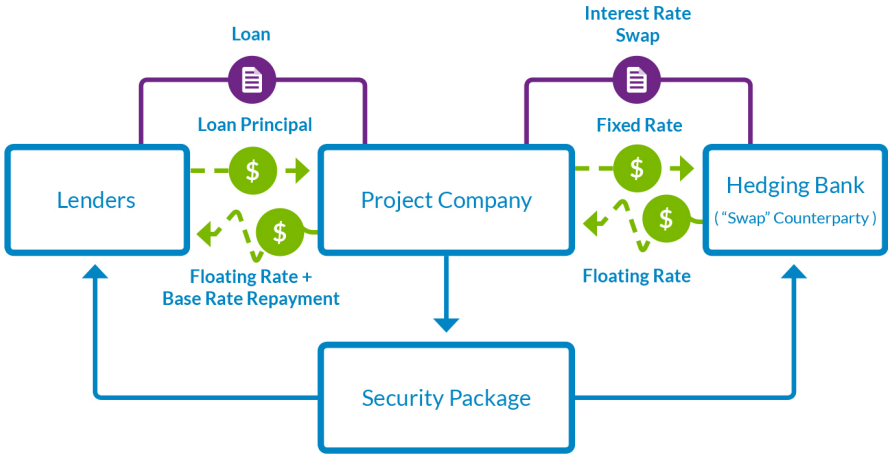
In a power project where the project company will be purchasing a commodity such as heavy fuel oil, or gas, and where the price is not fixed in advance under a fuel supply agreement, the project company may enter into a forward sale agreement under which it agrees to buy a fixed quantity of the fuel on a fixed future date, at a prior agreed price. This gives both the project company and the lenders certainty as to the project company's expenditure on fuel or other such commodity.

Interest Rate Hedging

Lenders may offer loans to the project company with either fixed interest rates or "floating" interest rates. Where rates are "floating", lenders may charge a fixed rate over and above a fluctuating or "floating" base rate, such as the London interbank rate (**LIBOR**) for a particular currency. This base rate is essentially the rate that banks lend to each other. Because an underlying rate like LIBOR can change over time, leading to potential uncertainty as to the project company's financing costs over the life of the loan, lenders and the project company alike may prefer to "fix" these floating rates by having the project company enter into long-term interest rate swaps. If floating rates rise, the project company knows that it will always have funds available to it to make the floating rate payments to lenders (as it is receiving those funds from the hedging banks) whilst knowing that it never has to pay more than the "fixed" rate to the hedging banks. The project company, therefore, caps its exposure to interest rate increases.

FINANCING STRUCTURES

Interest Rate Swap



3.5. Stakeholders

A typical limited recourse project finance structure in an energy project includes the involvement of several stakeholders as illustrated in the table below:

Key Stakeholders		Equity Investment	Lending	Credit Enhancement	Other
Public Stakeholders	Legislative Branch	Parliament			Enact / Ratify
	Government	Ministry of Energy	•		Policy / Golden Share
		Ministry of Finance			• Approval
		Ministry of Justice			Approval
		Other			As Needed
	Power Utilities	Generation			Infrastructure
		Transmission			Evacuation
		Distribution			Evacuation
		System Operation			Dispatch
		Single/Central Buyer			Offtake
	Agencies	Electricity Regulator			Regulatory Advocacy
		Fuel Supplier			Fuel Supply
		Water Supplier			Infrastructure
		Env. Promotion Agency			Facilitation
		Environmental			Approval
		Other			As Needed / Permits
	Regional Power Pool	Central Exchange			Offtake
		Bilateral Buyer			Offtake
		Regional Regulator			Regulatory Advocacy
	Landowners	Federal Government			Allocation / Lease
		Provincial Government			Allocation / Lease

STAKEHOLDERS

Key Stakeholders		Equity Investment	Lending	Credit Enhancement	Other	
Private Stakeholders	Strategic Sponsors	Local	•		Local Know-how	
		Foreign	•		Tech. Know-how	
	Financial Sponsors and Debt Providers	Local Commercial Banks		•		
		For. Commercial Banks		•		
		Institutional Investors		•		
		Dedicated Debt Funds		•		
		Dedicated Equity Funds	•			
		Multilateral Dev. Banks	•	•	•	Local Know-how
		Regional Dev. Banks	•	•	•	Local Know-how
		Export Credit Agencies		•	•	
		Dev. Finance Institutions	•	•	•	Local Know-how
		Local Capital Markets	•	•		
	Int. Capital Markets	•	•			
	Commercial Contractors	Construction			•	Services
		Operator			•	Services
		Equipment Manufacturer			•	Goods / Services
		Other Suppliers			•	Goods / Services
	Offtakers	Captive Industrial				Offtake
		Captive Distributor				Offtake
	Landowners	Private				Allocation / Lease
Insurers	Commercial			•		
Advisors	Legal				Services	
	Technical				Services	
	Financial				Services	
	Market Economist				Services	
	Model Auditor				Services	
	Insurance				Services	
	Socio-environmental				Services	
	Other				As Needed	
Interest Groups	Communities	Site Community			Socio-environmental	
		NGOs			Cause Advocation	
	Customers	Industrial				Demand
		Commercial				Demand
		Residential				Demand

3.6. Summary of Key Points

Principal Power Project Financing Models

There are four financing models that are primarily used to finance power projects:

- **Host government financing;**
- **Developer financing;**
- **Resource-based infrastructure financing;** and
- **Project financing.**

Each model is distinguished by which party or parties bear responsibility for funding the upfront costs of a project. Each alternative presents its own advantages and disadvantages related to timing, cost, and complexity of structuring and implementation.

Project Finance Essentials

The Role of a Project Company

The project company is a new, legally distinct, and ring-fenced entity, established specifically for the purpose of owning, constructing, and operating a project.

Limited or Non-Recourse Financing

Project finance is a form of limited or non-recourse financing. In limited recourse financing, the shareholders have, in addition to their equity contributions, limited liability for the debts and obligations of the project company, and in non-recourse financing, they have no liability for the debts and obligations of the project company.

Key Debt and Equity Players and Stakeholders

The key players and stakeholders in a project finance transaction typically include the following:

Sponsors / Developers	Debt and Equity Providers
Transaction Advisor and Arranger	Security Agent and Facility Agent

Key Documents and Agreements

Key financing documents in a project finance transaction typically include:

Common Terms Agreement	Facility Agreements
Security Documents	Accounts Agreement
Intercreditor Agreement	Hedging Documents
Direct Agreements	Shareholder Agreements and Equity Subscription Agreements

Sources of Financing

Projects are typically financed through a combination of debt and equity. The split between the debt and equity in a project is referred to as the level of **gearing** or **leverage**. If a sovereign is providing a project with credit support, then it needs to understand the gearing ratio to determine the resulting liability implications.

Types of Investment Financing

There are various types of investment financing available to a project company. These relate to the different tiers of funding structured within a project, which have differing repayment profiles and rates of return.

The types of investment financing include:

Senior Debt and Mezzanine / Subordinated Debt

The typical providers of such debt are DFIs, Multilaterals, Commercial banks, ECAs, Syndication Lenders.

Equity (Strategic and Financial)

The typical providers of equity are the sponsor/developer, private equity funds, venture capital and impact investors.

Capital Markets

Capital markets broadly refers to markets in which one can buy and sell debt and equity instruments. These markets include both international and local capital markets. The capital markets for the purchase and sale of debt and equity interests in power project finance transactions in emerging markets are still developing and may become more prevalent in the years to come.

Some forms of capital market tools and products include:

- **Project bonds;**
- **Sovereign and sub-sovereign bonds (including quasi-sovereign bonds);**
- **Yield companies; and**
- **Public offerings.**

Particular Aspects of Project Finance

There are certain aspects particular to project finance deals.

- **Length of tenor:** Project finance deals tend to have long tenors/length of loans, due to the long period of time required for project companies to generate enough revenue to pay back investors.

- **Tenor extensions:** Certain lenders may have limits on the length of time for which they can lend, so a project finance deal can involve tenor extensions. This is when other parties buy or guarantee the repayment of existing debt at a later point in time at a pre-determined price.
- **Refinancing:** Refinancing a company's outstanding debt is common practice once power plant construction has been completed and de-risked and the project is operational.

Local vs. Reserve Currency and Currency Mismatch

Power projects can be financed in either local currency or reserve currency. In practice, it is often challenging to finance projects entirely in local currency in developing and emerging markets. As a result, there is often a currency mismatch: for example, a PPA may be denominated in a different currency than the revenue stream of an offtaker. Currency mismatch is relevant because it strains the overall risk profile of a power investment.

Hedging Instruments

To avoid or mitigate some of the payment risks associated with currency mismatch, some projects are financed in part in local currency and in part in reserve currency. In addition, a project company can employ certain hedging instruments to hedge – or protect – against commodity price, and interest rate fluctuation. Hedging may involve complex financial instruments, but at its core, provides a way of insuring against certain price movements that can affect the payment (and re-payment) structure of a deal.

4. Risk Assessment, Pricing and Allocation

4.1. Introduction

4.2. Risk Assessment and Tools

4.3. Risk Pricing and Allocation

4.4. Managing Political and Payment Risks

4.5. Summary of Key Points

4.1. Introduction

To evaluate the economics of a power project and in turn, secure financing for a project, all stakeholders must conduct a detailed upfront assessment of the project risks. This includes identifying all possible risks, understanding how those risks are allocated amongst stakeholders, and pricing those risks.

Each stakeholder group will conduct its own assessment of risk, based on their respective assumptions, objectives and tolerance for risk and reach its own conclusions relating to the allocation and pricing of that risk.

The decision on whether or not to assume a particular risk may depend on:

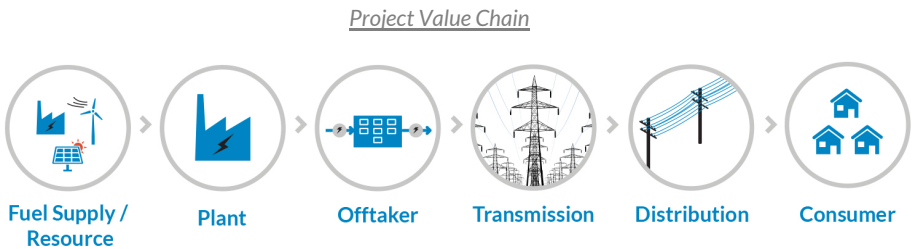
- how a party perceives that risk;
- the likelihood of its occurrence;
- the severity of its impact;
- the level of control they have over that particular risk;
- the availability of mitigating instruments for the risk;
- the risk tolerance of each party for a particular risk; and
- the cost of those instruments.

In the case of most IPP power projects, there are two principal risk takers who must agree on the allocation and pricing of risk: (i) the offtaker, typically a government owned power utility, and (ii) the sponsors, representing the project investors. Lenders and other financing providers (such as letter-of-credit issuing banks and hedge providers) also actively participate in the risk allocation process, as they effectively become exposed to all of the allocated risks through their financing. Other risks may also be shifted, to some extent, to insurers and other project participants, though at a cost to the project.

4.2. Risk Assessment

Understanding the Project Value Chain

Fully identifying project risks requires an understanding of the value chain for electricity, since risks can arise at different points of the value chain. As summarised in the graphic below, the power project value chain starts with fuel supply to the plant, then power generation from the plant, purchase of the power from the generation plant, transmission of the power to the distribution companies, and distribution of the power to the end-users of the electricity.



These different links in the value chain exist regardless of whether a utility is bundled or unbundled, the only difference being whether all the functional areas are housed within the same entity or have been split off into independently-managed corporate entities.

Risk Assessment by Offtaker / Government

The starting point for a government's risk assessment of a power project is based on its perspective of the sector's needs and its own internal costing of providing power. This includes assessments of supply and demand and the appropriate mix of fuel sources as directed by government policy.

This is likely to include some form of tariff benchmarking for different power technologies and by fuel resource. Many governments publish a

multi-year tariff schedule reflecting their estimation of what a sustainable tariff path is, in light of their view of the prevailing market conditions.

When evaluating a specific power project, the government may focus on the tariff or may look into wider macroeconomic and sectoral factors (such as the broader energy mix) in assessing the attractiveness of that particular project. Where the consumer tariff the offtaker charges is not cost-reflective (and unable to fully cover the cost of the power purchased from the IPP), the government must determine how best to deal with the exposure. This can be done in a number of ways, including (i) providing some form of subsidy, (ii) providing more capitalisation to the offtaker to be able to cushion the difference or (iii) increasing the consumer tariff to a cost-reflective level.

There are, however, a myriad of other risks that the offtaker/government must take into account, all of which impact on its ability to meet its obligations. The offtaker's risks include:

- demand risk of purchasing the generated power and reselling it to distribution companies;
- making monthly capacity and dispatched energy payments to the IPP (including for periods when the power cannot be evacuated from the plant due to no fault of the IPP);
- transmission risk;
- distribution risk;
- billing and collection risk; and
- interconnection risks, such as fuel transportation and power transmission risk (that could imperil a power project by interrupting fuel supply or prevent power from being evacuated).

Risk Assessment by Developer

Developers undertake a detailed assessment and pricing of risk by detailing a business plan and financial model which captures all expected costs, including upfront capital expenditure, financing charges and operational costs. The developers' risks include the risk of developing the power project, raising finance to build the plant, securing fuel supply for the plant, constructing the plant, and operating and maintaining it for the full term of the PPA. Developers often draw on the expertise of specialist consultants in the fields of technical, legal, market, financial, socio-environmental, and insurance matters to ensure the accuracy of inputs.

Whilst developers may be primarily concerned with the overall economics captured within its project as reflected through the shareholder internal rate of return (**IRR**), the developer should also be cognisant of the tariff to ensure it is economically sustainable for the country in the long term. A long-term view on tariffs is particularly important as there is a reasonable expectation that the cost of delivered power to the grid will reduce over time as more supply comes online and technological advances are made.

Risk Assessment by Lender

Similar to the developers, lenders also require detailed due diligence, often supported by independent third-party consultants to assist in evaluating and assessing the validity and accuracy of technical and economic assumptions in the project's business plan and base financial model. Lenders and developers have different risk tolerance thresholds and whilst the risk assessment of lenders may be similar to that of the developer, the conclusions and outcome of the assessment will diverge. In addition, different types of lenders may have differing views and capacities for participating in risk.

Within the lender group, there could also be differing perspectives on some of the allocated risks, particularly when there are both commercial lenders and development financial institutions (DFIs) involved. Due to their development mandate, DFI lenders tend not to be able to share addi-

tional political risk mitigation instruments such as political risk insurance policies.

Lenders, in particular, focus on the "bankability" of a deal. What this means for a lender is two things: first, that their returns, which are typically capped in nature, should be sufficient to offset the long-term risks of the project in light of the revenue stream; and secondly that the overall elements of the deal add up to one that is sustainable with a minimal likelihood of default.

Risk Assessment Tools

Having identified the importance of evaluating risk, the table below provides the list of advisors and consultants available to stakeholders to ensure that risks have been properly evaluated, quantified, and allocated to the party best suited to manage the risk. It is important to note that while some stakeholders may have in-house capabilities to evaluate and assess risk, external consultants can provide additional expertise and validation during the risk identification and assessment process. We have suggested below where stakeholders should or may choose to hire external advisors. "Government" includes the offtaker in this context. Where in square brackets, this is less common.

Third party consultant	Role	User
Legal advisor	Advises on all contractual matters to ensure legal, valid and enforceable documentation	Government Developer Lender
Technical consultant	Comments on development cost, appropriate technology, operating parameters and overall view on completeness and accuracy of key cost drivers	[Government] Developer Lender
Market consultant	Provides a detailed assessment of the underlying market, including supply-demand and cost of delivered power analyses	Government Developer
Insurance consultant	Advises on the adequacy of commercial insurances during the construction and operational phases	Developer Lender
Social and environmental consultant	Ensures best practices are applied towards minimising the impact of the project on the environment and society in line with local and international standards	[Government] Developer Lender
Model auditor	Ensures overall accuracy and operational functionality of the financial model, which ultimately reflects the agreed tariff and shareholder IRR and includes a review of tax assumptions.	Developer Lender

It is important to note that each stakeholder relying on third-party consultants to evaluate and advise on the validity and accuracy of technical, economic, commercial, and legal assumptions, will expect their advisor to act under a specific duty of care representing their perspective and interests. This enables all stakeholders to be in a position to effectively negotiate contractual agreements which are aligned and thus will result in project implementation. Governments can take advantage of these professional services before launching competitive tenders or establishing a procurement process, allowing them to attract serious attention from private sector developers.

The end result of risk assessment and pricing is translated into a cost of delivered power to the offtaker, referred to as the tariff on the one hand, and the ultimate return to the shareholders of the IPP on the other hand, referred to as the shareholder return or shareholder IRR.

4.3. Risk Pricing and Allocation

Allocating Project Risk

The general principle of risk allocation is that risk is allocated to the party best placed to manage or mitigate that risk. However, in practice, parties may deviate from this general principle, resulting in significant impact on project economics.

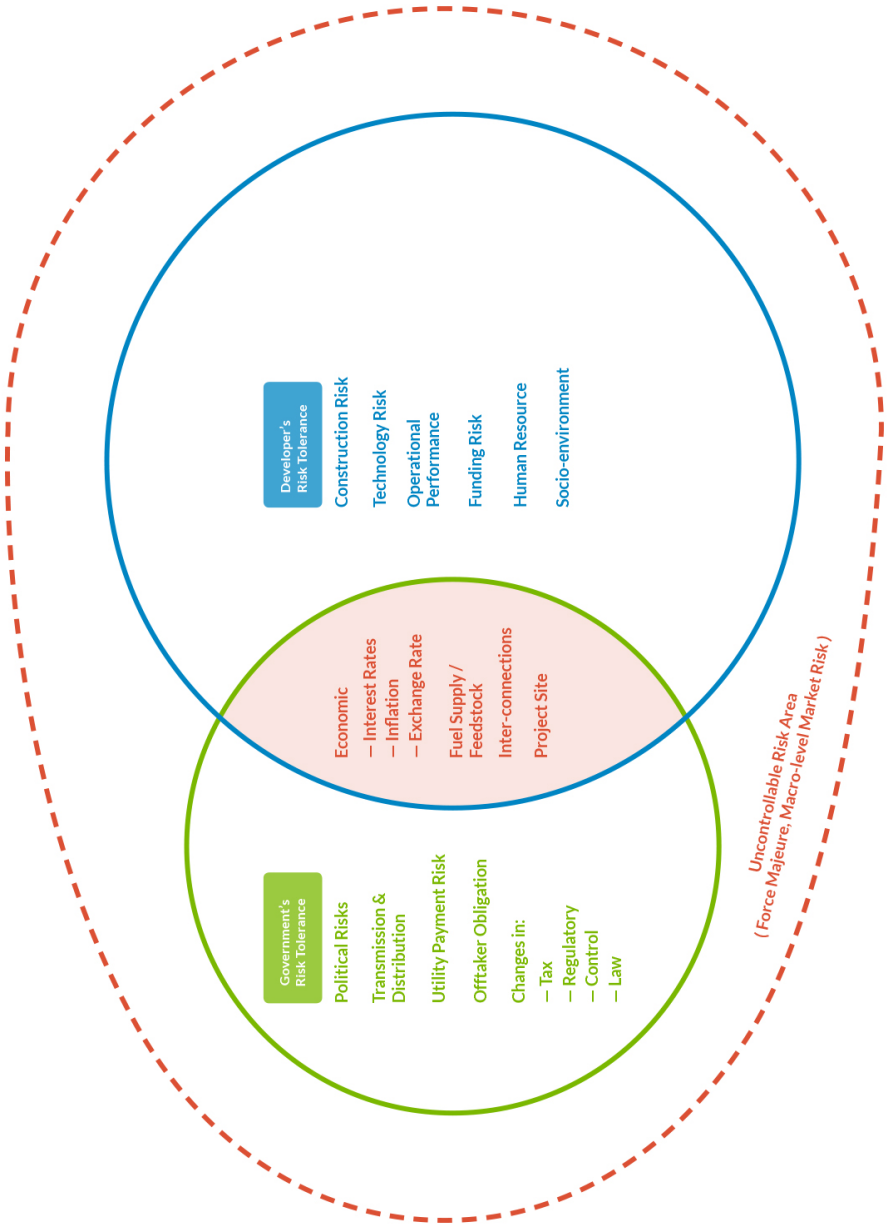
Even when strictly following this principle, risk allocation must still be done in an equitable manner. To arrive at an equitable allocation, three elements must be fulfilled: (i) each party fully understands the risks undertaken; (ii) the eventual taker of risk is best positioned, willing and/or able to take on that specific risk; and (iii) each party is confident that it is receiving economic value proportionate to the risk allocated to it.

Compromising on Risk

There are scenarios where a party that may not necessarily control a risk, is nonetheless willing to take it for the right economic benefit or simply to get the deal financed. For example, a government seeking to attract greater private sector investment may agree to a lower tariff in exchange for assuming certain risks outside of its control. For instance, even if the offtaker has no direct control over the government fuel supply entity, it may agree to take the risk of fuel supply with a view to attracting investment.

If a sponsor agrees to take such a risk outside of its control, it may seek a tariff which in turn results into a higher IRR in return. There is, however, a limit to the extent to which parties can shift risk. Ultimately, the allocation of risk must still result in a bankable and viable project. The diagram below highlights some of the more pertinent risks and illustrates the sphere of risk tolerance for a government on the one hand and a developer on the other hand. It also illustrates the portion of risk which falls outside of either government or developers.

The Universe of Risk Tolerance



Uncontrollable / Unassessable Risks

In the risk assessment and pricing process, there may be certain risks that no party feels it is in a position to assume. These risks may be largely uncontrollable, such as force majeure risks and macro-level market risk, but they must, in practice, still be allocated across parties.

Force majeure, for example, can be political or natural. Political force majeure can occur within a country (local political risk events) or emanate from outside. Political force majeure includes events such as expropriation, war, widespread riots, terrorist attacks, change in law or the regulatory or tax regime in a country, foreign exchange restrictions, and arbitrary revocation of permits and approvals. Certain political force majeure events are largely unforeseeable, such as riots and terrorist attacks, while local political risk events may include events within the government's control, such as expropriation and changes in law/tax. Natural force majeure covers a broad range of natural events, including weather conditions that could imperil a project, such as hurricanes, earthquakes, and flooding.

As noted above, the government may be better positioned to influence (but not control) certain of these uncontrollable risks, for example, an emergency response to a natural force majeure or fiscal management of a major market event. As a result, some uncontrollable risks are often borne by the government. Alternatively, the government may seek to shift the risk to the developer with a cost pass-through to the government, such as when a developer secures insurance against force majeure events and prices the cost of obtaining and maintaining such insurance into the tariff. In other cases, parties may allocate such risks based on who is adversely impacted by the risk event. For example, a natural force majeure that damages the transmission grid may affect the offtaker's ability to evacuate power; alternatively, an event that impacts the power plant itself may affect the developer's ability to generate power. Lastly, the government and the developer may opt to share the risks by agreeing to a cost-sharing mechanism or agreeing on a relief alternative to compensation, for example, an extension of time.

The Danger of Misallocated Risk

Effective risk allocation and distribution of economic benefit and reward must result in a long-term, sustainable and viable power project. The allocation of risk has a direct impact on the tariff. Misallocated risk can render an otherwise viable project impracticable or economically unviable. For example, if the risk allocation results in a high tariff or excessively high project returns relative to the risk assumed, this could result in offtaker default or cancellation of the PPA. On the other hand, if tariffs are too low and/or there are insufficient project returns, this could result in the IPP's bankruptcy and/or abandonment of projects by shareholders. In each instance, in this example the parties would not have adequately assessed, allocated appropriately, or priced risk at the onset, eventually leading to the failure of the project.

Understanding risks and categories of risk when banking a power transaction matters because the ability to mitigate risk is key to attracting funding. Credit enhancement is a means of reducing the price of certain risks, facilitating the financing of transactions that otherwise could not be financed, or could only be financed at prohibitively high interest rates.

Pricing Project Risk

Having completed its assessment of risk, and the allocation thereof, each of the key stakeholders in a power project will assign a cost to those risks, based on the allocation and available mitigation.

The developer and equity investors will reflect their evaluation of the cost of the risk in their projected target profit or internal rate of return (IRR). The government will form its view of what constitutes an affordable and acceptable tariff based on its assessment of underlying socio-economic conditions and all other risk factors. Similarly, lenders will calculate the rate at which they are willing to participate in the lending to take into account their overall risk assessment, including any risk mitigants that may be implemented, and ensure that they meet their investment return requirements. This adjustment of negotiated economic returns by the parties to

account for the perceived risk of a project is commonly known as the “pricing” of risk. The pricing of risks by stakeholders and lenders is not an independent exercise, and parties can often influence each other. For example, a developer/equity investor may seek a higher tariff to account for the risk-adjusted interest rate set by the lender.

Both the developer/equity investors and lenders will typically produce their own financial model reflecting their pricing of risk and how it impacts the returns they are willing to accept or the price they are willing to pay. The financial model assigns risk in a quantitative manner, with a particular focus on data-driven factors such as initial capital expenditure, fuel costs (for thermal projects), resource availability (for renewable projects), labour costs and financing costs. There are also a number of qualitative factors that parties may quantify and incorporate into their risk pricing, such as perception of political stability or growth potential in a market.

Lenders may adopt more conservative assumptions in their risk pricing (such as the assumed rate of operating efficiency of a plant). Similarly, the government may adopt more optimistic assumptions (higher regulated end-user tariffs).

4.5. Managing Political and Payment Risks

Political Risk

In assessing the viability of a power project, sponsors and lenders will need to determine the level of a wide spectrum of risks, including construction risk, operating risk, currency risk and political risk, among others.

Political risk represents the probability of disruption of the operations of private sector businesses by political forces, actions, or events, whether they occur in the host country or result from changes in the international environment.

Political risks are typically those which the host government is considered better placed to manage. This management will often embody a wide range of risks, including:

- Restrictions on the convertibility of local currency into foreign exchange and its transfer outside of the host government;
- Expropriation of ownership, control, or rights to an investment;
- Breach of contract by the host government of a contractual obligation (such as construction of a transmission line);
- Terrorism and acts of violence;
- War, civil disturbances and insurrection;
- Changes in law, including taxation and other adverse legal or regulatory changes;
- Refusal of government agencies to grant permits and approvals after the developer has fulfilled all necessary requirements; and
- Action or inaction by the host government or government authorities.

Such risks will often be captured in a PPA through the concept of Political Force Majeure or Political Risk Events. For additional detail on political force majeure, please see Section 5.3 (Other Extraordinary Payments Obligations).

Payment Risk

Although the components of the revenue stream (capacity and energy) are contractually agreed under the PPA, there still exists the risk that the off-taker does not meet its ongoing payments to the project company when required. This is known as payment risk. Non-payment by the off-taker will impact the ability of the project company to meet its scheduled payment obligations which include capital costs, fixed operating costs and debt service. This risk is magnified when the off-taker is seen as uncreditworthy and/or financially insolvent.

Furthermore, the termination provisions in the PPA, which are further discussed in Section 5.4 (Termination and Transfer), will typically stipulate a termination amount to be paid by the off-taker to the project company, in exchange for transfer of the power plant ownership to the off-taker. The termination amount payable is usually large and, as with payment risk, funders are concerned as to whether the off-taker will be able to fund the termination obligation in the event of a termination of the PPA.

4.6. Summary of Key Points

Risk Assessment, Pricing and Allocation

All stakeholders must conduct a detailed upfront assessment of the project risks. This includes identifying all possible risks, understanding how those risks are allocated amongst stakeholders, and pricing those risks.

Risk Assessment by Project Parties

- **Risk Assessment by Offtaker/Government:** Government's risk assessment of a power project includes its perspective of the sector's needs, its own internal costing of providing power, including an assessment of supply and demand.
- **Risk Assessment by Developer:** Developers undertake a detailed assessment and pricing of risk that takes into account developing the power project, raising finance to build, securing fuel supply for, if applicable, constructing, and operating and maintaining the plant for the full term of the PPA.
- **Risk Assessment by Lender:** Lenders typically focus on the "bankability" of a deal. Different types of lenders may have differing views and objectives.

Risk Assessment Tools

Each stakeholder should seek appropriate advice to evaluate the technical, economic, commercial, and legal issues in the transaction.

Risk Pricing and Allocation

Risks should be allocated to the party best placed to manage or mitigate that risk.

- **Compromising on Risk:** There are scenarios where a party that may not necessarily control a risk, but is nonetheless willing to take that risk for the right economic benefit or simply to get the deal financed.
- **Uncontrollable/Unassessable Risk:** Parties need to assess and negotiate who should assume the risk for uncontrollable-unassessable risk.
- **The Danger of Misallocated Risk:** Effective risk allocation and distribution of economic benefit and reward must result in a long-term, sustainable and viable power project. Misallocated risk can render an otherwise viable project impracticable.
- **Political Risk:** This risk is typically that which the host government is considered better placed to manage.
- **Payment Risk:** Although the components of the revenue stream (capacity and/or energy) are contractually agreed under the PPA, there still exists the risk that the offtaker does not meet its ongoing payments to the project company when required. This is known as payment risk.

5. Financial Obligations Supported by Credit Support

5.1. Introduction

5.2. Recurring Payment Obligations under the PPA

5.3. Other Extraordinary Payment Obligations

5.4. Termination and Transfer

5.5. Summary of Key Points

5.1. Introduction

This section examines the principal financial obligations of an offtaker in a power purchase transaction and the role of credit enhancement in reducing the risk of non-fulfilment of these obligations. The obligations of an off-taker in a power purchase agreement with an IPP are, broadly speaking, as follows:

- recurring payment obligations payable in the ordinary course of business;
- extraordinary payment obligations that may arise over the lifecycle of a project, but which do not arise in the ordinary course of business; and
- payment obligations that may arise upon the termination of a PPA, prior to the expiration of its term or upon the expropriation of either the shares in a project company or the plant itself.

While these obligations originally reside with the offtaker, investors in an IPP may require some form of guarantee or credit support to reduce or mitigate the risk of non-fulfilment of these obligations by the offtaker in order to finance a deal. The requirement for a guarantee or credit support, and the scope of such guarantee or support, is usually dependent on:

- a. the investor's assessment of the offtaker's creditworthiness;
- b. the offtaker's ability to meet its current and future obligations;
- c. views of the ratings agencies; and
- d. among other considerations, the investor's ability to price a bankable deal in light of this assessment.

In some cases, and as discussed in more detail in this section and in Chapter 6 on Sovereign Support, the host government may become directly responsible for certain of these financial obligations. This may occur through the execution of an Implementation Agreement, which is a contract between an IPP and the host government. In contrast, a PPA is an agreement between the IPP and the offtaker, which may be a government-owned or controlled entity, but is generally not the host government itself.

INTRODUCTION

Alternatively, the host government may undertake direct responsibility for certain of the offtaker's financial obligations by offering credit enhancements, such as a sovereign guarantee.

Where the transaction risks, including the offtaker's payment risk, are assessed at a level where an investor or lender can price a bankable deal without supplemental credit support, then such credit support or guarantee may not be required.

5.2. Recurring Payment Obligations under the PPA

The first category of offtaker obligations is recurring payments that the offtaker is required to make to the power producer, in this case, the project company, in the ordinary course. These obligations are typically set forth in a PPA and may be broadly referred to as tariff payments. Tariff payments are the actual price the offtaker pays to the project company for capacity made available and/or energy generated.

Tariff payments are important in understanding how to finance a power project because the payment structure and components reflect a pricing of certain risks and an allocation of certain risks between the project company and offtaker. Investors will assess a tariff when evaluating the overall bankability of a deal and their consequent decision to invest in it or not, and at what price or expected rate of return. Understanding a tariff is key to understanding a condition or element of a deal that may or may not drive the need for credit support.

Components of a Tariff

The components of tariffs payable for a power generation facility will vary depending on a number of factors.

Typical components of tariffs include capacity payments and energy payments.

The sections below summarise each of these components. Prior to such consideration, it is useful to note that tariff components are often affected by whether the power plant in question is dispatchable, meaning whether the plant can respond to the instruction, or dispatch, of a system operator to provide or vary its power. Dispatchability can depend on the technology used to generate power. Dispatchable technologies include gas-fired power plants, coal-fired power plants, and hydroelectric projects with sizeable reservoirs, and non-dispatchable technologies typically include solar PV,

run-of-river hydro, and wind, because they are reliant on natural conditions and accordingly, may be intermittent. Tariffs for projects using dispatchable technologies usually have capacity payments and energy charges; projects with non-dispatchable technologies usually only provide for the payment of energy charges.

Second, tariffs may vary depending on the time of use or provision of power, and there may be different calculations applicable to baseload, mid-merit, peaking, and/or self-dispatched power.

Capacity Payments

A capacity payment is a monthly charge for capacity made available to the offtaker (or deemed to have been made available), regardless of whether the offtaker actually dispatches the plant.

The capacity payment is structured and calculated to enable the project company to earn consistent and sufficient revenues under the PPA to enable the project company to:

- pay all the fixed operations and maintenance costs and any other agreed project costs,
- pay all corporate and other taxes that are assessed on the project company and its properties,
- repay the project loans (and in some cases the costs of the associated infrastructure such as transmission lines), and
- pay the sponsors/equity investors a return on equity,

in all cases regardless of whether and to what extent the offtaker actually dispatches the plant.

In cases where the power plant is unavailable or incapable of generating electricity as a result of risks the offtaker has agreed to assume (such as political force majeure events, transmission constraints, changes in law, and offtaker defaults), the plant may be considered to have deemed capacity. Deemed capacity is plant capacity deemed to be available regardless of whether it is actually capable of delivering electricity (net electrical output).

Energy Payments

Energy payments are monthly charges for the energy dispatched by and actually delivered to the offtaker. It is calculated with reference to the net electrical output of the plant that is delivered to an agreed delivery point. It is usually measured in units of MWh or kWh.

For dispatchable plants, energy payments are structured to allow the project company to recover the cost of inputs (such as fuel) used to generate the net output delivered and to recover operations and maintenance costs that vary depending on the quantity of net output generated.

For non-dispatchable plants, the energy payment is structured to allow the project company to recover the costs a capacity payment would cover in the case of a dispatchable plant. The energy charge rate, which is the price per MWh or kWh of net electrical output, is priced to enable the project company to recover those costs over time. Typically, the project company is required to generate a specified quantity of net electrical output over a period of time (e.g. a year) in order to receive the energy charge rate. The quantity specified is typically based on statistical probability of how much the plant should be able to produce in that period of time. For example, it may be based upon how much net output a solar PV plant is expected to generate over a year with a 90% degree of probability.

Deemed Energy Payments

Non-dispatchable plants can rely on energy payments as their sole source of revenues because offtakers are generally obligated to purchase all of the energy the plants generate. In the event that (i) the project company is asked to curtail the generation of net electrical output, or (ii) the plant is not capable of generating and delivering net electrical output to the delivery point as a result of risks the offtaker has agreed to assume, then the offtaker remains obliged to pay deemed energy payments. The amount of this payment is equal to the energy payments the project company could have earned by generating net electrical output if the project company had not been asked to curtail the generation.

Deemed energy payments are usually determined by calculating the quantity of net electrical output the plant could have generated during a curtailment using real-time data for the site conditions (wind speed and direction in the case of wind plants, solar irradiation in the case of solar plants, and quantities of water spilled in the case of run-of-river hydroelectric plants).

Pass-through Payments

IPPs which have a separate fuel supply contract will themselves often have a take-or-pay obligation to the fuel supplier. Under a take-or-pay provision, the purchaser commits to purchase an agreed quantity of fuel over a given period of time and will be liable to pay for this quantity regardless of whether or not it actually accepts delivery of the fuel. By the same token, the supplier may have a put-or-pay obligation to compensate the IPP for non-delivery of fuel. Similar provisions apply to other feedstock supply contracts, such as geothermal.

The PPAs for such IPPs will typically include a provision whereby this liability is *passed through* to the offtaker/host government where non-delivery is caused by a risk which is assumed by the offtaker/host government. In other words, if an offtaker fails to dispatch a plant at a level that will enable the project company to consume the specified take-or-pay quantity of fuel, the offtaker (or host government, depending on the risk) will be required to make a payment to allow the project company to cover the take-or-pay payment (in part or whole, depending on the PPA provisions) to the fuel supplier.

5.3. Other Extraordinary Payment Obligations

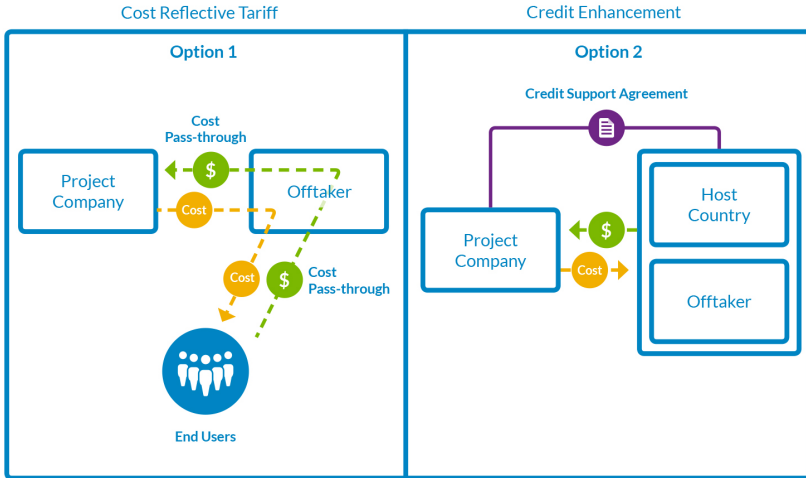
In addition to considering the tariff, investors in a power project will also assess and price the risk of certain extraordinary payment obligations that may arise over the life of a power plant, as a result of an extraordinary event (please see below).

Investors may require credit enhancement from the host government or a third-party provider to mitigate these risks.

Unlike businesses in other sectors that have flexibility to recover unexpected costs by adjusting the price of goods sold to their consumers, an IPP will not be able to recoup increased costs from its single customer (the off-taker) unless a recovery of these costs is permitted under the PPA. Even if the off-taker assumes liability for such increased costs under the PPA, lenders and investors may not be comfortable with the project company's ability to recover such costs unless they are either:

- reflected in the tariff charged by the off-taker to the end-user; or
- allocated to the host country, in a credit support agreement between the host country and the project company (often referred to as an implementation agreement).

Allocation of Extraordinary Payments

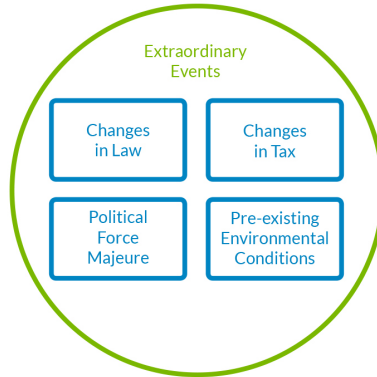


The host country is therefore in the best position to mitigate these risks, either directly by entering into an agreement with the project company, or indirectly by allocating them to the offtaker and permitting the offtaker to pass such risks onto consumers by increasing its rates or including a surcharge on electricity builds.

Extraordinary Events that May Require Credit Support

The following are categories of extraordinary events. Lenders and investors often seek to have the associated risks mitigated by host country credit enhancement.

Extraordinary Events of Risk



Changes in Law

Changes in law include the repeal, modification, or reinterpretation of any law, regulation, decision, code, or consent that is in effect when the PPA is executed, or the adoption of a new law, regulation, decision, code or consent thereafter, that:

- establishes any requirement for the development, design, construction, financing, ownership, operation, or maintenance of a plant;
- increases the costs incurred by the project company or its contractors in connection with the project, or decreases the revenues they may earn in connection with the project (particularly if the change in law is discriminatory);
- otherwise has a materially adverse effect on the project company or its contractors or its/their ability to perform their obligations or exercise its/their rights under the PPA; or
- otherwise affects the interests of the investors, including the returns they may expect to earn on their investment in the project, in a significant or material manner.

Changes in law can influence the economics of a project by, among other things:

- requiring that the project company incurs a capital expense to modify a power plant;
- requiring that the project company incurs increased operating expenses; or
- reducing the revenues the project company may earn.

An example of the manner in which a change in law may result in an increase in costs is as follows:

Grid Regulations Example

Change in Law Example

- Host government changes its electricity grid regulations
- IPP must pay to add interconnection equipment to plant
- Modifications are costly and reduce output of plant
- None of these costs could have been budgeted and all derive from host government change of law

Changes in Tax

A change in tax is the adoption, repeal, amendment, reinterpretation, or other change in the laws of the host country that increases the taxes payable by the project company or by the investors in respect of their investment in the project.

Political Force Majeure Events

Force majeure events are events or circumstances that are beyond the reasonable control of a party, that materially and adversely affect the performance by that party of its obligations under the PPA, that cannot be reasonably overcome by that party through the exercise of diligence and reasonable care. Political force majeure events are force majeure events caused by events such as war, embargoes, riots, insurrections, blockades, terrorist actions, and politically motivated and nation-wide strikes, in each case in, or affecting, the host country.

Costs associated with political force majeure events are usually allocated to the offtaker or host government. These risks are allocated to the offtaker through provisions that:

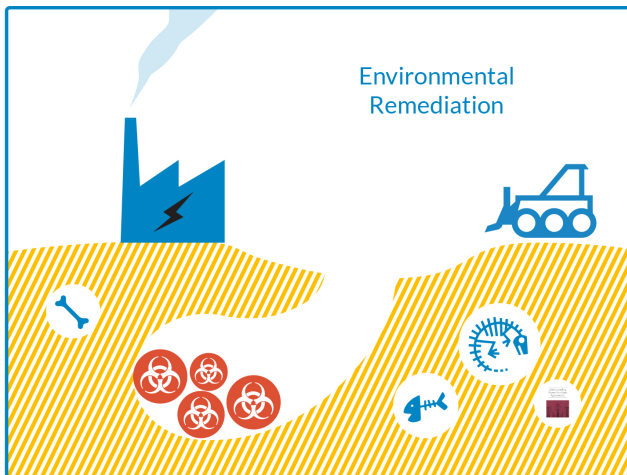
- provide for the continued payment of capacity or deemed energy payments during the continuation of a political force majeure event or their effects; and
- provide for adjustments to the tariff in the event that a political force majeure event requires the company to incur capital expenses to restore a plant that has been damaged by a political force majeure event.

In scenarios where the lenders and investors are not comfortable with the ability of the offtaker to make these payments, they may seek to have the costs covered by host country credit enhancement.

Discovery of Pre-Existing Environmental Conditions

In the event that a project company discovers an environmental condition that existed at the project site prior to the development of the project, applicable law will usually require the project company to remedy the environmental condition. If the existence of the environmental condition was not disclosed to the project company and its investors and could not reasonably have been known by them, then the costs the project company may incur to remedy the environmental condition will usually be borne by the offtaker either through a lump sum payment or an adjustment to the tariff. This is particularly true if the offtaker or the host country was responsible for selecting the project site. Due to the hazardous and material impact that such remediation costs can have on investors' returns, in scenarios where lenders and investors are not comfortable with the ability of the offtaker to cover these costs, they may seek to have the costs covered by host country credit enhancement.

Unexpected Remediation Costs



5.4. Termination and Transfer

A unique feature of a regulated power sector is that often there is only one single buyer in the market who is legislated to pay for the energy/capacity produced and/or provided by a utility-scale power plant. Usually, this single buyer is the utility, often completely or partly owned by the government. This means the PPA is effectively the only source of revenues for a project company.

If a PPA is terminated before its expiration (early termination), the project company (and the investors who financed the company, including construction of the power plant) may end up with a stranded asset that has no other means to monetise the power it produces to recover the investment made in the project. In order to address this risk of non-recovery of investment/investment returns, investors and lenders will often require the host country or offtaker to agree to purchase the plant from the project company at a pre-agreed price in the event that the PPA is terminated for reasons that are beyond the reasonable control of the project company.

In the event a project company fails to perform its obligations under a PPA, *and* the offtaker exercises its right to early termination of that PPA, the offtaker/the host country may seek the option to purchase the power plant and run and operate it itself, or to place the plant with a private third party whom it believes is well suited to do so.

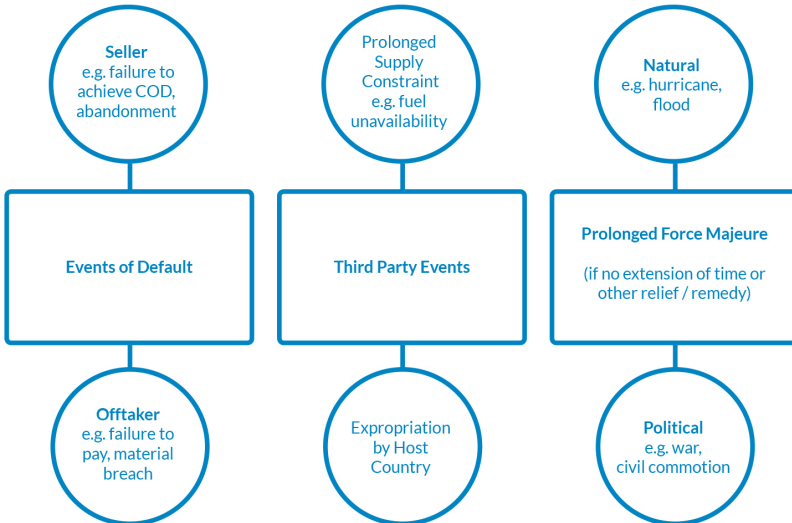
There are therefore two broad types of rights with respect to the power plant that are either in favour of the offtaker or project company, depending on the trigger or cause of the early termination of the PPA:

- a. the right of the offtaker (or host country) to purchase the plant or its shares (sometimes called a "call option" or simply "call"); and
- b. the right of the project company to require the offtaker or host country to purchase the power plant or its shares (sometimes called a "put option" or "put").

These put or call option rights may be part of the PPA, as post-termination obligations of the parties to the PPA (the offtaker and the project company), or they may be set forth in a separate agreement (such as a "put/call option agreement"). A put/call option agreement may have additional parties to it that are not parties to a PPA, including, for example, the host country and project investors.

The diagram below depicts some causes or "triggers" that may result in early termination of a PPA and the potential sale or purchase rights with respect to the power plant that may follow. While the diagram illustrates certain of the key project company and offtaker events of default, it should be noted that not all events of default result in an early termination of a PPA. Whether there is an early termination of a PPA will depend, in part, on the relevant provisions of the PPA and/or other agreements between the parties. The key point remains, however, that the early termination of a PPA is a risk that can be assessed by the parties and allocated through negotiated terms such as power plant sale/purchase provisions.

Termination Triggers



With respect to triggers, an offtaker event of default could be, for example, a failure to meet recurring payment obligations under the PPA – i.e. the offtaker fails to pay the project company for power/capacity provided/delivered per the agreement. A project company default pre-COD could be the failure to commence construction by a specified time; a project company default post-COD could be breaking certain laws, for example, committing corrupt practices. Certain of the other risks, such as political and natural force majeure, are described in more detail in Section 5.3 of this handbook.

The purchase/sale price of the power plant will vary, depending on the trigger event, including its cause. A wide variety of methods can be used to calculate purchase prices, but some fundamental building blocks are commonly used, such as the amount of outstanding debt, termination costs, and outstanding shareholder contributions, among others. These building blocks – and the definitions used below under the column "Typically agreed Purchase Price" – are described in more detail in the "Default and Termination" section of the Understanding Power Purchase Agreements handbook. It should be stressed that the section simply provides examples of how purchase prices can be calculated. Other methods could be used to calculate purchase prices. The table below depicts whether a particular trigger may result in put or call option rights on the part of the project company or offtaker, respectively. The use of the word "maybe" below reflects the fact that these matters are often subject to discussion and negotiation between the parties.

The trigger events, the resulting rights, and the consequent purchase price reflected in the table below are indicative only. The categories of trigger events listed are not intended to be exhaustive, and the exact rights and price calculations will always be subject to what is negotiated and agreed upon by the parties.










TERMINATION AND TRANSFER

Trigger Event	Project Company right to require purchase of plant by offtaker ("Put")	Offtaker right to purchase plant from project company ("Call")	Typically agreed Purchase Price
Offtaker Event of Default	Yes	Maybe	Offtaker Default Purchase Price
Project Company Event of Default occurring prior to the COD	No	Yes	Pre-COD Project Company Default Purchase Price
Project Company Event of Default occurring after the COD	Maybe	Yes	Post-COD Project Company Default Purchase Price
Expropriation	Yes	Maybe	Offtaker Default Purchase Price
Prolonged Political Force Majeure Event	Yes	Maybe	Offtaker Default Purchase Price
Prolonged Natural Force Majeure Event	Maybe	Maybe	Natural Force Majeure Purchase Price
Prolonged Fuel Supply Constraint	Maybe	Maybe	Varies, depending on a number of factors

The diagram below illustrates some of the building blocks commonly used in calculating a termination payment. Items in the "Additions" column indicate amounts usually added to the termination payment calculation and items in the "Subtractions" column indicate amounts typically deducted from the calculation.

FINANCIAL OBLIGATIONS SUPPORTED BY CREDIT SUPPORT

Elements for Termination Payment Calculation

Additions	Subtractions
 Outstanding Debt (Incl. hedging)	 Insurance Proceeds
 Termination Costs	 Expropriation Proceeds
 Investment Returns subject to Agreed Calculation + Discount	 Deferred Maintenance Remediation
 Equity Contributions Outstanding	 Deferred Maintenance Remediation  Un-contributed Equity Contributions

5.5. Summary of Key Points

An offtaker in a PPA with an IPP has three main categories of payment obligations:

- recurring payment obligations payable in the ordinary course of business;
- extraordinary payment obligations that may arise over the lifecycle of a project, but which do not arise in the ordinary course of business; and
- payment obligations that may arise upon the termination of a PPA prior to the expiration of its term or upon the expropriation of either the shares in a project company or the plant itself.

The parties' assessment of the risk of non-fulfilment of any of these obligations by the offtaker impacts on risk allocation and pricing of a transaction. It may also necessitate the need for credit enhancement or other support from the host country.

Recurring payment obligations are typically set forth in the tariff structure and formalised in a PPA. The tariff can include payments for actual and/or deemed energy capacity, payments for actual and/or energy delivered, and/or payments that account for certain take-or-pay obligations. The particular tariff structure adopted will reflect the parties' assessment of risks associated with the project.

Power project investors may require provisions that allow for payment in the event of extraordinary events during the lifecycle of a project. The nature and type of such extraordinary payment obligations will depend on the parties' assessment of risks associated with the corresponding events.

Early termination of a PPA can negatively impact both a project company and an offtaker/host country. As a result, stakeholders may agree to certain purchase/sale terms with respect to the power plant in the event of certain trigger events that may lead to early termination.

6. Sovereign Support

6.1. Introduction

6.2. Sovereign Guarantees

6.3. Letters of Comfort and Letters of Support

6.4. Put and Call Option Agreements

6.5. Liquidity Letters of Credit

6.6. Liquidity Escrow Accounts

6.7. Debt Sustainability

6.8. Host Government Considerations

6.9. Summary of Key Points

6.1. Introduction

Even as host countries create power markets and begin to move toward private participation (removing elements of the power market from their balance sheet), their governments are often still relied upon to extend their support. This support takes many forms, including legislative support, regulation, licensing, oversight, and ancillary market functions such as transmission and/or fuel supply.

Governments are relied upon to create an enabling environment, facilitate project finance structures, allocate and price risks according to generally accepted project financing principles, all in an effort to help stimulate and support private power projects. While a great deal of time and effort is involved in such endeavours, by adopting these approaches a government can increase the likelihood of reaping the benefits of project financing an IPP project, namely that the up-front cost of the project is provided through private sector-led financing and not from the sovereign's balance sheet.

The perceived benefits inherent in these structures, practices, and methods take time to develop and materialise into mature power markets. Macroeconomic events both external and internal to the host country can diminish the positive impacts of such approaches. Therefore, even in scenarios where a government has:

- a. fully embraced project financing,
- b. adopted the various practices recommended by the international finance community, and
- c. agreed to a classic allocation of risks among the various IPP stakeholders,

the private investors' perception of the host country risks may not yet make the project attractive enough at the agreed price.

One means of remedying this situation is through a more robust pricing of the deal to reflect the perceived risk, but this may not be viable in light of the impact on the offtaker or the offtaker's ability to pass it through to end-users. In these instances, the private sector lenders and investors may look to the sovereign and its balance sheet for additional support of the project to address material unmitigated risks through credit enhancements.

There are a number of reasons that a host country might agree to provide an IPP with credit enhancement, and a number of instruments through which a host country might provide this support. This chapter seeks to identify and describe these reasons and instruments, as well as how a host country might account for credit enhancement it has provided, and the challenges a host country might face in providing such support.

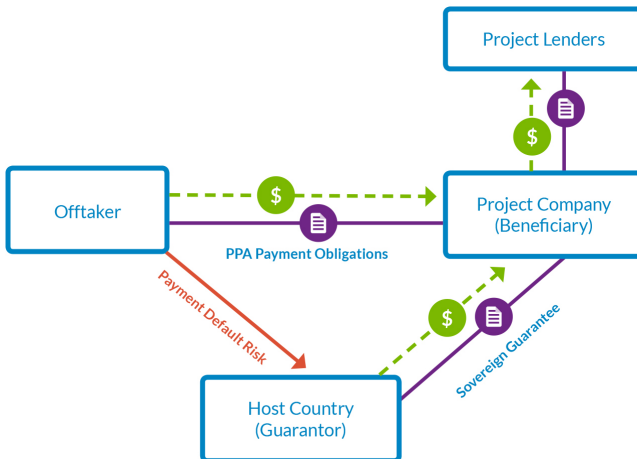
6.2. Sovereign Guarantees

Sovereign Guarantees for Payment Obligations of a State-Owned Offtaker

The need for credit support by the sovereign may be required both to address continuing payment risks, or to address the ability to satisfy termination payments. If both risks are present in a project, project investors and lenders may require a broader guarantee from the host country, typically titled a sovereign guarantee, that covers routine payment, termination payment and other offtaker obligations under the PPA.

As noted in the illustration below, the sovereign guarantee is not a bilateral agreement between the host government and the offtaker. It is a direct obligation from the host government to the project company, and by extension to the lenders. It should be noted that the sovereign guarantee is not a guarantee of the debt obligations owed to lenders by the project company.

Sovereign Guarantee Structure



Suitability of a Sovereign Guarantee

In determining whether the guarantee should be provided, the parties to the project should consider the cascade of options available. If it is determined that sovereign credit support is needed, the host government should model the risk factors to assess the extent of exposure to such risk and undertake a quantitative analysis of the cost of bearing that risk against the economic stimulus benefits of the power that would be delivered by the project. Therein lies the complexity as to determining whether a sovereign payment guarantee should or could be furnished for a given project.

Structure and Value of a Sovereign Guarantee

A sovereign guarantee will be a contingent liability on the host government's balance sheet and should require a detailed assessment of:

- any regulatory hurdles the government may need to overcome to provide such guarantee;
- the impact of the guarantee on the sustainability of its overall public debt levels and its impact on various financial covenants the government has undertaken to uphold under its various domestic and international debt obligations; and
- the policy framework on projects for which such guarantees will be provided, with a view to ensuring fair and equitable treatment of all independent power producers investing in power generation in the host country.

For the project lenders and the project company requesting a guarantee, the value of the guarantee must be pragmatically assessed. The value of the guarantee may be influenced by the credit quality of the host government. The value may also be constrained by a sovereign debt ceiling. Prudent project lenders and project companies should, in all circumstances, evaluate the requirement and practical consideration of obtaining guarantees, especially in light of alternative risk mitigation products available in the market which are discussed later in this handbook.

Term of the Sovereign Guarantee

A sovereign guarantee sometimes expires when the debt outstanding to the project lenders has been reduced to zero or when the offtaker's creditworthiness meets a defined threshold. The rationale is that the risks would have been assessed and priced by the project company and the lenders in the financial model during this period, and what remains should be risk that the project company can mitigate without seeking any further sovereign payment guarantee or support.

Other Entities Whose Obligations May Be Covered by Sovereign Guarantees

Depending on the technology of the power plant and the fuel source, a power plant supplying electricity to the national grid will be intrinsically linked to the transmission interconnection network and/or the fuel transportation infrastructure. Where a state-owned entity, local government authority or state-owned utility owns such infrastructure and is responsible for the connection of the infrastructure (from the grid or the fuel transportation system) to the power plant, the sovereign guarantee may need to cover the risk of delays in completion and delivery. This is typically covered contractually under the PPA where such delay would constitute a compensation event entitling the project company to claim deemed availability and/or deemed energy payments. A similar approach may also need to be taken with respect to grid failure or fuel supply constraints. In each case, non-payment of the deemed capacity and energy payments (after exhausting all the default and remediation provisions under the PPA) will trigger a call on the guarantee.

6.3. Letters of Comfort and Letters of Support

How comforting is a letter of comfort? How supportive is a letter of support? Are these types of letters legally enforceable? What value do such instruments provide to the oftaker as credit enhancement?

A letter of comfort is a letter from a host country whereby it promises to facilitate a project by offering certain assurances to the project developer. Unlike a sovereign guarantee, which establishes legally binding obligations on the sovereign, a letter of comfort may be a simple reflection of willingness and intent of the sovereign to support the development of the project. Since the objective of a letter of comfort may not necessarily be to create legally binding obligations, the letter may rather seek to demonstrate the host country's commitment to the project and offer "soft comfort" that the host country will support the project, the project company and its sponsors.

This support may include facilitating approvals required for project implementation, general support of its oftaker as well as fiscal incentives. As compared to a sovereign guarantee, letters of comfort, particularly if drafted in a manner that they are not legally binding, do not provide the same level of credit enhancement from an investor or lender perspective. This is primarily due to the reality that if the host government does not honour its commitments as specified in a letter of comfort it may, in the worst case, result in reputational damage to the host country but without any further legal or financial recourse by the investors against it.

The primary criticism of letters of comfort is that they put the government in a position where it is expected to backstop the obligations of an oftaker without enjoying the full reduction in credit risk of the oftaker, and by extension without granting the full cost savings of a lower cost of capital or improved probability of project implementation that would otherwise be afforded by a sovereign guarantee.

Enhanced Letters of Comfort / Letters of Support

Sometimes letters of comfort are enhanced in that they contain firm undertakings rather than a simple demonstration of support for the project. An enhanced letter of comfort may use the same language as a sovereign guarantee, even stating that the government "shall undertake" certain obligations and go so far as to define notice and arbitration provisions. These types of undertakings, whether in a letter or in an agreement, will typically be legally binding on the sovereign (even if the name of the document is "letter of comfort"). The key is always to look at the enforceability of the obligations contained in the letter of comfort (including taking advice from lawyers – from the attorney or solicitor general for the government and from local or international counsel for sponsors and their lenders). Ultimately however, even if the obligations are enforceable (and all parties receive advice or legal opinions that confirm this is the case), in order for the investor or its lenders to benefit from the enhanced letter of comfort, they may need to enforce their rights against government in court or arbitration, whereas under a government guarantee, the route for demanding payment may be more straightforward, particularly if this obligation is back-stopped by an external financial institution.

In certain jurisdictions these enhanced letters of comfort are called letters of support. In those jurisdictions, the letters of support contain enforceable obligations which, while falling short of financial guarantee obligations, nonetheless provide additional and binding comfort for investors and lenders in relation to a range of risks. These can include political and other types of force majeure, change of tax, change of law and compensation on termination/transfer. Letters of support are more akin to implementation agreements or government support agreements but fall short of granting government guarantees.

In many cases, the reason that letters of comfort or letters of support are given is that guarantees require (i) parliamentary or constitutional approval; and (ii) as noted in Section 6.7 below, the granting of guarantees may impact on debt sustainability levels of the sovereign, which could impact further borrowing from external institutions.

6.4. Put and Call Option Agreements

In contrast to a sovereign guarantee – which guarantees payment of certain (or all) financial obligations to the power project – a Put Call Option Agreement (**PCOA**) establishes direct contractual obligations between a host country and the project shareholders. Specifically, a PCOA establishes two contractual obligations:

- the first being a put option in favour of the project shareholders to require the purchase of the assets of the power project company by government; and
- the second being a call option in favour of the host country to require the project shareholder to sell the assets of the power project.

The PCOA also defines under which conditions the options can be exercised and defines the formula for how payments under the PCOA are to be calculated.

The Put Option

Under a PCOA, the put option is a contractual right, but not an obligation, held by the project shareholders that requires the host country to choose to either (i) purchase the plant and assets of the project company, or (ii) purchase all of the shares of the project company that are held by the private shareholders, in each case in exchange for a pre-agreed purchase price, which differs depending on the trigger event.

The put option held by the project shareholders is subject to certain conditions defined under the PCOA, which would typically include either the termination of the PPA following certain defined trigger events, or the expropriation of some or all of the project's assets.

The Call Option

Similar to the put option, the call option under a PCOA is a contractual right rather than an obligation. In the case of the call option, the right rests with the government and requires the project shareholders to either (i) sell the plant and assets of the project company to the host country, or (ii) to sell all of the shares in the project company. The call option is also subject to certain conditions precedent, such as the termination of the PPA or other defined conditions.

Trigger Events

As noted above, the put and call options under a PCOA are subject to strictly defined conditions, or “triggers”, that must be satisfied prior to exercise of the option. This constrained nature of the PCOA is important since this type of sovereign credit support is, in essence, a “last-resort” option rather than a guarantee of actions or payments that are in the regular course of business for a power project. For example, in the case of default due to non-payment by the offtaker, the project shareholders may be required to first draw, under a standing letter of credit (which may or may not be part of a partial risk guarantee arrangement) or from an escrow account, prior to exercising its put option under the PCOA. Similarly, in the case of default due to the seller’s failure to maintain the power plant, the government may be required to allow time for the project shareholders to correct the operational issue or for a lender to step in and appoint a new project operator, prior to the government exercising the call option under the PCOA. Even when it comes to eventually exercising the put or call option under the PCOA, due to the gravity of the situation (i.e. a permanent end to the power generation business by the IPP), the agreement may yet provide for a final consultation period for the parties, with time to remedy the situation and increase the probability of recovering value for all parties (i.e. through mutually agreed restructuring of the financing), before either of these options can be exercised.

For additional detail on default triggers and their operation under a PCOA, please review the chapter titled "Default and Termination" in [Understanding Power Purchase Agreements](#).

Defined Purchase Prices

Similar to the list of trigger events under a PCOA, the purchase price of the project assets or of the shares in a project company to be paid as a result of the exercising of an option under a PCOA, must also be carefully defined. The formula for the purchase price, also known as the termination payment, will be directly tied to which trigger event has led to the termination of the PPA. For example, in the case of termination of the PPA due to off-taker default, the purchase price will likely include not only the value of the project assets and the outstanding project debt, but also the expected return for shareholders in the project over a pre-agreed period. In the case of termination due to seller default, the purchase price may be limited to just the outstanding project debt. The purchase price in the case of termination for force majeure will likely fall somewhere between these two extremes and may depend on who is directly impacted by the force majeure as between the off-taker or government and the project company. Examples of the termination price are set out in a table in Section 5.4 above.

For additional detail on the definition of purchase prices under a PCOA, please review the relevant chapter titled "Default and Termination" in [Understanding Power Purchase Agreements](#).

Expiration of the Options

If a party to the PCOA does not exercise a put option or call option within an agreed period of time after the termination of the PPA becomes effective, then the option will expire. The expiration period will be defined in the PCOA and may also be subject to mutual agreement by the parties to extend the period, to allow for further negotiations or attempts to resolve the default that resulted in termination.

6.5. Liquidity Letters of Credit

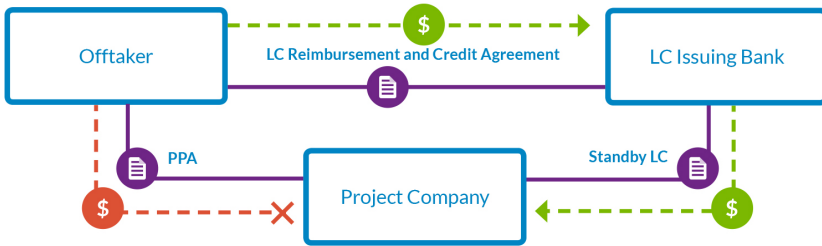
As noted in the previous section, a PCOA is a form of government support and is designed to allow investors and lenders to exit a project and recover their investment once a PPA has been terminated, which should only occur following a termination trigger event.

PCOAs are not designed to address the risk that an offtaker may suffer from short-term liquidity problems. In this way, PCOAs are different from sovereign guarantees because a sovereign guarantee is (usually) a guarantee both of an offtaker's obligation to pay ongoing payments, such as capacity payments and energy payments, and also to pay the purchase price for a plant following the termination of a PPA. As a result, PCOAs are often combined with credit enhancement tools that are specifically designed to address short-term liquidity problems. A liquidity letter of credit is one such mechanism.

In simple terms, a liquidity letter of credit is a letter of credit posted and maintained by an offtaker that can be drawn upon by a project company in the event that the offtaker fails to pay a capacity payment, energy payment, deemed energy payment, or a similar payment that is regularly due from the offtaker within a relatively short period after the payment becomes due. The amount available to be drawn under such a letter of credit is usually equal to a few months' worth of projected payments under the PPA.

If the offtaker fails to make a payment when required under the PPA, then the project company can directly make a demand on this letter of credit. This provides a liquidity buffer enabling the project company to remain solvent with continued operations whilst being able to meet overheads and service its debt, even if the offtaker fails to pay. The offtaker is usually obliged to replenish such a letter of credit by paying the issuing bank under a document called the reimbursement and credit agreement, fairly quickly after a drawing is made.

Liquidity Letter of Credit with Offtaker Obligation to Replenish

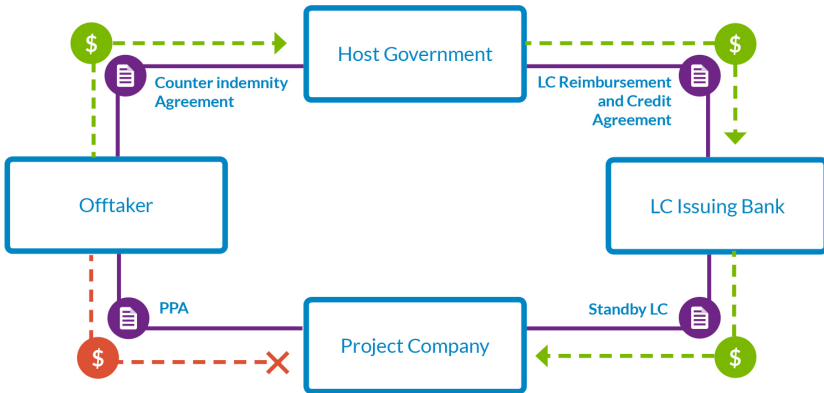


In exchange for posting and maintaining a liquidity letter of credit, the initial failure by the offtaker to pay a capacity payment, energy payment, or similar payment that is secured by a liquidity letter of credit, will typically not constitute an offtaker event of default. Rather, an offtaker event of default will occur if the offtaker subsequently fails to replenish the letter of credit within a certain period of time, or if the offtaker fails to make a required payment under the PPA after the letter of credit is exhausted.

This same structure can be implemented with a demand guarantee governed by the Uniform Rules for Demand Guarantees instead of a letter of credit governed by UCP 600 or ISP 98. In some cases, commercial banks are willing to issue demand guarantees at a cost to offtakers that is lower than the corresponding cost for a similarly-sized letter of credit.

A liquidity letter of credit may be less expensive (or have less opportunity cost) versus using a cash escrow account to cover short-term payment risk. In some cases, by not having the reimbursement obligation covered by a partial risk guarantee, a payment guarantee or a similar DFI product, as discussed below in Section 7.2 (DFI Guarantees), the liquidity letter of credit will be less expensive, less complex, and less document-intensive than those options.

Liquidity Letter of Credit with Host Government Obligation to Replenish



However, in other circumstances, a freestanding letter of credit may be unavailable or cost-prohibitive. For example, commercial letter of credit issuing banks may be unwilling to take the credit risk of the offtaker as the reimbursing party, (or may only be willing to do so for the first or two IPP projects in a country) or they may only be willing to take such credit risk in return for prohibitively high fees.

In such cases, the host government may agree to take on the obligation to replenish the letter of credit, as shown in the diagram above. In other circumstances, letter of credit issuing banks may only be willing to take the credit risk of the host government, and the host government may be unwilling to directly take on the reimbursement obligation, in which case the parties will likely need to pursue one of the options discussed in Chapter 8 below (Third-party Credit Support and Risk Mitigation).

A final point to note is that sometimes, the offtaker and the project company may engage in negotiations about the credit rating of the issuing bank for the letter of credit. To minimise the risk of the issuing bank not honouring the payment request under a letter of credit, the project company may seek a bank with a high credit rating, or a lower-rated bank whose let-

ter of credit has been confirmed by a higher-rated bank. The parties will need to agree on what works for each transaction.

6.6. Liquidity Escrow Accounts

As another option, short-term liquidity risk may be addressed by simply depositing cash into an account (variously referred to as a liquidity account, a reserve account, or an escrow account) held by a deposit bank pursuant to the terms of an escrow agreement.

The offtaker will be required to fund the account in an amount equal to a certain number of projected monthly payments under the PPA – for example, based on the total expected charges for a given number of months, or based solely on the capacity charge for that period. The limited use of such escrow accounts is often in addition to, or in combination with, other credit enhancement options, since it only addresses short-term payment risk.

If the offtaker fails to make a payment when required under the PPA, then the project company can draw on this escrow account. This provides a buffer so that the project company can continue to operate and to pay its debt service, even if the offtaker fails to pay. After any draw on the escrow account, the offtaker must immediately (or after a specified number of days) replenish the account.

Cash escrow accounts have the advantage of being clear, simple, and straightforward. The only third party that needs to be involved is a deposit bank, so the documentation normally requires minimal transaction costs, compared to other credit enhancement options.

However, there are a number of reasons why parties may prefer not to use escrow accounts. Cash escrow accounts are typically only a short-term solution to liquidity/payment risk. Cash is an expensive credit enhancement option since the cash must be placed in a deposit account that will typically earn little to no interest; and in any case, the amount escrowed will earn less interest than the cost of obtaining the capital. Therefore, there is negative carry on the amounts on deposit. Whether this cost is directly paid by the project company or the offtaker, it would typically be part of the overall costs that are passed on to the customer through the tariff.

In addition, the lenders to a project may be concerned with the offtaker's ability to replenish the escrow account in the future, if it is drawn upon. This concern can be addressed by backstopping the offtaker's obligation, either by the host government (if it is willing and able to take on the replenishment obligation) or alternatively by certain DFIs. For example, DFIs can provide a payment guarantee supporting an escrow account arrangement, which functions similarly to the payment guarantee backed by an LC discussed above, but with the escrow account in place of the guaranteed LC structure. Upon a draw on the escrow account by the project company, the offtaker or host government, as applicable, will have an obligation to replenish it. If the escrow account is not replenished, the DFI provider of the payment guarantee backstops the offtaker's or host government's obligation and replenishes it. If the DFI provider is an MDB, then the host government provides an indemnity in favour of the MDB as the guarantee provider.

An escrow account arrangement could also be set up as a vanishing fund whereby amounts kept in escrow could progressively revert to the offtaker if it is able to maintain a clean unbroken payment track record for a pre-agreed period of time.

6.7. Debt Sustainability

How Should a Government Account for a Guarantee or Other Form of Sovereign Credit Support?

International accounting standards address the question of how to deal with government guarantees, quasi-guarantees, or other forms of sovereign credit support on a government's balance sheet. In accounting terms, these types of government support obligations are termed contingent liabilities.

Contingent liabilities are potential future financial obligations whose conversion into an actual financial obligation is dependent on the occurrence (or absence) of one or more future events, which may be outside of the government's control. We outline the types of sovereign credit support that are treated as contingent liabilities in accounting terms in this chapter.

Both the International Accounting Standards and the International Public Sector Accounting Standards deal with this type of contingent liability (in IAS37 and IPSAS19 respectively, entitled "*Provisions, Contingent Liabilities and Contingent Assets*"). Both standards require that entities – which for our purposes means government treasury departments or ministries of finance – *recognise and disclose* contingent liabilities unless the possibility of those liabilities being called is remote. Both standards state that if a payment is *probable*, a provision is recorded on the balance sheet but that if a payment is *improbable*, it is treated as a contingent liability and disclosed (e.g. by way of a footnote) but not recorded on the balance sheet as an actual liability.

Governments typically manage their accounts on either a *cash* or *accruals* basis, with an increasing trend for accruals accounting. The move towards accruals accounting is based on the fact that cash accounting may not adequately account for all public sector assets and liabilities. For example, on a cash account basis, governments may not disclose sovereign credit support for power projects as a contingent or unfunded liability, even though this support will crystallise into a liability to be funded if the guarantees or

quasi-guarantees are triggered. Under cash accounting guidelines, guarantees are recorded in the fiscal accounts only when the liability is crystallised and a financial obligation is recorded. Under accrual accounting, *expected costs* are set out in the fiscal accounts at the time a guarantee (or another form of sovereign credit support) is granted.

The issue with reporting on a cash basis is that this gives the illusion of positive financial results in the short-term – possibly at the expense of longer-term financial health and fiscal stability. Accrual accounting allows governments to demonstrate an increased desire for both transparency and accountability. It allows better information for decision-making across all sectors of government. A move to accrual accounting may be part of a wider financial sector reform programme that looks to improve government operations across the board as well as contributing to the long-term sustainability of public finances, given the ability for governments to anticipate and react more readily to wider risks or threats to the financial health of a country.

That said, accruals accounting is not the only method to increased transparency. In respect of guarantees and credit support, transparency can also be strengthened by disclosing supplementary information in budget documents, fiscal reports and financial statements.

The challenge of accounting in a more transparent way may be that it puts a country at a disadvantage on a comparative basis against another country which may not reflect their contingent liabilities in the same way and which may be able to attract international financing more readily, as a result.

Why Does the Accounting Treatment Matter?

We start from the premise that guarantees and other forms of credit support are a legitimate form of government backing for power and infrastructure investments, where the government is seen to be the best placed to anticipate, control and minimise certain key risks.

External lenders to the sovereign (whether MDBs or commercial banks) are likely to examine the quantum of and nature of contingent liabilities in the same manner as actual liabilities, to assess the credit risk of the sovereign (and the terms of the borrowing itself).

The accounting treatment of guarantees matters in light of the long-term sustainability of government programmes. Issues may arise in the context of future government spending as a result of poor accounting – and as seen most recently by certain European countries post-financial crisis – this can have potentially major fiscal consequences. Both the recent global financial crisis and the European sovereign debt crisis has led to heightened concerns about the size of potential contingent liabilities and associated public debt sustainability. This means that defining and accounting for a contingent liability is now keenly looked at by international institutions, particularly the International Monetary Fund (IMF).

The increasing attention given to this form of contingent liability appears to be driven by three main factors. The first is a possible increase in the adverse implications of macroeconomic risks. Where those risks are not transparent (because they haven't been booked properly), investors will always face uncertainty as to the true extent of a government's financial liabilities. Secondly, the fiscal risks inherent in contingent liabilities may be systemically related—for example, guarantees of an offtaker's financial obligations under a series of PPAs may easily be called at the same time (if, for example, there are serious credit issues within that offtaker). Third and perhaps most importantly, as discussed above, contingent liabilities impose no express budgetary constraint (unlike traditional spending) that can hinder macroeconomic control.

According to the IMF, guarantees expose governments to greater fiscal risks because of: (i) the growing volume and volatility of private capital flows; (ii) the transformation of the government's role from financier to guarantor of services (without the accompanying accounting entry); and (iii) projects and the moral hazard that may result from guaranteeing outcomes to be delivered by the private sector.

Essentially the concern is that this distorts decision-making within private sector institutions because the decision makers do not anticipate having to absorb the cost of a negative outcome (such as an offtaker default). The implication is that government guarantees or other forms of credit support may in the short run appear attractive because of their hidden nature (their fiscal cost is invisible until they become due), however, they may turn out to be more expensive in the long run, particularly if governments guarantee all, rather than a part of the underlying assets.

Credit-rating agencies and investment banks are accordingly paying more attention to contingent liabilities in assessing sovereign creditworthiness.

How Else Could These Liabilities Be Accounted for?

The main accounting and reporting challenge is that the contingent nature of guarantees makes valuing them difficult. However, a number of analytical techniques are available to value guarantees and forms of credit support. The tools to do this include both simple and more complicated analyses and quantification of the credit risk.

It is certainly the case that contingent liabilities which are *likely* to be called should be provided for in annual budgets as appropriations.

It has been suggested that governments should take into account the volatility of public financing and the potential impact of large projects on their overall risk exposure. In some cases, it may be better for a government to provide direct budgetary support than a guarantee because of the value of being able to predict public financing requirements.

A reserve fund may also partly reduce the fiscal risks that can result when contingent liabilities fall due.

How Does the IMF Treat Government Guarantees or Other Sovereign Credit Support?

The Bretton Woods institutions, being the IMF, together with the World Bank Group (**WBG**), look at a country's public sector debt (**PSD**) for a number of purposes, including to monitor a country's economic and financial development and in order to provide it with either policy advice or to provide it with financing and other forms of support.

PSD is used in a country's debt sustainability analysis (**DSA**) which assesses how a country's level of debt and prospective new borrowing affects its ability to service its debt in the future. A different DSA framework is used for low-income countries in order to help policymakers strike a balance between achieving development objectives and maintaining debt sustainability.

In collaboration with the WBG, the IMF determines the baseline used to assess debt sustainability and also determine the risk classifications for each country. The assessment includes various aspects such as:

- calculating current and future debt burden indicators;
- identifying the country-specific factors to be included in the DSA;
- comparing external debt burden indicators with appropriate indicative debt thresholds; and
- important for the power sector, analysing how domestic debt or *contingent liabilities* affect a country's capacity to service future debt.

The main point to note here is that IMF/WBG guidelines, policies and analysis vary from country to country and over time.

The IMF/WBG debt sustainability analysis classifies countries according to their probability of debt distress. There are four categories: low risk, moderate risk, high risk, and in debt distress. Debt sustainability can be assessed on the basis of different debt and debt-service indicators relative to measures of a country's ability to repay. For instance, different risk classifications also take into account other factors such as a country's previous track

record in remaining current on its debt-service obligations. The most relevant measure of repayment capacity depends on the constraints that are the most binding for a specific country. Additionally, since external official debt is the dominant source of financing in many low-income countries, the assessment critically considers the country's ability to service external public debt.

The classification of risk distress forms the basis for determining future grant, loan and guarantee allocation by IDA and by other multilateral creditors such as the African Development Fund. The classification affects both the amount and the pricing of such loans.

How Do Government Guarantees or Other Forms of Credit Support Factor into the IMF's Risk Analysis?

Government-guaranteed private sector external debt is often seen by the IMF as a contingent explicit liability because it is a legal obligation for the government to make payments to an external creditor. For instance, in the event that a large state-guaranteed power project runs into payment difficulties, the government likely will provide public financing to cover such contingencies, with the consequence that these contingent liabilities can lead to large increases in public debt.

Key to the IMF's analysis will always be to look at the entity to which government owes the obligations (i.e. who is able to call the guarantee). In most cases, the guarantee will be in favour of an external (foreign) investor or lender. In some cases, however, monies under a support agreement or guarantee may technically be owed to a locally-incorporated project company. A government may therefore quite fairly consider this not as "external" debt but rather as debt owed within the country.

It is nonetheless prudent to believe that IMF would consider guarantees in favour of a local project company as being a contingent legal liability for the government to make payments to an **external** creditor and therefore classify it as external debt for its DSA. The reason is that the locally-incorporated project company is likely to have its actions and accounts con-

trolled by external project finance lenders as part of a security package given to lenders as part of the transaction. The assumption should, therefore, be that sovereign credit support in a power project financing will be seen by the IMF as "external debt" and, therefore, an explicit contingent liability.

As part of undertaking a holistic DSA, the relevant teams assess how other factors such as contingent liabilities can affect a country's capacity for servicing future debt service payments. This is viewed at the most general level as a "fiscal risk", which may be defined as any potential differences between actual and expected fiscal outcomes (for example, fiscal balances and public sector debt).

It is clear that contingent liabilities in general, are considered when the IMF assesses a country's debt sustainability. However, as noted above, governments are not required as such to disclose information on their exposure to all types of possible future fiscal liabilities. **Therefore, it is not possible to specify to what extent government-guaranteed private-sector external debts factor into the IMF's risk analysis.** It may be the case that government-guaranteed private sector debt (that has not become due) is not entirely taken into account in a risk analysis because not all government contingencies are disclosed to the relevant teams. When contingent liabilities fall due and become the guarantor's responsibility, they are transparent and taken into account since the government must then pay the amounts due.

Until then, while these contingent liabilities may not appear on a balance sheet or directly restrict government borrowing limits by external lenders, this should not obscure the fact that a financial undertaking by the government remains a valid and enforceable legal obligation with potentially significant financial consequences in the future. It is, therefore, prudent for government departments to continuously monitor and review a government's total borrowings.

6.8. Host Government Considerations

Providing credit enhancement in favour of IPP financing can result in a number of potential benefits to a host government, but it also presents significant challenges. Host governments are often unclear as to why their support is needed and what is actually required. In making decisions about the support needed from government, all stakeholders should have an appreciation of the various factors the government must balance when weighing the benefits and challenges of granting credit enhancement.

Often the main reason cited for why host government credit enhancement is required is simply "if you don't give the support, the project will not be bankable because lenders will not lend." While there may be some truth to this statement, it does not do justice to the various considerations a host government must decide upon.

Instead, it is perhaps better to highlight some of the substantial benefits to a host government of providing credit enhancement, while acknowledging that there is no one-size-fits-all approach and that providing such credit enhancement presents a number of challenges for the host government.

Active Limitation of Credit Enhancement Scope

One of the benefits of project finance is its potential to reduce the impact of financing an IPP project on a host government's balance sheet. Due to various considerations, however, the private investors who would fund the up-front costs of an IPP may determine that they will not provide funding to the company unless host government credit enhancement is provided. Such credit enhancement may impact the host government's balance sheet, but it may be possible to minimise this impact through active negotiation with the investor parties. As noted in Section 7.7, depending on how a host government accounts for the type of credit enhancement provided, they may only need to book it as a contingent liability on the host government's balance sheet, rather than full encumbrance of its balance sheet. This will depend on their method of accounting and the type of instrument that is selected.

In addition, depending on the risks that the investors to the IPP are seeking to cover, it may be possible to negotiate for credit enhancement that closely tracks the concerns of the investors and does not represent a guarantee of the entire cost of the IPP. However, this will largely depend on the concerns of the investors and in some situations, they may not be satisfied with anything less than a full guarantee from the host government.

Establishing a "Brand" Through Credit Enhancement

A host government with a nascent power market may be able to use the provision of credit enhancement not only to attract international investors to finance an IPP, but also to establish a "brand" for the country as a good place in which to do business. This is particularly true if multiple IPPs are financed in this manner and the host government and the off-taker are able to demonstrate a reliable track record of payment to the IPP. Once this "branding" and track record are established, it should become easier for the host government to reduce or do away with the provision of credit enhancement for future IPPs.

Costs of Credit Enhancements Decrease Over Time

The impact of any credit enhancement provided by a host government in support of an IPP's financing should reduce over time as the IPP pays shareholder dividends and repays its debt. Therefore, even if a host government was required to treat 100% of a credit enhancement as an actual liability on its balance sheet, this liability will decrease over time.

Limits of Host Government Financing

A host government may reach a stage where they determine that they do not have adequate balance sheet capacity, or available financing at acceptable prices from third parties, to finance the continued growth of its power market. At this stage, if it is unable or unwilling to utilise the developer financing and resource based project financing model, it may elect to avail itself of the project finance model. If it does so, and the private investors refuse to lend their support without credit enhancement, the host government will need to decide between the expansion of its power market and providing credit enhancement. In the latter scenario, the government enjoys the benefit of greater power production and (as discussed above) potentially limiting the impact on its balance sheet of the credit enhancement being sought.

Government Control

The risks that credit enhancement is intended to cover often relate to perceived risks that the sovereign is best able to mitigate, such as certain political force majeure events. As such the host government is best positioned to control and potentially diminish these perceived risks. The payment risk of the government offtaker will likely diminish as the power market matures and the offtaker builds up a solid payment track record.

Diversity of Interests within Government

When dealing with governments, there are multiple government stakeholders involved directly and indirectly in the negotiation of a power project. These could include the offtaker (if it is a state-owned utility), Ministry of Energy, Ministry of Finance, Ministry of Justice, the regulatory agency for the sector, the investment promotion agencies and the Parliament, among others.

A PPA is usually signed by the offtaker and the project company. The other government stakeholders are often not directly involved in the decision-making process but they may significantly influence the process. Ministries of Energy set the policy and will often advocate for private investment in the sector in order to assist them in meeting their goals of providing affordable electricity to the citizens of the host country. Investment promotion agencies are established to encourage private investment and facilitate interactions between investors and government bodies. The regulatory agency primarily seeks to balance the competing interests of the citizens (affordable power) and the project company (reasonable return on investment).

When dealing with issues of credit enhancement, ministries of finance seek to balance the financial needs of the sovereign, ministries of justice seek to protect the legal rights and ensure contracts comply with national legislation, while parliament seeks to represent the views of the wider citizenry and is often required, by law, to approve certain types of contracts or government obligations.

Having the inputs of each of these government stakeholders in the process requires significant coordination and a balance of constituent interests with political implications that must be appreciated by all stakeholders.

Concerns Regarding Precedent

Host governments may well be concerned about setting a precedent in giving certain types of credit enhancements. They may fear that if they provide a credit enhancement to one IPP, it may be perceived as market practice and this may be required by all future IPPs. While it may be challenging to change the perception of the market regarding the availability of credit enhancements, a healthy payment track record for existing IPPs and an established brand for the country, as a good place to do business, will greatly facilitate such discussions.

Debt Sustainability

When offering credit enhancements, host governments should consider the impact this will have on the overall debt sustainability framework. This is discussed in more detail above in Section 6.7. The impact of these frameworks is that governments have limited headroom to absorb additional liabilities (contingent or otherwise). The opportunity cost of accepting an additional liability should be considered by all stakeholders.

Furthermore, many legal frameworks require that any contract that creates a liability or contingent liability for the host country will require parliamentary approval. This approval process can be complex and time-consuming as most parliaments have a complicated committee system and meet sparingly. Parliaments must balance the value of any one credit enhancement against the competing needs of the citizenry.

Multiple Developers Knocking on the Door

A host government may be approached by multiple developers at once. If one of these developers indicates that it will not require any credit enhancement, the host government may be inclined to select that developer over others. However attractive the prospect of limited or no credit enhancement may appear, in all cases the host government should perform full due diligence on all such developers to ensure that they have the ability to deliver on their promises. A key consideration in such due diligence is verification of the track record of the sponsors of such projects and confirmation of whether they have successfully completed projects of similar magnitude in other jurisdictions. Reputational due diligence is also important to avoid exposure to 'vulture' funds who prey on countries under the guise of investments, especially where the sovereign has considerable exposure under a sovereign guarantee.

Financial failure of a project may result in discontinuity or full cessation of its operations, which will be disruptive to the power market. In addition, any such disruption could prove costly to the offtaker who may need to complete the project or cover the shortfall in power production through expensive emergency measures (imports or reserve power) or, worse, through load shedding that translates to loss of economic output. The government may also have spent a considerable amount on advisors before the projects ended prematurely. One of the ways of limiting this potential downside is to require prospective IPPs to provide development security and performance bonds to support their commitment to drive projects to conclusion of plant construction and commencement of commercial operations.

Foreign Currency Exchange Concerns

While project financing often leads to increased foreign investment and financing in a country, a key consideration remains that power tariffs are usually denominated in the local currency of the host country. This is dealt with in greater detail in Section 3.4. It is therefore incumbent on the host government as it formulates economic policy to always consider the impact on the broader economy of long-term PPAs that require on-going foreign currency-indexed payments.

6.9. Summary of Key Points

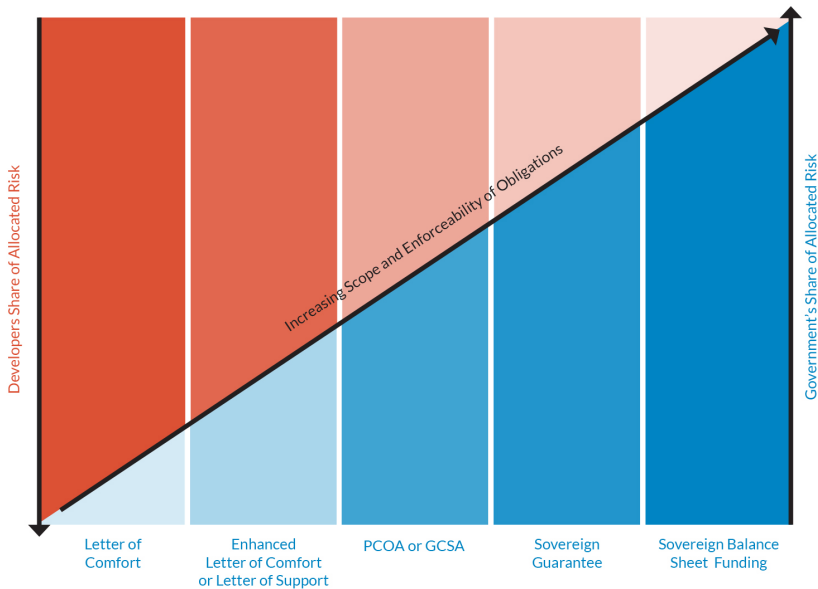
Governments need to create the enabling environment to facilitate the development of the host country power sector. The enabling environment may not be sufficient by itself, and therefore, to catalyse IPP deals in the market, the host country government may need to offer credit enhancements. Investors are concerned with allocating the risks of continuing payment obligations and termination payments.

- **Sovereign Guarantees** are one of the more comprehensive forms of credit enhancement that the sovereign can offer to investors.
- **Letters of Comfort and Support** provide less support than a full sovereign guarantee but are not uncommon.
- **Put and Call Option Agreements (PCOA)** typically deal with more significant events triggering termination, and do not provide enhancements for continuing payment obligations.
- Continuing payment obligations can be covered by either **Liquidity Letters of Credit** or **Liquidity Escrow Accounts**. These instruments do not provide coverage for termination-related events.

It should be noted that the sovereign guarantee is not a guarantee of the debt obligations owed to lenders by the project company.

Governments should be cognisant of the impact of credit enhancements on their sustainable debt frameworks developed in cooperation with the IMF. Host governments have many factors to consider when determining whether to provide sovereign credit enhancements.

Government Options for Sharing Risk



The diagram above is an illustrative example of the various levels of risk that a government can take when aiming to deliver a power project. It shows that a government fully procuring and paying for a power plant on its own balance sheet is an assumption of a significant portion of risk by the government. Where risks remain with the developer or private sector, these are mitigated, enhanced or otherwise allocated via the various credit enhancement methods described in this handbook (both by the sovereign and by third parties). The above diagram is indicative and illustrative only – the strength or otherwise of the various government credit enhancement documents and how enforceable they are – will be a function of what they actually contain and will always be subject to drafting and negotiation and are primarily a function of the wider macroeconomic and regulatory environment of a country. Nonetheless, the objective of the diagram is to illustrate in simple terms the allocation of risk between the government and the developer.

7. Third Party Credit Support and Risk Mitigation

7.1. Introduction

7.2. DFI Guarantees

7.3. DFI-Guaranteed LC Structures

7.4. Political Risk Insurance

7.5. A/B Loan Syndication

7.6. Summary of Key Points

7.1. Introduction

This section focuses on the different credit enhancement and political risk mitigation products that third parties offer in the context of IPPs. These products can be used for two separate purposes.

First, they can be used to provide a second level of credit enhancement to that provided by a sovereign:

- if the credit of a sovereign itself is not strong enough to offer the level of assurance required by investors and lenders;
- where the sovereign is unwilling to offer a full sovereign guarantee to a developer; or
- where the designated offtaker in a country is not creditworthy enough to take on the full payment obligations resulting from the PPA. This is particularly relevant in relation to an offtaker or host country's obligation to pay a purchase price following the termination of a PPA or the exercise of a put option.

Secondly, a few of these tools – such as political risk insurance – can be used to address risks that are not covered by direct contractual obligations.

Credit enhancement by third parties can bring significant benefits to the project and to the various stakeholders, including:

- widening the financing options available to the project company;
- reducing debt pricing; and
- lengthening the tenor of the debt.

Sponsors and commercial lenders will also often welcome MDB or DFI participation in a project because of the general "halo effect" that the participation in a project by MDBs or other DFIs can have on the bankability of a project, as a political risk mitigant.

7.2. DFI Guarantees

There is a range of guarantees that can be deployed by MDBs and other DFIs to address the different types of financial risks for an IPP. These guarantees can provide credit enhancement by mitigating risk, and are sometimes referred to by various DFIs as Partial Credit Guarantees (**PCGs**), Partial Risk Guarantees (**PRGs**), or Project-Based Guarantees. These guarantees can be divided into loan guarantees and payment guarantees, which are described in detail below. DFI guarantees will typically support the most critical financial obligations in a power project, such as the debt service obligations on loans or project bonds or payment obligations under the PPA and other project agreements.

Advantages of DFI Guarantees

DFI guarantees offer financial risk mitigation and credit enhancement to power projects in a number of ways. Governments and DFIs work together on a broad portfolio of development initiatives, and therefore host governments have strong incentives for maintaining a positive relationship with these institutions. This incentive will often lead governments to maintain their payment or contractual obligations, or direct their state-owned entities to do so, in transactions involving DFI support.

A government or state-owned entity's failure to honour commitments in a DFI-supported project could:

- jeopardise existing and future development financing to the country;
- trigger reimbursement obligations under an indemnity agreement or counter-guarantee from the host government (if applicable); and
- threaten the government's ability to seek other sources of funding, since DFIs are often seen as lenders of last resort.

The close working relationship between DFIs and government enhances the credit not only of the loans that are guaranteed by the DFI, but also

serves as a risk mitigant that further enhances the overall credit of a power project. This enhancement is sometimes referred to as a "halo effect".

Types of Guarantees

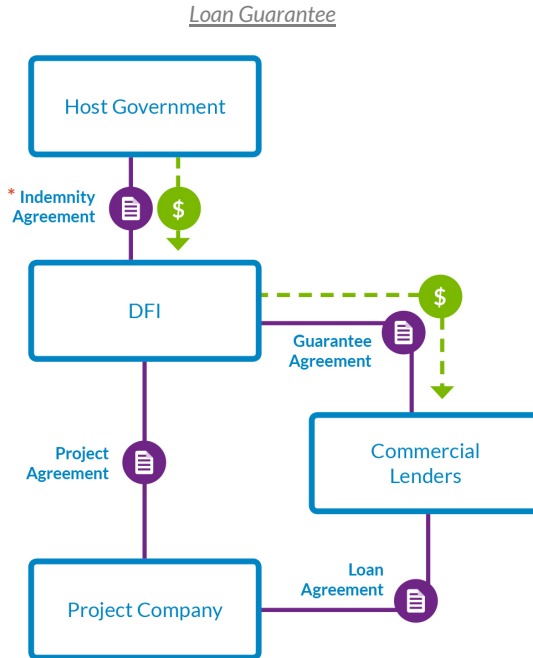
The products offered by DFIs to mitigate financial risk and enhance the credit of a power project are typically grouped into two broad categories, since they benefit two different stakeholders in the project structure. While this section describes some of the most common DFI guarantee structures, it should be understood that DFIs have a wide variety of guarantee products, structures and loan instruments, not all of which are covered in this handbook.

Loan Guarantee

The first broad type of DFI guarantee is the *loan guarantee*, which mitigates the risk of non-payment by the project company to the project's lenders, commonly referred to as a debt service default, as the result of action or inaction by the government or the state-owned offtaker. The latter condition is a critical feature of the loan guarantee, since this ensures that the product does not act as general coverage of the debt payment obligation of the project company to the project lenders. The beneficiary of the loan guarantee in the IPP context is the project's lenders rather than the project company. It is important to note that if there is a dispute about the government's obligations, payment to the beneficiary under the DFI guarantee is made only after the dispute has been resolved amicably or through the dispute resolution procedures set out in the project contracts.

The typical structure of a loan guarantee is set out in diagram below. It should be understood that this diagram does not represent every type of loan guarantee or partial credit guarantee available from a DFI. In particular, certain DFIs may offer guarantees without an indemnity agreement, but correspondingly at a higher cost to the project, since the DFIs are exposed to the commercial risk of the project without a host government indemnity to support the obligation. Instead of an indemnity agreement, cer-

tain DFIs may have a bilateral or treaty-level agreement with the host government, which may also impact the cost of coverage.



* Indemnity Agreement may or may not be required, depending on the DFI

Payment Guarantee

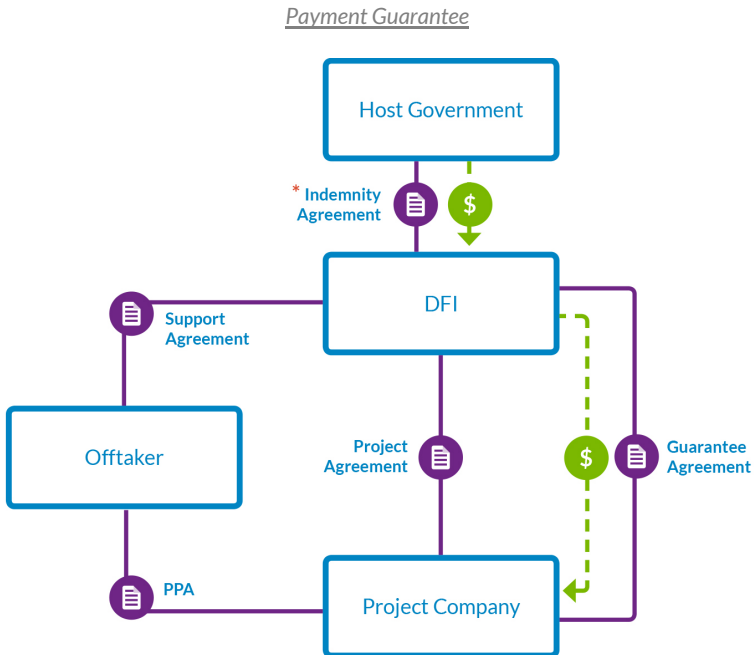
The second broad type of DFI guarantee is the *payment guarantee*. Unlike the loan guarantee, the payment guarantee is meant to benefit the project company directly and may cover a number of different payment obligations. These payment obligations may include, among other things:

- Recurring payments by the offtaker to the project company under a PPA;

DFI GUARANTEES

- Special instances of revenue replacement payments by the government to the project company for obligations for which government is liable; and
- Early termination payments by the government to the project company.

The typical structure of a payment guarantee is set out in the diagram below. It should be understood that this diagram does not represent every type of payment guarantee or partial risk guarantee available from a DFI. Certain DFIs may offer payment guarantees without an indemnity agreement, with similar implications to those set out in the loan guarantees section above.



* Indemnity Agreement may or may not be required, depending on the DFI

Contractual Framework for Guarantee Structures

The contract structure of a DFI guarantee can be extremely complex, given the numerous legal obligations that must be established among the host government, the offtaker, the DFI, the commercial lenders, the project company and (if applicable) the LC issuing bank. The key agreements negotiated in a guarantee transaction include:

- **Guarantee Agreement** – the relevant guarantee between the DFI and the beneficiary.
- **Project Agreement** – generally between the DFI and the project company, customarily setting out obligations from the project parties in favour of the DFI to pay the relevant guarantee fees and undertakings as to the conduct and implementation of the project in accordance with the relevant DFI's guidelines. Breaches of these undertakings may result in termination and/or suspension of the guarantee coverage following notification by the DFI to the issuing bank and an appropriate grace period.
- **Support Agreement** – these may be negotiated between the DFI and the offtaker, between the DFI and the government or even simply between the project company and the offtaker depending on the guarantee structure offered by the DFI. The support agreement customarily sets out the offtaker/government's undertakings with respect to the project. Depending on the DFI's approach and the nature of the project, these provisions may be contained in a separate agreement (such as a Direct Agreement) or in the underlying transaction agreements.
- **Host Government Indemnity Agreement** – is negotiated between the host government and the DFI, under which the host government agrees to indemnify the DFI if the DFI pays upon a demand for payment under the guarantee. This is sometimes referred to as a counter-guarantee. (As noted above, however, certain institutions may offer guarantees without an indemnity agreement, but correspondingly at a higher cost to the project, given the lack of a host government indemnity to support

the obligation. Instead of an indemnity agreement, certain DFIs may have a bilateral or treaty-level agreement with the host government, which may also impact the cost of coverage.)

All of the finance and project documents are required to be in a form acceptable to the DFI providing the guarantee.

General Considerations for DFI Guarantees

Applicability and Duration of Guarantees

DFI guarantees are intended to be flexible and can be used for any commercial debt instrument (loans, bonds) provided by any private institution, including debt provided by sponsors in the form of shareholder loans. They can also support other payment obligations to private-sector entities, such as payments to private-sector sellers or suppliers under a PPA. The duration of the guarantee is also flexible and will normally correspond to the term of the underlying guaranteed debt investment or obligation.

Allocation Issues

In determining whether to use a DFI guarantee that requires a host government counter-indemnity, the host government must consider how the guarantee will impact their balance sheet, their overall country strategy, and their country allocations for financing from the applicable DFI.

Government balance sheet issues are discussed in Section 6.7 (Debt Sustainability).

In the case of MDBs, country allocations are set on a periodic basis, keeping in mind that these institutions must allocate their limited resources across their eligible countries. While a guarantee typically has a different impact on a MDB's country allocation than a direct loan, the guarantee still uses up some of the available country allocation. Whatever the precise impact on the country allocation, this will mean that less resources will be available for the host government's other development priorities.

Partial vs. Full Scope of Guarantees

DFI guarantees may offer full or partial coverage of debt.

DFIs generally or often prefer partial (rather than full) coverage for a number of reasons, including:

- when a DFI provides full guarantee coverage, the commercial lenders and other parties may not conduct as extensive a due diligence on the underlying risk;
- partial financing is consistent with a development policy goal of assisting governments or public-sector entities in creating a track record of creditworthiness as borrowers or payers by retaining some unguaranteed payment obligations; and
- partial financing allows the DFI to catalyse more third-party financing with less of its own funds.

Ultimately, the purpose of these credit enhancements is to mitigate risk and to distribute it more appropriately in a particular project, not to eliminate it or shift it all to one party.

Certain Financial Considerations with DFI Guarantees

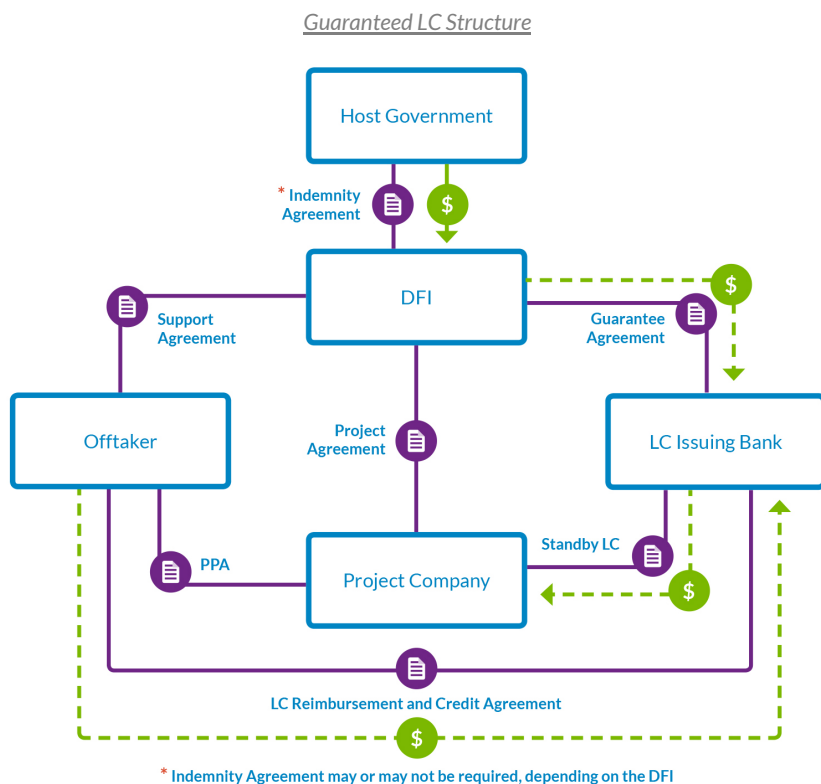
- The guarantee may or may not cover accelerated debt (i.e. full repayment of outstanding debt) in a default situation, depending on the particular DFI's policies. If the guarantee does not cover accelerated debt, the relevant DFI will typically pay out under the guarantee on the basis of the original amortisation schedule, subject to that DFI's particular institutional requirements.
- From the time that a payment has been missed to a guaranteed party, the beneficiary of the guarantee must follow a specific course of action to claim and draw down on the guarantee. This process could take up to several months or even years, depending on the circumstances of the default and the particular DFI's institutional requirements.
- The guarantee typically provides the DFI with a right of subrogation, so that, after the DFI makes a payment under the guarantee, it can step into the shoes of the beneficiary and recover the amount, if any, that the guaranteed party failed to pay.

7.3. DFI-Guaranteed LC Structures

While a DFI guarantee can be used for a variety of purposes, in many cases there are limitations on the DFI's ability to make payments under the guarantee instrument without a full resolution of disputes and passing of a specified period of time. Therefore, inserting a standby letter of credit (SBLC) into the structure is a common way to create liquidity support where the financial position of the state-owned offtaker may be constrained or limited. This guaranteed LC structure – sometimes referred to as a "PRG LC" – allows the beneficiary to draw from the LC as payment defaults occur, rather than seek payment from the DFI for each instance of payment default.

The guaranteed LC structure entails the provision of an SBLC or equivalent instrument by a commercial issuing bank in favour of the project company. The SBLC is typically put in place by the state-owned offtaker to cover the offtaker's payment obligations under the PPA. Issuance of the SBLC will likely be a condition precedent to effectiveness of the PPA and may also be a pre-condition for the disbursement of senior debt for the construction of the project.

A typical structure for a guaranteed SBLC is set out in the diagram below.



As illustrated in the diagram above, there are three primary financial commitments under the guaranteed LC structure:

First, if the offtaker fails to make a payment to the project company under the PPA, the project company may draw from the LC issuing bank under the guaranteed LC to satisfy the non-payment by the offtaker.

Secondly, if the project company then makes a draw under the guaranteed LC, the drawing will automatically convert into a loan from the issuing bank to the offtaker pursuant to a reimbursement and credit agreement (**RCA**) between the offtaker and the issuing bank. The general rule is that

the offtaker then has an extended period (typically 6-12 months) in which to repay the issuing bank for any such loan, with interest accruing at the agreed rate during that period.

Third, if the offtaker fails to reimburse the issuing bank under the RCA when repayment is due, the issuing bank may make a demand for payment from the DFI under the guarantee. If this occurs, the DFI will make a payment directly to the issuing bank to satisfy the outstanding payment due from the offtaker.

The ultimate recourse for a DFI under a guaranteed LC is the indemnity agreement with the host government, similar to the general payment and loan guarantees outlined above.

Role of the LC Issuing Bank

Payment is made by the issuing bank against a demand by the project company, without further examination of questions of fact (e.g. whether the payment was actually due under the PPA, etc.) This is of fundamental importance to the issuing bank, which is ultimately looking to the credit of the DFI as guarantor (and not to the offtaker or the host government) to cover its exposure. The structure, therefore, provides liquidity support for the offtaker, ensuring a more bankable PPA for the benefit of the project company and the lenders. A further reason for LC issuing banks not being required to investigate the underlying reason for the LC being drawn is the fact that the LC transaction is distinct from the underlying business transaction, and issuing banks, as a general principle, deal with documents alone and are not best suited to undertake such enquiries.

Contractual Framework for Guaranteed LC Structures

The contractual framework of a DFI-guaranteed LC is similar to the contract structure for general DFI guarantees described in Section 7.2 above, including a Guarantee Agreement between the DFI and the LC issuing bank as the beneficiary, a Project Agreement between the DFI and the project company, a Support Agreement between the DFI and the offtaker or host government, and an Indemnity Agreement from the host government. In addition, the guaranteed LC structure will include:

- **SBLC** – a standby letter of credit, which is an unconditional and irrevocable payment undertaking in favour of the beneficiary from the issuing bank. While such undertakings are generally characterised as irrevocable, the SBLC will contain specific termination and suspension events, including those set out in the DFI guarantee and the PPA termination clause. SBLCs may be governed by standard terms such as the Uniform Customs and Practice for Documentary Credits or the International Standby Practices, and the issuer is obliged to make a payment against a demand that conforms to those standards (including all appropriate supporting documents).
- **RCA** – a loan agreement between the applicant/offtaker and the issuing bank, providing that any drawing under the SBLC converts into a loan owing from the offtaker to the issuer, generally to be repaid within 6-12 months of the date of draw under the LC. The RCA will generally include classic covenants, events of default and conditions precedent. The RCA will also describe the circumstances giving rise to a right to substitute the issuing bank. Note that a termination or rescission of the guarantee would in turn normally be an event of default under the RCA, entitling the issuing bank to accelerate and exercise its remedies against the offtaker (e.g. cash-collateralise outstanding obligations, declare outstanding advances immediately due and payable, etc.).

All of the finance and project documents are required to be in a form acceptable to the DFI providing the guarantee.

Detailed Considerations for Guaranteed LC Structures

There are a number of more detailed issues to consider when structuring a Guaranteed LC which include the following:

Tenor of SBLC

The SBLC will generally be required to remain in force for an extended period, generally equivalent to the term of the PPA / senior debt. Normally, the LC structure is such that there is a fixed maximum amount (e.g. \$100m) available under the LC for the full term of its availability (e.g. 15 yrs.), however, SBLCs may sometimes set out lower and/or fluctuating annual sub-limits. This can allow a cost saving for the applicant (where there was no need for the full \$100m in, say, years 1 – 3 of the PPA, or where sub-limits were appropriate throughout the life of the PPA). However, as a result of Basel III, the issuing bank will now essentially be required to lock up capital equivalent to the maximum amount for the entire term of the LC, irrespective of whether the full maximum amount is capable of being called in one given year, or not.

One alternative, to save costs for the applicant, would be to have a sequence of short-term LCs in line with the relevant exposure under the PPA, i.e. adjusting the maximum amount each year resulting in a one-year tenor. This, however, gives rise to a need for annual replacement, and, therefore, replacement risk on the part of the power producer. Note in particular, that the guarantee structure does not allow for a drawdown of the SBLC if the offtaker is making timely payments but there is a replacing gap. Sponsors have in many cases taken the view that the long-term certainty of availability outweighed the cost savings and replacement risk, although this may not be the case in every transaction.

Scope of Payments Guaranteed under the SBLC

The coverage of the LC will be negotiated, but the general principle is that the SBLC will be available for (1) routine payments under the PPA (whether capacity/energy/fuel stock/etc.) and (2) lump sum termination compensation. Depending on the detail of the underlying transaction, cov-

erage is also possible on other matters (e.g., loss to the producer arising from local events of political force majeure, where that is covered by the government/offtaker in question, e.g. under a separate state guarantee).

DFIs will generally only support payment of undisputed amounts, or amounts disputed which have been settled at the time of making the demand. The beneficiary of the LC will, in its demand, be required to certify that the payment is undisputed, and/or that a relevant grace period has passed without notification of a dispute occurring. In some cases, commercial banks have applied different margins to drawings depending on the status of payments as disputed/undisputed (if permitted by the DFI).

Scope for Suspension and Termination under the Guarantee

The guarantee provided by the DFI is intended to be “unconditional”. Where the issuing bank makes a payment under the LC, then so long as it is made against a conforming demand – i.e. so long as the issuer does not pay out against non-conforming or inadequate documents or make some equivalent error – the general principle is that the guarantee will apply to that advance.

The DFI may seek to suspend or terminate its obligations under the guarantee. This may be for breach of the project agreement on the part of the company or offtaker (e.g. sanctionable practices or corruption on the part of the company, unauthorised change of control, insolvency, unapproved privatisation, etc.), or the relevant host nation ceasing to be a member in good standing by the relevant DFI.

The guarantee may also be terminated as a result of certain issuer-specific events, including corruption/sanctionable practices in relation to the project and/or insolvency type events. There may be a discussion in the RCA around the event of default for guarantee termination where this is triggered as a result of acts of the issuing bank. Non-payment of fees by the beneficiary/offtaker (as the case may be) will also trigger a termination right.

The general rule, however, is that the guarantee will continue to apply to advances made prior to the suspension/termination.

7.4. Political Risk Insurance

Political risk insurance (**PRI**) offers coverage for political risks not directly covered under the PPA or to backstop those risks that are covered under the PPA. Political risks are associated with government actions which deny or restrict the right of an investor or lender (i) to use or benefit from the project assets and negatively impact the project revenues; or (ii) which reduce the value of the project company. Political risks include war, revolutions, government seizure of property, and actions to restrict the movement of profits or other revenues from within a country. A further definition is contained in Section 4.4 above.

Providers

PRI can be provided by both public and private insurers.

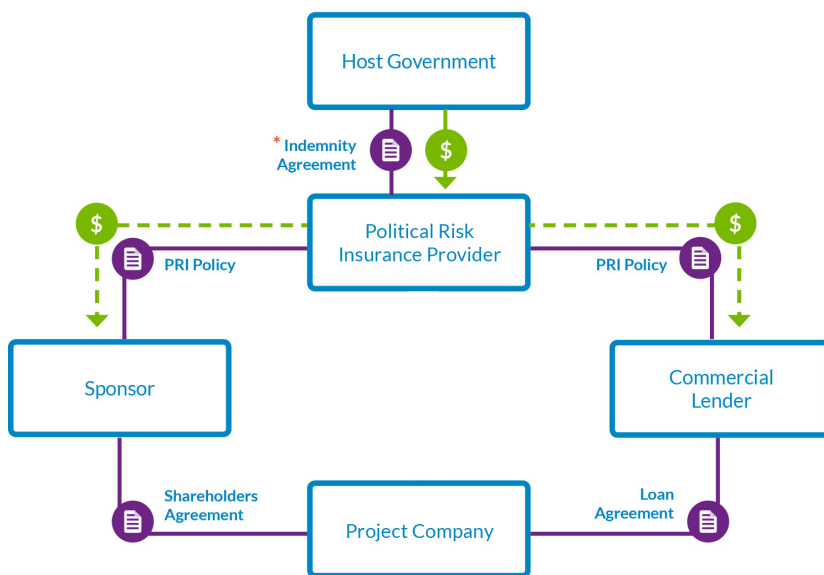
Public insurers include both ECAs and DFIs. These insurers typically have mandates to support the policy goals of their sponsoring government(s) or institution(s), such as fostering development or facilitating exports in certain emerging markets. These mandates may also place restrictions on the types of investments that are eligible for coverage. Such restrictions may address environmental issues, the nationality of the investors, eligibility of the investment, or other issues derived from the insurers' policy objectives.

Private insurers have greater flexibility in the types of projects and breadth of coverage they can underwrite, but have lower tolerance for risk to provide coverage in high-risk markets or to underwrite risks which cannot be reinsured. They also typically have shorter tenors.

What is Covered?

Traditional PRI policies are insurance contracts that provide protection against commercial losses that result from asset-backed and trade-related risks. Asset-backed risk includes confiscation, expropriation, nationalisation, deprivation, forced divestiture, forced abandonment, arbitral award default, license/permit cancellation, embargo, war and political violence. Trade-related risk includes currency inconvertibility, currency transfer restrictions, contract frustration and wrongful/unjust withdrawal of a guarantee.

PRI coverage can cover project stakeholders (sponsor or lender) against the project company's failure or loss due to a breach of contractual obligations if the failure or loss is caused by one of the defined political risk events under the PRI. PRI can also cover non-honouring and breach of contract of financial obligations by a host government or state-owned offtaker and as such can serve as additional credit enhancement for the project.

Political Risk Insurance Structure

* Indemnity Agreement may or may not be required, depending on PRI provider.

PRI coverage can be used to supplement commitments provided to a project company by the host government under an implementation or government support agreement (or even the PPA itself, if the offtaker is sufficiently creditworthy). Any government guarantees would stand in front of the insurance cover. For example, while the host government would normally provide an undertaking to ensure the convertibility of currency throughout the term of the project, in the event the host government has insufficient foreign currency reserves to meet its conversion obligations, a PRI policy which covers currency inconvertibility can provide a cover by converting the portion of the currency that was not serviced by the government.

PRI providers typically subrogate to the rights of the investors and lenders covered, and require an assignment of the underlying rights. Depending on

the political risk insurance provider, and the type of coverage being sought, a counter indemnity with the host government may also be required.

Considerations

Aside from determining the length of time involved and the cost of seeking PRI cover, there are many other practical considerations when an investor or lender seeks insurance cover. These include:

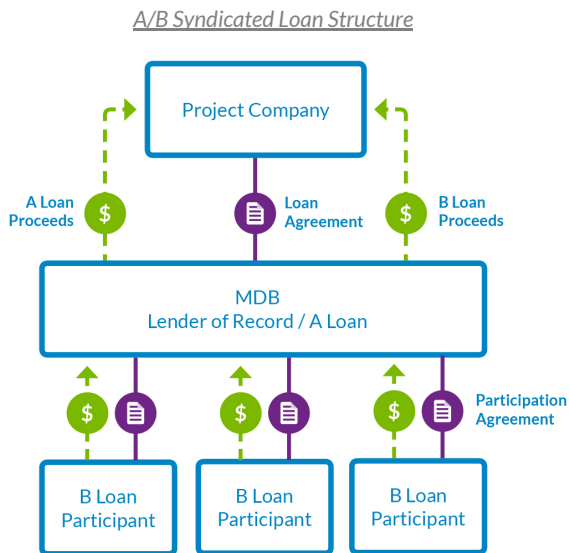
- *Eligibility:* Does the political risk coverage being sought meet the insurer's underwriting guidelines, for example, the geographic location of project, country risk limits, environmental and social requirements, perception of political and economic instability?
- *Ability to recover:* An ability to receive payment under a claim can depend on contract language ambiguities, exclusions and deductions to coverage, gaps in coverage, and/or subjective determination of cause and effect.
- *Timeline/process for payment of claims:* Payment of claims can be subject to waiting periods, require an exhaustion of remedies, or resorting to international arbitration rulings or another dispute resolution procedures specified under the agreements.
- *Salvage and subrogation:* The clauses require the policyholder to cede ownership of imperiled assets to the insurer in the event of a total loss as well as underlying rights to the project agreements. This feature allows insurers to recoup losses to the extent of their ability to salvage value in the assets or salvage from the host government directly. The ability to transfer these rights may be complicated by existing security that has been granted to the other financing parties in the transaction. The parties may address these issues under a document known as a Claims Cooperation Agreement.
- *Pricing and Syndication:* Unlike DFI policies, PRI coverage is market-priced and may allow for syndication, enabling greater leverage of the policy.

7.5. A/B Loan Syndication

In addition to the products described earlier in this section, there are other products provided by MDBs, such as A/B Loan facilities that can help catalyse financing from commercial banks or other private sector lenders.

Under an A/B syndicated loan, the MDB, as lender of record, extends an "A" loan to the project company from its own resources and a "B" loan which is funded (under a participation agreement) by commercial banks. The MDB is the lender of record for both the A loan and the B loan. From the project company's perspective, this allows lending to be mobilised through a combination of MDB and commercial lender funds within a single loan structure.

The commercial lenders take commercial risk on repayment of the loan under the terms of the participation agreement. However, the fact that the MDB is the lender of record brings a number of benefits, which are further described below.



What are the Advantages of an A/B Syndicated Loan?

Since the MDB is the lender of record, the B loan lenders will benefit from the MDB's preferred creditor status (with respect to currency convertibility and transfer risk) as well as other advantages that may be enjoyed by the MDB, such as exemption from withholding and other taxes and duties.

The fact that the MDB is lender of record will also bring a wider "halo effect" and help mitigate commercial lenders' concerns with respect to more general country and political risks. The MDB is not giving a guarantee to the commercial loan participation, but they will nonetheless take comfort from the wider developmental relationship that the MDB has with the host government and the influence that that can bring.

B-loan participants may also be exempted from the mandatory country-risk provisioning requirements that regulatory authorities may impose if these banks lend directly to projects in host countries.

These benefits should ultimately allow commercial lenders to price their debt lower than if they were lending directly to the project company.

Considerations

There are typically restrictions on eligibility for B-loan participants:

- Financial institutions cannot be incorporated, nor can they have their head office, in the country where the borrower is incorporated. The B-loan participant cannot have an office or branch that is resident in the host country.
- Financial institutions cannot be an official agency such as an ECA or other governmental, quasi-governmental or multilateral development bank.

7.6. Summary of Key Points

There are a range of third party guarantee products available which can cover repayment of debt directly or support payments due to the project company from other project participants.

A/B Loan structures allow MDBs to mobilise commercial lenders and widen the financing resources available to a project.

The benefits of third-party credit enhancement to a project and to the various stakeholders can include:

- widening the financing options available to the project company by, for example, mobilising the commercial lenders;
- reducing debt pricing; and
- extending the tenor of project debt.

Sponsors and commercial lenders often value the general "halo effect" that some DFIs bring to a project in addition to any direct credit enhancement.

Governments will need to consider the accounting impact and country allocation implications of different forms of guarantee product, depending on the provider and conditions of the product.

Appendix

Glossary

Online Resources

Acronyms

Glossary

A/B Loan product – see Section 7.4

Accounts Agreement – agreement setting forth the terms for the flow of funds through a project company's accounts. See also Section 3.2.

African Development Bank Group (AfDB) – a multilateral development finance institution established to contribute to the economic development and social progress of African countries. The AfDB was founded in 1964 and comprises three entities: the African Development Bank, the African Development Fund (ADF) and the Nigeria Trust Fund (NTF). The ADF is the concessional window of the AfDB Group. The NTF, established by the Nigerian government is a self-sustaining revolving fund.

Appropriation – in budgetary terms means the setting aside of money for a specific purpose. Various sources of government funding should be appropriated each year for government programmes and this should be contained in a government's annual or periodic budget. In business use, an appropriation may also be known as a "capital allocation".

Arbitration – a dispute resolution mechanism where the matter in dispute is referred for determination by an arbitral panel in accordance with a pre-agreed set of rules.

Assignment – a legal term describing the act of transferring the rights, but not obligations, of a party under an agreement to another party. The right of a party to assign its rights under an agreement will be subjected to restrictions and limitations set out in the relevant agreement and may require the prior consent of other parties to the agreement.

Balance Sheet Financing – the financing of a project which is provided in full by a sponsor.

Bankable – a project or contract is said to be "bankable" if it comprises a level of risk allocation which would be generally acceptable to lenders.

Baseload Power or Capacity – generating capacity within a national or regional grid network that the offtaker or grid operator intends to dispatch or utilise on a continuous basis.

Black-outs – a total reduction of power supply to electricity consumers.

Brown-outs – a partial reduction of power supply to electricity consumers.

Call Option – the right of the offtaker (or host country) to purchase the power plant or its shares.

Capacity Payment - a payment for capacity by the offtaker which is based on the ability of the power plant to generate a certain amount. The payment is designed to allow the producer to recover their fixed costs (capital costs and fixed operating costs) and agreed-upon profits. These charges are paid so long as the power plant is made available or deemed available for dispatch, regardless of whether the power plant is actually dispatched.

Collateral - property, contract rights, or other assets in which a borrower grants a security interest to a lender in order to secure the repayment of a loan.

Commercial Operations Date or COD - a key milestone date defined in the PPA when the power plant commences commercial operation, as established by the conclusion of the performance tests and certified by an independent engineer.

Common Terms Agreement – agreement among the project company and the lenders that contains all the financing terms common to all the different loan facilities (for example, conditions to funding, financial covenants, events of default, representations and other undertakings). See also Section 3.2.

Concession - the right granted by the host government to build and operate the power plant and sell electricity in the host country for a number of

years. A concession agreement is the agreement by which the concession is granted to the project company. An implementation agreement serves a similar purpose.

Conditions Precedent - a set of conditions that must be fulfilled before a contract or parts of it become effective.

Contingent Liability - a liability that has not yet materialised but which may materialise in the future.

Corporate Finance - used to distinguish Project Finance (see below). Corporate finance implies that the lender has recourse to the shareholders of the relevant borrower and/or to assets over and above the asset being financed.

Cost-reflective Tariffs – tariffs charged to end consumers which reflect the true cost of generation, transmission, distribution and supply to end consumers.

Credit Enhancement – the provision of guarantees or other forms of support to enhance a payment obligation.

Cure Period - the time period during which a defaulting party has a chance to correct a breach which would otherwise lead to an event of default.

Curtailment – an instruction by the offtaker or grid operator to the power producer of a non-dispatchable power plant to reduce generation. This may be motivated by end-user demand, the availability of alternative generation resources, transmission network capacity and/or grid stability.

Deemed Capacity – the capacity that a power plant would have been able to make available, but for the occurrence of an event or circumstance for which the offtaker bears the risk.

Deemed Energy Payments – payments made with respect to deemed generation.

Deemed Generation/Energy – the electricity that a power plant would have been able to generate, but for the occurrence of an event or circumstance for which the offtaker bears the risk.

Delivery Point – the point to which a producer is responsible for delivering electricity generated by the power plant. The delivery point is typically on the high voltage side of the step-up transformers. The electricity that is generated by a power plant is measured at the delivery point.

Developer - see Sponsor.

Development Finance Institutions – financial institutions with a mandate to finance projects that achieve development outcomes. They include MDBs. Examples include the World Bank, AfDB, EBRD, ADB, IDB, OPIC, FMO, DEG, CDC, DBSA and Proparco.

Direct Agreements - contracts or agreements between lenders and counterparties of the project company (including the offtaker and, where relevant, the host government), under which the relevant project counterparty acknowledge the security interests granted by the project company to the lenders, and allows lenders the opportunity to step in to remedy breaches by the project company. Direct Agreements may also be used to clarify/amend the underlying project contract.

Direct Loss - a loss arising directly as a result of a defaulting party's failure to perform its obligations under the agreement.

Dispatch - an instruction by the grid system operator to the power plant to produce electricity.

Dispatchable Plant - a power plant that is capable of responding to the instructions of the transmission company on demand to vary its output on short notice. Plants that fall within this category include coal-fired plants,

gas-fired plants, and renewable plants with a relatively constant or storable source of energy such as a hydro plant with a reservoir and/or a biomass plant.

Drawdown - in the context of a loan, means the disbursement of funds from the lender to the borrower.

Energy charge rate – see Energy payment.

Energy Payment – a payment for electricity by the offtaker which is based on the actual amount of power generated and dispatched. The payment is designed to allow the producer to recover fuel costs and variable operating costs.

Engineering, Procurement and Construction Contract or EPC Contract - one or more contracts to be entered into between the EPC contractor and the project company for the purpose of setting out terms and conditions for the design, engineering, procurement of materials and equipment, the construction and commissioning of the power plant.

Environmental remediation – the action which needs to be taken to remedy environmental contamination of a power plant site following termination of a PPA.

Equity – money invested by the sponsors in the project that is not borrowed by the project company. The term "Equity" may sometimes be used to include shareholder subordinated debt (which is finance made available to the project company by the sponsors or shareholders of the project company, which is subordinated to debt made available by the lenders).

Escrow Account LC – see Section 6.6.

Event of Default – a default that the parties to a contract agree is a material default. The occurrence of an Event of Default usually grants the non-defaulting party the right to terminate the contract if such default is not cured within any applicable cure period.

Export Credit Agencies – public agencies and entities that provide government-backed loans, guarantees and insurance to corporations from their home country that seek to do business overseas in developing markets.

Facility Agent – agent on behalf of any debt facility. See also Section 3.2.

Feasibility Study – a technical and financial study of the viability of the proposed power project.

Financial Closing (Financial close) – either (i) the execution of the Financing Documents, or (ii) the execution of the Financing Documents and the satisfaction of all of the conditions for disbursement of the project loans.

Financial Investor – a financial institution, fund or insurance company which invests in a power project.

Financing Documents - the set of contracts and agreements other than the project documents (including the Loan Agreements, Direct Agreements, and Security Agreements), that define the rights and obligations of the lenders and the project company in relation to the financing of the power plant.

Force Majeure Event – an event beyond the control of the affected party that prevents it from performing one or more of its obligations under the relevant contract. Events constituting force majeure are generally further classified into Political Force Majeure Events and Non-Political Force Majeure Events, with different financial and contractual consequences to the contracting parties. Natural Force Majeure falls within the latter category.

Fuel Supplier - a supplier of fuel used to generate electricity.

Fuel Supply Contract/ Agreement - the agreement between the project company and the fuel supplier (in the case of a conventional PPA), or between the offtaker and the fuel supplier (in the case of a tolling agreement

or energy conversion agreement), under which the fuel supplier supplies fuel to the project company.

Generator - see Seller.

Government Concession and Support Agreement – agreement between the host government and the project company, under which the host government agrees to certain undertakings with respect to the project. This agreement typically goes beyond the customary provisions of an Implementation Agreement and may include an explicit guarantee of the performance obligations of a governmental entity, such as an offtaker or fuel supplier.

Grid - a system of high tension cables by which electrical power is distributed throughout a region.

Hedging instruments – Instruments used by project stakeholders to protect against movements in currency exchange rates, interest rates and commodity price fluctuations.

Host Government – the government of the country in which the power plant is located.

Implementation Agreement – agreement providing for direct contractual obligations and undertakings between the host government and the project company to support the project, including, among other things, undertakings from the host government with respect to taxes and cooperation in obtaining necessary permits and approvals for the project and undertakings by the project company to comply with its contractual obligations with its counterparts that are state-owned entities and compliance with other requirements.

Independent Power Producer - a privately-owned producer of electricity.

Initial Public Offering – First sale of equity interest, or stock, by a private company to the public.

Insolvency - the inability of an entity to pay its debts when or as they become due.

Interconnection – the point at which the transmission system and the power plant interconnect.

Interconnection Agreement - an agreement between the project company and the transmission system operator providing for the connecting of the power plant to the transmission system.

Intercreditor Agreement – agreement among the lender groups providing financing to a project, or among the agents or other representatives on behalf of each lender group. See also Section 3.2.

Internal Rate of Return or IRR – the annualised effective compounded rate of return earned on an investment over a period of time.

Investor – see Sponsor.

Lenders - the providers of loan financing to the project company.

Letter of Comfort – letter from a host government whereby the host government promises to facilitate a project by offering certain assurances to the project developer. See also Section 6.3.

Limited Recourse Financing – see non-recourse project financing.

Liquidity – the availability of cash and cash equivalents to cover a party's short-term financial obligations.

Loan Agreement - creates the commitment of the lender to make a loan to the producer to finance the power project, and the obligations of the

producer/borrower to repay the loan with interest and to comply with various covenants set forth in the loan agreement.

Merit order – describes the order of preference in which power plants will be dispatched by a transmission system operator.

Mezzanine debt – finance provided by lenders which ranks below senior debt and above subordinated debt and equity.

Mid-merit – a mid-merit power plant is one that sits between baseload and peaking power plants in the merit order.

Monoline Insurer – an insurance company that guarantees the repayment of bonds.

Multilateral Development Banks - an institution, formed, owned and controlled by its member countries, that provides financing and advisory services for the purpose of development. Examples include the World Bank (IBRD and IDA), AfDB, and MIGA.

Net Electrical Output - the net electrical energy, typically expressed in MWh, that is generated by a power plant and delivered to the delivery point, as measured by the metering system located at the delivery point.

Non-dispatchable Plant – a power plant that is not capable of responding to instructions from a transmission system operator to vary its output due to the intermittent nature of the energy resource base being used such as wind or solar.

Non-Political Force Majeure Events - a force majeure event that is not a Political Force Majeure Event.

Non-Recourse Financing - financing that will be repaid solely the cash flow proceeds of a project structured as a special-purpose vehicle. The obligations of the shareholders in the special-purpose vehicle are usually

limited to their obligation to contribute capital and, in some cases, to provide other limited and well-defined support to the special-purpose vehicle.

Offtaker - the party to a PPA whose obligation is to purchase the capacity made available and the electricity generated by the power plant, subject to the terms and conditions of the PPA. Also referred to as the Buyer.

Operating and Maintenance Agreement or O&M Agreement - the agreement between the project company and a plant facilities operator under which the operator operates and maintains the power plant and associated facilities.

Partial Credit Guarantee - see Section 7.2.

Partial Risk Guarantee – see Section 7.2.

Pass Through – in relation to a cost, a mechanism under which the producer passes such cost on to the offtaker by operation of the tariff.

Peaking – a peaking power plant is a plant which is only dispatched to meet peak electricity demand.

Political Force Majeure Event - a force majeure event that is political in nature. Typically these would include any act of war, conflict, act of foreign enemy, blockade, embargo, or revolution, strikes of a nationwide or politically motivated character, changes in law, and the revocation or non-issuance of concessions or other authorizations.

Political Risk Insurance – see Section 7.4.

Power Africa – a U.S. government-led initiative, launched by President Obama in June 2013, comprised of numerous public and private sector partners working together to double access to electricity in Sub-Saharan Africa by adding 30,000 MW of cleaner, more efficient electricity generation and 60 million connections in Sub-Saharan Africa by 2030.

Power Purchase Agreement or PPA – a contract between two parties, one of which produces or generates power for sale (the seller/producer) and one of which purchases power (the buyer/offtaker). This contract is sometimes referred to as an "offtake" agreement.

Producer - see Seller.

Project bonds – debt instruments issued in the capital markets to finance or refinance a power project.

Project Company – See Seller.

Project Documents – the contracts or agreements required for the construction, operation and maintenance of the power plant. Typically this will include the Power Purchase Agreement, the EPC Contract, Fuel Supply Agreement, Operations and Maintenance Agreement, and the Interconnection Agreement.

Project Finance - see Non-Recourse Financing.

Project Loan – a loan from one or more lenders to the project company, made for the purpose of financing a power project.

Public Private Partnerships - arrangements between the public and private sectors whereby a service or piece of infrastructure that is ordinarily provided by the public sector is provided by the private sector, with clear agreement on the allocation of associated risks and responsibilities.

Put Option – the right of the project company to require the offtaker (or host country) to purchase the power plant or its shares.

Quasi-sovereign bond – see Section 3.3.

Regulator – competent authority of the host government having the statutory right to regulate agencies and entities participating in the sector, including the Project Company.

Reimbursement and Credit Agreement – see Section 7.3.

Resource-based Infrastructure Financing – grants rights to extract natural resources in the host country in exchange for an agreement by the holder of the extraction rights to design, construct, and implement a project.

Security Agent – agent on behalf of any debt facility with respect to security and collateral matters. See also Section 3.2.

Security Documents – the documents that grant the security interests, mortgages, pledges and other security rights that secure the repayment of the project loans in favour of the lenders.

Self-dispatched – a power plant which delivers electrical power directly into the grid without being dispatched by a transmission system operator.

Seller – the entity which is selling power under the PPA. Also referred to as the Project Company, Power Producer or Generator.

Senior debt – finance provided by lenders which ranks ahead of mezzanine and subordinated debt.

Shareholders Agreement – organisational agreement among the shareholders to a project company, establishing the governance structure of the project company and the rights among the shareholders.

Site (project) – the land upon which the power plant is located.

Sovereign bond – debt instruments issued by host governments in the capital markets.

Special-Purpose Vehicle – a corporate entity established specifically for the purpose of pursuing a specific project and is prohibited from undertaking any activity beyond the project in question. Often called the project company for the purposes of this handbook.

Sponsor – a shareholder or other parties affiliated with the shareholders of the project company, also known as the Investor or Developer in this handbook.

Spot Market - in the context of the supply of electricity, the wholesale electricity market into which the project company can sell electricity other than under a long-term PPA. In the context of a fuel supply arrangement, the market from which the project company can acquire fuel without entering into long-term fuel purchase obligations.

Standby Letter of Credit – see Section 7.3.

Step-in Rights – the rights granted to the lenders under a Direct Agreement to step-in and cure a default by the project company, under a project agreement, before the counterparty to the project company may take any action to enforce the contract against the counterparty or terminate the contract.

Stranded asset – a power plant which has no power purchase agreement with an offtaker and no other means of monetizing its generating capacity.

Sub-sovereign bond – a debt instrument issued by a region, province, state, municipality or state owned enterprise.

Take-or-Pay (Fuel) – in the context of a PPA, the obligation of the off-taker to pay for an agreed quantity of fuel over a given period of time and will be liable to pay for this quantity regardless of whether it actually accepts delivery of the fuel.

Tenor – see Term.

Term – the period of time during which a contract will remain in force, unless terminated earlier by either party in accordance with the terms and conditions of the contract. The term of a PPA is usually expressed to run until a date falling a fixed number of years after COD.

Volts (voltage) – a derived unit for electrical potential.

Wheeling – the transmission of power by one or more third-party transmission line operators between a power producer and a buyer of electrical power.

World Bank - International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA).

World Bank Group – collectively, the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA), the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA), and the International Centre for Settlement of Investment Disputes (ICSID).

Yield co – Holding company that a developer/sponsor may form, comprised of its interest in a project company or companies that have reached COD and are earning revenues.

Online Resources

The following is a non-exhaustive list of additional online resources:

Understanding Power Purchase Agreements

- Understanding Power Purchase Agreement: <http://go.usa.gov/FBzH>

Country Risk Classifications

- Standard & Poor's Risk Ratings: <http://www.spratings.com>
- Moody's Country Risk Ratings: <http://goo.gl/QVUG8n>
- Fitch Ratings Sovereigns: <http://goo.gl/ymFOIV>
- OECD Country Risk Classification: <http://goo.gl/vEKPuY>

Environment and Social

- African Development Bank's Integrated Safeguard System: <http://goo.gl/hWTO5p>
- Equator Principles: <http://www.equator-principles.com>
- IFC Environmental and Social Performance Standards: <http://goo.gl/pNaCOv>

Debt Sustainability

- Government Finance Statistics Manual 2014 (IMF): <http://goo.gl/iuxirn>
- IMF Debt Sustainability Analysis: <http://goo.gl/3eCSGz>
- Public Sector Debt Statistics Guide (TFFS): <http://goo.gl/eDm693>
- Quarterly External Debt Statistics (World Bank): <http://goo.gl/RhYYp0>
- World Bank-IMF Debt Sustainability Framework: <http://goo.gl/nsLcEa>

Development Finance Institutions

- Africa Finance Corporation: <http://www.africafc.org>
- African Development Bank Group: <http://www.afdb.org>
- Agence française de développement: <http://goo.gl/c8wNXY>
- Asian Development Bank: <http://www.adb.org>
- Commonwealth Development Corporation (CDC):
<http://www.cdcgroup.com>
- DEG German Investment Company: <https://goo.gl/YG0QvH>
- Development Bank of Southern Africa: <http://www.dbsa.org>
- European Bank for Reconstruction and Development:
<http://www.ebrd.com>
- European Investment Bank: <http://www.eib.org>
- FMO Netherlands Development Finance Company:
<https://www.fmo.nl>
- International Finance Corporation: <http://www.ifc.org>
- Islamic Development Bank: <http://www.isdb.org>
- KfW Entwicklungsbank: <http://goo.gl/gUuUzD>
- Proparco Investment and Promotions Company for Economic Cooperation: <http://www.proparco.fr>
- Overseas Private Investment Corporation: <http://www.opic.gov>
- Swedish International Development Corporation (SIDA):
<http://www.sida.se/English/>
- UK Department for International Development: <https://goo.gl/yTqt8R>
- World Bank Group: <http://www.worldbank.org>

Export Credit Agencies

- OECD List of ECAs: <http://www.oecd.org/trade/exportcredits/eca.htm>
- CESCE (Spain): <http://inglaterra.cesce.es>
- COFACE (France): <http://www.coface.com>
- Delcrede – Ducroire (Belgium): <http://www.delcredere Ducroire.be/en/>
- EDC (Canada): <http://www.edc.ca>
- EKF (Denmark): <http://goo.gl/ATUH5K>
- ExIm (USA): <http://www.exim.gov>
- FEC (Finland): <http://www.finnvera.fi/eng>
- Hermes (Germany): <http://www.eulerhermes.com>
- JBIC (Japan): <http://www.jbic.go.jp/en>
- KEXIM (Korea): <http://goo.gl/sVWZrB>
- NEXI (Japan): <http://nexi.go.jp/en>
- SACE (Italy): <http://www.sace.it/en>
- UK Export Finance (United Kingdom):
<http://www.ukexportfinance.gov.uk>

Guarantees

- African Development Bank: Partial Risk Guarantees:
<http://goo.gl/kRVCFI>
- World Bank: Guarantees: <http://goo.gl/RXm2Tn>

Negotiation Support

- African Legal Support Facility: <http://goo.gl/hux9Va>
- Host Government Negotiation Support Portal:
<http://www.negotiationsupport.org>

Political Risk Insurance

- Africa Trade Insurance Political Risk Insurance: <http://goo.gl/ptnyoA>
- MIGA Political Risk Insurance: <http://goo.gl/8rBvwe>
- OPIC Political Risk Insurance: <http://goo.gl/cl1MWf>

Power Sector Guides

- Africa Power Guide: <http://www.africapowerguide.com>
- Geothermal Handbook: Planning and Financing Power Generation by World Bank: <http://goo.gl/Ftms70>
- IEA Wind Power Technology Roadmap: <http://goo.gl/5uaStk>
- Important Features of Bankable Power Purchase Agreements by OPIC: <http://goo.gl/fBRXys>
- Power Africa: <http://www.usaid.gov/powerafrica>
- World Energy Outlook: <http://www.worldenergyoutlook.org>

Procurement

- African Development Bank Procurement Guidelines: <http://goo.gl/ZegcL9>
- EIB Procurement Guidelines: <http://goo.gl/GXd0U3>
- South Africa's Renewable Energy IPP Procurement Program: Success Factors and Lessons: <http://goo.gl/1YnSGy>
- World Bank Procurement Guidelines: <http://goo.gl/cT3X47>

Project Finance

- Harvard Business School Project Finance Portal: <http://goo.gl/HQufjo>
- Project Finance Key Concepts (PPPIRC): <http://goo.gl/xlTpFN>

Public Private Partnerships

- Infrastructure Consortium for Africa: <http://www.icafrica.org>
- Unsolicited Proposals – An Exception to Public Initiation of Infrastructure PPPs: <http://goo.gl/hXJgFZ>
- World Bank Public Private Partnership in Infrastructure Resource Center: <http://www.worldbank.org/pppirc>

Syndicated Loans

- B Loan Structure and Benefits (IFC): <http://goo.gl/ep4BzO>
- Universal Recognition of B Loan Structure (IFC): <http://goo.gl/tFN80U>

Uniform Legal Provisions

- ISP 98 – <http://goo.gl/tSBG63>
- TSAO 4878 – <https://t.co/bVRRfSozLi>
- UCP 600 – <http://goo.gl/QNp1SX>

Acronyms

ADB – African Development Bank

ADF – African Development Fund

AfDB – African Development Bank Group

CDC – Commonwealth Development Corporation

COD – Commercial Operations Date

DBSA – Development Bank of Southern Africa

DEG – Deutsche Investitions und Entwicklungsgesellschaft, German Investment Corporation

DFI – Development Finance Institution

DSA – Debt Sustainability Analysis

ECA – Export Credit Agency

EIB – European Investment Bank

EPC – Engineering, Procurement and Construction

FMO – Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V, Netherlands Development Finance Company

IAS – International Accounting Standards

IBRD – International Bank for Reconstruction and Development

ICSID – International Center for Settlement of Investment Disputes

IDA – International Development Association

IFC – International Finance Corporation

IMF – International Monetary Fund

ISP – International Standby Practices

IPP – Independent Power Producer

IPO – Initial Public Offering

IPSAS – Independent Public Sector Accounting Standards

IRR – Internal Rate of Return

LIBOR – London Interbank Offered Rate

LC – Letter of Credit

MDB – Multilateral Development Bank

MIGA – Multilateral Investment Guarantee Agency

MLA – Mandated Lead Arranger

KWh – Kilowatt Hour

MWh – Megawatt Hour

O&M – Operations and Maintenance

OPIC – Overseas Private Investment Corporation

PCOA – Put and Call Option Agreement

PCG – Partial Credit Guarantee

PPA – Power Purchase Agreement

PPP – Public-Private Partnership

PRI – Partial Risk Insurance

PRG – Partial Risk Guarantee

PPA – Power Purchase Agreement

PSD – Public Sector Debt

RCA – Reimbursement and Credit Agreement

SBLC – Standby Letter of Credit

UCP – Uniform Customs and Practice

WBG – World Bank Group

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ALSF Acknowledgement – Understanding Power Project Financing

Despite access to power being a basic requirement for economic growth and development, only approximately 5% of sub-Saharan Africa has access to energy.¹ In 2014, electricity consumption per capita in the region was estimated “at one-sixth of the world’s average,”² and total consumption in the region was estimated at “only as much as in the state of New York.”³

In the course of our advisory work and discussions with governments and stakeholders, we observed that one of the biggest issues limiting private sector participation in power generation was the issue of credit enhancements and more specifically, sovereign guarantees. The burgeoning power sector and shortage of creditworthy offtakers in Africa leads to credit enhancements as a central feature in power project financing transactions.

These observations prompted us to bring together leaders with practical experience to produce this handbook. The handbook is a collaborative effort for which there are many institutions and individuals to thank. First, we must give our sincerest gratitude to the successful partnership with Power Africa and CLDP that has led to the creation of this handbook.

This handbook would not have been possible without the generous commitment by the individual authors and the support of their respective institutions and firms. Not only were the authors generous with their time by taking a week out of their extremely busy schedules, but also the long hours endured to produce a handbook of such a high quality in such a short time.

As we say in Africa, “*it takes a village to raise a child*” – and the same is true here. There are many others involved in the production of the handbook, particularly African government officials and private sector partners, whose insight and guidance set the parameters to ensure the handbook focused on the real issues arising in these negotiations.

¹ “Who will fund the renewable solution to the energy crisis?” *The Guardian*, June 5, 2014, available at <http://www.theguardian.com/global-development-professionals-network/2014/jun/05/renewable-energy-electricity-africa-policy>.

² *Id.*

³ *Id.*

These collaborations not only produced a valuable resource but have cemented existing relationships and created new ones for the ALSF. All of which will enrich our efforts to deliver our mandate to assist Africa.

The “Understanding Power Project Financing” and the “Understanding Power Purchase Agreements” handbooks are examples of the many activities that the African Legal Support Facility has developed to assist its African governments negotiate complex commercial transactions. For more details about the work of the ALSF, please visit our website (<http://www.afsf.org>) or email us at alsf@afdb.org.

A handwritten signature in black ink, appearing to read 'Stephen Karangizi', with a long horizontal stroke extending to the right.

Stephen KARANGIZI

Director, African Legal Support Facility