AfIDA Insider

AFRICA INFRASTRUCTURE DEVELOPMENT ASSOCIATION

MANAGING POWER PROJECT RISK ALLOCATION WHEN WORKING WITH FISCALLY STRESSED AFRICAN GOVERNMENTS

THE ANNUAL EDITION

INSIDE THIS ISSUE

AfIDA
AFRICA INFRASTRUCTURE DEVELOPMENT ASSOCIATION

Issue Number 05
December 2018 - February 2019

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FEATURES

Welcome Note

Welcome to the annual edition of the Africa Infrastructure Development Association's (AfIDA) Newsletter. In this annual issue, I want to commend the outstanding and continued efforts of all the association members, partners and all the developers to close the infrastructure gap on the continent.

As we continue to grow in membership, AfIDA is cognizant of the need to work collaboratively with all development stakeholders operating in Africa to continue promoting the project development ecosystem. We aim to do so by promoting the adoption of international best practice to ensure that more projects reach bankability. As discussed in previous newsletter editions, the need for synergies between bankable projects and financing mechanisms is a critical factor in the quest to bridge Africa's infrastructure deficit.

As individual developers, we have made concerted efforts, but there is still more that is required and could be better attained through the collective efforts of the association's members and partners. As an association, we place great emphasis on addressing some of the challenges in key infrastructure sectors, through advocacy and country engagements with our counterparts in the public sector. I, therefore, continue to call upon developers and development stakeholders to partner with us as we continue to grow as sector representatives and as a collective voice for developers operating in Africa.

I want to take this opportunity to invite all our members and would be members to join us as we undertake country engagements in Zimbabwe and Kenya in 2019. The association's primary aims are to foster dialogue among members, standardise project development documents where possible, develop market norms, build capacity, conduct research and serve as a policy advocacy forum.

I must thank the founding members of AfIDA who continue to support the association's efforts. AfIDA is a platform for developers, and we call on everyone involved in the painstaking but rewarding endeavour of project development to become part of the dialogue. I hope you enjoy this Newsletter.

Oliver Andrews
AfIDA Board Chairman

OLIVER ANDREWS
AFC - EXECUTIVE DIRECTOR & CIO

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AfIDA - Who We Are

The Africa Infrastructure Development Association ("AfIDA" or "the Association") is an association of project developers and development stakeholders in Africa.

The objective of AfIDA is to enhance the vibrancy of project development (PD) activities in infrastructure, with a view to ensuring that more projects achieve bankability and become available for financing and investment

The association aims to play an important role in the PD industry by providing members with industry updates (via newsletters and relevant research publications), workshop programs, and networking opportunities and serving as an advocacy platform.

AfIDA members include (but not limited to) project developers/ sponsors, regulators, development finance institutions and other financiers. The common goal amongst all members is to have a developmental impact in Africa by the enhancement of infrastructure development on the continent.

VISION & MISSION STATEMENT

01 VISION

Enhancing the vibrancy of project development activities in the infrastructure sector in Africa.

02 MISSION

Africa Infrastructure Development Association (AfIDA), is an association of project developers and development stakeholders in Africa, aimed at advancing the development of more bankable projects on the continent.

03 MOTTO

ADVOCACY, INCLUSIVENESS, INNOVATION & GROWTH

The AfIDA will promote and enable Project Development work in Africa, by creating a platform that will foster continuous dialogue amongst members, benchmark project development documents, develop market norms, conduct independent research and serve as a policy advocacy forum for the industry with a view to ensuring more projects on the continent achieve bankability.

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Objectives Of The AfIDA

The objectives of the AfIDA are to PREP the development of projects in Africa:

01 PROMOTE

The development of power and infrastructure assets in Africa; capacity building in the industry through training and knowledge sharing; transparency through information sharing and dialogue between members; and ethical and professional standards amongst its members.

02 REPRESENT

A common voice for developers on a wide range of development interests in a manner as inclusive as possible; the industry by facilitating advocacy and sector representation; the views of its members by being an industry interface to the market; and the African power and infrastructure sector to all stakeholders.

03 ESTABLISH

Tools for information gathering and dissemination between members; standardised templates for basic agreements between members; standardised templates for basic agreements between stakeholders; norms, guidelines and codes of conduct to govern project development in Africa; and regular meetings, conferences and workshops to further AfIDA's objectives.

04 PROPOSE

Recommendations for improvement in the legal and regulatory environment for project development and finance in Africa to the relevant authorities within governments; greater participation from government in order to be able to deliver bankable projects; benchmarks for market terms in certain key areas of development; and reports and results of industry research following market analysis of key indices.

WHY YOU SHOULD JOIN AfIDA

01 COUNTRY ENGAGEMENTS & POLICY ADVOCACY

Participate in AfIDA's country engagement efforts aimed at driving advocacy and inclusiveness through collaboration between public and private sector developmental stakeholders. The country engagements are aimed at addressing project development bottlenecks and identifying opportunities for development.

02 SKILLS TRANSFER

Participate in workshops and conferences where industry issues and market norms are developed.

03 THOUGHT LEADERSHIP

Gain access to AfiDA's Industry data, analyses, research and share your input on key discussion topics in the associations newsletter.

AfIDA
AFRICA INFRASTRUCTURE DEVELOPMENT ASSOCIATION
MEMBERSHIP BENEFITS

04 CAPACITY BUILDING

Access to specialised resource hubs that assist members with expertise on deal structuring, project finance, legal documentation, health and safety and other identified developmental gaps.

05 DIALOGUE & INFO SHARING PLATFORM

Network with leading industry influencers and stakeholders.

06 MARKET BENCHMARKS

Participate in the development of market standards, industry benchmarks and industry template document.

Meet The AfIDA Board of Directors

OLIVER ANDREWS
AFC
EXECUTIVE DIRECTOR & CIO
AfIDA CHAIRMAN

ALEX KATON
INFRACO AFRICA
EXECUTIVE DIRECTOR & CIO
AfIDA VICE CHAIRMAN

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IFC
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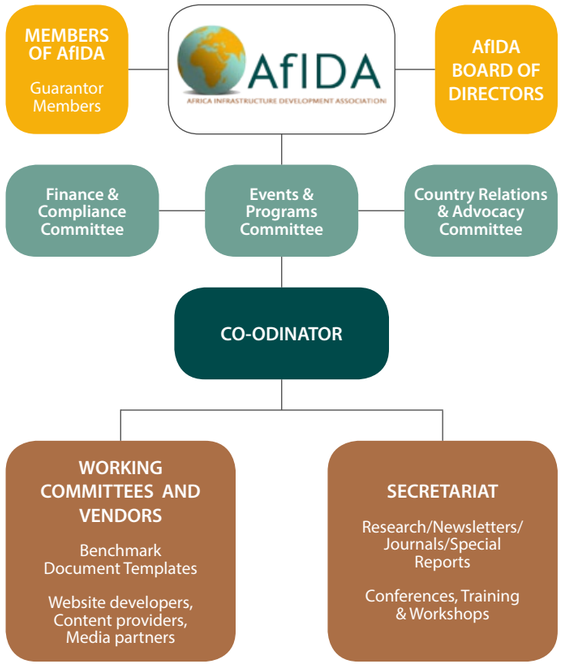
PAUL BIGGS
TRINITY
SENIOR PARTNER

SUZANNE GUJADHUR BELL
INTERNATIONAL PROXIMITY
MANAGING DIRECTOR

LEGAL AND OPERATIONAL STRUCTURE



THE OPERATING MODEL

- This association is registered in Mauritius (as a not for profit).
- The AfIDA is headed and made up of Board of Directors, with each member being a representative of the pioneer institutions: AFC, AIIM, CIO, Eleqtra, FMO, Infraco, Themis Energy, Trinity etc.
- The Board of Directors have appointed the coordinator who is responsible for the day to day running of the association.

Board Member Institutions

The Co-odinators Report Back

PRECIOUS NKANDU
AfIDA - CO-ODINATOR

Precious oversees the management and operations of AfIDA, supported by the board of directors. In this role, she provides a vital link between the members, the secretariat and the working committees, and other parts of the association.

Precious brings a wealth of experience to the role, having worked in the past with infrastructure project developers and governments and a wide range of investors – including institutional investors, sovereign wealth funds, pension funds and family offices – to facilitate partnerships and investment opportunities.

She has also worked closely with African development finance institutions and other organisations seeking to gain access to international capital by providing them with investor relations, communication and media support as well as business development services. The knowledge gained from this background puts her in an ideal position to help AfIDA make progress with meeting its objectives and ensuring that Africa's project development space remains vibrant.

"I'm excited to be part of a team of industry leaders who are already playing a catalytic role in driving Africa's projects to achieve bankability, helping with skills transfer and serving as a collective voice of developers on the continent" she says.

AfIDA Events and Advocacy Programs

KENYA TO HOST AfIDA COUNTRY ROUNDTABLE - 15th APRIL 2019

NAIROBI, KENYA

AfIDA, in partnership with the government of Kenya, Kenya Investment Authority and other key stakeholders will be hosting a roundtable to explore investment opportunities in the transport, energy and industrial infrastructure sectors. The roundtable will host project developers, financiers and policy makers.

ZIMBABWE TO HOST AfIDA COUNTRY ROUNDTABLE - 25th MARCH 2019

HARARE, ZIMBABWE

AfIDA, in partnership with the government of Zimbabwe and other key stakeholders will be hosting a roundtable to explore investment opportunities in the transport, energy and industrial infrastructure sectors. The roundtable will host project developers, financiers and policy makers.

For more information on participation and AfIDA membership details, please contact Precious Nkandu on:
precious.nkandu@afida-africa.org

Kenya Investment Roundtable – Mobilising Private Sector Investments in Kenya's Infrustructure Sector - Nairobi, Kenya - 15 th April 2019

Photo Credit - Shutterstock.com

ROUNDTABLE OBJECTIVES

The Roundtable will offer a unique platform for a dialogue on development and investment opportunities in the transport, energy and industrial infrastructure sectors in Kenya and address the barriers to entry for investors . The Roundtable, therefore, represents a unique opportunity to raise awareness on new opportunities for fast-tracking the development of projects in Kenya. The Roundtable will contribute to enhancing Africa's attractiveness for Foreign Direct Investment, as well as to foster regional cross-border Investments.

TENTATIVE PROGRAM - 15th APRIL 2019

09:00 – 09:15	Welcome Remarks by KenInvest MD- **Dr Moses Ikiara**
09:15 – 09:30	Opening remarks by AfIDA Chairman - **Mr Oliver Andrews**, Executive Director & CIO, Africa Finance Corporation (AFC)
09:30 – 10:00	Keynote Address
10:00 – 10:30	About AfIDA Presentation
10:30 – 11:30	1st Presentation: Trends & Opportunities in Kenya's Energy Sector- **Hon. Charles Keter**, Cabinet Secretary, Energy
11:30 – 12:30	2nd Presentation: Trends & Opportunities in Kenya's Transport and Infrastructure Sector- **Hon. James Macharia**, Cabinet Secretary, Transport and Infrastructure
12:30 –14:00	Networking Lunch
14:00 –15:00	3rd Presentation: Addressing the Barriers to Entry and Setting the Way Forward- **Hon. Henry Rotich**, Cabinet Secretary, Treasury
15:00 – 16:00	AfIDA led discussion - Project to bankability, developers and financiers experiences and challenges in Africa and what needs to be done
16:00 – 16:30	Closing Remarks - Summary of proposed initiatives, and way forward

PROGRAM DELIVERABLES

The 1st, 2nd, 3rd Presentations, and the open discussion will cover more specific topics such as:

- How can a government facilitate the development of private sector projects in the region?
- What role could PPP's play in such projects?
- What sort of projects – generation/ transmission/distribution.
- Allocation of risk between private and public sectors.
- Options and way ahead.
- Identify the current investable projects in the transport, energy and industrial infrastructure sectors.
- Identify the challenges faced by Kenya's public sector when attracting private funding and identifying a collaborative way forward.
- Identify and address the barriers to entry for investors in Kenya and forge the way forward.

ZIMBABWE INVESTMENT ROUNDTABLE

Mobilising Private Sector Investments in Zimbabwe's Infrustructure Sector

Harare, Zimbabwe - 25th March 2019

AfIDA
AFRICA INFRUSTRUCTURE DEVELOPMENT ASSOCIATION

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2018 Events Report Back

AfIDA NETWORKING EXCHANGE, 14 NOVEMBER 2018
London, Uk

AfIDA Thought Leadership Series – Transmission privatisation in Africa has been negligible, and the private sector could play a vital role in financing, building, operating power transmission infrastructure in Africa through the Independent Power Transmission model (IPT). This AfIDA led session discussed strategies to strengthen the grid and private sector solutions to help overcome transmission shortfalls.
Including analysis of:

- Major plans for national grids;
- Independent Power Transmission model (IPT) model- it has worked for Latin America, why not Africa? Panellists discussed the World Bank's recommended 10 steps needed to realise the potential of IPTs in Africa
- Cross-border interconnections – logical solutions dogged by mistrust?
- The need for tariffs (or equivalent cash-flow) that reflect the cost of upgrading and building new T&D infrastructure.
- How should existing grid networks, grid extension, grid edge and fully off-grid coexist?

AfIDA Networking Exchange, 14 November 2018 - London, Uk


AfIDA Chairs Meeting Of Nigeria Solar Power Developers - Abuja, Nigeria

AfIDA CHAIRS MEETING OF NIGERIA SOLAR POWER DEVELOPERS, 22 FEBRUARY 2018
Abuja, Nigeria

AfIDA's Chairman, Mr Oliver Andrews (Executive Director & CIO, Africa Finance Corporation) presided over a meeting of Solar Developers held on Thursday 22 February 2018, in Abuja, Nigeria. The meeting was attended by representatives from; Oriental Energy, LR Group, MDPI, KVK, Access Quiant, eN Africa, Anjeed Innova Group, Middle Belt Solar, Sinosun, Nigeria Solar Partners, Pan African Solar, etc.

The meeting discussed the need to strengthen partnerships between the independent power producers and government. The developers agreed that to be effective partners of the government and its various relevant agencies in their drive to provide electricity for Nigeria's development, there is a need for open and transparent discussions among all the relevant stakeholders and creating consensus among them. To achieve this, there is a need on the part of developers to speak with one voice.

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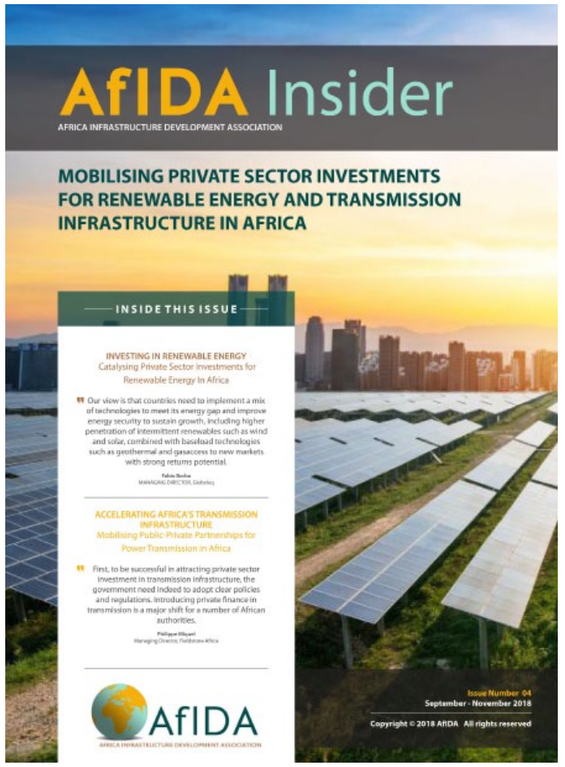

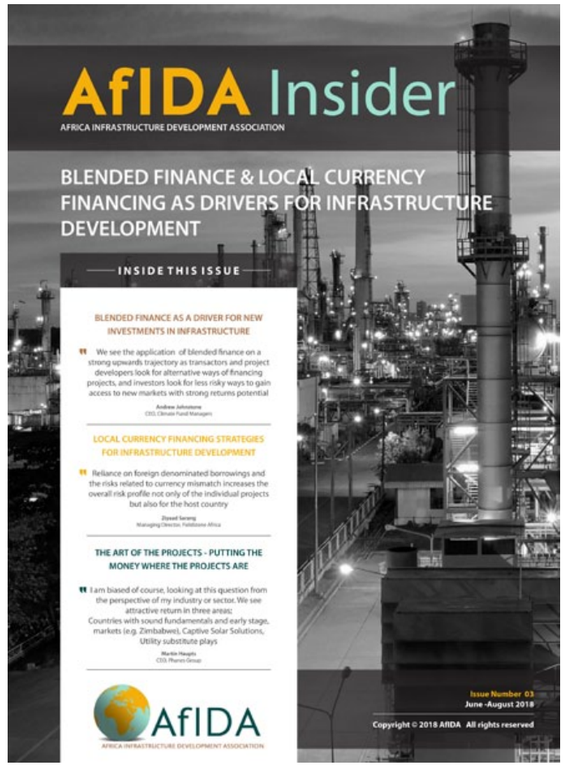

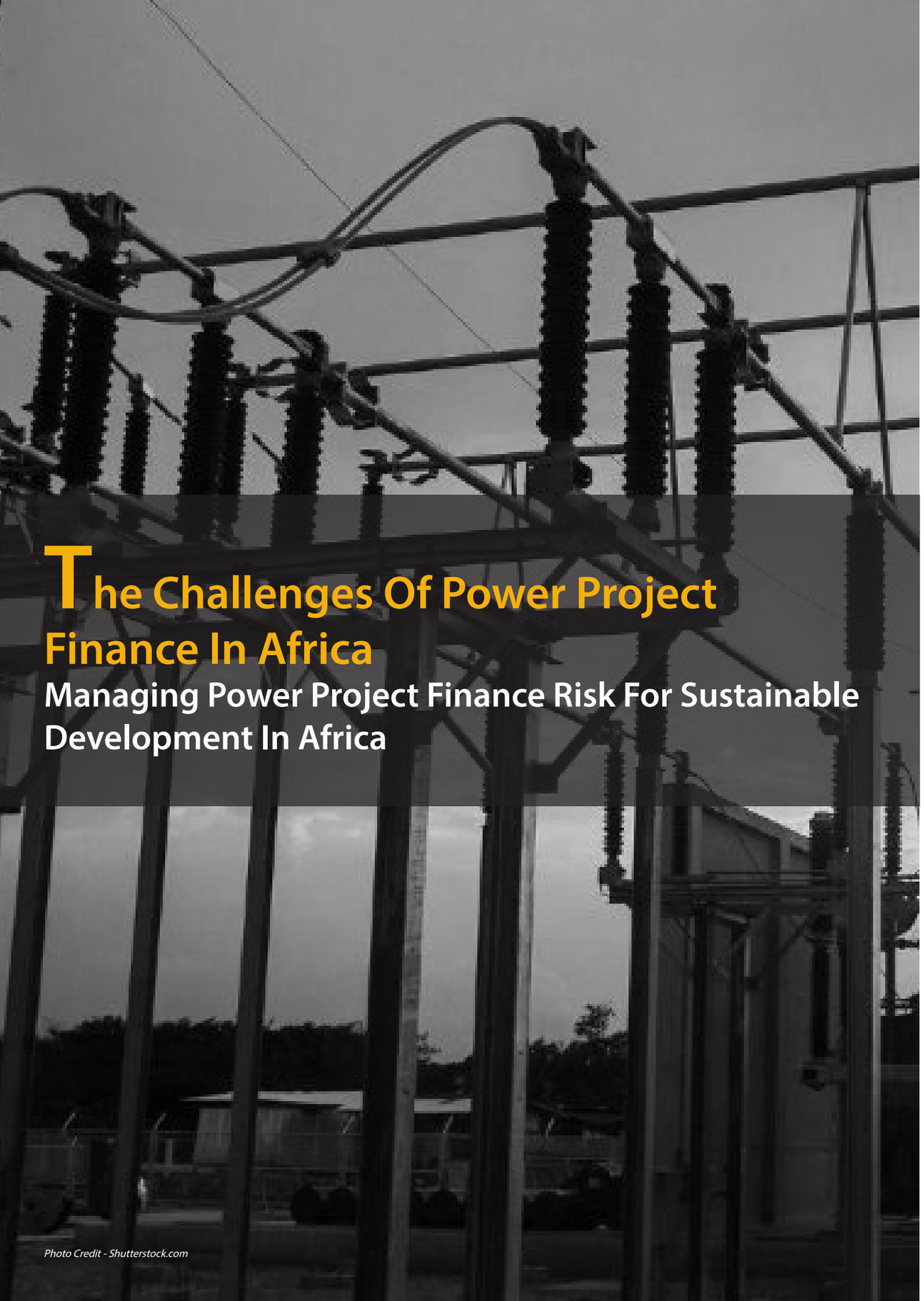

The Challenges Of Power Project Finance In Africa

Managing Power Project Finance Risk For Sustainable Development In Africa

Photo Credit - Shutterstock.com

The Challenges of Power Project Finance in Africa - Managing power project finance risk for sustainable development in Africa

Africa's power deficit has demanded the need for stakeholders to identify project financing opportunities in the power sector and address the challenging bottlenecks. Several reports evidence the continued efforts by governments, development finance institutions, international finance organisations, and the private sector to drive investments into power projects in under-served power markets in emerging countries and remote markets in developed countries.

Reports show that the power sector is an essential building block for economic advancement and that Power plays a vital role in the successful growth and functioning of any country's economy, across all its sectors. Findings show that the demand for electricity could be linked to GDP growth and other socio-political advancements. Therefore, successful investments in the power sector highlight a clear and quantifiable economic return upon completion and commissioning of the financed power projects, with a subsequent exponential effect on the broader economy with a broad-reaching development impact.

The development of the required power projects in Africa necessitates substantial and long-term investments which are accompanied by lengthy repayment periods and require technical and specialised knowledge and expertise to prepare and implement. Reports show that the nature of the power sector has a heavy reliance on physical transmission and distribution infrastructure which is more investment intensive than other sectors. To address some of the challenges of investing in Africa's power sector, there is a need to develop a sustainable, long-term investment environment.

Reports demonstrate that governments will need to continue to provide legislative support, regulation, licensing, oversight, and ancillary market functions such as fuel supply and/or transmission to ensure continued successful participation of the private sector in the development of power projects in Africa. Governments will also need to provide an enabling environment that will support the evolution of their power sectors which could enhance the return on investments and encourage the participation of independent power producers.

PRIMARY FINANCING MODELS

Africa's power sector can be financed through four core financing structures which are principally distinguished by the establishment of the party or parties that bear the responsibility of funding the upfront costs of a project. All the models present variable advantages and disadvantages that could be related to the timing, cost and complexity of structuring and implementation. The four core structures include; host government financing, developer financing, resource-based infrastructure financing, and project financing. While these models have several variations, the four structures on transactions share similar core concepts.

THE PROJECT FINANCE APPROACH

Project finance continues to be a pivotal technique for financing long-term funds for large-scale and capital-intensive projects. Findings show that the core benefits of project finance are underpinned by its robust risk diversification and isolation which could increase the likelihood of the success of a project. Several reports argue that project finance could be regarded as the most understood risk management strategy which reconciles the occasionally differing objectives of borrowers and lenders by encapsulating the long-term economic and commercial linkages which exist between the sponsors, the lenders and third-party participants involved with a project.

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Continued from page 13

THE BUILDING BLOCKS OF PROJECT FINANCE

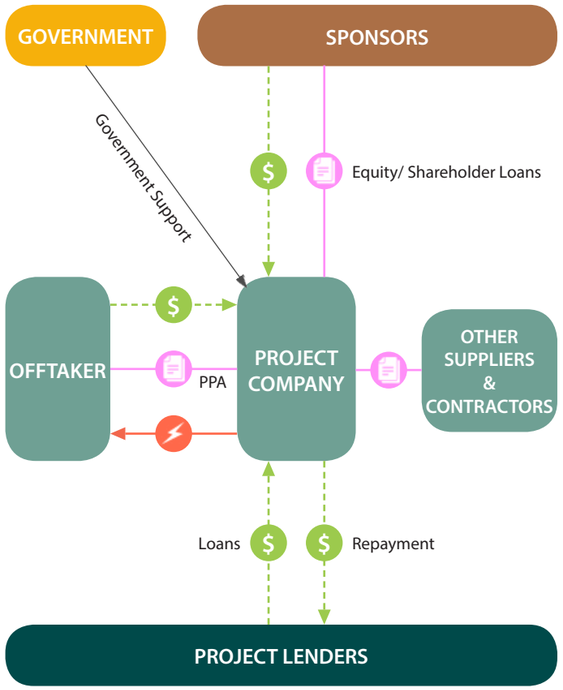
In project finance structures, the sovereign (or a government off-taker) grants certain concession rights which highlight the building, ownership, and operation of a project to a special purpose company whose responsibility is the building, ownership, and operation of the project. The project company could then sub-contract third parties to certain requirements (like construction and operation).

It is the responsibility of the the project company 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 sometimes, funds made available by the sovereign or by donor parties either as concessionary loans or grants.

According to the **Understanding Power Project Financing** report, lenders typically lend the majority of the funding required by the project company on a limited-recourse basis. This implies 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. If the project company is not able to repay the loans, the lenders have no recourse against the investors.

An added benefit of project finance as a model for financing Africa's capital-intensive power sector is that it 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 which governments may not have the resources to finance power project on their balance sheet.
Findings show that It is advantageous to structure power deals as project finance transactions which allows the apportionment of various transaction risks to those best placed, willing and able to assume them. For instance, investors with a higher 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 STRUCTURE



Source – Understanding Power Project Financing

RISK ASSESSMENT TOOLS

Several reports argue that while some stakeholders may have in-house capabilities to evaluate and assess risk, external consultants could provide additional expertise and corroboration during the risk identification and assessment process. The importance of assessing risks cannot be overstated and, the table below provides the list of resources available to stakeholders that could be influential to ensuring that risks are adequately evaluated, quantified, and allocated to the party best suited to manage the risk.

RISK ASSESSMENT, PRICING AND ALLOCATION

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 supplydemand 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 Environ-mental 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

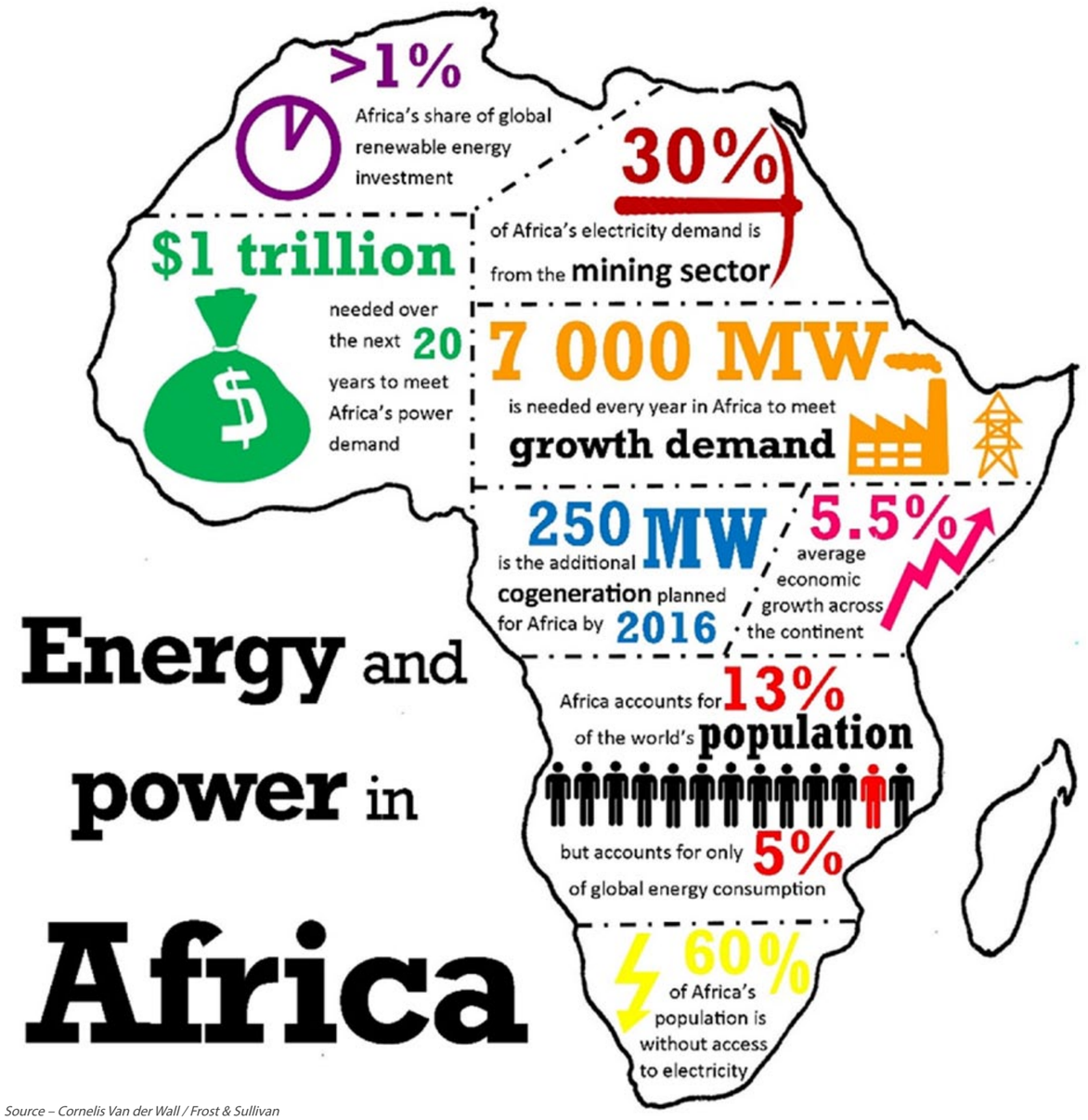
Source – Understanding Power Project Financing

> **"An added benefit of project finance as a model for financing Africa's capital-intensive power sector is that it avoids capacity constraints, opportunity costs and balance sheet financing by a sovereign.**

MANAGING THE RISKS ASSOCIATED WITH PROJECT FINANCING OF POWER PROJECTS IN AFRICA

Reports show that for several IPP power projects, there are two principal risk-takers who need to agree on the allocation and pricing of risks: (I) the off-taker, this is usually a government-owned power utility, and (II) the sponsors, often representing the project investors, lenders and other financing providers (such as a 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.

Reports show that project finance may be more affordable or more expensive than financing a project on the host country balance sheet as dictated by four factors: (1) government's cost of capital, (2) tenor, (3) availability of financing, and (4) amount of equity in the project. If a sovereign is funding a project from proceeds of bond issuances, 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.



Source – Cornelis Van der Wall / Frost & Sullivan

Enos Banda on the Need to Match Political Life cycle with Project Development and Construction Life cycles

ENOS BANDA

ANERGI - CEO

What regulatory framework governs project finance for power projects in Africa ?

The regulatory framework that governs project financing of power projects is specific to the relevant countries where the power project is situated. Project finance transactions are regulated by legislation, case law and government policies.

Most countries have a framework under which power projects are developed. Furthermore, majority of power projects are developed and financed under the auspices of concession arrangements and/or public private partnership regimes.

Given that most power projects are financed by a combination of commercial lenders (domestic and international) and development financial institutions, the common trend is for the governing laws of most of the financing documentation to be the laws of a jurisdiction that is neutral and well established, for example English law or New York law are widely used.

In addition, most countries will however require the governing law of security documents over physical assets in the country to be governed by domestic laws.

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What are the advantages and disadvantages of using project finance to structure a power project deal ?

Some of the notable advantages of using project finance to structure a power project deal include:

- The limited recourse (or non-recourse) nature allows sponsors to develop projects without exhausting their ability to borrow and obviates a requirement to provide a corporate guarantee or other forms of direct recourse to the sponsors;
- More debt can be raised for the project (than would otherwise be available to the project sponsors directly) as lenders are sure that the project's cashflows are well marshalled towards funding the project's operation, capital expenditure and debt services before returns can be distributed to the project developers;
- Provides strong incentives for careful technical and economic evaluation and risk assessment of the projects given that lenders main recourse is to the project's cashflow, which results in more robust and high performing projects; and
- Incentivises the sharing of risk amongst project sponsors, lenders and other stakeholders through a network of security arrangements, contractual agreements, and other supplemental credit support to other financially capable parties willing to assume the risks.

Some of the notable disadvantages of using project finance to structure a power project deal include:

- Complexity of the process due to the increase in the number of transaction parties, risk sharing arrangement, security arrangements, marshalling of cashflow, use of credit enhancement and transactions security structures;
- Expensive as the lenders rely on support from transaction advisers to undertake the due diligence process, negotiation and documentation process, which is usually costly;
- Lengthy duration of the due diligence, negotiation and documentation of financing arrangement, which is highly sensitive to delays caused by third parties or external factors; and
- The relative cost of capital arranged on a limited (or non-recourse) basis is higher than a full recourse financing (such as a corporate facility or sovereign loan) given the comparative higher risk borne by the lenders.

> "there is a mismatch between the political lifecycle (typically 4 years on average) and the project development and construction life cycle (which could exceed 6 – 8 years) in most African countries. This renders power projects vulnerable to political risks.

What are the forms of security available to protect investments when project financing power projects in Africa? How are they enforced ?

The forms of security used to collateralise a project finance transaction will depend on the nature of the assets to be secured in favour of the lenders. It is common for the scope of a security package on a power project finance transaction to comprise of:

- Mortgages or charges over the project's physical assets;
- Charges over the project company's bank accounts;
- Security assignment of the project's contractual rights under the project related documents;
- Obtaining a liquidity instrument (such as a letter of credit) from the power offtaker, which may backstop by a partial risk guarantee;
- Pledge over the project sponsor's shares in the project company;
- Obtaining a sovereign guarantee from the host government; and
- Obtaining a put call option agreement, which typically entitles the project sponsors to sell the power project to the government at a predetermined price (or based on a third-party valuation) upon the occurrence of certain specified events.

What are the risks involved in project financing power projects in Africa? What are your five recommendations on how these can be mitigated or allocated?

There are several risks involved in project financing, five of the main risks and recommended mitigates are: finance transaction to comprise of:

- **CURRENCY RISKS (INCLUDING CONVERTIBILITY, TRANSFERABILITY AND DEVALUATION)**

  This risk is exacerbated where there is a mismatch between the currency in which power is sold and the currency in which the project loan is denominated. This risk may be mitigated by:

  a. Ensuring the same currency applies across the power purchase agreement and the project financing,
  b. Including an indexation mechanism in the power purchase agreement to the currency of the project financing,
  c. Obtain currency-related hedging product, which will come at an extra cost to the project or
  d. Obtaining protection against currency-related risks from the host government.

- **OFFTAKER RISK**

  The power offtaker is typically the state power utility (who may not be sufficiently capitalised or have an independently verifiable credit rating) or a private sector participant (who may not have the balance sheet or sufficient trading history). As such, the offtaker will need to be sufficiently capitalised and its payment obligations back-stopped through acceptable forms of credit enhancement products, such as:

  a. The provision of bank guarantees or letters of credit from acceptable financial institutions which may be back-stopped by a partial risk guarantee,
  b. Sovereign guarantees or letters of support from the host government,
  c. In respect of a private sector offtaker, a parent company guarantee.

- **REGULATORY OR SYSTEMIC UNCERTAINTY**

  This uncertainty erodes confidence in the power sector and makes project financing transactions less bankable and more expensive.

  A mitigant is to ensure that the host government provides regulatory certainty, fiscal stability, cost reflectivity and transparency of the electricity pricing structure that guarantees an acceptable level of economic returns to power developers and project financiers, which would incentivise continued private sector investment without compromising affordability of power supply to final consumers.

- **POLITICAL RISK**

  We note that there is a mismatch between the political lifecycle (typically 4 years on average) and the project development and construction life cycle (which could exceed 6 – 8 years) in most African countries. This renders power projects vulnerable to political risks, such as reduced government support for projects following a change of government. Expropriation conduct (both hard and soft forms of expropriation) is another major political risk that undermines the bankability of power projects.

  Project financiers and project developers may obtain insurance against political risk. In addition, the existence of developmental financial institutions (such as the AfDB or the IFC) in a lending syndicate may be helpful in ensuring that the host governments remain supportive of such projects in line with their contractual obligations.

- **MARKET RISK**

  There is a risk that the power price that is negotiated in the power purchase agreement may prove to be uneconomic in the long term, or a change in technology may displace or render certain existing projects too expensive. In order to mitigate against this risk, project developers and project financiers will need to ensure that the power tariff is both realistic and sustainable to cover the duration of the loan and the life of the project.

  Project developers will also need to be aware of the trends in technology and develop power projects that can be modified to remain competitive and remains resilient in spite of disruptive technology in the mid-long term.

Arnold Attoungbre on the Challenging Credit Quality of The Power Sector in Africa

Who are the key players in the project financing of Power projects in Africa ?

The project finance or limited recourse debt funding market in Africa has developed significantly over the past two decades, and the financing of independent power projects has been a key outlet for utilisation of project finance.

The nature of the funding participants in the power project finance sectors of the various countries on the continent is not uniform, and is typically a function of the scale and sophistication of the banking systems and capital markets in the respective countries.

Countries with well-developed capital markets, such as South Africa, Egypt and Morocco have an array of domestic project finance commercial banks that are able to provide long term project finance debt in domestic currencies. Further to this, there are a few markets, such as Nigeria and Kenya, with vibrant banking systems despite developing domestic capital markets, which have the capability to provide long term finance to projects. Project finance commercial banks in these territories have been able to provide capital to projects, although this has tended to be in hard currencies, such as US dollars and Euro. In other markets, the banking systems do not have the capacity to provide long term project financing, and this is where multilateral and bilateral development finance institutions tend to step into the breach. These DFIs provide long term project finance debt, and this can typically be provided in either hard currency or, in some limited instances, in domestic currency.

Other key participants in the project financing of projects include: off-takers, who buy power from the projects and provide a revenue source for projects; guarantors, such as local finance ministries, who guarantee the obligations of the off-takers, where required; technical parties, who construct and operate the power projects, and guarantee their own performance; fuel suppliers, who provide the required fuel, depending on the nature of the respective power projects.

ARNOLD ATTOUNGBRE

AIIM - INVESTMENT ANALYST

What are the key pitfalls of project financing Power projects in Africa?

The major challenge to project financing power projects in Africa is the credit quality of the power sectors across vast swathes of the continent. There are few power utilities (the typical off-takers from independent power projects) on the continent who have permitted tariff levels that are reflective of their cost structures, including ongoing maintenance and expansion of the power system. The lack of cost reflectiveness in utility tariffs entails that these utilities are not sustainable on their own on a long term basis, and require significant subsidisation from their local ministries of finance. This entails that, in many instances, independent power producers will require government guarantees to provide the payment certainty required by project financiers.

The lack of capital market development is another project financing pitfall in that projects tend to be financed in hard currencies, rather than the local currency which is earned by the power end-users. This currency mismatch could have an impact on the long term sustainability of local power sectors.

Structuring power deals as project finance transactions facilitate the apportionment of various transaction risks, what are the major risks of power project financing in Africa?

The major risks of power project financing in Africa are:

- Creditworthiness of Off-Takers: The off-taker's ability to perform as contractually obligated is the single most important risk facing private power projects. High transmission and distribution losses, tariffs below cost-recovery levels, and poor billing and collection systems are key issues that can severely affect the financial standing of utilities. Average distribution losses in Sub-Saharan Africa are 23 percent compared with the norm of 10 percent or less in developed countries. Moreover, average collection rates are only 88.4 percent compared with the best practice level of 100 percent. Combining the costs of distribution losses and uncollected revenue and expressing them as a percentage of utility turnover provides a measure of a utility's inefficiency. In Africa, this inefficiency is equivalent, on average, to 50 percent of turnover.

- Regulatory and political risk, i.e. changes in law, or risks which relate to the effects of government action or political force majeure events such as war and civil disturbance.

- Construction Risk: A key funding consideration for project financed power projects is whether the project can be completed on time, on budget and to the required specification. This question revolves around the risks inherent in the construction process such as: land acquisition and access; site conditions; permits and approvals; and the skill and experience of the construction contractor.

- Environmental risks: The project's impact on the surrounding environment, during both the construction and operation phases, needs to be considered. A large number of financiers are now loth to finance projects involving coal and other fossil fuels, as renewable energy is seen as being more environmentally sustainable.

- Currency risk: The majority of African economies do not have financial systems that can sustain the long term financing of projects using local currencies. As a result, the mismatch between local currency revenues (from end-users) and hard currency financing costs remains a key risk in project financings.

Project finance could be more affordable or more expensive than financing a project on the host country balance sheet, what are the factors that affect power project finance costs in Africa ?

Project finance is invariably more expensive to implement than a public procurement in absolute terms. The legal and commercial rigour involved in project financing, requires a significantly larger allocation of management time and expertise from both the public and private sector, than would otherwise be the case in the instance of a utility procuring a power unit.

The factors negatively affecting power project finance costs in Africa relate to the management of the afore-mentioned pitfalls, such as the credit issues, political risk aspects and currency risks inherent in the project financings. The relatively small scale of the projects being financed relative to more developed markets also entail that the project finance costs per unit of power produced are also higher.

Another key aspect affecting the cost of project financings is the dearth of local project finance skills and capital. This entails the importation of technical, legal and financial skills from outside the host countries, which adds to the overall cost envelope.

Project finance adds layers of complexity to a transaction relative to balance sheet financing which could cause delays, what are your five recommendations to shorten timelines ?

We believe that the benefits of pursuing a project financing exceed the associated challenges, but only in instances where the project finance solution is fit-for-purpose and appropriate for the nature of the project being financed.

- Limit the numbers of participants involved in a project to reduce coordination risk.

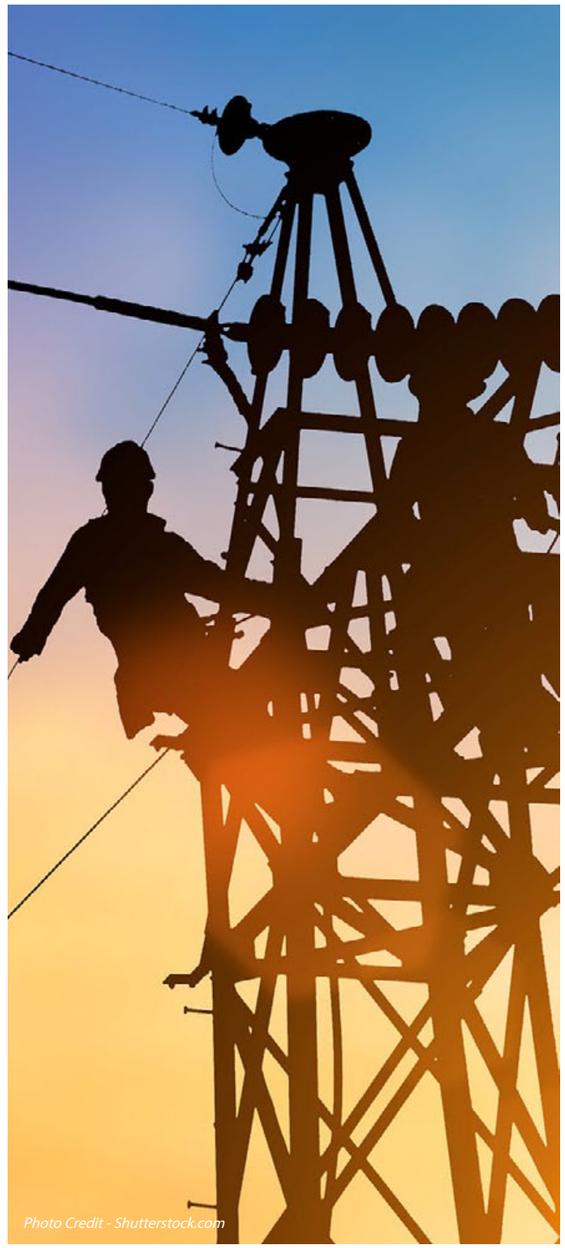
- Use precedent and do not attempt to reinvent the wheel on every transaction.

- Reduce transaction costs by seeking entities that can partially operate on risk.

- Ensure that the scale of projects makes sense relative to the nature of the financing being sought, a quicker solution could be corporate or blended financing solution.

- Involve participants earlier in the process to avoid reworking aspects of the transaction at a later point.

> "Project finance is invariably more expensive to implement than a public procurement in absolute terms. The legal and commercial rigour involved in project financing, requires a significantly larger allocation of management time and expertise from both the public and private sector"



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AFC Invests in Cameroon's Landmark Hydro Electric Power Station

AFRICA FINANCE CORPORATION

www.africafc.org

ABOUT AFC

AFC, an investment grade multilateral finance institution, was established in 2007 with an equity capital base of US$1 billion, to be the catalyst for private sector-led infrastructure investment across Africa. With a current balance sheet size of approximately US$4.2 billion, AFC is the second highest investment grade rated multilateral financial institution in Africa with an A3/P2 (Stable outlook) rating from Moody's Investors Service. AFC successfully raised US$750 million in 2015 and US$500 million in 2017; out of its Board-approved US$3 Billion Global Medium-Term Note (MTN) Programme. Both Eurobond issues were oversubscribed and attracted investors from Asia, Europe and the USA.

AFC INVESTS IN CAMEROON'S LANDMARK 420MW HYDRO-ELECTRIC POWER STATION

Africa Finance Corporation ("AFC" or "the Corporation"), the leading infrastructure development finance institution in Africa, is pleased to announce it is to invest in the Nachtigal Hydro Power Company ("NHPC"), located 65KM north of Yaounde in Cameroon.

The Nachtigal 420MW greenfield hydro power project in Cameroon achieved financial close on the 24 December 2018. The total project cost is €1.26 billion, with the total debt package of the project at €916 million. AFC will invest EUR50 million in the debt financing of this project.

Other high calibre lenders participating in the investment consortium include the International Finance Corporation, European Investment Bank, Proparco, Société Générale and Standard Chartered, with the following as project sponsors:

- Electricité de France International, globally recognised for its expertise in hydro-electricity power (shareholding in NHPC: 40%);
- InfraVentures, the World Bank's infrastructure project development fund (shareholding in NHPC: 30%); and,
- The Government of Cameroon (shareholding in NHPC: 30%).

This investment into Cameroon's power sector comes following consistent growth in the demand for electricity across the country for both domestic and industrial use. For example, during the 2012 – 2016 period, demand grew at a Compound Annual Growth Rate of 7.6%, from 4.2TWh to 5.7TWh in the grid to which Nachtigal will connect. Currently, demand in the grid to which Nachtigal will be connected is expected to more than double from 5.7TWh in 2016 to above 13TWh by 2030.

At the same time, Eneo Cameroon S.A., the country's main electricity company, and off-taker to the NHPC, has delivered significant operational improvements. This has consequently meant liquidity support for NHPC is stronger than it was for the Kribi Power

Model of Hydro - Electric Power Station

Togo Becomes AFC's 20th Member State

Development Corporation IPP, which attracted a similar group of lenders.

As is the case with all projects Africa Finance Corporation participates in, the decision to go forward with the Nachtigal hydro project was based on its potential to drive economic development while also considering its wider impact.

The NHPC will be the cornerstone of Cameroon's low carbon development plan and was selected because it was ranked as the best future hydro project to be developed in the LCDP. AFC, the sponsors and lenders will develop the project in compliance with national and international best practices in terms of environmental and social management and infrastructure building.

Samaila Zubairu, President & CEO to AFC commented on the announcement: "Cameroon is a textbook example of a nation that has, in recent years, demonstrated a deep-rooted commitment to surmount its power deficit challenges by successfully creating a highly investible sector. The financial close of projects such as these and the Kribi IPP are a testament to their earnest efforts.

"Moreover, with the International Monetary Fund having raised Cameroon's economic growth outlook to 4.2% from 2017's 3.2%, we are pleased to be investing in the country's essential infrastructure that will help unlock further economic growth in the years to come, and for the people of Cameroon reach their developmental aspirations."

THE TOGOLESE REPUBLIC BECOMES AFRICA FINANCE CORPORATION'S 20TH MEMBER STATE

The Togolese Republic ("Togo") has become the twentieth (20th) Member State of Africa Finance Corporation ("AFC" or "the Corporation"), Africa's leading infrastructure development finance institution. Togo's membership of AFC also makes it the 12th West African member. AFC currently has 21 member states from West, Central, East and Southern Africa:- Nigeria (the host country), Benin, Cape Verde, Chad, Côte d'Ivoire, Djibouti, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Malawi, Mauritius, Rwanda, Sierra Leone, Togo, Uganda, Zambia, Zimbabwe, and 24 Institutional shareholders including African Development bank, African Reinsurance Cooperation and other leading African commercial banks.

Togo has in recent years delivered one of the highest growth rates across the continent, averaging over 5% since the beginning of the commodity downturn (2011), against a continental average of less than 4% during the same time period, as well as impressively low inflation rate, projected to come in at just 0.5% in 2018. As the World Bank notes, this has been a result of Togo's fiscal disciple and prudent monetary policy.

As a consequence of the retrenchment of public capital spending however, the Togolese economy grew 0.5% slower in 2017 (4.5%) than 2016, with the construction industry being one of the main casualties. To overcome this, the Togolese government launched in August 2018 the National Development Plan (PND), which will seek to attract US$ 5.4 billion in private sector investment, with the infrastructure sector as a key investment priority. Projects currently earmarked include the Port of Lome, an Airport hub and Railway infrastructure amongst others.

Established in 2007, AFC invests across five sectors of infrastructure: Power, Telecommunications, Transport & Logistics, Natural Resources and Heavy Industries. To date, the Corporation is invested US$ 4.5 billion across 28 African countries. Togo's milestone decision to join the Corporation will therefore enhance its ability to access AFC's award-winning capacity for infrastructure development, financing expertise to complement the PND's objectives as well as the Corporation's advisory services to modernize and bolster its economy.

Samaila Zubairu, President and CEO of AFC commented on the announcement: "We are very pleased to welcome the Togolese Republic as a Member State of AFC.

"Earlier this year, we saw the country outline its very ambitious plan for modernizing its economy, and in particular its infrastructure, through the PND announced last August. As Africa's leading investor in the sector, we therefore stand ready to become Togo's go to partner for infrastructure financing and development."

AFC President and C.E.O Samaila Zubairu Meeting with the Togolese Minister of Finance Sani Yaya

H.E. Sani Yaya, Minister of Economy and Finance, Republic of Togo, commented:

"Africa needs to find ways to enable and accelerate infrastructure development, if it is to reach its fullest economic, environmental and social potential. It is for this reason that we have sought to make infrastructure development, a key priority of our 2018 - 2022 National Development Plan. We recognise that there are technical challenges and constraints for which we need International partners such as AFC, with its investment grade rating and pan- African footprint, to provide us with much needed assistance in implementing the PND. Africa Finance Corporation, through its track record of delivery of sustainable infrastructure assets and projects, provides the nexus between sustainable development, investment and integration across the continent and globally".

H.E. Prof. Robert Dussey, Minister of Foreign Affairs, Cooperation and African Integration, Republic of Togo also stated:

"H.E the President of the Republic of Togo, has placed attracting foreign direct investment, and enabling regional integration, as a critical plank in Togo's investment strategy. We are delighted to become members of AFC; as one of the largest financers and developers of infrastructure in Africa, AFC is a strong partner perfectly placed to assist Togo in realizing its investment objectives, improving the quality of Togo's infrastructure, and enabling Togo to expedite economic development through regional integration for the benefit of all our people."

Soji Awogbade on The Lack of a Universal Regulatory Framework for Africa's Power Sector

SOJI AWOGBADE
ÆLEX - PARTNER & HEAD INFRASTRUCTURE PRACTICE

What regulatory framework governs project finance for power projects in Africa?

In spite of overarching economic platforms and development aggregation in Africa and its regional organs, there are no universal regulatory framework governing project finance for power projects in Africa. However, most countries have enacted laws which are material to participation in, and implementation of project finance in their countries. Examples can be found in the Preferential Procurement Policy Framework Act, 2000 (PPPFA) and the Electricity Regulation Act, 2006 which are applicable in South Africa, and the Infrastructure Concession Regulatory Commission (establishment) Act 2005 which applies in Nigeria.

> "In spite of overarching economic platforms and development aggregation in Africa and its regional organs, there are no universal regulatory framework governing project finance for power projects in Africa. However, most countries have enacted laws which are material to participation in, and implementation of project finance in their countries."

What are the advantages and disadvantages of using project finance to structure a power project deal ?

ADVANTAGES

- Creating a separate SPV for the project ensures that the liability of the project sponsors to repay the debt obligation will be determined only by the performance of the project.
- The proceeds from a project finance structured transaction is usually used to repay the loan. For an IPP project, this is attainable when the power plant begins to supply power to offtakers.
- Using a project finance structure, participants in a power project can properly allocate risk among themselves, according to their risk ability. This ensures that the project sponsors do not bear the entire risk of the project.
- Power projects structured using project finance allow project sponsors to access funding for the project using the SPV's balance sheet only.

DISADVANTAGES

- As a result of the varying interests of lenders, the ability of the project sponsors to determine issues relating to the project is not absolute.
- Lack of credit history creates a generally low –risk appetite for financial institutions to invest in power projects within Africa.
- It takes a long time to structure project finance transactions, and for power projects, it may take longer having regard to the peculiarities of the various players in the power value chain, including regulators and other relevant agencies.

What are the forms of security available to protect investments when project financing power projects in Africa? How are they enforced ?

- Charge: a fixed or floating charge can be created over the project assets, including the shares of the SPV and all its accounts. Security documents like Deed of All Asset Debenture, Deed of Charge, and Accounts Agreement are usually used to achieve this.

  A fixed charge over an asset is perhaps easier to enforce as the assets become subject to the control, utilisation, liquidation or disposal by the holder of such charge from the point of creating the charge. Judicial enforcement of fixed charges operate in the same manner as against collateral in a loan past due date. For floating charges, the charge does not crystallise on the assets until the loan has become due and there is a default. Post-crystallisation, it is enforced as in a fixed asset.

- Mortgage: a mortgage can also be created over the immoveable assets of the project. These may include the site for the project as well as the projects facilities. The mortgagee/investor may enforce the mortgage by instituting arbitration proceedings or an action in court. The mortgagee may also exercise its power of sale of the mortgaged asset, or its right to an order of foreclosure, or its right to appoint a receiver. In addition to these, a mortgagee can institute winding up proceedings against the mortgagor where the mortgagor is unable to pay up its debt.

- Hedging instruments (forex & interest rate hedging): another way to secure the investment of the lenders in a power project finance arrangement is to hedge risks related to foreign exchange and interest rates by arranging appropriate hedging instruments.

What are the risks involved in project financing power projects in Africa? What are your five recommendations on how these can be mitigated or allocated ?

RISKS

- **Political Risk**
  a. Change in government and policies;
  b. Risk of expropriation, forced renegotiation of public-private contracts, etc.;
  c. Civil unrest.

- **Currency and Payment Risk**
  a. Depreciation;
  b. Restrictions on foreign exchange transfer;
  c. Tariff collection losses.

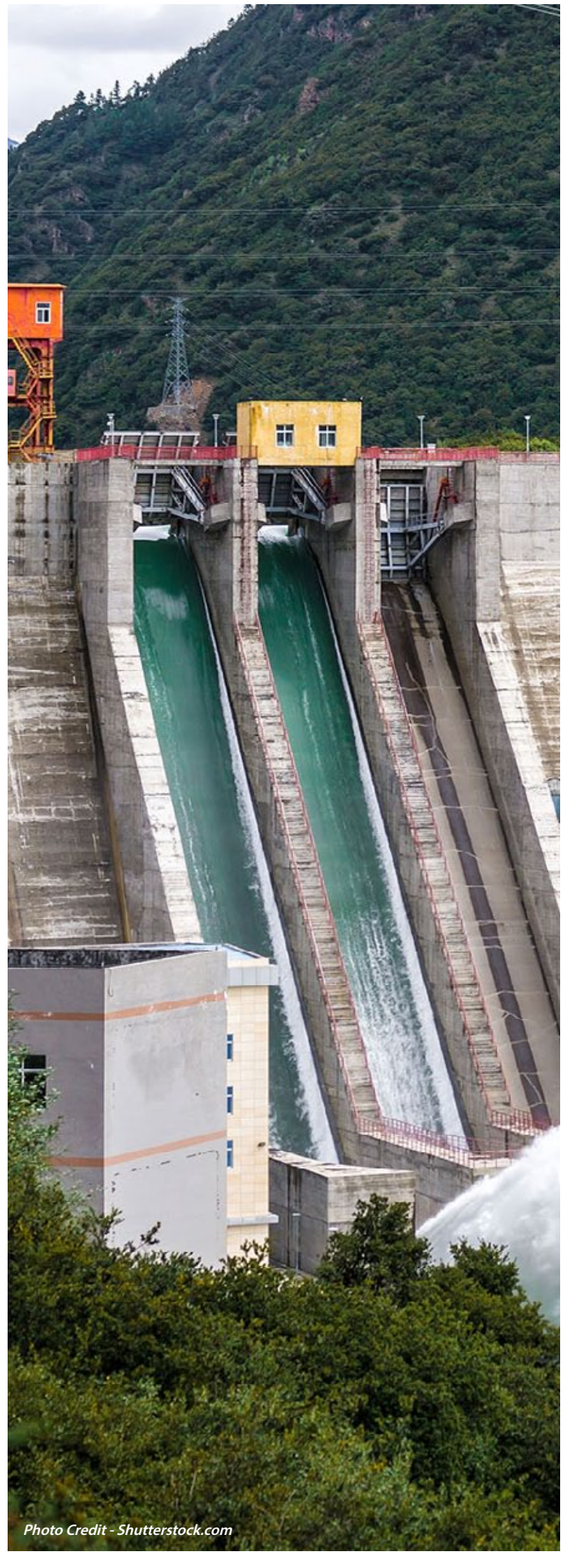
- **Pre-Construction Risk**
  a. Bureaucratic bottlenecks in obtaining environmental and other regulatory approvals;
  b. Technology risk;
  c. Social risk.

- **Construction Risk**
  a. Poor Contractor performance – costs and schedule overrun;
  b. Social and environmental risk.

- **Operations Risk**
  a. Poor Health, Safety and Environment performance;
  b. Poor maintenance of project facilities and attendant unscheduled mechanical shutdowns.

RECOMMENDATIONS

a. Conduct of country due diligence investigations and taking out Political Risk Insurance;
b. Inclusion of stabilisation clauses in public-private contracts to insulate them from changes in policies and laws;
c. Procuring risk enhancement facilities issued by Multilateral Agencies ("MLAs");
d. Allocate construction risk to the contractor by obtaining completion guaranties, such as Performance Guaranties; and
e. Hiring of an experienced operations and maintenance team.



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AIIM on The Commencement of its Commercial Operations of The 90mw KAYES Power Plant in Mali

ALBATROS ENERGY MALI SA ANNOUNCES THE START OF COMMERCIAL OPERATION OF ITS 90 MW POWER PLANT IN KAYES, MALI

The developers and investors in Albatros Energy Mali SA, the company that has built the first independent power project in Mali, are proud to announce the start of operation of the 90 MW Thermal Power Plant in Kayes, Mali on October 31st. The plants construction has been completed 3 weeks ahead of schedule in less than 16 months. AEM has entered into a 20 year Power Purchase Agreement with Energie du Mali (EDM).

The power plant, which is composed of six (6) medium speed, highly efficient, 15 MW Caterpillar engines, will produce a guaranteed minimum of 578 GWH of electricity per year while respecting the latest international environmental guidelines. The power plant will operate on a base load basis, increasing Mali's total installed production capacity significantly along with providing constant supply of much needed reliable and affordable electricity.

African Infrastructure Investment Managers ('AIIM') through its African Infrastructure Fund 3 ("AIIF3"), Redox Power Solutions Ltd ("Redox"), Burmeister & Wain Scandinavian Contractor ('BWSC') and Denmark's Investment Fund for Developing Countries ('IFU') are the shareholders in Albatros Energy Mali SA. Together the shareholders have provided 30% of the project funding in the form of equity. The remaining 70% is financed by the West African Development Bank ('BOAD'), the Islamic Development Bank ('IDB'), the Islamic Corporation for the Development of the Private Sector ('ICD'), the OPEC Fund for International Development ('OFID'), GuarantCo and the Emerging Africa Infrastructure Fund ('EAIF'). The latter also provided a grant that helped funding a part of the project development costs via PIDG.

Jurie Swart, AIIM's CEO said:

"AEM's Thermal Power Plant is a much-needed baseload energy source in Mali, which will benefit communities, businesses and industries across the country and lead the way in helping to secure the country's energy future. We are proud to have supported AEM in reaching this significant milestone, ahead of schedule, and look forward to continued partnership with our stakeholders in making a beneficial contribution to Mali's power sector and supporting the Government in its sustainable development efforts."

AIIM
AFRICAN INFRASTRUCTURE INVESTMENT MANAGERS

www.aiimafrica.com

ABOUT AIIM

AIIM, a member of Old Mutual Alternative Investments, has been investing in the African infrastructure sector since 2000 with a track record extending across seven African infrastructure funds. AIIM currently manages USD2,1 billion in assets across the power, telecommunications and transport sectors with operations in 15 countries across East, West and Southern Africa. AIIM's power portfolio extends across renewable energy and thermal power assets with a combined generation capacity of over 3,300 MW.

As a leading infrastructure manager across Africa, central to AIIM's investment objectives and processes is its commitment to responsible investment. AIIM is committed to fulfilling fiduciary duties as the custodian of shareholders' and beneficiaries' long-term interests. In this regard, AIIM considers the incorporation of environmental, social and governance (ESG) factors into its investment and ownership processes to support the pursuit of creation of positive futures and obtaining sustainable, superior risk-adjusted returns for its clients.

90 MW Thermal Power Plant in Kayes, Mali

Phanes Group on Incubating Senegal's Solar Projects

Source: Phanes Group

SENEGAL: SOLAR PROJECT WINS PHANES GROUP'S SECOND SOLAR INCUBATOR

International end-to-end solar provider Phanes Group has announced the 30MW Gossas Solar Farm Project in Senegal as the winner of the second edition of its Solar Incubator.

The announcement was made at the "Unlocking Solar Capital: Africa" conference in Kigali, Rwanda, where three finalists presented their proposal to a panel of international industry experts from responsAbility, ECREEE, Hogan Lovells, Phanes Group, RINA, and African Development Bank.

"We are proud to announce Mr. Hadj [the project owner] as the winner of this year's Solar Incubator. It was a difficult decision as we received a strong response of project proposals with the potential to positively impact their communities. Our experience now in the second year of the incubator encourages us to continue with this initiative because there is a great deal of local talent on the continent who have the potential to benefit from such a platform," said Andrea Haupts, COO of Phanes Group.

Maintaining a long-term stake in the project, Hadj and the Dubai-headquartered solar provider will work collaboratively, aiming to bring the solar energy project to financial close.

The Solar Incubator phase will kick off with an intensive face-to-face workshop for Hadj in Dubai, UAE, where he will work with Phanes Group's team and its incubator partners to set the foundations to deliver a bankable project.
During that phase, Hadj will gain access to commercial and technical know-how covered by experts from project finance, project development and execution, legal and CSR, followed by further remote mentoring sessions in the succeeding months.

"Ultimately, Mr. Hadj's project convinced the evaluation panel not only with its strong CSR component but also with his knowledge and commitment to the region where he hails from. We believe in Mr. Hadj's determination to bring his project to life in a challenging market environment, where our expertise and training can make a difference," Mrs. Haupts added.

"We look forward to welcoming him to Dubai, and want to encourage the other candidates to keep persevering in bringing their proposals to fruition, as everyone would have deserved to win."

The goal of the Phanes Group Solar Incubator, held under the theme, "Your Project, Our Expertise, For a Sustainable Future," is to provide access to commercial and technical knowledge, and eventually funding, to promising PV projects in sub-Saharan Africa, and to help entrepreneurs overcome obstacles that could prevent solar initiatives from reaching fruition.

PHANES GROUP

www.phanesgroup.com

ABOUT PHANES GROUP

Phanes Group is an international solar developer, investment and asset manager, strategically headquartered in Dubai, UAE. Our end-to-end business model brings together fully-fledged in-house capabilities, including expertise in project development, structured finance, capital markets, and legal and regulatory affairs. Lean and agile, our structure enables us to deliver utility-scale, distributed, and off-grid PV solar projects. We take a holistic approach to solar energy to deliver across the entire value chain - from the selection and development of projects, to financing, construction, and O&M.

Project Risk Allocation With Fiscally Stressed Governments

Managing Risk Allocation To Drive Ppp's For Africa's Power Project Finance

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Project Risk Allocation With Fiscally Stressed Governments

– Managing Risk Allocation To Drive PPP's For Africa's Power Project Finance

Governments today are under pressure to meet the infrastructure development needs of various countries, and the growing population of Africa's cities has continued to necessitate the provision of sustainable power and electricity to support the ever increasing economies of scale. While several governments continue to make efforts to provide the much-needed sovereign grants to catalyse development finance and private capital, there is a dearth of capacity, especially for fiscally distressed governments. This limited capacity could lead to delayed completion of several infrastructure projects and even the lack of investment from development stakeholders. This dynamic therefore requires the evaluation and assessment of risk to ensure that all relevant parties are best equipped to manage the risk exposure.

Findings show that the inherent nature of project finance is risk allocation and that effective risk allocation could improve project performances. While the distribution of risk in project finance is mostly to the participants whose risk tolerance is high, the participants' degree of risk tolerance could be problematic to evaluate. Reports demonstrate that while the allocation of risk could be based on parties best suited to take the risk, risk allocation could also be determined by the bargaining power to negotiate the terms of the contracts by stakeholders.

ESTABLISHING AN EVALUATION MATRIX OF RISK ALLOCATION AND SELECTING REPRESENTATIVE PARTIES

According to the rule and method of risk allocation in project finance report all possible risk factors of the project risk should be identified based on the participant's ability to control the risk. Establishment of the matrix of risk allocation depends on the recognised risk factors and selecting the representative parties. Depending on such a comprehensive evaluation of controllable and impact extent, the representative parties are chosen, and relevant parties are determined.

RISK MATRIX

A useful tool for evaluating risks in a project is to prepare a detailed risk matrix identifying the key risks. An example (of the Design, Construction and Commissioning issues section) of such a risk matrix is set out in the schedule to this article. The following points should be borne in mind with such a risk matrix:

1 A risk matrix is illustrative of the issues which could arise in an energy/infrastructure project, including projects involving lenders on a project financed basis. It lists those risks likely to arise and suggests ways in which the risks arising can be mitigated.

2 The list of risks is not exhaustive. Each project must be carefully analysed to identify additional and project specific risks.

3 A risk matrix will usually be developed primarily from the perspective of the project company. It will not necessarily deal fully with risks which may be relevant to other project participants, such as lenders or government entities.

4 In addition, the risk matrix will focus on the types of risks which may arise in the course of delivering the project, in particular once the project agreements have been signed. Once these risks are analysed in the context of the particular project, this may lead to appropriate provisions being included in the project agreements to mitigate or allocate those risks, or may even result in a decision not to proceed with the project.

5 The list of mitigants in respect of each risk will not be exhaustive. Consideration should be given in all cases, for example, to whether conditions precedent in the project agreements, insurance, the pass-through of costs or the involvement of multilateral agencies is an appropriate risk management strategy. There may be other mitigants available in the particular circumstances.

6 Risk allocation is often not simply a function of whether a specified risk has occurred, but also why it has occurred. In general, if a party has itself brought about the occurrence of the risk, for example by failing to perform an obligation, that party should expect to have to bear the consequences of that failure. In other cases, the risk may arise because of an external event which the affected parties could not prevent. In those cases, risk allocation cannot be based on blame criteria.

7 Risks may be classified on the basis of a number of different parameters, including timeframe, project participation or project function (such as financing, input, offtake or operation). No single classification will be suitable for all projects. Here is a suggested classification for these purposes:

- inter-governmental;
- project-specific new domestic legislation;
- procurement;
- regulation/change of law/ political risk;
- environmental;
- land acquisition;
- planning;
- design, construction and commissioning;
- operation and maintenance;
- connection to utilities;
- fuel/feedstock supply;
- product offtake;
- financial;
- employment; and
- general.

A given risk may be relevant to more than one of these headings.

Continued from page 28

Source – (Dentons, 2018) Identifying and allocating risks in international energy and infrastructure projects

Continued from page 27

ALLOCATING PROJECT FINANCE RISK

Findings describe risk allocation as the process of deciding the allocation of risk and the extent of the allocation. It is related to the identification and isolation of each risk, assessment of risk cost and choice of disposal methods, negotiations and signing of agreements. The way by which that all project risks are transferred to the project participants is also referred to as the "back-to-back" risk allocation. Reports show that the concession agreement identifies the risks of project sponsors while other agreements could have the risks assumed by the project company transferred to other participants through back-to-back risk allocation.

Reports argue that those that are not risk-averse stakeholders could undertake a larger share of the risk. Findings show that during the risk allocation of actual project finance, the participants' degree of risk aversion could be vague and challenging to assess. Stakeholders risk tolerance may not only correlate with their capacity of resources, understanding the level of risk, the presumed capacity of risk results, organisational risk behaviour and willingness to control risk but also to the controlled extent of risk and incentives of risk.

Findings show that while assessing risk appetite could be challenging, the effective allocation of risk could drive performance and ensure project bankability. Reports indicate that while stakeholders may be exposed to different types of risks including political risk at various stages of a project, the allocation of risks at different phases of the project is a critical aspect to financing power projects successfully. Interview respondents and research findings argue that fiscally distressed governments have had an adverse impact on project developers and investors who have inherited costs on the merits of past sovereign fiscal agreements. Results show that this could lead to project failure and cost-intensive projects, and this inherent risk exposure could be credited for the increased investments in countries perceived to be less risky at the peril of other underdeveloped 'riskier 'countries.

It is also interesting to note that while Africa's power sector could be faced with several project finance risks, the risks vary from one country to another across the value chain which could also dictate investor interest in investing at various stages of the development lifecycle.

According to the World Bank Independent Power Projects in Sub-Saharan Africa report, IPP's contribute to Africa's power needs significantly and that the emphasis should not only be on mobilising investments in IPP's, but also the investment outcomes and the price and reliability of the electricity produced. The report argues that African countries need to create the conditions to attract more and better IPPs to help overcome the continent's power deficit.

GOVERNMENT OBLIGATIONS UNDER HGAS:

- Grant of requisite land rights (including compulsory purchase as required);
- Facilitate import and export of equipment, raw materials, supplies and export, as required, of products from project;
- Ensure governmental approvals granted in a timely manner, and are renewed;
- No governmental approval is revoked without cause;
- Cause all reasonable efforts to expedite consideration of application for governmental approvals;
- Ensure critical consents are granted prior to date scheduled for financial close;
- Procure guarantee by Ministry prior to financial close in respect of payment and performance obligations of utility providers;
- Ensure no expropriation occurs of project assets;
- No competing projects (or compensation regime)
- Not intervene in construction, operation, maintenance of project in a manner that is adverse to the project company; and
- Not to take discriminatory action that materially and adversely affects the project.

Source – (Dentons, 2018) Identifying and allocating risks in international energy and infrastructure projects

CONTROLLING FACTORS INFLUENCING THE OCCURRENCE OF RISK

Reports show that the capacity of participants controlling the occurrence and occurring extent of risk could have a substantial and valuable impact on the potential results of risk in a project. The findings show that the assumption of such inherent risk could result in the implementation of control mechanisms that could mitigate the effect of any project risks. Fiscally-stressed governments could benefit from the application of diversified financing models and ensuring the facilitation of a stable and viable investment climate.

Reports show that risk should be allocated mostly to the participants who can provide the best assessment and control of it. The reports add that risk allocation could also be considered in respect to the risk of other projects.

> "According to the OECD, once project risks are analysed and understood, the risk management process should identify the strategies to mitigate the impact of risks on project cash flows. This process is essential for all infrastructure assets and sectors, but specifically, in project finance, as lenders' security packages are often non-recourse against equity investors. "

> "Those that are not risk-averse stakeholders could undertake a larger share of the risk.

RISK DEFINATION IN INFRASTRUCTURE PROJECT

RISK DEFINATION

Risk is a variation in things that may occur naturally or the possibility of occurance of an event that are expected to be a threat to property and financial benefits due to the danger will occur.

MANAGEMENT RISK DEFINITION

Risk management is an aproach to risk by understanding, identifying, and evaluating the project's risk. Risk on a construction project is however unable to eliminate but may be reduced or transfered from one stakeholder to another.

CATEGORIES OF RISKS

- Risk Alocation
- Design, Construction & Operational
- Sponsor Risk
- Operational Risk
- Risk Income
- Interface Risk
- Political Risk
- Force Majeur Risk
- Assets Ownership Risk
- Financial Risk
- Network Connection

RISK ALLOCATION PRINCIPLES

Any risk shall be allocated to the Stakeholder who:

- Have better ability to control the possibility of risk occurance;
- Have better ability to manage the impact of the possibility risk occurance;
- Have better the ability to take the risk with the lower risk costs.

Source - PT Penjaminan Infrastruktur Indonesia (Persero)

TYPICAL RISK ALLOCATION COVERAGE

	Political Risk	Site Acquisition	Design, Construction & Commisioning	Sponsor Risk	Operating Risk	Revenue	Network connectivity
Public Allocation	• Currency inconvertability • Expropriation risk • Change in law • Fail in obtaining permits	• Land acquisition delay • Complex resettlement	• N/A	• VGF disbursement • Refund of land acquisition fund (DTT)	• N/A	• Failure in AP payment • Delay in periodical tariff adjustment	• Road & transportation connectivity • Smoothness of transportation system • Competing facilities
Private Allocation	• N/A	• Contamination/ pollution to the site • Disruption of the community convenience around the project	• Design faults • Failure to maintain security & safety • Default of sub-contractors • Increase in construction cost	• Default of project company, sponsor, or lender • Increase in construction cost • Fail to achieve financial close • Forex, inflation	• Failure project management • O&M cost operation increase • Incompetent of technology & information system	• Failure in initial tarif determination • Misscalculation of tariff estimates	• N/A

Source - PT Penjaminan Infrastruktur Indonesia (Persero)

MAIN CONTRACTUAL INSTRUMENTS TO MITIGATE PRIVATE INVESTOR RISK

Risk Catergories	Development Phase	Construction Phase	Operation Phase	Termination Phase
Political and Regulatory			Insurance Contracts	
Macroeconomic and Business			Offtake Agreements and Availability Contracts Put or Pay Agreements Derivative Contracts and Hedging Arrangements	
Technical	Turnkey (EPC) Contract		Operations and Maintenance Agreements	

Source – (Oecd, 2017) Selected Good Practices For Risk Allocation And Mitigation In Infrastructure In Apec Economies

Continued from page 29

According to the OECD, once project risks are analysed and understood, the risk management process should identify the strategies to mitigate the impact of risks on project cash flows. This process is essential for all infrastructure assets and sectors, but specifically, in project finance, as lenders' security packages are often non-recourse against equity investors, and so are only collateralised against project equity. This means revenue is based solely on the ability of the project asset(s) to generate cash flows.

The OECD report further shows that priority actions to be applied to the reduction of risks and catalyse infrastructure investments are linked to the soundness of the legal and institutional frameworks for infrastructure. In this context, strengthening domestic capital markets, providing sovereign guarantees, and demand risk mitigation instruments could be efficient risk reduction approaches.

Findings argue that governments could influence political and regulatory risks by creating a more favourable institutional environment which could include making credible commitments to honour the terms of the agreement, and developing clear and reliable estimates on development and construction costs, tariff and demand definition and trends.

To address the risk challenges when dealing with fiscally distressed governments, the OECD report recommends that to attract substantive private capital into infrastructure projects, governments could retain certain risks or influence the magnitude of certain risks and/or reduce the probability of their occurrence. The report demonstrates that governments could impact **political and regulatory risks** by; creating a more **conducive institutional environment**, by making credible commitments to honour the terms of the agreements, and by developing clear and reliable estimates on development and construction costs, tariff and demand definition and trends. To achieve this, the OECD demonstrates that this might necessitate:

- **A stable long-term plan for infrastructure development:** enhanced certainty and acceptance of innovative approaches to infrastructure development (for example PPP, privatisation or pure private development); enhanced transparency and accuracy of the infrastructure pipeline; reliability of feasibility studies; credible commitment to providing necessary permissions.

- **The creation of confidence in rules about, among other things, public procurement, permits, expropriation, taxation, litigation and tariffs.** Improving the institutional environment could result in the continued further attracting private capital into infrastructure investment.

According to the OECD Principles for Public Governance of Public-Private Partnerships three elements that could be useful to define government support for PPPs which could foster a suitable institutional environment include: (I) the establishment of a clear, predictable and legitimate institutional framework supported by experienced and well-resourced authorities, (II) the need to ground the selection of public-private partnerships in value for money; and (III) the transparent use of the budgetary process to minimise fiscal risks and ensure the integrity of the procurement process.
The enabling environment is fundamental in attracting private sector investment, with the rule of law, enforcement of contracts and regulatory quality found to be of key importance to infrastructure markets.

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Opuiyo Oforiokuma on the Lack of Homogeneity of Project Finance Risk in Africa

What are the key risk identification models available for power project financing in Africa ?

Key risks in financing African power projects are not homogeneous across the power value chain or in every country or location. Laws, regulations, the economy, the stage of development of the power sector, ways of doing business, culture and social factors, etc, differ from one country to the next. Risks associated with different parts of the value chain – generation, transmission, distribution – are not identical. Technology and the procurement models vary too.

At the upstream end of the value chain there are risks associated with wheeling out the power generated; with pricing and payment for the available generation plant capacity and the electricity supplied to the grid; and with transmission losses. At the downstream end there can be mismatches between the power transmitted to distribution companies and what the latter can take from the grid and distribute to customers. Uneconomic tariffs, customer dissatisfaction with unmetered billing, electricity theft, bad debts, and political interference, are risk factors known to affect distribution company revenues. The risks are not exhaustive.

Successfully dealing with risks of the types highlighted above, and perhaps much more, requires competent and capable skills and resources to be deployed in risk identification and impact measurement. Ways for eliminating, mitigating, and or managing the risks, including monitoring them during the project's lifecycle, should also be established and formalized in the project implementation plan.

A risk register with scores that distinguish the severity of the risks is usually used, and responsibility for managing the risks is assigned to named individuals or teams. As a general principle, risks should also be contractually allocated to the parties best able to deal with them, and where appropriate, penalties should be applicable for non-performance, and bonds/guarantees may be sought to cover downsides.

OPUIYO OFORIOKUMA

ARM-HARITH INFRASTRUCTURE - MANAGING DIRECTOR /CEO

When confronted with strong fiscal pressures, governments tend to make politically and fiscally difficult decisions, how has this impacted project risk allocation in Africa ?

The impact has been significant where project developers and investors have already incurred expenditure on the strength of what government previously declared to be its policy, or where contracts, e.g., Power Purchase Agreements, Sale & Purchase Agreements, etc, have already been signed. Risk perceptions about the country concerned will likely increase where such changes occur, and the resultant effects may include project failure or suspension; capital flight; and the emergence of contractual claims and disputes; amongst other adverse developer/investor reactions.

It may also prove more expensive or impossible to procure third party risk protection such as political risk insurance, FX and interest rate hedges, etc, as underwriters of such products shy away from the country, thus making it more difficult for investors to take risk there. In such circumstances, and to the extent that Africa is still considered an attractive investment destination, capital should still flow onto the continent. This capital, however, will likely be skewed towards countries that investors consider 'safe' while the higher risk countries lose out.

The attention to local government fiscal condition and fiscal distress is not new to project financiers, however, how has the allocation of risk changed in respect to power projects ?

Africa's power deficit and the opportunities that derive from that are on such a scale that government and investor attention will remain focused on that space for some time to come. But the risks are not homogeneous across the value chain, and we see developers and investors being selective about where in the value chain they play, and how. For example, some investors may consider investing in on-grid greenfield IPPs that are ring-fenced and wrapped in sovereign and multilateral guarantees that guard against off-taker payment default, to be less risky than investing in privatized generation companies that do not enjoy similar protections.

Investors are also seeking protection against stranded generation capacity by negotiating for capacity payments based on plant availability. Other investors may currently shy away from privatized distribution companies owing to legacy challenges of bad debts and concerns about uneconomic end-user tariffs. We see a shift away from thermal energy towards renewable energy projects as global climate change reduces emphasis on fossil fuels like diesel and coal, and as costs of renewable energy such as solar becomes cheaper. There is also increased focus on smaller scale mini-grid and off-grid power projects targeted at supplying power to rural areas where circa 65% of Africans dwell, and to support economic sectors such as agriculture.

> "Effective risk allocation is fundamental to project finance, and experienced private investors would not willingly shoulder risks that they are not best-placed to carry.

The rule of effective risk allocation in project finance is that risk is mostly allocated to the participants whose risk tolerance is high, what are your recommendations on the allocation of risk when governments are fiscally distressed?

Effective risk allocation is fundamental to project finance, and experienced private investors would not willingly shoulder risks that they are not best-placed to carry. It is a reality, however, that many African government counterparties are indeed fiscally distressed and may end up defaulting on their contractual obligations for that reason. Where this is the case, a solution would be for government allocated risks, e.g., for payment default, to be backstopped by a multilateral or other creditworthy third-party guarantee. Commercial debt and equity can also be covered by political risk insurance where that is available and reasonably priced.

Concessionary financing from multilateral institutions, climate funds (where applicable), and DFIs, can help to bring down the overall blended cost of capital for the project. Government should not be left off the hook entirely, however, as having meaningful 'skin in the game' is important to ensuring their alignment to project success.

What are your five recommendations on how the PPPs can establish an effective evaluation matrix of risk allocation and select representative parties?

I believe there are more than five things required; however, if I must focus on just five, I would say that;

1. Government engaging the services of a competent transaction adviser at the outset is a good start. This should help even out asymmetries of knowledge and experience that may exist between the private and public sector counterparties.

2. Choosing the ownership or procurement model is important. For example, does government want to perpetually relinquish ownership, e.g., through privatisation, or does it prefer to grant time-bound exploitation rights via a concession?

3. The scope of what is to be done and ideally by whom, should be considered – this itself will involve allocating risks to the parties best-placed to deal with them.

4. There should be clearly-defined criteria for assessing the financial, asset delivery, and operating capabilities of the private investor-operators, to ensure that the most-suitable investor-operator is selected.

5. A transparent and balanced scoring methodology that supports the risk weightings assigned to the various assessment criteria should underpin the selection process.

> "The impact has been significant where project developers and investors have already incurred expenditure on the strength of what government previously declared to be its policy, or where contracts, e.g., Power Purchase Agreements, Sale & Purchase Agreements, etc, have already been signed."

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Rob Graham & Nathaniel Lowbeer-Lewis on the Synergistic Collaboration Of Private Sector & DFI's

ROB GRAHAM

CPCS - GLOBAL DIRECTOR FOR POWER

1. **What would be a feasible risk allocation approach to project financing power projects in Africa?**

2. **In your words, what would be a viable approach to selection of risk disposal models when dealing with governments?**

3. **How can project finance participants manage risk based on their resources to benefit their capacity for risk management?**

4. **How effective are risk allocation agreements negotiations in Power project financing when dealing with African Governments? What are your three recommendations going forward?**

Risk Mitigation Allocation and Tools – Essential to Close Deals

Understanding and properly allocating risk is essential to ensuring the bankability and long-term viability of power projects. For example, in a power purchase agreement (PPA), the allocation of risks between the seller (and independent power producer, IPP) and the buyer (generally a utility) is important for the long-term viability of both parties. In many cases, the PPA is accompanied by an implementation agreement, concession agreement, or other agreement allocating risks that are best borne by the Government. This could be local currency volatility or the availability of forex, essentially risks that neither the utility or project are well placed to take on. Often these agreements come with some form of government guarantee or sovereign guarantee on force majeure and termination provisions to increase the bankability of the project. In many cases in Africa, where utilities are often chronically underfunded and sovereign credit ratings may not be of a financeable level, additional measures are needed in order to secure financing for a project.

A tool that can be used to manage utility liquidity risk and ensure regular payments by a financially strained utility is a Partial Risk Guarantee (PRG). A PRG is a type of insurance mechanism that provides a guarantee of utility payments backed by a third party, often multilateral institution. The insurer providing the PRG or utility payment guarantee will then seek a back-to-back guarantee or indemnity from the host government regarding this payment. In effect, the PRG ties the hands of the utility and government to ensure payment. The PRG provides lenders with comfort needed to provide finance to a project, which allows deals to close and unlocks private finance to build out additional investment.

Risk Mitigation Mechanisms – The Negative Side Effects

While this insurance on the regular payments by utilities has become an useful tool to close deals in Africa, the long-term financial repercussions of such mechanisms on utilities and governments can have the unwanted cause of worsening the cycle of financial strain on chronically underfunded utilities, pushing them into a long term "sustainability trap". PRG's and other payment guarantee mechanisms effectively push IPPs benefiting from these mechanisms to the top of a utility's cash waterfall, above all other obligations. In the case where tariffs in country are not cost reflective (which is the case in most countries in Africa), and the cost of power for IPPs is above the average cost of power to the utility, new projects financed with PRG's can lead to net less money for chronically underfunded utilities to pay their own costs and invest in their needs throughout the value chain including transmission, distribution and operations.

Since transmission, distribution and operations are placed below IPPs in a utility's cash waterfall of payment priority, this can mean transmission and distribution investment becomes worse off by prioritizing the payment of IPPs first. Most PPAs also have take or pay, deemed energy, availability, or other provisions that ensure that IPPs do not take on evacuation risk for power past the identified connection point. If a utility is unable to evacuate power due to insufficient investment in transmission, utilities may end up owing IPPs for power it was never able to deliver to consumers or to recover revenue for.

The prioritization of private IPPs above transmission and distibution in payments can exasperate this risk even further since utilities

NATHANIEL LOWBEER-LEWIS

CPCS - MANAGING DIRECTOR, Infrastructure Development

> **"Understanding and properly allocating risk is essential to ensuring the bankability and long-term viability of power projects.**

may have even less money and finance available to carry out necessary transmission and distribution investments. The same can be said for variable power projects, such as solar projects, that do not address peak evening demand typical for most utilities, therefore requiring peaker plants or other forms of generation to meet peak demand in place of solar generation. Solar PV plants will only have a net positive impact on financially strained utilities if they can help them save costs as compared to the operating costs of an existing generation plant that it will displace, or if it will generate net new supply that will otherwise not be built (in which case peak demand remains unaddressed).

Overall, it is important to understand the wholistic impact on a power system of any additional generation and then work backwards from there, identifying the most effective and simplest ways to manage risk and ensure sustainable investment plans. Solutions that are sustainable over the long term for both the buyer and the seller will ultimately lead to more sustainable contracts and set the stage for additional private investment over time.

Coupling Risk Mitigation and Utility Financial Viability

While there has been a growing recognition of the need for utilities to achieve cost reflectivity, governments and regulators in Africa are hesitant to increase electricity costs to consumers without providing additional benefits for this increased cost (such as increased reliability). They are also hesitant to increase costs to poor consumers or to allow costs associated with private investment that are higher than concessional debt that utilities often have some access to (though perhaps not enough to meet all investment needs). Another emerging alternative is to identify ways to achieve cost reflectivity without increasing tariffs, such as loss reduction programs that allow utilities to increase revenues by ensuring they collect for all power produced. This work can be counteracted by new IPPs where the net revenues generated by the new power to the utility will be less than the amount owed by utilities under PPAs, or where utilities may not be sufficiently prepared to mitigate evacuation risks.

Insurers providing risk mitigation mechanisms for IPP projects need to take a harder, critical look at the net effect on the utility's long-term financial status when providing these guarantees to ensure every IPP they support leaves the utility in a better long-term state than when they found it. Recommendations for insurance providers include:

1. **A deeper and more critical project risk analysis at the net financial impact of every IPP project applying for a PRG. This includes potential impacts of the project on the utility's cash flow and balance sheet, and the utility's realistic ability to evacuate power, to deliver that power to consumers, to deal with the grid integration and variability of power for solar PV and wind projects, among other factors.**

2. Indemnities from governments on the payments of PPAs are no longer enough. PRGs and other mechanisms need to be closer tied with utility viability improvements. The financial impact of an IPP on the African utility should be net neutral under a pessimistic case scenario. This may require agreement to increase retail tariffs to accommodate the new average cost of power after the new IPP project, transmission investments including milestones and timelines, loss reduction programs, or other undertakings from utilities and governments that ensure that the net impact of any IPP is expected to be positive not just from an economic perspective of the country, but on the long-term balance sheet and cash flow of the utility.

3. Government undertakings tied to a PRG should be strictly monitored, and failure to meet these promises should be equivalent to failure to pay the IPP and trigger the same repercussions under an indemnity agreement. Insurers should partner with other DFIs and donors to assess the utility's ability to manage the risks allocated to it under the PPA, and provide deeper technical assistance and financial support where needed.

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ARM-Harith INFRASTRUCTURE FUND MANAGER'S on Investing In Ghana's Port Infrastructure

ARM-HARITH INFRASTRUCTURE FUND LINES UP TO INVEST IN GHANAIAN PORT PROJECT

Takoradi Floating Dock Project

ARM-Harith Infrastructure Investment Limited ("ARMHIIL"), fund manager of the ARM-Harith Infrastructure Fund ("ARMHIF"), recently attended the Commissioning Ceremony held to mark the launch of Prime Meridian Docks Ghana Limited's ("PMD's") new offices located at the Port of Takoradi, Ghana. Also present at the ceremony were several Government of Ghana dignitaries, including Ghana's Minister of Transport, the Director-General of the Ghana Ports and Harbours Authority, and the Director of Takoradi Port, amongst others.

PMD is the lead sponsor of the Takoradi Floating Dock Project, which is designed for the development, financing, construction, installation, and ownership of a world class floating dock and ship/oil rig repair and maintenance facility, pursuant to a 25-year concession granted by Ghana Ports and Harbours Authority. Long-term financing for the project will be provided in the form of debt and equity from local and international sources. ARMHIF is lined up to provide equity capital for the project alongside PMD and other investors.

Speaking at the Commissioning Ceremony, Opuiyo Oforiokuma, ARMHIIL's Managing Director and CEO, said: "We are pleased to be involved in the Takoradi Floating Dock Project, not only because of its fit with ARMHIF's investment focus on West African transport infrastructure, amongst other sectors, but also because of the comfort that we have in the robustness and viability of the project, and the confidence that we have in the lead sponsors, PMD, their UK-based technical partners, Rigmar Services Ltd, and their South African-based financial advisers, Liquid Africa. In addition, we are encouraged by the commitment and support that the project is receiving from the Government of Ghana, notably via the Ghana Ports and Harbours Authority. Much credit must be given to PMD for their flexibility in accommodating new ideas for enhancing the project, and for their determination and doggedness in driving the project to a stage where financial close should be achieved soon."

ARMHIIL's Accra-based Investment Director, Ernest Nyarko, further said: "Another plus for us with this project is that its location in Takoradi is reasonably close to Aboadze where ARMHIF is an equity investor in the Amandi IPP, a 192.4MW greenfield Power Generation

Takoradi Port, Ghana

Plant that is currently under construction and scheduled to deliver power into supply in 2019. The Amandi Project will be crucial in helping meet Ghana's growing power needs, and will be, with its combined cycle technology, one of the most efficient power plants in Ghana. Logistically, the proximity of the two projects should help us keep a closer eye on our investments in Ghana. We expect the Takoradi project to be ARMHIF's second investment in Ghana. This demonstrates ARMHIF's long-term interest in, and commitment to, the country.

ARMHIF is already committed to other West African projects, including as an equity investor in the 459MW Azura-Edo IPP, a Power Generation Plant currently under construction on the outskirts of Benin City in Nigeria and scheduled to deliver power into supply in 2018, ahead of schedule. In addition, ARMHIF is financing the development of a 100MW Solar Photovoltaic AC Power Plant in Northern Nigeria, and has several other transport, power, and utilities opportunities in its deal pipeline.
"ARMHIF aims to make a solid contribution to improving infrastructure in West Africa, particularly Nigeria, by smartly and profitably deploying our investors' capital in infrastructure assets. Our participation in today's ceremony in Takoradi is in keeping with those objectives", said Mr Oforiokuma.

InfraCo AFRICA Begins Construction on Salima Solar in Mali

SALIMA SOLAR STARTS CONSTRUCTION

Kazimbe Village, Traditional Authority Kalonga, Salima District, Malawi: His Excellency Prof. Arthur Peter Mutharika, President of the Republic of Malawi, presided over a ground-breaking ceremony on Monday to mark the start of construction of the 60MWAC Salima Solar project. Salima Solar is being co-developed by InfraCo Africa, part of the Private Infrastructure Development Group (PIDG), and JCM Power. It is the first Independent Power Producer (IPP) of its kind in Malawi.

In his speech to an audience of Government ministers and invited guests, His Excellency said: "The time has come to address our power problem, now and for future generations … I want to say farewell to blackouts." He described the challenges facing Malawi's energy sector: historic underinvestment, the impact of changing climate on hydro power output and an imbalance between supply and demand. His Excellency concluded that: "The Salima Solar power project is taking a leading role in power generation," before calling on the private sector to continue investing into Malawi's power sector.
His Excellency and Madame Prof. Gertrude Mutharika, First Lady of the Republic of Malawi, were welcomed to the Salima Solar site by Hon. Aggrey Masi M.P., Minister of Natural Resources, Energy and Mining and by members of the project team including Justin Woodward, Co-Founder of JCM Power. Following a briefing about the project, His Excellency unveiled a plaque and signed the guest book. The event concluded with local dance performances and a fanfare played by the Malawi Defence Force Brass Band.

Hon. Aggrey Masi M.P., Malawi's Minister of Natural Resources, Energy and Mining, said: "The current administration has worked hard to ensure that Malawi's energy problems can be a story of the past. The Salima Solar project is very important. It is the first solar IPP to reach construction and will address some of the challenges the power sector is facing." He also expressed his view that the project will demonstrate the potential of the country's solar resource to other private investors.

JCM's Phylip Leferink acknowledged the collective efforts of the President, government ministers, ESCOM and local communities. He also recognised the continued support of PIDG, InfraCo Africa and its funders in progressing the project to construction. "We will now work to prepare the ground, ready to install 230,000 solar panels after the rainy season and anticipate that Salima Solar will be delivering power to the grid by the end of 2019," he said.

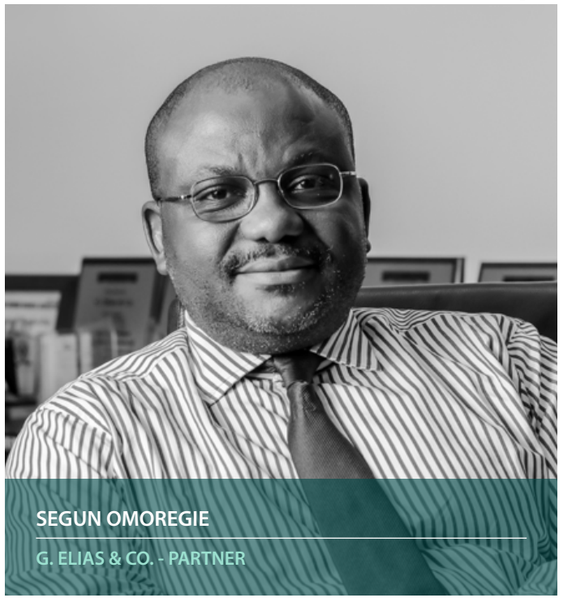
"I am delighted to be here with our partners to witness the ground-breaking ceremony for Salima Solar, an event which marks the culmination of significant work by all parties. The project will pioneer private sector delivered solar and increase access to clean, reliable electricity which is essential for economic growth." Justin Woodward, Co-Founder JCM Power

Elizabeth Hipwell of InfraCo Africa said: "The Government of Malawi's ongoing commitment to Salima has enabled us to start constructing this pioneering solar project. As His Excellency Prof. Mutharika has noted, further private investment into renewable power generation in Malawi will help to secure the country's energy future. We are delighted to have played a pathfinding role in demonstrating the potential of solar for future investment in the market."

InfraCo Africa and JCM Power are already building on their partnership to develop Salima Solar's sister project, Golomoti Solar, in the south-east of the country. Together, the two projects will increase Malawi's installed power generation capacity by over 80MW by 2020.

60MW PV project in Malawi

Segun Omoregie on Feasible Risk Allocation in Project Finance to Prevent Disputes



SEGUN OMOREGIE
G. ELIAS & CO. - PARTNER

What would be a feasible risk allocation approach to project financing power projects in Africa ?

For a typical power project in Africa and as one would expect anywhere else, effective risk allocation would not only improve project performance but would guarantee the bankability of the project. The rule of thumb in risk allocation for project finance is that risks should be optimally allocated to the party best able to manage such risk. This rule also applies to project financing of power projects in Africa. In practice, it is difficult to measure the risk appetite of a party.

Using the Africa experience, feasible risk allocation for power projects would vary with projects depending on factors such as, the sponsor, government support for the project, the structure of the off-taker, the generation technology (renewable and non-renewable), the location of the project, among others. While certain risks such as political risk, force majeure, change in law, change in tax and change in control would run through all the phases of the project, certain risks are peculiar to particular stages of power projects. For instance, construction risk will typically arise during the construction phase of the project while offtake risk would come up at a later stage usually after commercial operations. A viable allocation of the various risks at each stage of the project is inevitable for a successful project financing of a power project.

Using the 450MW Azura power project in Benin City, Nigeria, on which by the way G. Elias & Co., advised on, as a case in point, the various risks arising from the project were mainly addressed via three means namely, the Federal Government of Nigeria put and call option (PCOA), which granted the sponsors the option to put up the shares in the project company to the government in the event of early termination of the project. MIGA (Multilateral Investment Guarantee Agency) also provided political risk insurance; and then, WPRG (World Bank Partial Risk Guarantee) to mitigate government's failure to perform its obligations with respect to the project. The last two risk mitigants, that is the MIGA guarantee and WPRG, became imperative because of the complex nature of the project and the fact that major aspects of the projects were hinged on government supports (in the form of waivers and approvals). Lenders viewed the project as having benefitted from the "goodwill" of the Government then in power. This, in the lenders' opinion, exposed the project to huge political risk likely to arise from change in government and change in law. Hence the need to mitigate the risk and exposure of the lenders through the MIGA guarantee and WPRG.

The Azura project has been applauded and has become a reference for subsequent power projects in Africa especially for the risk allocation across the value chain of the project. For other projects in Africa, it is typical for political risk, change of law and tax to be allocated to the State party. This would be different for projects without any significant State party participation especially for off-grid power projects and independent power projects without government support. Risk allocation for such projects would typically be shared between the offtaker and the project sponsor, including risk of change of law and change of tax. These risks can however, be mitigated through insurance. The attendant high cost of the insurance would ultimately be passed on to the end-user (through tariffs).

Risk allocation being one of the main causes of disputes in project finance, a feasible risk allocation would therefore require a practical understanding of the risks inherent in the project. For a bankable power project, risks should be allocated to the party whose risk tolerance is higher and who is best able to manage it. The Azura PCOA and risk allocation model has become a template for independent power projects in Nigeria and across sub-Saharan Africa.

Azura Power Project - Benin City, Nigeria

> "Effective risk allocation would not only improve project performance but would guarantee the bankability of the project.

In your words, what would be a viable approach to the selection of risk disposal models when dealing with fiscally-stressed governments ?

For a fiscally-stressed government, alternative funding and financing models would be viable approaches for risk disposal. Options such as public private partnerships (PPP), "blended finance" model using development finance institutions ("DFIs") and private equity to mobilize funds, can also provide viable solutions when dealing with fiscally-stressed governments.

The fiscally stressed government should in turn provide its support by creating a conducive investment environment through consistent policies, tax incentives, formulation of clear road maps and honouring commitments under relevant government support agreements.

There is a need for the government to create confidence by establishing clear, predictable and legitimate institutional and legal frameworks especially in the areas of transparent budget process and integrity in the procurement process.

How can project finance participants manage risk based on their related resources to benefit their capacity for risk management ?

As earlier noted, risk allocation should be on the basis of the party best able to manage the risk. For the project sponsor there is need to ensure that the risk allocation aligns across the transaction documents, such that risks are well shared.

Failure to align the risks will alter the economics of the project in the event of a material change, such that where for example a concessionaire is required to pay liquidated damages to the state party for a breach, such liquidated damages are effectively passed on to the EPC contractor where the breach arose from a breach of the EPC contractor. In practice, for each risk assumed by a transaction party, the party expects to receive some benefit for assuming such risk.

For instance, an offtaker who has assumed the risk of change of law and tax would expect to get a lower tariff, while a seller that assumes the risk of exchange fluctuation expects to receive higher tariff from the offtaker. Although the party would have passed on a risk, ultimately that party is still bearing the cost of such risk one way or the other.

Azura Power Project - Benin City, Nigeria

How effective are risk allocation agreement negotiations in Power project financing when dealing with African Governments? What are your three recommendations going forward ?

Just as with project financing generally, risk allocation is usually tough to negotiate. This is because parties try as much as possible to pass on and avoid as many risks as possible. African Governments have been very supportive and open in risk allocation agreement negotiations. This is especially relevant because of the huge infrastructure deficit in Africa. The Federal Government of Nigeria, Azura project PCOA has been lauded. Aside the MIGA and WPRG, the bankability of the project was on the back of the Federal Government of Nigeria PCOA. This model has become a template for upcoming infrastructure projects in Nigeria and sub-Saharan Africa.

Three major recommendations would be as follows: firstly, the need for improved government support. There is need for conducive investment environment through consistent policy framework and implementation, clear road maps and honouring commitments under relevant government support agreements. To attract the much-needed investment for development in Africa, there is need for African governments to create confidence by establishing clear, predictable and legitimate institutional and legal frameworks. Secondly, there is also need for transparent budget process and integrity in the procurement process of African States.

Project sponsors should work closely with and so maximize the opportunities provided by DFIs. A major lesson from the Azura project was the flexibility of the DFIs on key structure issues. This in no little measure buffed greatly the bankability of the project.

Lastly, early engagement of key stakeholders (community, regulators and government parties), skilled and experienced advisers and professionals, is key for a viable power project.

Martin Kavanagh & Christophe Lefort on Rationalisation of Power Development Due to Government Fiscal Pressures

What are the key risk identification models available for power project financing in Africa ?

The risks associated with developing and financing a power project in Africa on a project finance basis fall into a number of categories, aside from the obvious technical and operational risks that are associated with any power project. Those risks can broadly be described in the following categories:

1. **Financial Viability:** this refers to the ability of the power producer to charge tariffs which are viable for the development costs and operational costs incurred.

2. **Certainty:** this refers to the ability of a developer and its lenders to be comfortable that the financial and regulatory landscape will not adversely change in the life of the project.

3. **Government risk:** frequently government action or inaction can cause distress to projects. This is not unique to Africa of course, but there have been many examples of governments not carrying out steps they are required to complete (either from a regulatory perspective or carrying out physical works or other enabling activities), with negative consequences for developers.

4. **Legal risk:** this refers to the ability of both developers and their lenders to feel comfortable that any legal rights they have will be able to be enforced in accordance with the law.

When confronted with strong fiscal pressures, governments tend to make politically and fiscally difficult decisions, how has this impacted project risk allocation in Africa ?

Pressure on the fiscal position of governments, along with over-stretching by many governments without a co-ordinated approach to liabilities and development of the power sector, has led to rationalisation in some countries either through internal political

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re-evaluation, or through intervention of external bodies such as the IMF. As countries have looked at the consequence of the liabilities either actual or contingent that they hold, they have frequently reacted by offering little or no support for new projects, either by choice or because the support of international institutions is not available.

The consequence of this is a direct impact on bankability and a real risk that projects will not proceed. The fundamental cause of this has been unstructured development of the power sector in many countries, and the granting of project rights to parties on an ad hoc basis rather than as part of a well thought through strategy. Affordability of power (to the country) is linked directly to risk allocation, and reform of the sector so that tariffs are viable is crucial otherwise the sector will never be viable.

Risk allocation is a major part of structuring a project finance transaction. What are your recommendations on the allocation of risk when governments are fiscally distressed?

The rule of allocating risk to the party which is best placed to absorb that risk ensures minimum overall cost because the risk premium factored in by the project participants is at its lowest. Frequently governments believe (or are advised) that they should pass as much risk as possible to the private sector, but because in power projects this usually results in the government or the public bearing the cost of the power, this idea is flawed.

The idea of trying to pass risk which can be passed is a good one, but only once the government has a proven track record and the private sector can therefore take on the risk without unreasonable cost.

This doesn't suggest that the government should ever take risks (such as technical or performance risks) which the private sector should always bear, but the same logic says that the government should not ask the private sector to bear risks it cannot control until the conditions for executing projects are so favourable that the private

sector should be willing to accept all risks of operating in a country.

What are your five recommendations on how the PPPs can establish an effective evaluation matrix of risk allocation and select representative parties ?

- Look at what power needs are in the country, where those needs are, and what sort of power is needed.
- Work out what activities the government will undertake and what the private sector will do (eg generation vs transmission vs distribution).
- Work out what tariffs will be payable and who will pay them.
- Ensure that the environment is conducive to "good" developers being willing to invest in the country and to bring lenders with them – don't make the mistake of trying to "win points" for the sake of it. Look after developers and their lenders by ensuring simple things are conducive to investment – allow money to flow freely, offer a stable legal and tax environment, offer protection against change in law and other political events, agree to do things as a government which the private sector can't easily do such as procure land, build transmission, etc.
- Once everything is signed up, do what you say you will do and build a reputation for being investor friendly.

> "The rule of allocating risk to the party which is best placed to absorb that risk ensures minimum overall cost because the risk premium factored in by the project participants is at its lowest."

South African 50 MW PV Solar farm at De Aar-De Aar Solar Power

Globeleq Investing in Zambia's Wind Energy Farm.

Photo Credit - DevelopmentAid

USTDA BACKS FEASIBILITY STUDY FOR 100-MW WIND FARM IN ZAMBIA

The U.S. Trade and Development Agency awarded a $1.15 million grant to Globeleq Zambia Wind Limited (Globeleq) for a feasibility study for an estimated 100-megawatt wind power plant in the Muchinga Province of Zambia. The study will be carried out by U.S. engineering firm, DNV GL Energy USA, Inc. of Katy, TX, with Globeleq providing financial, development and project management planning services.

As Zambia's energy generation has historically been dominated by hydropower, the Government is looking to diversify and incorporate other resources, including wind energy. This approach will better protect the energy sector from the effects of climate change. The project is anticipated to include 40 wind turbine generators connected to the national grid by a single-circuit overhead transmission line. The study will support Globeleq in finalizing the technical analysis needed for the project to seek financing, such as a wind energy assessment, as well as finalizing the design of the plant and equipment needed for construction.

"USTDA is pleased to support this study that will diversify Zambia's energy mix," said Thomas R. Hardy, USTDA's Director for Congressional and Public Affairs. "At the same time, this project will also lead to new opportunities for innovative U.S. companies in a growing sector in Zambia."

"We look forward to working with USTDA and having their critical support," said Paul Hanrahan, Globeleq's CEO. "This is a positive step forward for the project, demonstrating Globeleq's continued commitment to Zambia and the Government's renewable energy initiatives."

Marion Hill, Director, Renewable Advisory Services for DNV GL added, "We are pleased to be working with Globeleq and USTDA in Zambia, to advance wind power plant development, enable renewable energy, and, ultimately, provide greater energy security to Zambians."

This project supports the goals of Power Africa and the Electrify Africa Act which aim to increase capacity as well as support private sector involvement in Africa's energy sector.

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ABOUT GLOBELEQ

Founded in 2002, Globeleq has become a power industry leader by operating or acquiring interest in multiple power facilities across the world. Now with its focus on the African continent, the company's experience in implementing an array of generating technologies in different geographic locations, provides Globeleq with a unique perspective and strong foundation for developing new capacity.

Under the ownership of shareholders CDC (70%) and Norfund (30%), the cornerstone of our strategy is to be the trusted, reliable and committed partner of choice within the African IPP industry. We will achieve this by adding significant MWs of new power generation over the next decade while positively contributing and impacting the communities in which we operate.

With the support and expertise of our staff operating out of our London head office, our regional offices in Nairobi, Cape Town, and Doula, and our eight power plants located in Tanzania, South Africa, Côte d'Ivoire, Cameroon and Kenya, we currently generate approximately 1,300 MW, and have another 2,000 MW in development.

FMO Calls For Fair Pricing Of Solar Energy Projects To Encourage Local Participants

GEERT FIJNAUT
FMO - MANAGER, ENERGY ASIA AND EASTERN EUROPE

FMO CALLS FOR FAIR PRICING OF SOLAR ENERGY PROJECTS TO ENSURE LOCAL PROSPERITY AND REDUCE INEQUALITIES

The sharp decline in solar energy prices, that has broadly been welcomed as helping to bring affordable and sustainable power to local communities in emerging and frontier markets, may also have under-appreciated high social and environmental costs, Dutch Development Bank FMO warned on Thursday.

Geert Fijnaut, manager Energy Asia and Eastern Europe at FMO, said: "At a tariff of around USD 2.5c per KWh - as seen in a number of countries in our target markets - there is awfully little upside for developers and a lot of downside.

Any sort of setback in the procurement or construction of a solar plant will lead to returns that are dangerously close to zero, if not negative. This will lead to aggressive cost-cutting or, to use a nice euphemism, cost rationalization."

He was making the opening speech at the Unlocking Solar Capital Conference in Singapore organized by Solar Plaza, the renewable energy events and information company, and co-hosted by FMO. The development bank has financed a total of EUR 2.21 billion in renewable energy projects in target regions of Latin America, Africa and Asia, of which EUR 739 million was in Asian markets.

Fijnaut said too low solar power prices risk being counter-productive and may result in poor quality projects, which don't deliver on the promise of clean energy access. Developers and contractors can be pressured to take little account of social and sustainability criteria and engage in a competitive race to the bottom.

For example, with unfair compensation for local people whose economic livelihoods depend on the land used for the solar project; downward pressure on wages; unsafe working conditions and perhaps an over-dependence on lower-cost labour from neighbouring areas.

FMO
Entrepreneurial Development Bank

www.fmo.nl

ABOUT FMO

FMO was founded in 1970 and is a public-private partnership, with 51% of our shares held by the Dutch State and 49% held by commercial banks, trade unions and other members of the private sector. FMO has a triple A rating from both Fitch and Standard & Poor's

FMO is active in an international environment and is aware of the importance of being open to the needs and wishes of each stakeholder, while taking into account its own integrity and social responsibility.

FMO strives for a flawless reputation for integrity. Accordingly, we expect all employees, irrespective of their position, to behave beyond reproach. They should act, and in certain cases refrain from acting, fully as FMO expects a good employee to do.We have created an open culture based on respect, integrity and social responsibility. Our employees are engaged, want to make a difference and cooperate to create excellence

Uneconomic pricing might also preclude the acquisition of local technological knowledge and impede the development of domestic solar energy industries, because restrictive cost structures do not allow the flexibility to invest in human capital.

Geert Fijnaut concluded: "Governments need to realize that the race-to-the-bottom, when it comes to energy tariffs, is not sustainable and not even necessary to achieve their goals of cheaper and cleaner energy for their growing populations and economies."

A higher but still competitive price will place more emphasis on making sure that decent work is provided, and inequalities are reduced for the workers of these solar plants by providing better wages, safer work environments and fairer compensations for livelihood displacements.

AfIDA Members and Partners

AfIDA Would Like to Thank it's Partners for your Continued Support in Driving the Project Development Eco-system in Africa.

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FMO – Entrepreneurial Development Bank
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Issue Number 03

June-August 2018

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