Africa’s Energy Sector

AFRICA FINANCE CORPORATION

THE CHALLENGE

Power generation and distribution infrastructure across Africa is often inadequate, unreliable and costly, and this has constrained wider economic growth and development across the continent. As it stands:

- The combined power generation capacity of the 48 countries of Sub-Saharan Africa (SSA) is roughly that of Spain
- More than 600 million of the continent’s population lack access to electricity
- On current trends fewer than four out of every ten African countries will achieve universal access to electricity by 2050

Owing to outdated facilities and plants and a lack of maintenance, power supply in SSA is notoriously unreliable and power outages are frequent. This is of particular concern given emergency power is expensive and represents a considerable proportion of GDP in some countries.

A SOLUTION

Solving Africa’s energy crisis is critical to unlocking the full potential of the continent’s natural, economic and human resources. Harnessing renewable energy has made inroads, as has the U.S. presidential Power Africa initiative. This scheme intends to add more than 10,000 megawatts (MW) of new, cleaner electricity to the grid and increase access to electricity for at least 20 million households. So far Power Africa has leveraged more than $20 billion from the private sector for new on and off-grid projects in Sub-Saharan Africa.

THE ROLE OF AFC

AFC has sought to address the wider infrastructure divide by originating, structuring and executing projects in the African power sector. Lack of project structuring expertise and available risk capital has hugely restricted the success of large-scale infrastructure projects in Africa in the past and AFC seeks to address this problem by bringing to bear its project development expertise, financial advisory skills and investment, often in the form of equity. In the past six years, AFC has financed five power projects comprised of generation and distribution assets. These generation assets have a combined output of circa 800MW and the projects utilise both renewable and non-renewable sources of energy.

Renewable: Cabeolica wind farm – The $90 million 26MW wind power Cabeolica project based in Cape Verde is the first commercial scale public private partnership (PPP) wind farm in Sub-Saharan Africa. The project, consisting of 30 wind turbines, provides Cape Verde with more than 20% of its power needs, and is an economical, green and sustainable source of renewable energy to power economic development. AFC is the lead investor in Cabeolica SA, the special purpose vehicle established to develop, build, own and operate the project.

Non-Renewable: AFC has invested over $155 million in two Generation Companies and a Distribution Company in Nigeria, which is the largest power market in ECOWAS and has the largest growth potential in Africa. The corporation has also secured a mandate with WAPP to develop a 450 MW IPP in Benin and a 450 MW IPP in Ghana, and is the lead investor in the ongoing development of a 300 MW IPP in Mozambique. Please see overleaf for a case study on the Cenpower project: Kpone IPP

Cenpower

ABOUT THE PROJECT

The Kpone Independent Power Plant (KIPP) is a landmark $900 million energy project which aims to transform electricity generation across West Africa. Africa Finance Corporation (AFC) is the lead project developer, mandated lead arranger and largest equity investor in Kpone IPP, which reached financial close in December 2014. The project is being implemented by Cenpower Generation Company Limited, a Ghanaian special purpose vehicle created to develop the plant.

FIRST IN ITS FIELD: Kpone IPP project will represent:

- The first licensed IPP in Ghana
- The first greenfield project finance IPP in Ghana
- The largest IPP to be built in Sub-Saharan Africa in the last decade

It is a majority African private sector venture with key international partners:

- The founding shareholders are Ghanaian
- The construction company, Group Five, is African
- 67% of equity is held by African companies
- 83% of senior debt is issued by African lenders

THE CHALLENGES

The lack of precedents meant that the project faced a number of developmental and financial hurdles. These included strict international financing requirements within significant local constraints, as well as both real and perceived sector risk factors. For example the off-taker's insistence not to take fuel-supply risk necessitated the structuring of a $93 million Fuel Finance Facility. This facility, provided by the Development Finance Institutions, was specifically designed to address the significant constraints facing the Ghana Power Sector, including fuel supply challenges due to natural gas unavailability, liquid fuel price variability and issues with availability of liquid fuel (Light Crude Oil and Distillate) storage and treatment infrastructure.

BENEFITS

Kpone IPP promises to play a vital role in not only Ghana's future but in the African energy industry as a whole. The International Energy Agency noted that demand in SSA increased by 45% over the 12 year period from 2000 to 2012 as a result of rapid economic growth. Sustainable solutions to Africa's power deficit are essential to maintaining this momentum.

KIPP will improve Ghana's generation capacity by 10% when operational, provide 20% of thermal generation and supply power to over one million homes.

KEY FACTS

Technical Specification:

- KIPP will be a Combined Cycle Gas Turbine (CCGT) plant
- Generation capacity: 350MW
- Power transmission: 161kV
- Fuel storage capacity: 18,000 cubic metres

Core Equity Holders:

- AFC
- Sumitomo Corporation
- African Infrastructure Investment Managers (AIIM)
- Ghanaian Private Investors
- Netherlands Development Finance Company (FMO)

Core Debt Financiers:

- Rand Merchant Bank
- Nedbank
- Standard Bank
- Export Credit Insurance Corporation (ECIC)
- FMO
- Deutsche Investitions-und Entwicklungsgesellschaft
- Industrial Development Corporation
- Emerging Africa Infrastructure Fund
- Development Bank of South Africa

AWARDS

The landmark $887 million financing transaction has received five major awards:

- Winner of Africa Power Deal of the Year – PFI Thomson Reuters Awards
- Winner of Best Project Finance Deal – EMEA Project Finance Awards
- Winner of Infrastructure Deal of the Year – African Banker Awards
- Highly Commended for African Infrastructure and Project Finance Award – The Banker
- Power Deal of the Year – African Investor

AFRICA FINANCE CORPORATION

Africa's Telecommunications Sector

THE CHALLENGE

Often described as "the last great, untapped telecommunications market," at the end of 2013 Sub-Saharan Africa hadon aggregate the lowest mobile penetration rate of any region, at just under a third of the population, despite experiencing the fastest subscriber growth of any region over the last few years. This sharp increase is in stark contrast to the rest of the world where subscriber growth is slowing. The telecommunications sector is crucial for economic growth and development and is often viewed as a supporting factor in developing the transport and logistics sectors.

THE OPPORTUNITY

Improved economic conditions and rapid combined GDP growth over the last five years have seen Africa experiencing fast growth in this sector, which has transformed fundamental aspects of social and business life. The advantages of investment in this sector are many:

- Telecommunications growth in Africa has positively impacted incomes across the continent: in SSA, mobile revenues reached $35 billion in 2011, representing a GDP contribution of approximately 3%
- Recent Deloitte and GSMA research states that a 10% increase in mobile penetration in developing economies is likely to increase productivity by 4.2%

The mobile phone industry plays an important role in Africa's telecommunications sector. A lack of landline-based infrastructure has led to mobile devices becoming the most popular way to communicate or access the internet.

Investment in the sector is increasing; according to the World Bank, total private sector investment between 1998 and 2008 in the SSA telecommunications sector reached $49 billion, and this upward trend has continued.

THE ROLE OF AFC

The AFC's most significant investment in the telecommunications sector has been the Main One Cable System – please see overleaf for case study.

Main-One

ABOUT THE PROJECT

The Main-One System is an undersea fibre optic cable system that links countries on the west coast of Africa to Europe and other parts of the world. The cable system consists of approximately 7000 km of fibre optic cable between Portugal and Nigeria with branching units to the Canary Islands, Morocco, Senegal, Côte d'Ivoire and Ghana. The cable system, which has been operational since 2010, was completed on time and on budget. Since then, Main One has developed a reputation for highly reliable services and has become the provider of wholesale Internet services to major telecommunications operators, ISPs, government agencies, large enterprises, and educational institutions in West Africa.

Main-One currently delivers on an open access model with 1.92Tbps of bandwidth (equivalent to ten times the available capacity on the SAT-3 cable and approximately 20 times the available satellite capacity across SSA). A second phase of the project that will extend connectivity to the greater part of the Gulf of Guines and Central Africa is under construction. A further phase will see the extension of the cable to Southern Africa.

Main-One has recently built and commissioned a Tier 3 Data centre to compliment its connectivity business. The data centre is operational and has begun to provide services to a wider segment of the business community.

Africa Finance Corporation (AFC) is one the largest investors in Main-One.

FIRST IN ITS FIELD: The Main-One project represents:

- The first wholly privately African-funded licensed submarine cable along the West African coastline
- The first private submarine cable landing licenses in Nigerian and Ghana
- The first private cable to deliver services in West Africa
- The highest lit capacity in West Africa to date with upgradeability to reach 4.96 Tbps
- The largest IP NGN network deployed in West Africa on DWDM systems for Internet Transit – Cisco Carrier Routing System (CRS 3)
- The largest regional Tier III carrier neutral data-centre

BENEFITS

- Main-One has dramatically improved regional connectivity and access and with significant technology/broadband cost reductions to local businesses and consumers
- Leasing and capacity sales to leading local telecoms operators has generated activity and revenue for these companies, further promoting sector growth
- Main-One delivers 1.92Tbps of high capacity bandwidth – equivalent to ten times the capacity of previous fibre optic cable serving West Africa, and more than 20 times the satellite capacity available across SSA
- Main-One has spearheaded broadband penetration in African countries
- The project is creating better access of educational institutions to wider pool of knowledge and information

FINANCING HIGHLIGHTS

- AFC's equity commitment of about $37 million out of a total $120 million makes it one of the largest investors in Main One
- Other Investors include, MST (Promoters),PAIDF, FBN Capital, and Skye Bank
- Current debt financing is by local banks
- Sponsors are local African entrepreneurs and institutions
- Phase one of the project (the cable from Portugal to Ghana and Nigeria with branching points on key countries on the West African Coast) was delivered at a cost of $240 million
- Awarded: African Banker Deal of the Year, 2009; and Private Equity Africa Development Impact Award, 2012

Africa's Transport & Logistics Sector

AFRICA FINANCE CORPORATION

THE CHALLENGE

The diversity within the 54 nation states of Africa is mirrored within the Continent's transport sector. There is huge variation in the quality and maturity of existing transport networks and in infrastructure investment, translating into low connectivity between the countries and creating problems for supply chains. As an example, according to the World Bank it takes 12 days to export a container from Egypt, at a cost of $625, while it takes four times as long to do so from Angola, at nearly triple the cost.

It is also worth considering:

- In many nations the cost of infrastructure improvements required dwarfs current GDP
- Inadequate transport can stall growth in economies by failing to keep pace with resource potential. This happened in Mozambique in 2013 when flooding on a crucial rail line interrupted coal shipments for two weeks
- Africa's terrain is extremely varied, from desert to savannah and rain forest: it becomes more challenging under these conditions to build road and rail networks, bridges and tunnels
- It is often unclear who will pay for and run the new infrastructure required across the continent: private companies are starting to make major investments but the investment gap remains high and lots more needs to be done

THE OPPORTUNITY

Improving the transport infrastructure and connectivity of the world's fastest growing continent could reap great rewards and steps are already being taken in the right direction. Over 70% of the world's biggest consumer goods companies are already operating in Africa, and a number of large multinationals are investing in the region, providing a key opportunity for the transport and logistics sector.

THE ROLE OF AFC

Recognising the pivotal importance of developing better quality infrastructure in this sector, AFC has invested in a number of projects that are designed to improve transport and logistics links throughout Africa:

Ethiopia: AFC provided financing for Ethiopian Airline's fleet expansion via the $668 million acquisition of five Boeing 777-200 LR aircraft, allowing the airline to stay abreast of the latest developments in passenger aircraft technology. The financing comprised of senior debt capital of US$ 568million, subordinated debt of $85 million and an equity investment of $15million.

South Africa: The Bakwena Toll Road consists of a 95km section of the N1 highway running from Pretoria northwards, and a 290km section of the N4 highway running from Pretoria westwards, to the Botswana border. The route was designed to form part of the Maputo development corridor and in turn, stimulate agriculture, manufacturing, mining and tourism by connecting South Africa's industrial and commercial heartland, the Witwatersrand, with its nearest deep water port in Maputo, Mozambique. The toll road has been fully operational since December 2004 and has seen a significant decrease in transportation costs since its inception, reducing travel times and vehicle operating costs through improved road surfaces.

Cote d'Ivoire: Please see overleaf for a case study on the Henri Konan Bedie Bridge

Henri Konan Bedie Bridge

ABOUT THE PROJECT

The Henri Konan Bedie Bridge is an Africa Finance Corporation financed flagship $365 million public private partnership (PPP) project in Abidjan, Côte d'Ivoire. The project involves the design, construction, financing, commissioning and operation of a 6.4km highway and 1.9km bridge with three lanes in each direction across the Ebrié lagoon, connecting Abidjan's residential Riviera district directly with the commercial district of Marcory.

The new bridge eliminates the need to use the heavily congested 9km route via existing bridges. The bridge includes a toll station on the north side of the lagoon and footbridges for pedestrians.

Bouygues Group is the main project sponsor and has a 30 year concession with the Ivorian Government to design, construct, develop and operate the new bridge. AFC provided long tenor financing facilities and was the mandated lead arranger for the mezzanine tranche of financing for the project.

BENEFITS

Abidjan, the commercial heart of Cote d'Ivoire, is a fast growing post-conflict metropolis with a population in excess of seven million. Since the late 1990's Cote d'Ivoire has experienced serious political upheaval and civil conflict, paralysing international private sector investment. Infrastructure in Abidjan is in dire need of investment and expansion.

FIRST IN ITS FIELD: The Henri Konan Bedie Bridge is the first of a new program of privately funded infrastructure development projects being implemented by the post-conflict Government of Côte d'Ivoire.

The bridge:

- Reduces transportation costs by easing congestion on the existing two (non-tolled) bridges
- Provides quick and easy access to the centre of Abidjan
- Provides direct and indirect employment during the construction and post construction phases
- Develops local capacity

FINANCING

- AFC was the mandated lead arranger of the mezzanine tranche of the financing and provided an aggregate commitment of $55 million comprising commitments to the senior and mezzanine loan facilities, and an equity investment
- Government contribution to the project is in excess of $90 million
- MIGA provided $145 million in insurance cover for equity investments and loans

KEY FACTS

- The project special purpose vehicle (SPV), SOCOPRIM S.A., has the following shareholders: Bouygues Travaux Publics, Bouygues Batiment International, SETAO, Côte d'Ivoire Govt., Banque Nationale d'Investissement, Total Côte d'Ivoire, PAIDF
- The core financiers of the project are: Bouygues Group; AFC; African Development Bank (AfDB); FMO; PAIDF; BOAD (Banque Quest Africaine de Developpement); BIDC (Banque d'Investissement et de Developpement de la CEDEAO); and BMCE (Banque Maroccaine du Commerce Extérieur)
- The project has received the following international awards: International Finance Corporation Emerging Partnerships top ten Public Private Partnerships (PPPs) in Africa; Euromoney Project Finance Deals of the Year, 2012: African Transport Deal of the Year; EMEA Finance Project Finance Award 2012 – Best infrastructure deal in EMEA; Africa Investor Leadership in Sustainable Investment in Africa, 2011

Africa's Heavy Industry Sector

THE CHALLENGE

Despite Africa's wealth of natural and mineral resources, the continent has yet to see sustainable growth in the heavy industries sector. Raw materials are normally exported with little or no value added and manufacturing contributes relatively little to Sub-Saharan Africa's GDP- according to the World Bank, only 13% in 2012.

Several challenges limiting the development of the industry include:

- Poor quality supporting infrastructure- inadequate power supply and weak transport networks
- Low availability of industrial project sponsors and limited project management capacity for large-scale projects
- Financing requirements- large capital investment is normally needed to fund heavy industry projects

THE OPPORTUNITY

Africa's population, which already exceeds one billion and is growing at 2.2% each year, provides companies looking to invest in the sector with an ever-expanding consumer base and a large labour force. The region's human capital, combined with the abundance of natural resources, is making SSA an attractive investment option for both local and international heavy industry and manufacturing firms.

THE ROLE OF AFC

In order to promote the development of the heavy industry sector, AFC has supported a number of relevant projects by offering project management expertise and providing financing, both direct investment and debt provision.

So far, AFC has financed major projects relating to cement, ammonia/urea and phosphates. These projects are located in East Africa, South Africa, Nigeria and the DRC. Over the next few years the corporation plans to focus on industrial project development and mobilising financing in partnership with other institutions. The current project pipeline includes pulp and paper manufacturing, potash, glass manufacturing, small-scale steel plants and refinery operations, as well as continued investment in ammonia/urea production.

One of AFC's largest investments in heavy industry is ARM Cement (formerly Athi River Mining Ltd.) Please see case study overleaf.

ARM Cement

THE IMPORTANCE OF INVESTING

As urban growth accelerates across Africa, the construction and manufacturing sectors are set to boom. The raw building material that is essential to the development of housing and infrastructure needs to be produced locally and in a cost-effective manner in order to maintain this growth momentum.

ABOUT THE PROJECT

ARM Cement, established in 1974, is a publicly held company listed on the Nairobi Securities Exchange. ARM is one of the largest cement manufacturers in the region. It engineers, builds and operates world class cement plants, with lower than industry average capital costs, to supply Africa's growing infrastructure, housing and construction needs.

ARM is also a leading manufacturer of sodium silicate, lime, industrial minerals, formulated fertilizers and special building products in East and Southern Africa. ARM has subsidiaries operating in Kenya, Tanzania, Rwanda and South Africa.

In 2012 the Africa Finance Corporate (AFC) invested $50 million in ARM Cement.

BENEFITS

Cement production is a highly capital intensive industry but produces significant benefits, including:

- Direct and indirect employment
- Local capacity development
- Utilisation of lacal primary industrial products
- Locally produced materials needed to build Africa's infrastructure

AFRICA FINANCE CORPORATION INVESTMENT

Since listing in 2007, ARM Cement expanded its operations through internally generated cash flow and borrowing. However, the capital intensive nature of cement projects resulted in the company seeking a potential financing partner to take a significant minority stake in the business to help fund growth. ARM looked to AFC to provide advice, structure, execute and co-invest in the company.

In 2012, AFC provided a $50 million investment in the form of convertible debt in ARM Cement. ARM intends to use the investment to expand its operations and grow the business regionally through the development and construction of a lime plant in Tanzania, a cement plant in South Africa and expansion of ARM's cement capacity in Kenya.