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ENERGY

Plugging Africa's power gap

The continent's energy sector offers plenty of opportunities for private investors, but the lack of bankable projects remains a considerable challenge, writes Siddharth Poddar

Africa's energy woes are well-documented. An estimated 600 million people living on the continent do not have access to electricity. According to the World Bank, blackouts alone are responsible for shaving around 2.1 percent of the annual GDP of sub-Saharan African countries; and each year, the average manufacturing firm in the region loses 5.5 percent of annual sales due to power outages.

"Of the 1.3 billion people on the planet who don't have access to a reliable energy supply, many of them are in Africa. That is not a situation that is going to change any time soon. In fact, trillions of dollars of investment are required to meet 2035 energy access targets," says Lucy Heintz, partner at Actis' energy practice.

Sev Vettivetpillai, Abraaj Group partner and global head of its Thematic Fund Business, says that Africa's power supply has historically been characterised by a lack of investment. "Moreover, the growth in African economies in the last 10 to 12 years has led to increased urbanisation, and an expansion of the middle class in terms of disposable income and absolute numbers. Which, in turn, has led to increased economic activity, resulting in further supply shortage," he says.

"Reducing the electricity gap in Africa is very high on the agenda of governments, sub-regional organisations, the African Union, African Development Bank, the World Bank and others," says Honore Dainhi, regional director for Africa at the United Nations Office for Project Services (UNOPS), adding there are several initiatives and programmes that seek to improve access to electricity across the continent.

Plugging that gap will not come cheap, though. According to The Economist Intelligence Unit, between \$60 billion and \$90 billion is required annually for Africa to address its energy gap – about four times the amount invested in 2014.

A DISTRIBUTED ENERGY REVOLUTION

Scott Mackin, managing director and co-president of Denham Capital, says Africa's dire need for power opens opportunities

“There are a lot of projects that are talked about, but they are far from being real bankable projects” Alli



broadly in three categories: the first is baseload power, which he expects to be predominantly gas-fired, in particular LNG; the second is renewable energy, with both wind and solar having the potential to undercut Africa's variable cost of power; and the third (closely related to the second) is off-grid power solutions.

Providing access to the grid is an enormous challenge in Africa. Mackin says that even by 2030, it is estimated there will still be some 500 million people without direct access to the grid. Considering it will not make economic sense to build transmission infrastructure in many places, especially in rural Africa, there is a growing consensus that if electricity access is to be increased any time soon, it has to be done by working around this limitation.

This has become possible as renewable off-grid technologies have become cheaper. The falling cost of solar panels, for example, has led to the proliferation of independent, standalone solar set-ups in rural homes in parts of Africa, for instance.

Like Mackin, Meridiam founding partner and chief executive Thierry Déau sees a lot of opportunity in renewables, especially in wind and solar, following green energy commitments by a number of countries in the region.

One of the major factors in favour of renewables, besides their obvious environmental benefit, is that they are now cost competitive against most other technologies in Africa. Mackin argues they can undercut the variable cost of

power today and can be competitive even over the long-term, thanks to a dramatic decrease in the costs of solar and wind.

Additionally, renewables avoid a key logistics issue – getting fuel to power projects – he points out. By obviating the need for fuel, renewables also bypass commodity risk. “When a government signs a long-term power purchase agreement (PPA) for a wind or solar project, they are fixing the US dollar price now, typically with only an inflation adjustment and no additional price flex for gas risk or oil prices,” explains Heintz.

Renewable energy can also be delivered more quickly than traditional technologies, with wind projects typically constructed in about 12 months for an average-sized project. Solar can be even shorter than that, compared to the two- to three-year construction timeframe for a gas plant. For a region with urgent power needs, this is another big plus point.

THE BANKABILITY ISSUE

That there is a requirement for power investment in Africa is in no doubt. However, not all of that power deficit is easily convertible into bankable projects.

“There are a lot of projects that are talked about and have a certain degree of positive aspects to them, but they are far from being real bankable projects that investors can invest in,” says Andrew Alli, chief executive of Africa Finance Corporation (AFC).

A case in point is the storied Grand Inga Dam, in the Democratic Republic of Congo. “We know that the water resource exists; we know that it is physically possible to build a dam; we know that there is demand for power across Africa; and we know there is interest in getting the dam built. So in theory, you have all the ingredients to make a project. But who is going to build it, what is the plan, what are the agreements, who will pay for it, and how is the power going to be transmitted?”, one investor exclaimed in exasperation.

“When a government signs a long-term PPA for a wind or solar project, they are fixing the US dollar price now” Heintz



Vettivetpillai says one of the underlying issues is that many of the power concessions awarded have not reached financial close. Or when they have, there has been trouble post-financial close with equity investors, debt providers or both having been “dissatisfied with the manner in which the project has developed in terms of its contractual obligations”.

Heintz says there are currently many developers actively looking for new opportunities in Africa, and “while this is great and exciting, many of them do not yet have a full appreciation of what it takes to get a bankable PPA and to achieve a project financing”. Governments are not always helpful either, with Vettivetpillai contending that too many tend to “focus on who is providing the cheapest tariff”, which may not be viable over the long term.

The AFC also recognised the need for in-house project development some time ago, says Alli. One project where that approach paid off handsomely was in the development of Ghana’s \$900 million Kpone Independent Power Project, where AFC played a leading role and which became the country’s largest IPP when it reached financial close in early 2015. Backed by \$650 million of bank debt, the project’s successful closing demonstrated healthy lender appetite for well-structured African energy projects.

STRUCTURAL CHALLENGES

Outside of individual project bankability, there are also structural impediments that continue to cast a cloud on Africa’s power sector.

Tariffs are a case in point. As Dainhi points out, tariffs are generally too low, with governments reluctant to remove or at least substantially reduce subsidies in the electricity price structure. “There is a long tradition of subsidising energy costs, so for governments to come out of that takes a while,” Déau says.

“Low tariffs are okay when you are paying for that electricity, but there is not

enough electricity, so at the end of the day the cost of not having power is higher than having more expensive power,” Alli adds.

Then there is the high credit risk associated with state-backed entities that are generally the offtakers for the power produced. Heintz says offtaker creditworthiness is the most common issue Actis encounters. “The sectors are generally pre-liberalisation and have tended to rely on emergency generation, which means that liquidity support and payment security is typically required,” she explains.

Of national utilities, Déau says: “Most of them are still state-owned and many are poorly run and struggling for efficiency gains.” He adds that many of the utilities that may sign PPAs may not have the ability to support the financing, resulting in a need for government guarantees. “When you require guarantees and there is a risk premium, then it’s not very easy [for investors],” he comments.

Investors all agree that governments in the region need to prioritise regulatory and tariff reforms; break vertically-integrated state monopolies that control production, transmission and distribution; and open the sector up to competition. But political will has been slow to follow good intentions.

Moreover, funding remains a key issue. Generally speaking, there are limited sources of long-term funding available that are willing to take this type of risk, according to Alli. The problem is compounded by the fact that most of these sources tend to be US dollar-denominated while electricity is paid for in local currency. Therefore, even the funding one can get tends to generate a very large currency exposure risk.

That said, investors believe things are getting better, with many utilities having restructured.

Broadly speaking, though, power is still a nascent industry in Africa and getting from concept to reality takes a lot of work. But that, as Mackin put it, is also where the opportunity lies. ■

2.1%

Amount shaved off sub-Saharan Africa’s GDP by blackouts

\$600m

Average yearly public assistance to energy sector since mid-90s

24%

of sub-Saharan Africa has no access to electricity

28GW

Minus South Africa, sub-Saharan Africa generates as much power as Argentina

56

Days per year during which manufacturers experience power outages

Source: World Bank