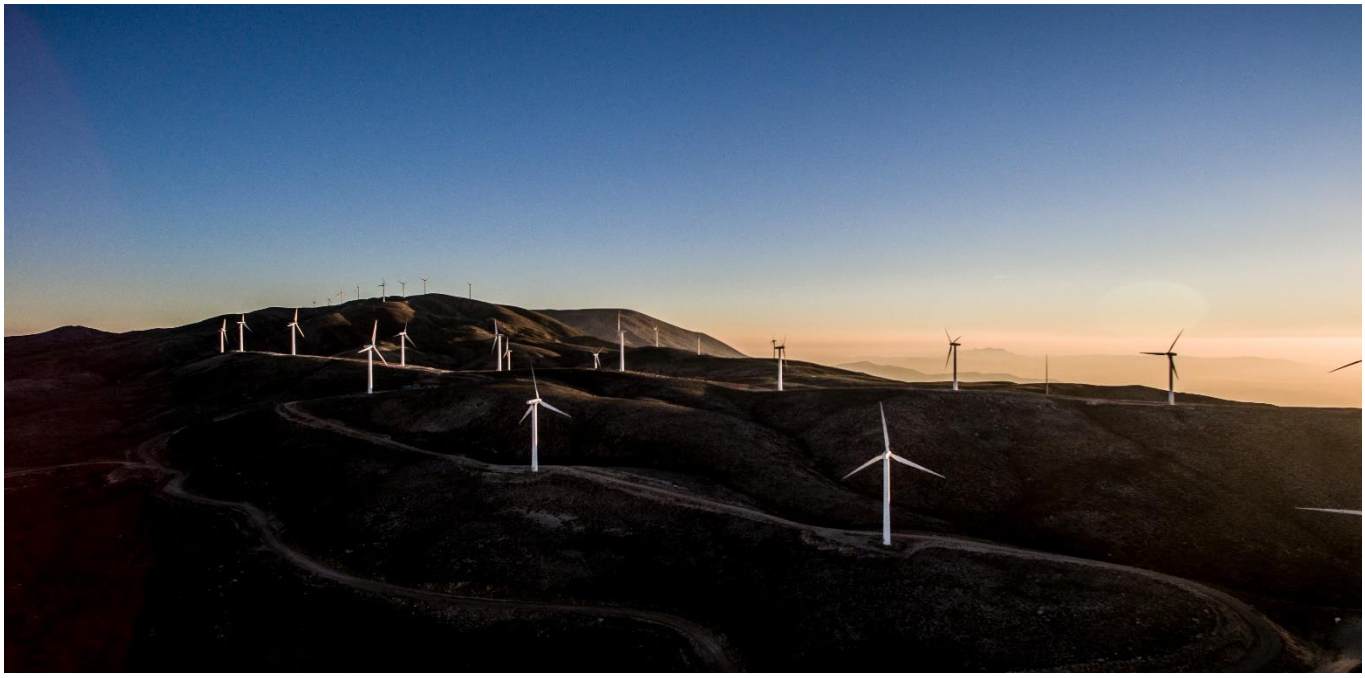
CLIMATEFOCUS

Using Climate Finance to Reduce Currency Exchange Risks



Key Points

- Securing energy access for all by 2030 will require annual investments of over US$ 50 billion, of which 95% will need to flow to sub-Saharan Africa.
- Underdeveloped domestic capital markets mean that international financiers are needed to catalyse investments in renewable energy projects in Africa.
- Financing in currencies such as the US dollar or euro creates a currency exchange rate risk when revenue streams are booked in a local currency.
- When electricity offtakers pass on the resulting price volatility to end-consumers, one crucial advantage of renewable energy—the long-term price stability reflecting predictable operating costs—is lost.
- Climate finance can de-risk investments by shielding existing and future renewable energy activities from exposure to exchange rate risks. This can be done in one of three ways:

  I. In the short-term, climate finance can support national electricity offtakers in defining and implementing currency hedging strategies.

  II. In the mid- to long-term, it can support initiatives that leverage local capital markets and enable project finance flows in local currencies.

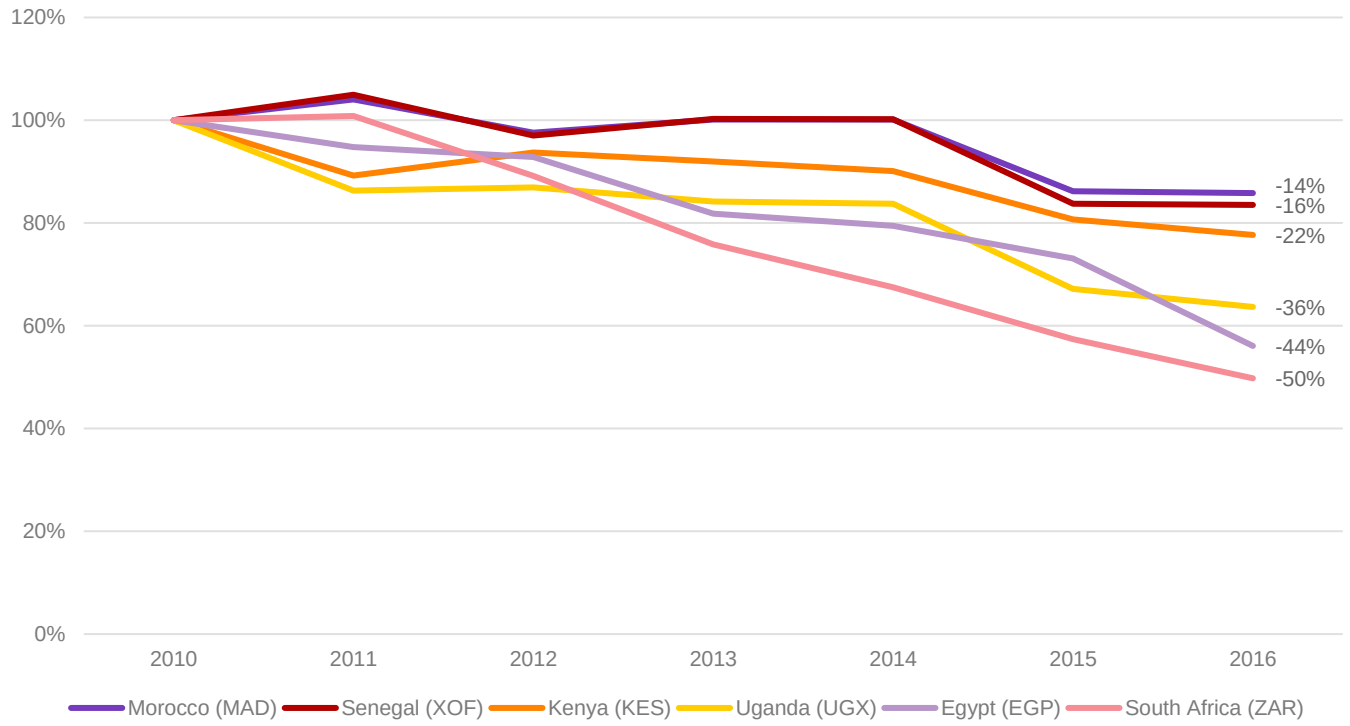
  III. Climate finance can also be deployed in a results-based fashion, stepping in to make up for unrealised carbon revenues.

A Costly Mismatch

In countries with a mature domestic financial sector, project financing of renewable energy investments is generally structured with debt and equity denominated in the local currency. This means that both the upfront capital expenditures and future revenue streams generated by these assets are handled in one single currency. In most African countries, domestic financial markets or state budgets are not able to deliver the volumes of project finance needed due to insufficient levels of capitalisation. International financiers step in to close this financing gap, offering hard currency[1] financing in US dollars or the euro. While this enables independent project producers (IPP) to reach financial closure, financing in foreign currencies creates currency exchange rate risks when end-consumer electricity tariff rates are charged in a local currency. For the entity that is exposed to this risk—commonly a state-owned electricity offtaker that commits to hard currency payments to the IPP through a long-term Power Purchase Agreement (PPA)—the resulting asset-liability mismatch can become very costly if left unmanaged.

As a result of the uncertainty in currency fluctuations, international investors opt for hard currency PPAs or agreements that are settled in local currency but are indexed to the currency of financing. While such arrangements protect investors, the currency exchange rate risk is not resolved but merely passed on to public electricity offtakers. And as national offtakers charge end-consumers electricity tariffs in local currency, the currency mismatch remains. Typically, this arrangement does not work in favour of offtakers and the governments that support them; most African currencies follow a depreciating trend against hard currencies over time (see Figure 1). Such local currency devaluation puts pressure on state budgets as PPA servicing costs rise. In scenarios where offtakers fully pass on the price volatility to end-consumers, one crucial advantage of renewable energy—the long-term price stability made possible through predictable and consistent operating costs over time—is lost.

Figure 1: Most African currencies follow a depreciating trend against hard currencies over time. This figure shows the currency development of selected African countries against the US dollar between 2010 and 2016



[1] A hard currency is a globally traded currency that is unlikely to fluctuate greatly in value and serves as a reliable and stable store of value

Take the example of Kenya. To attract foreign direct investment in the energy sector, the Kenyan government has been granting international project developers long-term PPA guarantees indexed to the US dollar. The national feed-in-tariff is based on the installed energy capacity and technology types, varying between US$ 0.0825 per kWh for large hydropower projects to US$ 0.20 per kWh for off-grid solar PV. The scheme has enabled the implementation of flagship projects such as the 110 MW Olkaria III project, which marks the first privately funded geothermal project in Africa. The Kenya Power and Lighting Company (KPLC) purchases the power generated by the plant under a 20-year US dollar-indexed PPA that is partially adjusted to the US Consumer Price Index. The government guarantees the payments, thereby also taking on the bill for any additional costs associated with a weakening Kenyan Shilling.

Without the security of hard currency-denominated PPAs, foreign direct investment would drop

Uganda is another case. Its largest operating hydropower station—the 250 MW Bujagali hydropower project financed by a consortium of financial institutions including the European Investment Bank and the International Finance Corporation—secured a 30 year long US dollar denominated PPA. Since the commissioning of the project in 2011, the Ugandan Shilling has depreciated by over 30% against the US dollar. With the government keeping the national electricity tariff fairly stable over the years, the consequence has been a growing financial pressure on the state budget as it accommodates a rising PPA payment obligation in local currency terms.

However, international investors are not to blame here. Whereas the local currency depreciation witnessed in many African countries strains public finances, project financiers do not gain from this arrangement and only aim to secure a normal, risk-adjusted return on invested capital. Without the security delivered through hard currency denominated PPAs, international investors would not be able to commit the volume of capital needed to get large-scale renewable energy projects off the ground. And without foreign direct investment driven by private sector financiers, many African states will lag behind in the realisation of clean energy projects.

In most cases, governments take on the bill for the costs associated with a weakening local currency

Box 1: **Impact of currency volatility**

The volatility at which exchange rates can change over a relatively short period of time is a warning to how drastic the consequences of unmanaged currency risk exposure over the duration of a PPA can be. The recent development of the EUR/US$ exchange rate is a case in point. The euro appreciated by close to 15% against the US dollar between April and September 2017, driven by the European Central Bank's signalling of a slowdown of its asset purchase programme. IPPs in Africa that have taken on US dollar-denominated loans at the start of the year and service this debt by exchanging a local currency pegged to the euro (e.g. the West African CFA Franc), witnessed a decline in debt servicing costs as a result of this. An opposite price movement between the currency pairs could however have resulted in liquidity issues for unhedged IPPs. Such instability is undesirable as it makes financial management difficult and can undermine the profitability of renewable energy investments.

Climate Finance Can Help

In the run-up to the global climate change conference hosted in Paris in November 2015, countries submitted pledges outlining their intended efforts to reduce national emissions and adapt to the impacts of climate change. From the 53 Nationally Determined Contributions (NDC) submitted by African nations, 28 states have made pledges related to renewable energy generation. These amount to a cumulative generation capacity of 102 GW by 2030, requiring an investment of close to US$ 250 billion.[2] The International Energy Agency forecasts that under a "new policies scenario"[3], the renewable energy capacity in Africa is expected to increase by over 100 GW by 2030.[4] Regardless of the actual scale, international climate finance is set to play an important role in enabling African countries to transition to low carbon development pathways. Given the restricted availability of public funds, climate finance institutions will need to carefully assess where its funds can maximise impact and leverage private sector capital. Targeting energy market reform and contributing to a framework that alleviates the currently observed asset-liability mismatch caused by currency exchange exposure is one avenue through which progress can be achieved. There are three broad strategies that can remedy the problem at hand.

[2] Global Economic Governance Initiative (2016) Renewable Energy Investment in Africa and Nationally Determined Contributions

[3] This scenario describes the probable pathway for energy markets based on the continuation of existing and announced national policies and measures

[4] International Energy Agency (2014) World Energy Outlook 2014

Implement Currency Hedging

In the short-term, international climate finance can be used to assist national offtakers and their backers with defining and implementing currency hedging strategies. At the heart of such strategies is the identification of parties that are best positioned to take on and manage currency exchange rate exposure. Cost-effective execution of such strategies is key, as hedging comes at a cost that will need to be born either by project financiers or host country governments. Hedging less liquid currencies—such as the Ugandan Shilling or the Rwandan Franc—may not be commercially viable and can currently only be handled through specialised vehicles that develop the conditions to enter currency swap contracts for less common currencies. Where possible, the cost of hedging these more 'exotic' currency pairs (as applicable to most African currencies except the South African Rand) can reach 6-10% annually, a cost that can considerably diminish the attractiveness of attaining a low-interest hard currency loan in the first place. Climate finance could serve to initially cover the (partial) costs associated with hedging currencies or to enable the underwriting of long-term fixed currency swaps, thereby managing exchange rate risks on behalf of public authorities in countries that have entered into long-term, hard currency PPAs with IPPs. Climate finance could also be used to bundle hard currency denominated loans with cross-currency swaps to make local currency loans directly available to IPPs. As demand for such currency hedge products increases, transaction costs should fall over time, eliminating the need for continued public finance support. More importantly, experience of implementing such hedging strategies would accustom national beneficiaries with the process and reduce the hesitance to engage, which is currently observed in many public institutions across Africa.

Strengthen Local Capital Markets

In the longer-term, climate financiers should support initiatives that prioritise improving local capital markets and enable project finance flows in local currencies. The asset-liability mismatch can be overcome altogether once local financial institutions are mature enough to finance large-scale domestic investments in the renewable energy space. Financing in local currency—if affordable—would also be beneficial to IPPs as it would eliminate the risk of an offtaker defaulting on its PPA obligations in a period of major local currency devaluation. Climate finance should be used i) to capitalise local financial institutions through local currency-denominated credit lines; ii) by extending local currency financing directly to IPPs; or iii) through the provision of guarantees that enable local banks to prop up domestic lending activities to the renewable energy sector. Capital for this purpose could either be drawn from earmarked budgets, or in regions with more developed capital markets, be raised through the issuance of local currency (climate) bonds. Regional development banks are already progressing on this front. The African Development Bank has successfully issued local currency bonds in South Africa, Uganda and Nigeria. Another example is the West African Development Bank, which extends local currency credit lines to a number of members of the Economic Community of West African States. In each case, climate finance should be applied in situations where regular finance is in short supply and needs a 'push' in the form of guarantees or first loss mechanisms to safeguard private investors. As such, it should complement national capacities to deliver project finance priced in local currency, which may be constrained by the degree of domestic savings in the first place. Climate finance could also be structured to enable local commercial banks to issue loans with longer maturities to match the long payback periods of capital intensive renewable energy investments. Both applications would leverage significant sums of commercial private sector finance.

Pursue Results-Based Finance

Last but not least, climate finance could be deployed in a results-based fashion, for example by building on the current infrastructure of international carbon markets. In Africa alone, there are currently around 100 renewable energy projects registered under the Clean Development Mechanism (CDM)[5], with a total installed capacity of 5.6 GW and a combined annual greenhouse gas emission reduction potential of 16.8 million tonnes of CO_2 equivalent. A large proportion of these projects are (co-)funded by international financiers, and rely on US dollar PPAs signed with public offtakers. In some cases, the government has a claim over a share of the carbon revenues derived from the sale of carbon credits; a structure in part devised with the aim of hedging the offtakers' exposure to the long-term PPAs offered to these projects. With the price of Certified Emission Reductions (CER) below EUR 1 per tonne this hedge is not effective, and public budgets are being stretched to permit timely payouts. A claim can be made by public authorities that the absence of hard currency income from carbon credit sales has in some cases economically 'damaged' host governments. For projects that are of strategic political and social importance, results-based climate finance could be engaged to help alleviate the burden of rising PPA servicing costs that many African governments are facing. Under such a scheme, payouts could be made to the offtaker based on the amount of electricity delivered or the amount of carbon credits verified, with revenues being indexed to the average exchange rate fluctuations observed over a pre-defined monitoring period. In situations where the local currency would depreciate against the PPA currency, climate financiers would step up to make up for the devaluation. With the exchange rate risk exposure being managed by means of a locked-in exchange rate, public financial planning would become more robust.

[5] Including wind (32), biomass energy (20), hydro (18), solar (16), landfill gas-to-power (9), and geothermal (4)

Way Forward

African states have the opportunity to leapfrog future investments in fossil-fueled power generation if appropriate policy frameworks are put in place to encourage wide-scale investments in renewable energy generation. Currently, less than half of the continent's population has access to electricity. According to the International Energy Agency, securing energy access for all by 2030 will require an annual investment of US$ 52 billion per year, of which 95% will need to be directed to sub-Saharan Africa.[6] The good news is that technology is available and evolving rapidly, with the levelised costs of energy for certain renewable energy investments already being cost-competitive with conventional forms of power generation. However, as long as domestic financial institutions cannot carry the weight of the required investments, it will be challenging for governments to deliver equitable electrification strategies without shouldering a large proportion of the bill. Furthermore, as long as unanticipated cost increases are forwarded to the general public through raised electricity tariffs, internationally financed renewable energy investments will continue to receive bad publicity.

By de-risking existing and future renewable energy projects from exposure to currency movements, climate finance can play an important role in strengthening the case for renewables in Africa and supporting the role public-private partnerships can play in this market. All three strategies presented in this brief reduce or eliminate the economic 'damage' that currency exchange risk may cause, decreasing the possibility that public offtakers attempt to re-negotiate 'unfavourable' PPAs. Reduced political risk will in turn strengthen investor confidence, reduce the cost of capital and facilitate the crowding in of private capital. The volume of financial support required will depend on the value of the underlying assets, the degree to which exposure is to be managed, and the chosen strategy. Smaller investment volumes could be used to directly support standalone flagship projects that depend on foreign currency denominated PPAs serviced by national offtakers. Larger sums of climate finance delivered through the Green Climate Fund or bilateral arrangements could in turn be applied with the aim of supporting interventions at a sectoral level, whereby hedging strategies or dedicated financing vehicles could be set up to tackle exposures for a portfolio of IPPs.

While for existing projects currency hedging may be the most immediate way to alleviate exposure on the side of the offtaker, over time, climate finance should be used to incentivise local financial institutions to extend affordable, long-term project finance in local currencies. This will allow local financiers to gain experience in evaluating and structuring investments in the domestic energy sector, gradually leading to lower financing costs. Improved risk-return profiles will in turn further strengthen the attractiveness of renewable energy investments, delivering an exit strategy for concessional climate finance.

CONTACT

Szymon Mikolajczyk
s.mikolajczyk@climatefocus.com
www.climatefocus.com

Climate Focus (Head Office)
Sarphatikade 13
1017WV Amsterdam
The Netherlands

[6] International Energy Agency (2017) Energy Access Outlook 2017