

Pay-as-you-go power is fast emerging as a viable off-grid solution

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With power shortages hampering economic and social development across much of sub-Saharan Africa, new and existing technologies are coming together to allow alternative off grid solutions to complement the conventional grid system in getting power to the largest number of people quickly.

Building a fully fit for purpose electrified grid in Africa has become increasingly challenging and the downturn in the commodity cycle in the last two years has added to the challenge. Capital outflows from Africa have resulted in the continent having significantly weaker balance sheets to fund capital expenditure, and this has been further exacerbated by the expectation that a stronger US economy will cause an increase in dollar interest rates, and the increase in repayments will further weaken emerging economies saddled with dollar debt. We now have a vicious circle - the 'African emerging market problem', weakening currencies, capital outflows and reduced investment capacity, each spurring the other on in an unfortunate way.

The hard choices about infrastructure delivery that emerging market economies need to take have now arrived at Africa's doorstep. Governments do not have the balance sheet to fund all necessary investment. What needs to be done? The private sector needs to take on most of the investment, but against sound and reliable regulatory and legal frameworks that investors can trust. Most importantly, infrastructure investment needs to be in local currency. This means multilaterals (IFC, EIB, AfDB etc) and DFIs must decrease the amount of dollar lending and increase the amount of local currency lending in African countries. However this will take some time.

Government to government loans should not be discounted either, but here again local currency funding by the developed market Government (e.g. China, US, EU) should become the norm, not the exception.

Certainly the successes achieved in South Africa's renewable programme can be replicated across Africa, where opportunities abound for solar, wind, hydro and gas projects, but where only 20% of people are connected to power grids. Innovative models for project finance are going to be needed to help fast track energy projects in Africa and bridge gaps that existed previously.

Against this backdrop, there is little doubt off-grid solutions and renewables are set to become a much bigger source of supply in the future, and while off grid was not a solution three years ago, it is fair to say it is inevitable now as technology and funding mechanisms become more accessible and applicable.

So much of Africa is remote and rural, the wait for power from the grid can still be decades away. But the same is not true of mobile phone coverage. Most Africans live within the coverage of a mobile phone mast, and with it comes the ability to communicate and to use 'airtime' as an alternative means of payment for a number of things, including access to power at the household level. Combining solar power solutions with existing telecommunications infrastructure and technology, linked to the banking system, allows "local" solutions to be one of the quickest and perhaps more affordable in enabling the pay as you go concept for off grid electricity to the home.

Business models for at home off grid supply have been in existence for some time, particularly in the USA, but this has developed into a complex hybrid solution in the sense that access to the grid is always there, and ability to take or supply into the grid (and pay or get paid for the energy consumed or supplied), in combination with favourable tax treatment has created a complex and competitive market for off grid power solutions.

Africa differs fundamentally from the USA in the sense that off grid in its truest sense needs to be just that and affordable down to very low disposable income households. So the cost of the technology at its most basic (a few solar panels, a few light bulbs, a battery and phone charger) has to be reasonable, and be part of the overall budget a customer can afford, and if combined with the cost of a pay as you go or contract mobile phone, is something that should be capable of financing by commercial banks. Once payment histories are known, and hence default rates, banks should be able to lend on a portfolio basis to solar off grid equipment suppliers, and allow leverage and hence significant growth into the off-grid industry.

Making off-grid initiatives bankable will be a key component and this is where public participation can be encouraged, for example, by launching a public bond that crowds in public funding. It is early days yet, but what is clear is that a solution like this could work and could be funded.

A key driver for off grid in the future is going to be rural electrification as these areas have only limited electrification networks. The secret will be bringing power to rural areas without necessarily extensive expenditure on transmission costs.

The future energy mix should also include far more off-grid solutions where big industries create their own power and sell excess power to the grid, for example if they need 8 -10 megawatts (MW) but build capacity for 12 MW, they can sell the additional 2MW to communities or villages in the area.

At Standard Bank we continue to see potential in developing the continent and facilitating economic growth and we believe off-grid solutions can be bankable if the right partners are found. As these developments help businesses and economies to grow, they also indirectly support regional development. Off grid can be also be expanded into the retail market, where modular rooftop solar solutions can be rolled out to commercial neighbourhoods, either individually or as collectives.

These solutions can be used to target African countries with limited power rollout. We just need to get more creative with how we fund these opportunities as the bottom line is: Africa needs power.