

Prosumers key to addressing Africa's power challenges

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The rise of the prosumer - a trend that has been gathering momentum in Europe in recent times - could well be the answer to a multitude of challenges faced by the power utilities in Africa.



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Currently, there are about [600 million](#) people in Sub Saharan Africa – two-thirds of the region's population – who do not have access to electricity or proper running water. Yet, demand for these resources is growing at a rapid rate. Africa is expected to more than [double its population](#) by 2050 to about 2.5 billion people.

Rapid urbanisation

Compounding this problem is the increasing number of people from rural areas who are constantly migrating to cities in search of employment and also the rapid urbanisation. As a result, cities are growing in completely unstructured and unplanned ways and it's putting tremendous strain on the utilities.

At the same time, one of the main challenges faced by traditional power utilities across the continent is a severe lack of funding, forcing many companies to choose between investing in expansion or investing in the maintenance of their power grids.

Many have opted for expansion, under increasing pressure from an expanding population that is demanding access to modern services. While a greater focus has been placed on grid maintenance in some African countries in recent years, it remains startling that entire installed generation capacity of Africa's 48 Sub-Saharan countries is just [68 gigawatts](#). Up to one-quarter of this capacity is unavailable because of aging plants and poor maintenance.

In response to the challenges faced by Africa's traditional power utilities, governments have started [issuing tenders](#) to independent power producers (IPPs) to start electrifying rural and urban areas and to find additional solutions to boost capacity. All over the continent, where there are existing solar panel farms, renewable natural gas reserves or wind farms, there is a move to push excess energy into the electricity grid.

However, a problem that the traditional grids are facing in Africa is that these are not smart grids, so they are not multi directional, there are no import and export metering arrangements at the customer sites, making it very difficult to sell electricity back into the grid.

Prosumer trend

But globally, there has been a move towards the prosumer. People are moving away from being consumers to being prosumers. A prosumer is someone who generates and consumes its own energy, which it can also sell into the grid.

Prosumers are people who actively choose their own energy source. They decide whether they want to use solar panels, gas heaters, or gas for cooking. They also decide whether they want to electrify their entire community with solar panels and use technologies like blockchain for peer to peer trading which facilitate buy and sell of energy.

This is not just happening in the low-income areas, but also among those in the high-income bracket. People are starting to think that they need a constant electricity flow, so what kind of measures should they put in place to ensure that? This is driving the shift towards becoming prosumers.

If digital technologies are used, prosumers will have much more control and information about their power usage. That's why people are moving towards prosumer status. With blockchain technology, it becomes much safer and easier to transact and get your power without any complex mechanisms of contracting, trading and then consuming.

Utilities need to start embracing digital technology to be more consumer focused than inward focused.

A rising global trend is that the consumer is putting pressure on utilities to transition from a transactional business to a customer-centric business. Consumers want to know how much energy they are consuming, when they are consuming it and how to consume less. The consumer also wants utilities to go beyond the meter and start helping customers with

energy efficiency, appliance management, home automation etc.

Renewable energy

For the shift to prosumer to fully take hold in Africa, there is a need to roll out smart and multi-way grids. Only then can IPPs, renewable energy sources and prosumers contribute significantly towards closing the energy gap on the continent. The smart grid investments would pay for years since grid is still one of the most efficient, reliable and cheaper form of energy transport. Other technologies like battery storages, micro grids, community solar are also picking up however still remains a secondary option compare to grids due to security of supply issues and fastest mechanism of transport of energy.

However, the trend of becoming a prosumer is picking up noticeably in Africa. Africa has the potential to transcend other parts of the world and leap frog on the technology adoption. The continent can look at other countries and learn from their lessons, while also having benefit of an abundance of natural resources and renewable energy.

African leaders need to focus on economic growth, the stability of societies and climate change. IPPs, renewables and prosumers will all contribute to and help with this. But it will require a mind-set change from governments and leaders alike.

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