

22 February 2018

## Power in Africa



**Peter Burdin** is the BBC's former Africa Bureau Chief. He has thirty-five years experience as a senior editorial leader in the BBC's International News operation and has worked extensively in Africa, the Middle East, Europe, the Indian sub-continent and Asia from where he has covered numerous major international news stories. He has won several Sony Awards for his news and documentary programmes, including the war in Bosnia, the Tiananmen Square protests, South Africa's first democratic elections and the funeral of President Nelson Mandela. ([www.peterburdinafrica.co.uk](http://www.peterburdinafrica.co.uk)) Peter is currently an Advisor to BBC Africa and is lecturing in International Journalism at universities in the UK and Africa.

\*\*\*\*\*

There have been many attempts to predict that this 21<sup>st</sup> Century will be the African Century.

The African Renaissance, The Africa Rising narrative and The African Union's 2063 Vision have all been predictors of a bright future --- but for all that there are some major stumbling blocks to overcome on the continent's road to that future.

The biggest impediment is still power – or rather the lack of it. According to the World Bank around 70% of Africans still have no access to electricity. That's more than 620 million people.

This lack of power inhibits millions of Africans from carrying out the basic tasks so many others take for granted:

Small businesses can't manufacture without electricity, farmers can't transport their food produce far as they have no access to refrigeration, school children can't study in the evenings because they have no proper lighting only dirty, dangerous and expensive kerosene lamps.

At a Symposium in London on Power In Africa we heard how far Africa has to grow to make up this shortfall. In the USA there are 3,360 megawatts per million people, in Africa there are just 91 megawatts per million.

Kofi Annan's Africa Progress Panel estimates that \$63 billion needs to be invested each year in new power generation until 2030 to catch up. It also warns that the current annual investment is just \$8 million.

**Access. Engagement. Resolution.**

Add to this Africa's coming demographic revolution which will see the continent's population double in size to more than two billion people and we can see how powering Africa is one of the world's most crucial development challenges.

This population explosion may present an enormous challenge but is also an enormous opportunity. One-in-every-four babies will be born in Africa which will have a larger number of people of working age than both China and India. This youth revolution ought to propel Africa to be the workshop of the world.

But this requires having the electrical power to fuel and match the human energy of its young entrepreneurs and workers. There are some three hundred or more Innovation Hubs dotted around the continent but without access to reliable power they will struggle to scale-up.

People often look towards Renewables as Africa's saving grace – They see solar power from the burning African sun as the answer, supported by hydro power from Africa's mighty rivers, and by wind power and geothermal power. Much is being developed in all these sectors but, as [NewsBase](#) Research Director, Gav Don, pointed out in his keynote address to the Symposium, renewables will not provide the solution to grid-scale power development.

Gav Don explained how Renewables are currently providing just 18% of Africa's current power generating capacity. He estimates that by 2040 this will only grow to 27%, with a much smaller share of actual production. Africa needs to grow production by 40 bn kWh each year. A 1 kW panel produces around 1,500 kWh per year.

By 2040 he says Gas will still provide 44% of Africa's total generating capacity, even higher than the 36% it currently supplies, while Fossil fuels like coal will continue to play a significant role with a 23% share of capacity.

Of the Renewables Hydropower is by far the most successful. It currently provides 16% of Africa's generating capacity and by 2040 this will grow slightly to 17%.

We already have the Inga dam project in DRC, the Bu-ga Dam which will double Uganda's capacity, and the Grand Renaissance Dam on the Blue Nile in Ethiopia which will quadruple its generating capacity.

Other Renewable sources fare less well. Wind power is currently 1% of the total capacity and is predicted to rise to 6% by 2040; Geothermal is just 0.5%, while the much-vaunted solar power is currently 0.5% and will rise to 2.5%.

Bill Gates has already dismissed solar power as a solution, while President Trump with his love of polluting fossil fuels dismisses all renewables as "an expensive way of making the tree-huggers feel good about themselves".

However there are "alternate facts" to Africa's power shortfall. At the Paris Climate Change agreement, that President Trump pulled the USA out of, African governments committed themselves to the Africa Renewable Energy Initiative. This imposes a 2030 deadline to give all Africans access to power and is supported by the African Union, the World Bank and the African Development Bank.

Some promising projects are already in production. Ethiopia is building a plant to convert street waste into electricity. It will remove 80% of Addis Ababa's rubbish dumps and transform them into power for a third of the city.

If successful the project's Chinese and British backers aim to replicate it in every major African city. Ethiopia also aims to become Africa's Wind power capital and is building five new wind farms which will double its electricity capacity.

Kenya is currently building Africa's largest wind farm which it hopes will provide 20% of its energy needs. Last year it opened the world's largest geothermal plant.

There's also much activity in the solar power sector. Elon Musk's Solarcity and the French energy giants EDF have both invested in the Rwandan and Tanzanian start-up Off Grid electric which will deliver power to two million homes by 2020.

MKOPA in Kenya connected (probably not really correct, since a stand-alone panel is not grid-connected) one million homes this year with a simple rent-to-buy solar panel system which powers three domestic lights, a radio and a USB point for charging mobile phones.

The Cambridge-based Azuri Technology is also in the rent-to-buy solar market in Africa. It's CEO Simon Bransfield-Garth says: "An energy revolution is taking place in Africa which is a generation ahead of the west".

Developing off-grid alternatives could create many opportunities and transform millions of lives.

And perhaps that is the key. Perhaps the answer is to find off-grid local solutions to connect Africa's 620 million people in the rural areas who need the simple answers that a solar panel can deliver.

A prime example of a low cost simple answer can be found in Cote D'Ivoire where solar panels have been sewn into childrens' school bags.

The morning sun is captured by the panels as the children walk to school. That builds up enough power to give each child four to five hours of domestic light enabling them to do their homework and study at night.

A simple solution that will never appear in the macro-economic statistics but one which has the ability to transform the lives of millions of school children.

Perhaps the future is bright after all.

\*\*\*\*\*

**Access. Engagement. Resolution.**

The Ambassador Partnership LLP is a **unique specialist** partnership of former Ambassadors with unrivalled networks of influence in almost 100 countries. We provide discreet services to resolve your international problems and to improve your capacity to operate effectively wherever you need to.

We are **dispute resolution** specialists and **political risk** experts.

To discuss how we can help you to manage your political risk please call:

**Tracey Stewart**

Partnership Secretary

+44 (0) 7950 944 010

[tracey.stewart@ambassadorllp.com](mailto:tracey.stewart@ambassadorllp.com)

[www.ambassadorllp.com](http://www.ambassadorllp.com)