

KaPower Insights #3

The African Venture Impact Investment Cooperative

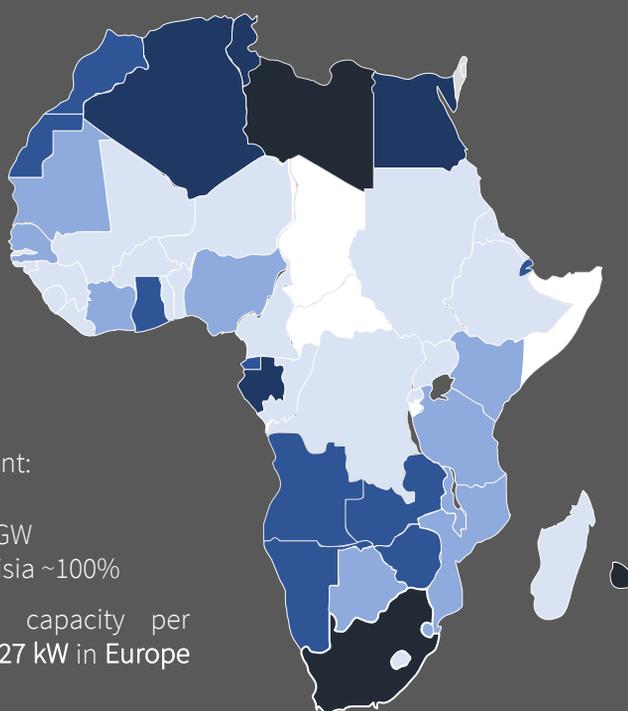
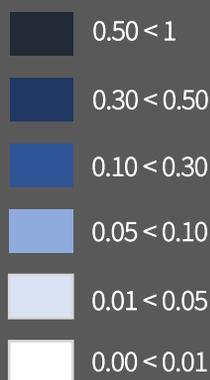
Executive words

“The price of light is less than the cost of darkness” (Arthur Nielsen) has never been so true when applied to the African power sector. Education, health, poverty reduction and GDP growth, all share a positive correlation with electricity access and Sub-Saharan Africa is in imperative need of it. Although there is an extensive energy potential (solar 10TW, hydroelectric 350GW, wind 110GW and geothermal 15GW), the continent only combines 147 GW installed capacity; which represents half of Japan’s power capacity, despite its eight times larger population. With an **average electricity access rate of 45%**, *“half of the population of Sub-Saharan Africa lacks access to electricity”* has become one of the most quoted statistics about the continent. In addition to a low access rate, the electricity supply especially in urban areas remains unstable due to poor transmission infrastructure, low skilled workforce, poor maintenance of existing power stations, as well as poor metering and billing. Initiated by governments or by private operators departures, dissatisfied over contractual terms, contracts in the power sector have been cancelled at a much higher rate in Africa than in the rest of the world and averaged 22% of all distribution transactions.

However, some countries such as Kenya, Uganda and Rwanda, to name a few, decided to tackle the power crisis and undertook drastic reforms **including privatizations, implementation of cost-reflective tariffs, international guarantees and strong, reliable contractual agreements**. DFIs active on the continent have also increased their commitment to the power sector and put high on their agenda clean African power and transmission segment. Bringing reliable electricity to every Africans, considering the growing demand, would require around **\$120 billion of annual investment**, representing a commitment from each African governments between 1.5 to 3% of their GDP. India and China have successfully done it and Africa can also come up with innovative financing solutions prioritizing renewable energies and gas, which are both widely available.

We can ask ourselves, in this current world, where China could see its status of the world’s manufacture challenged, is Africa able to boost its power sector and, thanks to the upcoming AfCFTA, grab the tremendous opportunity to raise the **Made in Africa** as a global standard?

Installed electricity capacity per inhabitant in kW



- Highest installed MW capacity per inhabitant: South Africa with 0.87kW
- Highest Installed MW: South Africa with 51GW
- Highest Access rate: Algeria, Morocco, Tunisia ~100%

By comparison, the installed electricity capacity per inhabitant is on average 3.35 kW in the US, 2.27 kW in Europe and 1.43 kW in China.

KaPower Insights #3

The African Venture Impact Investment Cooperative

■ Kenya case study

With an electricity access rate of 75% in 2019 compared to 8% in 1996, Kenya has been driving **one of the most successful electrification programs in Africa**.

Having realized at an early stage that electrification was a fundamental pillar to rely on in order to develop its economy, Kenya was indeed one of the first African countries in the 90's to liberalize its power sector by **allowing Independent Power Producers** to operate, reducing its dependence on government investments. To receive commercial funding and meet the power sector's investment needs, Kenya implemented several reforms to strengthen the sector's policies, laws, regulation and institutions. One of the major component to this success was the partnership with The World Bank to provide guarantees to private investors in the power sector generating **US\$ 3 billion of private capital between 1997 and 2018**. In 2006, Kenya created a new independent regulator, the Energy Regulatory Commission, which became key to remove any conflict of interest and corruption within the sector. Other reforms included the introducing of cost-reflective tariffs, establishing new entities mandated to develop transmission, development of geothermal assets and strong commitments to rural electrification. In 2008, the government also set "Vision 2030" to transform Kenya into a newly-industrialization, middle income country aiming to reach full electricity access by 2022. Kenya is now host to **Africa's largest windfarm** and developing the **world's largest geothermal power plant**. The country's generation capacity has **increased by 244% since 1996 to reach 2,670 MW in 2018 and 85% of its energy mix is now generated from clean sources** (geothermal, hydro and wind). Kenya is showing to the world that with the right strategy and vision, electrification and quality of life can be improved.

■ Investing in the African Power sector?

Three factors are determining the continent's future energy consumption - its **growing population, the rapid increase in urbanization and its industrialization**. Tremendous opportunities are available for investors especially in the renewable space as African countries are moving away from biomass and fossil fuels. In Nigeria alone, homes and businesses spend \$14 billion each year on fuel for small backup and full-time generators. Despite the challenging barriers to entry and high tickets, investing in IPPs (Independent Power producer) can ensure **strong cashflow to investors over a long period** with PPA (Power Purchase Agreement) often signed for more than 15 years. The PPA prices per kW are, in some jurisdictions, also based on the inflation and US\$ equivalent granting both local and foreign investors **protection against currency risk**. Most financial institutions are willing to support projects developing renewables or refurbishment to increase the MW installed capacity with attractive interest rates allowing potentially substantial **capital gains on equity**. Valuations on secondary shares are still very attractive on the continent and investors can expect quicker than average payback periods, providing double-digit returns. More international funds are consolidating African IPPs portfolio providing opportunities for investors especially if their assets are considered clean. Investors in IPPs can also diversify into real estate and manufacturing. We indeed noticed the development of Free Zones next to large IPPs providing low cost and reliable electricity supply aiming to become leader in the **Made In Africa**.

■ Further Insights



[Revisiting Reforms in the Power Sector in Africa – A study by the Association of Power Utilities of Africa \(APUA\) and the African Development Bank \(AfDB\)](#)



["How Africa meets its growing energy needs is crucial for the continent's economic and energy future, as well as for global trends." - Africa Energy Outlook 2019](#)