Kenya’s Renewable Energy Advantage

Solar power in Sub-Saharan Africa is now taking off, highlighted by a new record low tariff for solar PV in the region – less than US$40 per megawatt hour (MWh) in Zambia. Kenya has the great, additional advantage of being on Africa’s Rift Valley, which provides significant wind and geothermal potential in addition to solar.

2017 marked a turning point across all emerging markets; for the first time renewable energy accounted for the majority of all new power capacity additions added. Since then, the momentum behind renewables in Africa has increased further with new projects announced in 2018-19 across many nations.

In 2017, the large majority of the world’s new zero-carbon power capacity was built in developing countries. Momentum has moved firmly behind renewables, and away from coal in both developed and developing markets.

The trend followed in 2018 during which renewables made up nearly two-thirds of all new power generation capacity added, led by emerging and developing nations.

By 2020, onshore wind and solar PV will be a less expensive source of new electricity than the cheapest fossil fuel alternative.

- In 2018, Africa’s renewable energy expansion rate was only slightly behind the fast-paced rollout of renewables in Asia. The rate of growth of African renewables was ahead of the world average.

- Kenya saw its renewable capacity increase by 22% in 2018.

- This latest Sub-Saharan record low solar tariff achieved in Zambia in April 2019 was US$40/MWh. Power from the proposed Lamu coal plant in Kenya would cost far more than this and could cost 10 times what the proponents have claimed according to a new IEEFA report on the project.
Coal plant developers are increasingly turning away from coal, including major developer Marubeni which announced a transition away from coal and towards renewables in September 2018.

- Marubeni’s Botswana coal power proposal now looks stranded – Botswana issued tenders for 12 solar PV projects in November 2018 and is to issue tenders for another 100MW of solar projects by the end of June 2019. Japanese public finance interest in the coal project has reportedly now been withdrawn.

- Marubeni’s Thabametsi coal power proposal in South Africa is struggling to find funding – over 100 major global financial institutions have now introduced policies that restrict coal financing including South African banks.

- In June 2019, Marubeni became the largest shareholder in Azuri Technologies, a company which provides solar home systems for off-grid areas of Africa.

- Marubeni’s increased renewables focus includes a new geothermal plant that it is now building in Kenya - Africa’s geothermal power leader - as the nation expands its second largest source of power generation.

Geothermal energy is just one of the renewable power resources that Kenya has access to that can meet growing electricity demand much faster than coal-fired power and at lower cost:

- Kenya’s Lake Turkana wind farm is the largest in Africa (310MW). Since coming into operation it has been replacing ageing and expensive diesel generation. Replacement of diesel has been cited as a key reason for the need of the Lamu coal-fired power project. However, newer and ever-cheaper technology has beaten coal to it. Another 100MW wind farm in Kenya has recently reached financial close.

- Geothermal technology itself looks set to get a significant boost in East Africa with the beginning of a US$4.4 billion investment in 1,000MW of geothermal power in Ethiopia.

- A succession of new utility-scale solar plants are under development in Kenya and the cost of solar power is dropping across Africa. The African Development Bank (AfDB) recently financed the 40MW Kopere solar project in Kenya. The nation’s first utility-scale solar project reached financial close in June 2019.

- In March 2019, the President of the AfDB, Akinwumi Adesina, noted that renewable energy will be key to driving economic development in Africa whilst addressing climate change, stating that “I believe that the future is renewable energy and as the head of the African Development Bank I should not be investing in the past, I have to be investing in the future.”
• A May 2019 German Solar Association report found that Africa’s high solar potential means the continent could install up to 173 GW of solar by 2030, up from 5 GW in 2018.

• Many other Sub-Saharan nations have announced new renewable energy projects over 2018-19 including Burkina Faso, Chad, Ethiopia, Ivory Coast, Malawi, Mali, Senegal, Tanzania and Uganda.
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