



I. Renewvia's Rural Microgrid Development & Operation Model

Renewvia is actively scaling up a sustainable rural electrification strategy for sub-Saharan Africa that deploys its Rural Microgrid Development and Operation Model in areas that are either unserved by conventional utilities, or ineligible for grid extension. This approach to developing standalone or hybrid solar photovoltaic and battery-powered plants, which are designed to accommodate additional capacity from wind or other sources of electricity, provides a sustainable return on investment by focusing on **four core pillars**:



I. Timeline of Impact

- 2015 1 hybrid solar microgrid – Mfangano Island hatchery facility (KENYA)
- 2016 2 solar microgrids – Ng’ore & Got Kochola lakeshore communities (KENYA)

Through Power Africa, the U.S. Government-led initiative to expand access to electricity, the U.S. Trade and Development Agency (USTDA) partnered with Renewvia on two projects:

- 2017 1 feasibility study for 25 microgrids totaling 5 MW (NIGERIA)
- /
- 2019 1 feasibility study for 8 microgrids totaling 1.5 MW (KENYA)

Renewvia attracts new capital; performs technical assessments, community forums and power audits in over 60 communities; builds/owns/operates and/or is actively developing 13 more microgrid facilities that are equipped with its PAYGO platform:

- 2018 2 solar microgrid pilot projects – Ringiti & Ndeda Islands (KENYA)
- 2019 2 solar microgrids – Kalobeyei Town & Refugee Settlement, Turkana County (KENYA)
- 2019 *in process* 1 solar microgrid – Ngurunit, Marsabit County (KENYA)
USTDA site
- 2019 *in process* 2 solar microgrids – Oloibiri & Akepelai communities, Niger Delta (NIGERIA)
- 2020 *in process for June* 6 solar microgrids – Communities in Lamu, Siaya, Kajiado, Tana River and Kajiado Counties (KENYA)
including 2 USTDA sites



** wind power added to Ndeda in 2019**

III. Catalyzing Connections & ROI

Today, Renewvia Energy Corporation, based in Atlanta, Ga., operates four wholly or majority-owned subsidiaries. With a 20 percent stake in Renewvia Solar Mauritius Ltd., it uses this holding company to capitalize three development subsidiaries: Renewvia Energy Kenya Ltd., Renewvia Solar Nigeria Ltd. and Renewvia Solar Rwanda Ltd. All operation and maintenance tasks, engineering, procurement and construction activities are facilitated through the three subsidiaries.



By capitalizing on an early mover advantage, which will close once market penetration is felt by regulators, those holding multiple concessions will be in a valuable position.

Phase 1: \$1.75 million USD	Status: CAPITALIZED
<ul style="list-style-type: none"> ○ 4 sites in northern Kenya (including 1 refugee settlement) ○ 2 in the Nigeria Delta ○ Total installed capacity: 302 kWp 	<ul style="list-style-type: none"> ○ \$720,969 performance-based grant for Kenya (via development aid agency) ○ \$300,000 performance-based, recoverable grant for Nigeria (via impact investor) ○ Commissioned 2 in Kenya; construction underway Q3-4 2019 for remaining sites
Phase 2: \$10.13 million USD	Status: in process
<ul style="list-style-type: none"> ○ 9 sites in Kenya ○ 27 sites in Nigeria ○ Total installed capacity: 2.05 MWp (13,376 residential/commercial connections) 	<ul style="list-style-type: none"> ○ \$506,240 CAPEX grant (via development aid agency) ○ \$3.82 million performance-based grant (via multilateral institution) ○ 18.7% projected IRR
Phase 3: \$800 million USD	Status: pre-development
<ul style="list-style-type: none"> ○ 1,000 sites in sub-Saharan Africa 	<ul style="list-style-type: none"> ○ Microgrids have potential to provide electricity to 500 million people by 2030 (World Bank)

Renewvia receives 20-year Independent Power Producer exclusive concessions from federal governments for each site

IV. Renewvia's Model at Work in Northern Kenya

The second largest of Kenya's 47 counties, Turkana County also the poorest, where around 88 percent of the population lives in extreme poverty. In September 2019, Renewvia's Kenya team successfully commissioned:

➤ **Kalobeyei Town:** 20.13 kW facility has already connected 75 households, businesses, schools and churches.



➤ **Kalobeyei Settlement:** 60.06 kW facility with 225 connections to date is serving one of three villages that make up the UNHRC-run refugee settlement (population 38,000).