



WHAT POWER AFRICA MEANS FOR KENYA

Kenya Energy Sector Overview

The Government of Kenya has set forth its “Vision 2030,” a program to transform Kenya into a “newly industrializing, middle-income” country. Yet, Kenya has 2,150 MW of generation capacity to serve its population of more than 43 million, which constrains economic growth. Kenya is believed to possess more than 7,000 MW of undeveloped geothermal energy resources in the Rift Valley. Wind (see transactions below) and biomass energy are also significant potential sources for power generation. Power Africa is helping Kenya reduce reliance on expensive diesel-fueled generation and other high-cost fossil resources.

Kenya aims to increase generation capacity by 5,000 MW by 2016 and by 23,000 MW by 2030. The Government of Kenya is focused on sustaining a stable investment climate for private-sector participation in energy, developing expanded transmission and distribution networks to deliver power to customers, maintaining a creditworthy off-taker, maintaining cost-reflective tariffs, and reducing inefficiency in the sector to support more affordable end-user tariffs.

Power Africa Support

In Kenya, Power Africa is supporting the development of the energy sector through financing, grants, technical assistance, and investment promotion. Power Africa is working to mobilize more than \$1 billion in private investment for electricity to accelerate geothermal and wind projects.

Central to the work of Power Africa/Kenya is the Grid Management Support Program (GMSP). GMSP is providing technical assistance to address key challenges of integrating intermittent renewable energy into the national grid. The Grid Management Support Program (GMSP) has four components: (1) a renewables integration study, (2) systems operations gap analysis, (3) training and twinning with utilities with significant wind power penetration, and (4) revising the transmission and distribution grid codes. The first phase of the GMSP concluded in December, 2014.

Power Africa is also helping major infrastructure investments advance and is demonstrating the effectiveness of U.S. technological solutions.

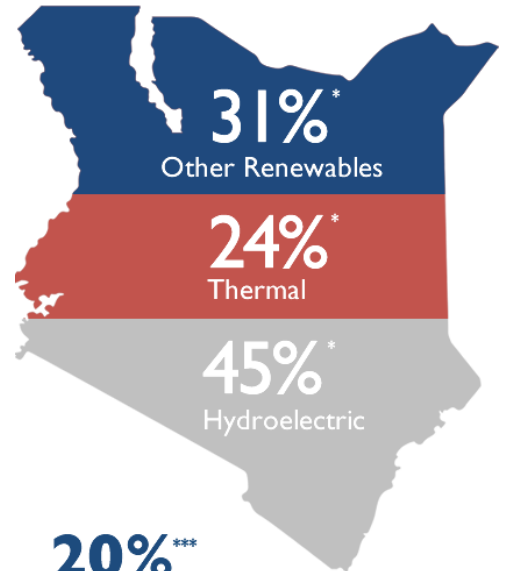
Rural and Off-Grid Access

Power Africa/Kenya is focused on using such innovative solutions as the USAID Development Credit Authority to connect rural Kenyans to the electricity grid, and is actively supporting small on-grid power generation projects, as well as projects to provide off-grid and mini-grid solutions for small communities.

In partnership with General Electric, the African Development Bank, and others, Power Africa awards grants for innovative energy projects across sub-Saharan Africa.

In Kenya, Power Africa has already awarded eight \$100,000 grants for the following project as part of the Power Africa Off-Grid Challenge: 1) Solar World (E.A.) Ltd. for solar-powered water systems to provide both water and electricity in rural areas, 2) Afrisol Energy Ltd. to use bio-digesters to produce electricity and biogas for small urban businesses, 3) Mibawa Suppliers, to expand its delivery of pay-as-you-go lighting and chargers, 4) Boma Safi to install Solar home systems, 5) Kitui to provide diesel engines for farmers running on bio-diesel from cottonseed, 6) Pfoofy to establish two 10-kW solar charging stations for 35 electric motorcycles, 7) Scode to provide micro loan financing of solar home systems with small forced-draft micro-gasifier stoves, and 8) Sollatek to provide solar freezers and portable lights for fishermen.

Current Generation Input Mix



20%***
Access to electricity

2,150MW**
Current installed generation capacity

5%
Rural access to electricity

19¢*
Residential tariff rate

* The Kenya Power and Lighting Company Limited Annual Report and Financial Statements 2013/2014. ** KPLC National Control Center. *** World Bank. 2010. Kenya - Electricity Expansion Project. Washington, DC: World Bank.

Highlighted Transactions in Kenya

| Name | Megawatts (MW) | Type of Transaction | Value (USD Million) | Timeline | Power Africa Support | GOK Actions |
|---|----------------|-----------------------|---------------------|--|---|--|
| African Geothermal International Limited (AGIL) | 140 | Geothermal | \$600 | <ul style="list-style-type: none"> Expected to reach financial close in 2016 Commercial operation by 2018 | <ul style="list-style-type: none"> Geothermal Risk Mitigation Facility grant | <ul style="list-style-type: none"> Letter of support VAT Exemption |
| Kinangop | 61 | Wind | \$150 | <ul style="list-style-type: none"> Reached financial close November 2013 Construction began in Q1 2014 but suspended in June 2014 due to political force majeure (FM) Operational by 2017 | <ul style="list-style-type: none"> Facilitated conditions precedent to financial close Grid Management Support Program assists Kenya in managing the challenges presented by the integration of renewable energy, especially wind | <ul style="list-style-type: none"> Feed-in Tariff Letter of Support VAT Exemption Assisting in resolving FM situation. |
| Kipeto | 100 | Wind | \$300 | <ul style="list-style-type: none"> Expected to reach financial close in Q1 2016 Construction begins Q1 2016 Operational 2017/2018 | <ul style="list-style-type: none"> Grid Management Support Program assists Kenya in managing the challenges presented by the integration of renewable energy, especially wind OPIC debt financing of US\$233M | <ul style="list-style-type: none"> Feed-in Tariff Letter of Support VAT Exemption |
| Lake Turkana Wind Power | 300 | Wind and Transmission | \$1,100 | <ul style="list-style-type: none"> Reached debt financial close in December 2014 Construction began Q4 2014 Operational in phases starting Q4 2016 | <ul style="list-style-type: none"> OPIC \$250M investment guarantee Grid Management Support Program assists Kenya in managing the challenges presented by the integration of renewable energy (especially wind) and addresses key constraint for LTWP | <ul style="list-style-type: none"> Letter of Support VAT Exemption |

Leveraging Partnerships to Increase Access to Power in Sub-Saharan Africa

Power Africa, an initiative led by the U.S. Government, aims to increase the number of people in of sub-Saharan Africa with access to power. Launched by President Obama in 2013, Power Africa works with African governments and private-sector partners to remove barriers to sustainable energy development in sub-Saharan Africa and to unlock the substantial wind, solar, hydropower, natural gas, biomass, and geothermal resources on the continent.

Power Africa’s goals are to increase electricity access by adding more than 30,000 megawatts of cleaner, more-efficient electricity generation capacity and 60 million new home and business connections across sub-Saharan Africa.

Power Africa also includes the Beyond the Grid sub-initiative, which works to expand rural electrification and access to small scale and off-grid technology.

A New Operating Model: Mobilizing Partnerships & Investments in Energy

A unique private-sector-led model, Power Africa draws on the combined expertise and abilities of 12 U.S. Government agencies, the World Bank Group, the African Development Bank, the Government of Sweden, African governments, and private sector partners. Power Africa’s “Toolbox” approach offers a range of resources and tools to advance key projects on the electricity grid, or beyond it. By leveraging U.S. expertise in energy technology and regulatory reform, combined with U.S. Government and private financial resources, Power Africa helps drive quick-impact interventions and policy reforms to push for sustainable energy development.

To date, Power Africa has leveraged more than \$20 billion in commitments from the private sector for new on- and off-grid projects in sub-Saharan Africa. The U.S. Government is committed to providing more than \$7 billion in financial support, loan guarantees, and technical support. As a result, every dollar the U.S. Government has committed to Power Africa leverages almost three dollars in private investment commitments. Additionally, the African Development Bank, the World Bank Group and the Swedish Government have collectively committed an additional \$9 billion in support of Power Africa.

Power Africa Contact for Kenya:

Mark Carrato, Power Africa Country Team Leader
Email: mcarrato@usaid.gov

U.S. Government Coordinator for the Power Africa Initiative:

Andrew Herscowitz
Email: powerafrica@usaid.gov
Follow on Twitter: [@aherscowitz](https://twitter.com/aherscowitz)

For more information on Power Africa:

visit www.usaid.gov/powerafrica or email powerafrica@usaid.gov

