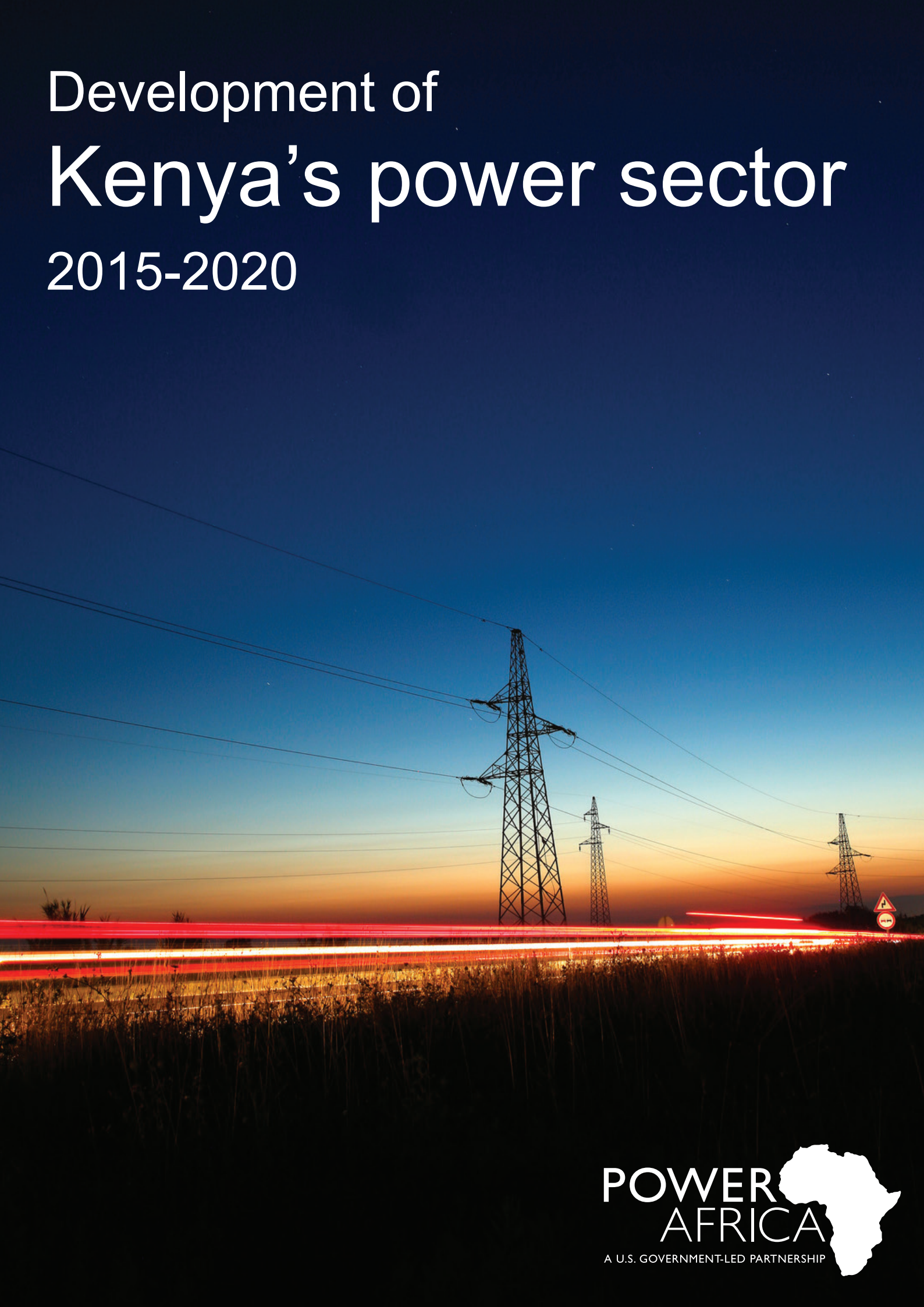
Development of Kenya's power sector 2015-2020



POWER AFRICA

A U.S. GOVERNMENT-LED PARTNERSHIP

Contents

Glossary of terms

Acronym	Definition
ACEF	African Clean Energy Finance Initiative
AfDB	African Development Bank
BOT	Build, Own, Transfer
CAPEX	Capital expenditure
DFI	Development Finance Institution
DisCo	Distribution company
EAP&L	East Africa Power and Lighting Company
ERC	Energy Regulatory Commission
FiT	Feed-in-tariff
GDC	Geothermal Development Company
GoK	Government of Kenya
GW	Gigawatt
GWh	Gigawatt hour
IPP	Independent Power Producer
KEMP	Kenya Electricity Modernization Project
KenGen	Kenya Electricity Generating Company
KETRACO	Kenya Electricity Transmission Company
KP	Kenya Power
kV	Kilovolt
kWh	Kilowatt hour
LAPSSET	Lamu Port Southern Sudan Ethiopia Transport
MDB	Multilateral Development Bank
MoEP	Ministry of Energy and Petroleum
MW	Megawatt
NLC	National Land Commission
PATRP	Power Africa Transactions & Reforms Program
PPA	Power Purchase Agreement
REA	Rural Electrification Authority
SPV	Special Purpose Vehicle
SREP	Scaling Up Renewable Energy Program
SSA	Sub-Saharan Africa

Foreword

The Kenyan power sector is a true success story in sub-Saharan Africa, with strong leadership at the highest levels of Government, long-standing participation of the private sector in generation, impressive growth in access, and a strong enabling environment for innovation in off-grid solutions.

In 2015, Power Africa undertook a diagnostic of the sector in order to understand the role it could play in taking Kenya from good to great across generation, transmission, and distribution of electricity. Over 100 actors in the Kenya power sector were engaged, including government bodies (Ministry of Energy and Petroleum, Energy Regulatory Commission, National Land Commission, REA), national utilities (KenGen, Kenya Power, KETRACO), IPPs, off-grid players, developers, investors, banks, end-users, and development partners.

At the conclusion of this effort, Power Africa would like to share the major findings from the diagnostic with 3 goals in mind: (1) build a shared understanding among stakeholders in the sector around the current and future state of the Kenya power sector, (2) showcase Kenya's successes, and (3) communicate the interventions Power Africa is undertaking in order to continue to strengthen and support this sector.

We are grateful for the support and collaboration from all the stakeholders with whom we have engaged and look forward to playing our part in achieving Kenya's power sector goals.

About Power Africa

In June 2013, President Barack Obama launched Power Africa, a partnership among the U.S. Government, African governments, bilateral and multilateral development partners, and the private sector to double access to electricity in sub-Saharan Africa. Power Africa has set two ambitious targets to expand access to power across sub-Saharan Africa by 2030: Increase installed power capacity by 30,000 MW, and create 60 million new connections. Power Africa's model focuses on practical solutions. We are uniquely positioned to drive results, because our partnerships combine three important elements: Deep knowledge of the power sector, a private sector-led engagement approach, and experience working with governments and civil society to improve policies and sector governance.

Now in its third year, Power Africa has built the financial and human resource foundation, recruited the partners, and identified specific deal flow to facilitate a clear path to success. We are now partnering with more than 120 public and private sector entities to accelerate power transactions in sub-Saharan Africa. By the end of 2015, 13 projects (expected to generate approximately 4,300 MW) supported by Power Africa had already reached financial close. These projects include solar, wind, hydro, biomass, natural gas, and dual-fire natural gas/liquid fuel projects. Nearly half of the projects involve renewable sources.

Partnership is at the heart of Power Africa's strategy and our innovative development model. Power Africa's Toolbox is at the center of our partnership model; it assembles the suite of catalytic support services offered by our development partners. Our tools include transaction assistance, financing and risk mitigation, policy/regulatory design and reform, capacity building, legal assistance, and convening and coordination. We offer this support to our private sector and African government partners to help accelerate power sector transactions.

Power Africa's teams live and work in Africa, and regularly engage with public and private sector stakeholders to understand and alleviate the constraints holding back transactions. To help advance transactions across the continent, we have deployed more than 20 seasoned power sector experts to serve as Transaction Advisors for private sector partners and host governments, and the number of these advisors will continue to grow. These on-the-ground experts work to remove the barriers slowing down individual transactions, and help connect various stakeholders with the innovative solutions offered in our Toolbox. Similarly, Power Africa's Regional and Country Teams in U.S. embassies and development partner missions in Africa work directly with local governments and institutions to share our partners' resources and help build local capacity. These teams help local governments implement the specific reforms necessary to advance transformative transactions. Further, our technical assistance and capacity building support ensures that governments will be able to oversee a sustainable power sector long after our teams are gone.

Power Africa can be found online at: www.usaid.gov/powerafrica

Executive summary

Kenya is the fourth largest economy in sub-Saharan Africa, with an estimated nominal GDP of 55 billion USD in 2015. The story of Kenya's power sector is one of solid performance. For its population and per-capita GDP, Kenya is performing well in terms of power generated. Kenya's per-capita power consumption is 161 kWh (2014) compared to 126 kWh in Nigeria, which has a per-capita GDP nearly 3x higher.

Kenya's power sector as a whole is well-governed and has a long history of encouraging participation by private actors in generation. Moreover, Kenya has remarkable renewable resources, as evidenced by its track record as one of the lowest cost developers of geothermal power in the world. Kenya has also aggressively pursued connections, having nearly doubled electricity access from 25% to 46% of households in 4 years[1].

However, Kenya has an opportunity to take its power sector from good to great by:

- Delivering 2,700 MW of new generation capacity by 2020 through new financing and partnership models
- Developing and executing a connection strategy incorporating on- and off-grid solutions to deliver universal electricity access by 2020
- Resolving wayleave issues and optimizing construction to triple the kilometers of transmission lines in the country
- Seeking innovative solutions to meet the 14-18 billion USD in financing required for the sector as a whole to meet its goals

Following our diagnostic of the sector and engagement with key stakeholders, Power Africa will focus its efforts to support the Kenyan power sector in achieving these goals through 11 interventions to drive 2,000+ MW of generation capacity, 2.5+ million off-grid connections, and enable the full system:

- Provide critical transaction advisory, technical assistance, market information, and PPA process support for 800+ MW of renewable projects
- Strategic partnership with KenGen to support new generation capacity of 1,300+ MW in established pipeline (with a potential of up to 2,500 MW by 2025) through traditional and new financing mechanisms
- Facilitate and/or provide feasibility, pilot and project (equity and debt) financing
- Support the Geothermal Development Company (GDC) to develop a Joint Development Agreement, enabling funding for drilling for 645 MW
- Develop and support overall off-grid accelerator program, for 2.5+ million connections
- Support distribution system loss reduction and operational efficiency through integrated planning, investment mobilization and technical assistance
- Continue to drive grid management support and capacity building to enable grid adoption of intermittent renewable energy projects
- Develop critical go-to capability for community engagement and landrelated challenges
- Build the capacity of GoK entities to undertake critical functions to foster clean energy development
- Develop and support initiatives to finance the 14-18 billion USD gap to achieve generation, transmission, distribution, and off-grid electrification targets
- Provide policy and regulatory design and reform assistance based on global best practice

1 KP data, 2015

Kenya’s power sector 2015-2020 snapshot

~2,700 MW

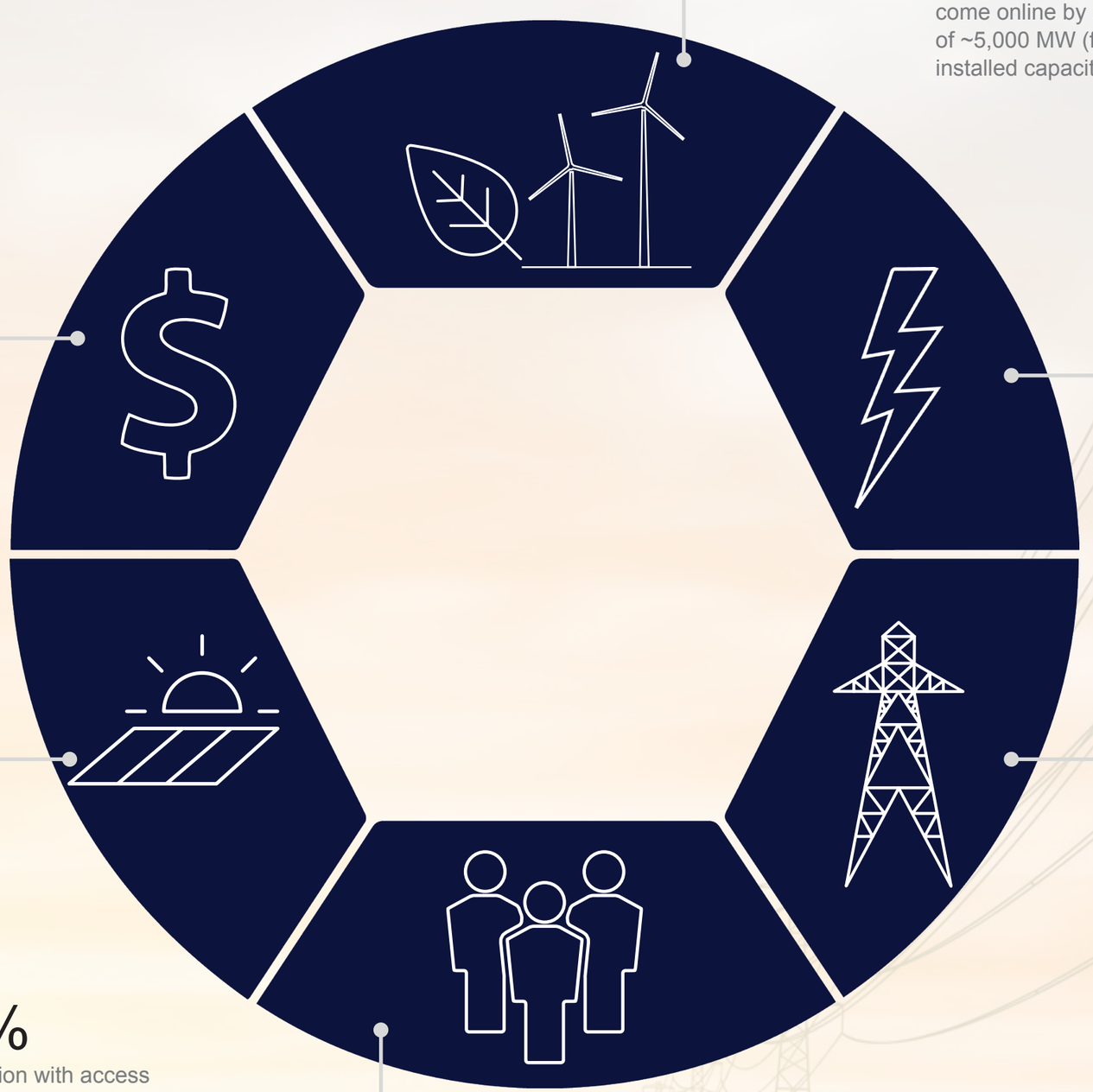
New generation capacity that could come online by 2020 for a total of ~5,000 MW (from ~2,300 MW installed capacity in 2015)

14-18 billion USD

Total unsecured financing needed by 2020 to deliver power sector projects

80+%

Share of 2,700 MW new capacity coming from IPP projects, with 50+% from geothermal



20-30%

Potential population to receive off-grid access to electricity by 2020, primarily through solar

~4,200 km

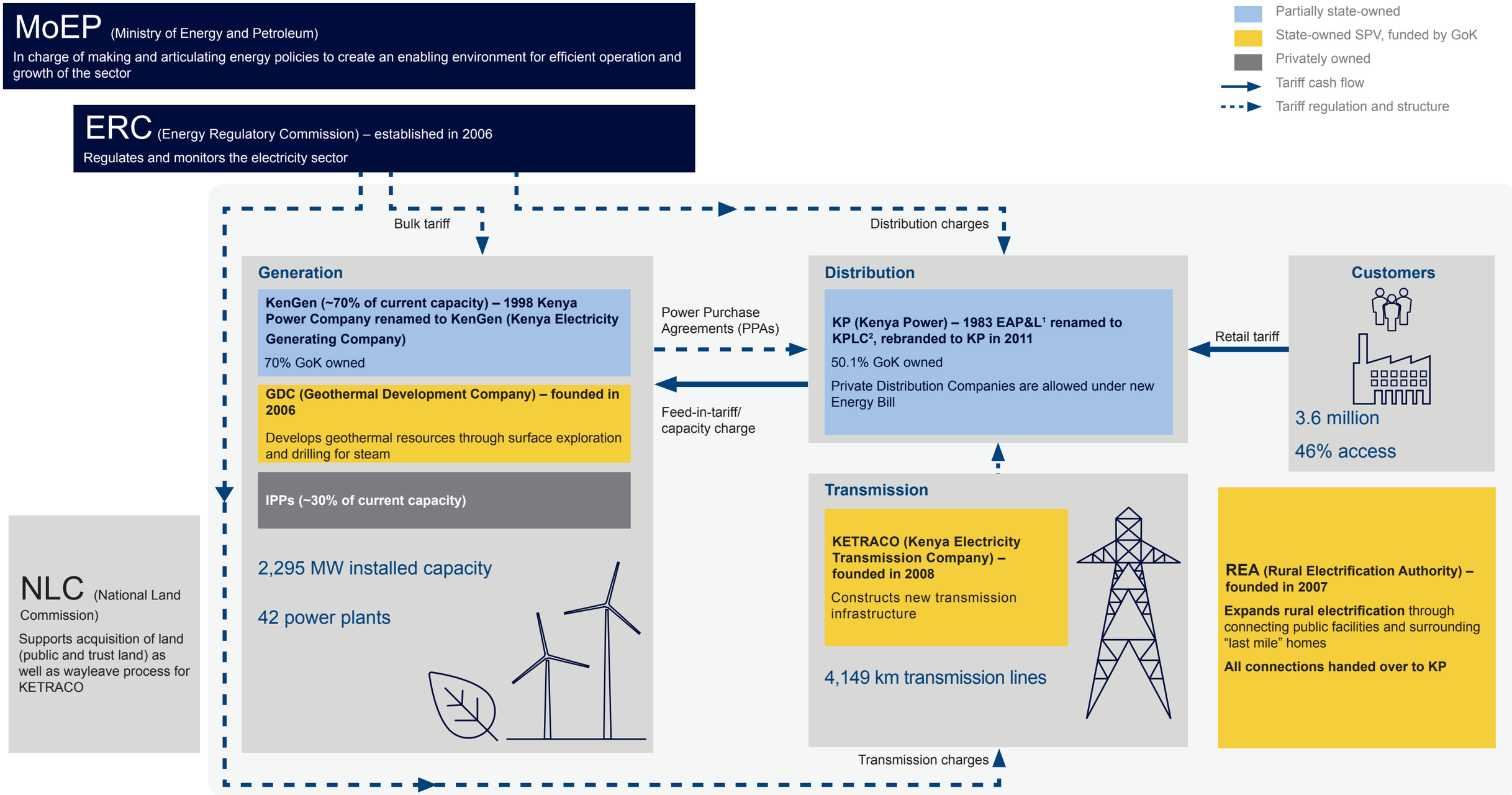
Distance of transmission lines KETRACO is currently seeking to finance (in addition to ~4,150 km of existing lines and ~4,500 km under construction)

70-80%

Expected population with access to on-grid electricity by 2020, up from ~46% in 2015

Kenya's power sector structure

The policy and regulatory environment in Kenya is fairly advanced, with significant and growing IPP presence, unbundling and partial privatization of national utilities, and cost-reflective tariffs. The below diagram highlights the current structure of Kenya's power sector.



1 East African Power and Lighting Company
2 Kenya Power and Lighting Company
Source: USAID Kenya power sector assessment report, April 2013; CSL research; ERC, 2015

Demand

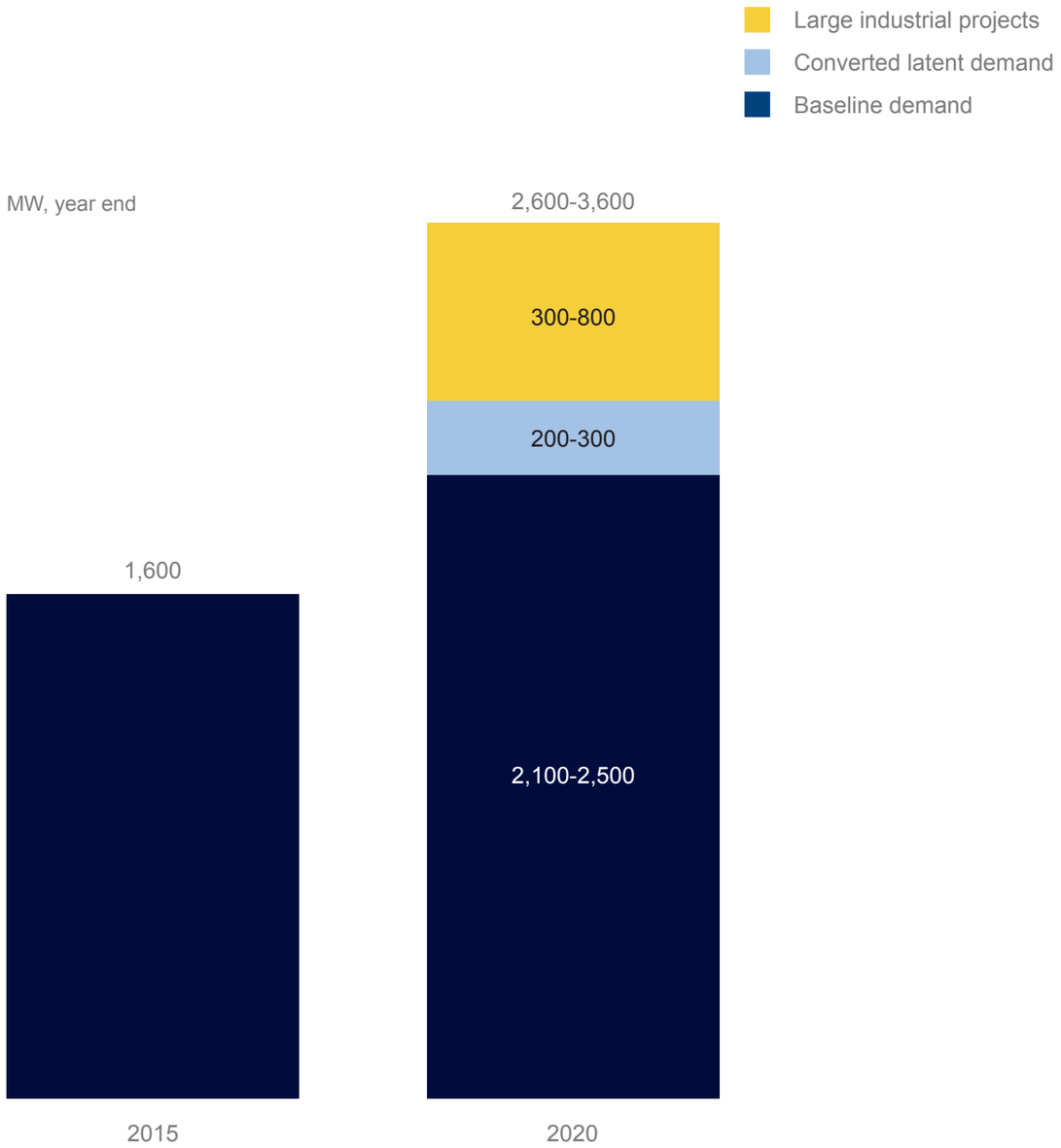
Power Africa's focus for this study was on enabling increased energy supply and connections. However, recognizing the importance of balancing supply and demand, Power Africa conducted a bottom-up analysis of demand.

Based on this analysis, we project power demand in Kenya to reach 2,600-3,600 MW by 2020, up to double the demand in 2015. Our demand projection is based on:

- **Baseline demand from anticipated growth in population and economic activity.** Based on a historical analysis, power consumption is expected to grow between 1.0-1.2x GDP growth
- **Conversion of latent demand through increased electricity access.** This includes connection requests that have not yet been fulfilled
- **Implementation of large industrial projects, which will require significant electricity use.** This is based on the Vision 2030 plan, with timelines adjusted based on interviews with government actors and private sector. Examples of such projects include the Standard Gauge Railway and LAPSSET corridor. Note that timelines for the Vision 2030 projects are shifting. This may lower the contribution of projected demand from these projects in 2020

Photo: Morgana Wingard

We project 2,600-3,600 MW peak demand by 2020



Source: 10 year power sector expansion plan; BMI Kenya Power Sector report Q3 2015; KenGen; stakeholder interviews July 2015

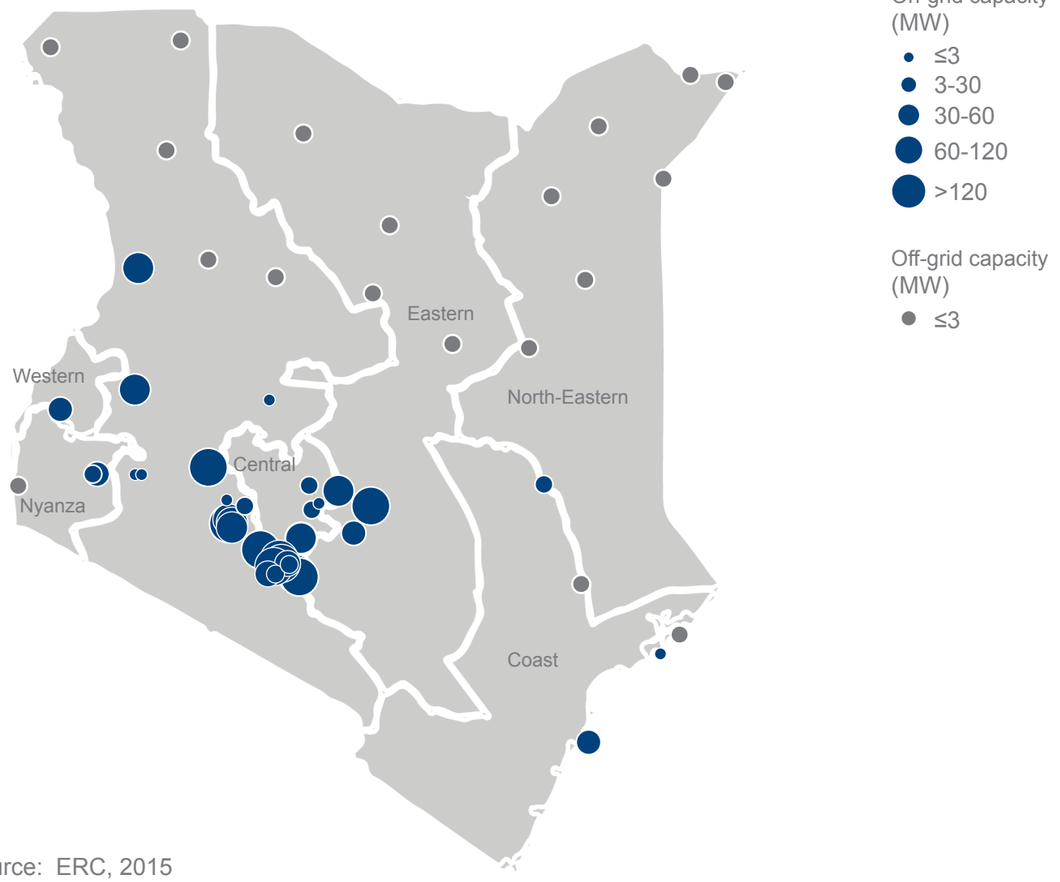
Generation

As of August 2015, the Energy Regulatory Commission (ERC) stated that Kenya has 2,295 MW of installed on-grid capacity across 42 plants, plus an additional 11.5 MW in 19 off-grid stations in remote parts of the country.

Kenya's installed capacity consists of 70% renewable sources, with enormous potential to expand that base. According to the MoEP, Kenya has the potential to produce 10,000 MW of geothermal power from the Rift Valley Basin. The United Nations Environment Program (UNEP) further estimates that Kenya's wind capacity could be as high as 3,000 MW.

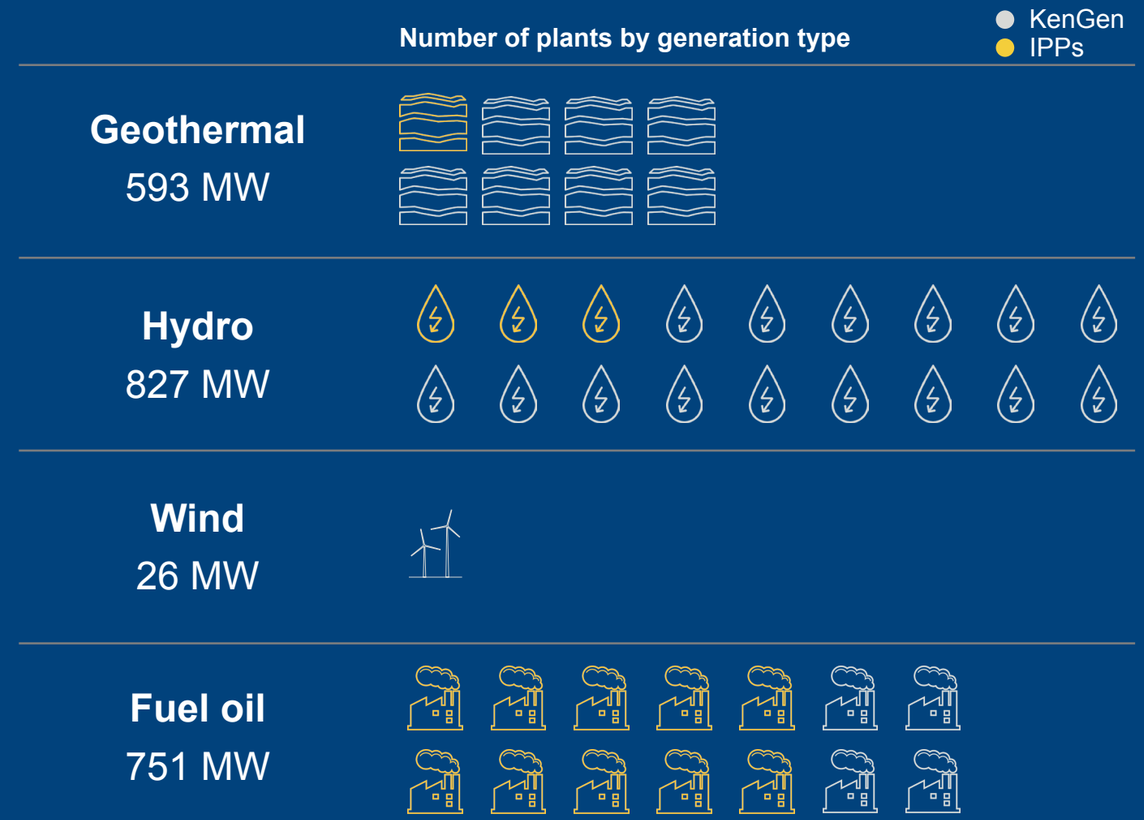
Around 30% of Kenya's installed capacity is owned and operated by Independent Power Producers (IPPs) across 15 plants, including 3 small-scale hydro plants, 1 geothermal plant, 1 biomass plant, and 10 fuel oil plants. The remaining 70% capacity is owned and operated by KenGen.

Kenya's power plants



Source: ERC, 2015

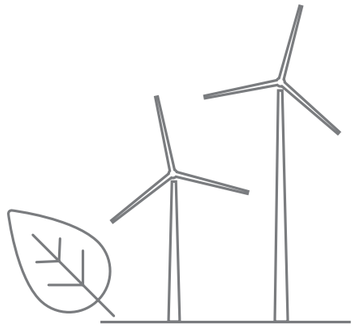
Kenya's power generation landscape in 2015



Total: 2,295 MW **42 plants**

Source: ERC, 2015

Growth in generation capacity



Based on updated timelines and projects in the pipeline, we estimate Kenya could have 5,040 MW of installed capacity by 2020, representing ~2,700 MW of new generation capacity coming online in 42 new plants over the next 5 years.

We project all of this new capacity will be renewable energy, resulting in Kenya's energy mix being 83% renewable by 2020. Geothermal projects being developed by KenGen, GDC, and IPPs are expected to contribute 1,392 MW of new capacity. As a result, by 2020, we project geothermal will form the baseload of Kenya's power system at ~40% of all installed capacity.

We believe solar will play an increasingly important role as well, growing from 0 MW today to 430 MW by 2020. Moreover, many of the 19 off-grid diesel stations will likely be converted to solar-diesel hybrids.

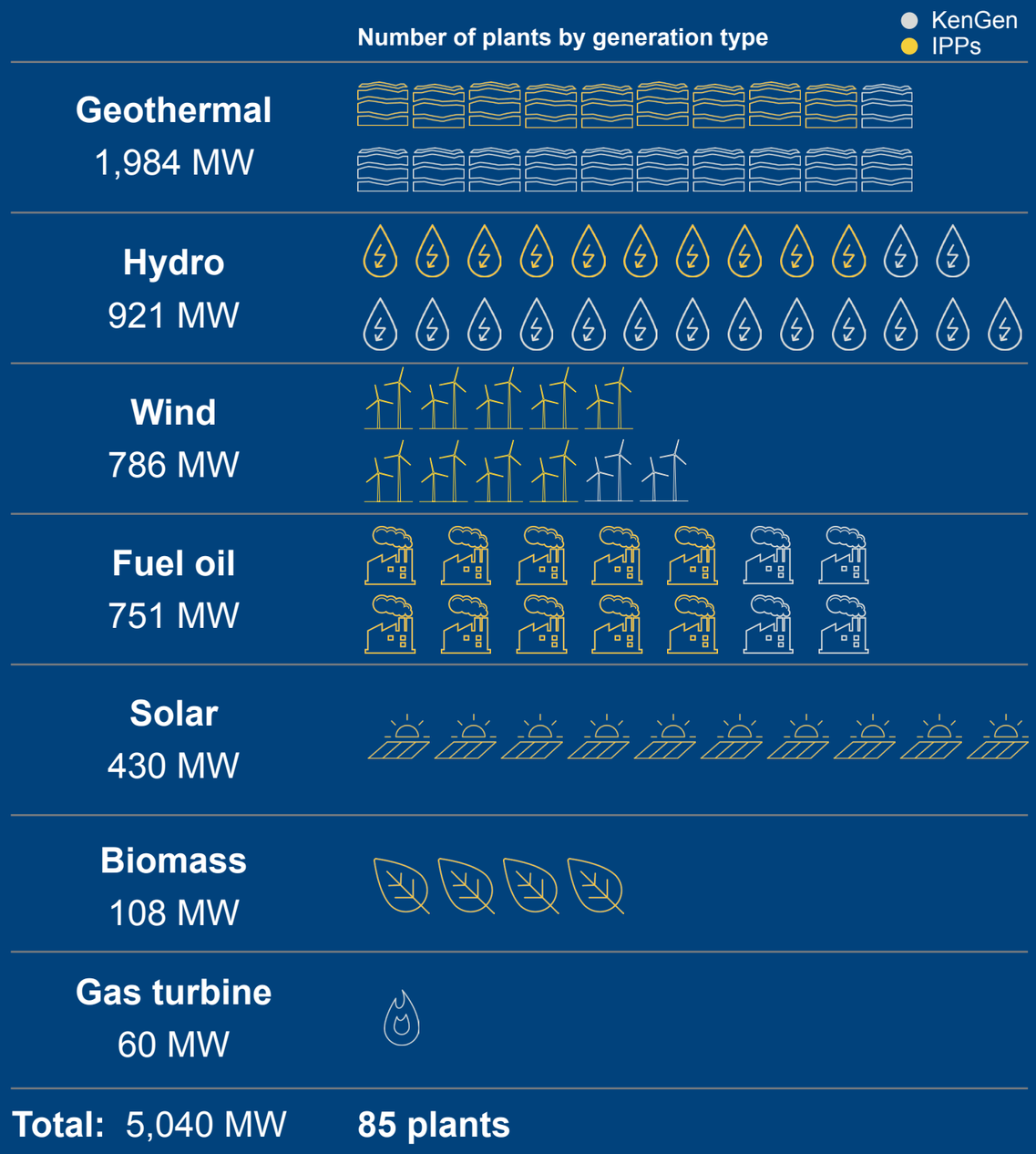
By 2020, we estimate over 60% of Kenya's power will be generated by IPPs (including IPPs using steam provided by GDC) through 52 plants.

The Government of Kenya's effort to increase generation capacity has resulted in significantly increased investment in the energy sector. Our projections are based on interviews with developers and financiers performed in mid-2015 to understand the latest project timelines, including projects that have been put on hold, delayed, or added since the power sector plan was developed.

Photo: Power Africa

Kenya's generation capacity in 2020

Team forecast based on developer and historical timelines



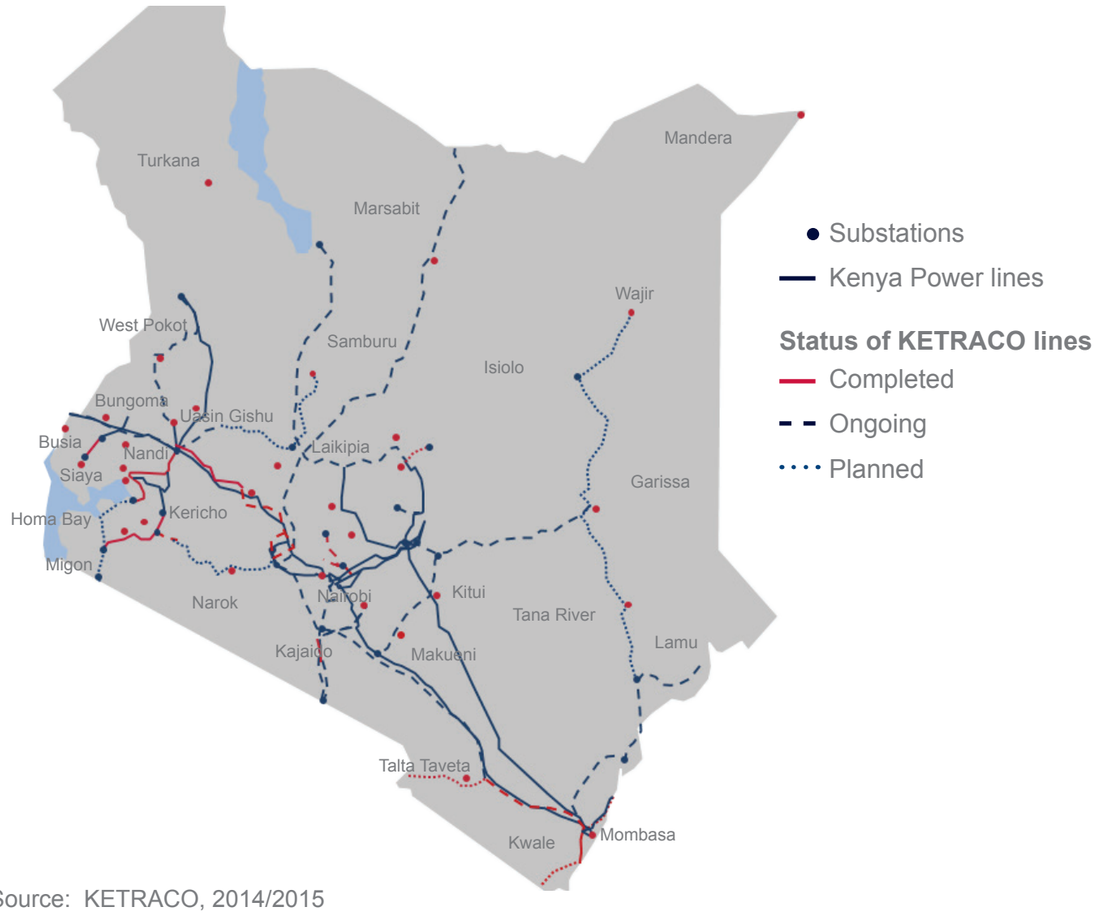
Total: 5,040 MW **85 plants**

Source: 10 Year Power Sector Expansion Plan, 2014- 2024; Investment Prospectus 2013-2016; interviews with developers; benchmarking of time typically takes to complete projects in Kenya and internationally

Transmission

As of 2015, Kenya had 4,149 km of transmission lines, all of them 200 kV or 132 kV. KETRACO is in the process of constructing ~4,500 km new lines, more than doubling the transmission network and introducing Kenya's first high-voltage 400 kV and 500 kV DC lines as well as 3 major regional interconnectors to Ethiopia, Uganda, and Tanzania.

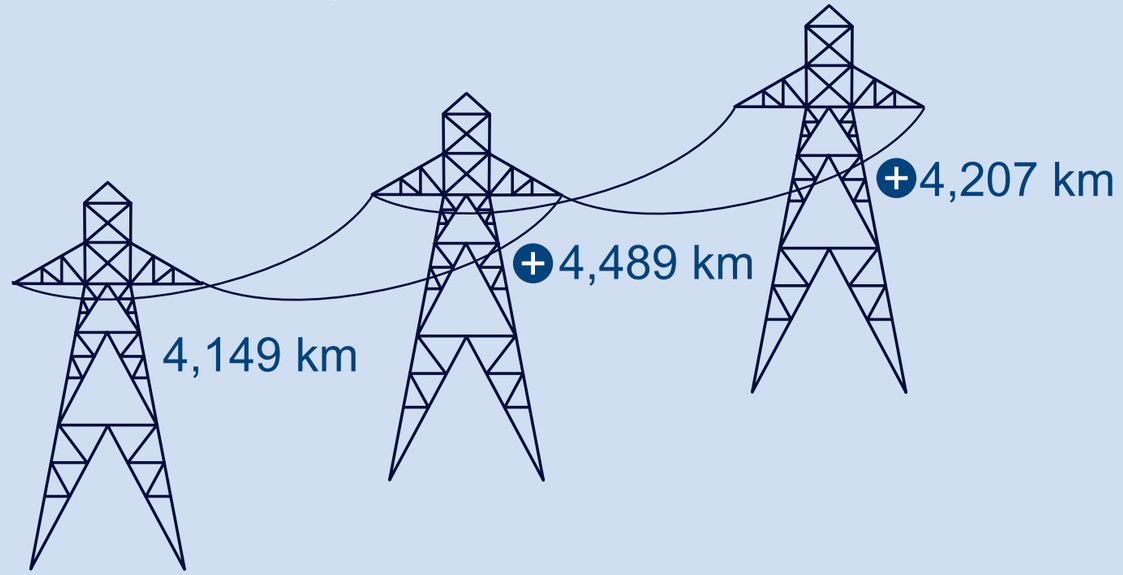
Beyond these lines that are under construction, KETRACO is planning a further ~4,200 km of lines to expand and strengthen the grid.



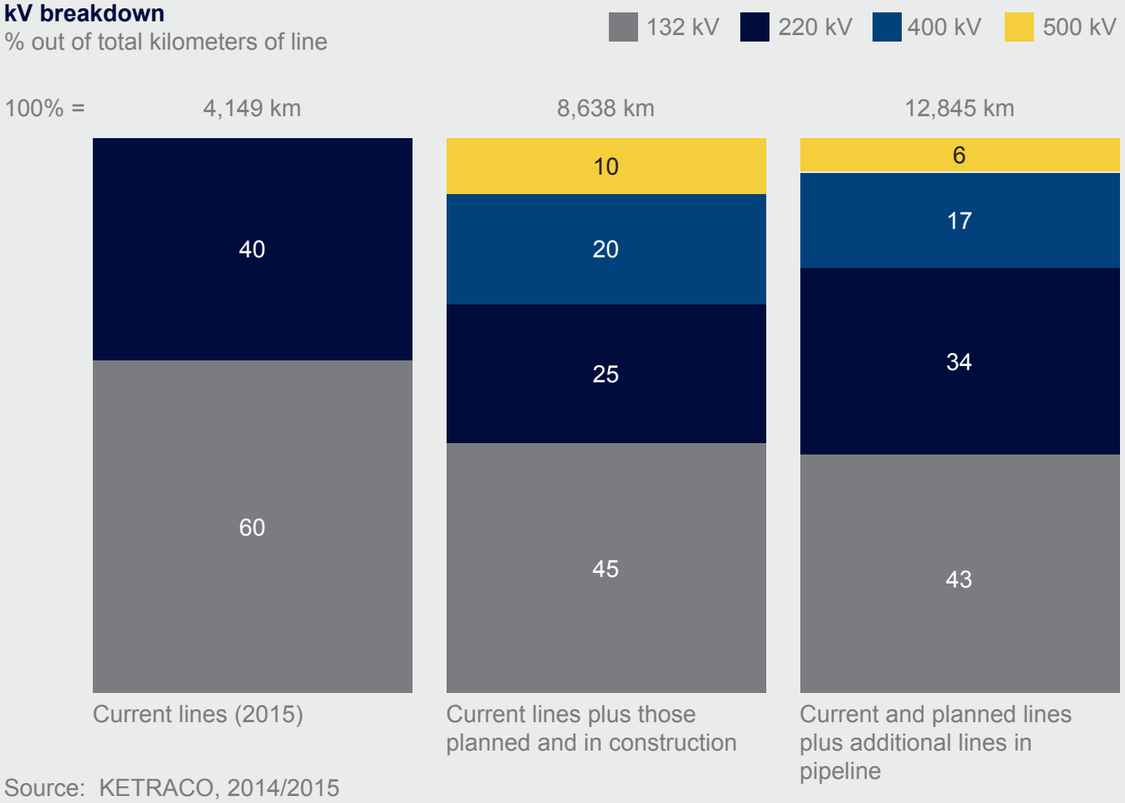
Source: KETRACO, 2014/2015

Kenya's planned transmission line build-out

Total kilometers of current and planned transmission lines



kV breakdown
% out of total kilometers of line



Source: KETRACO, 2014/2015

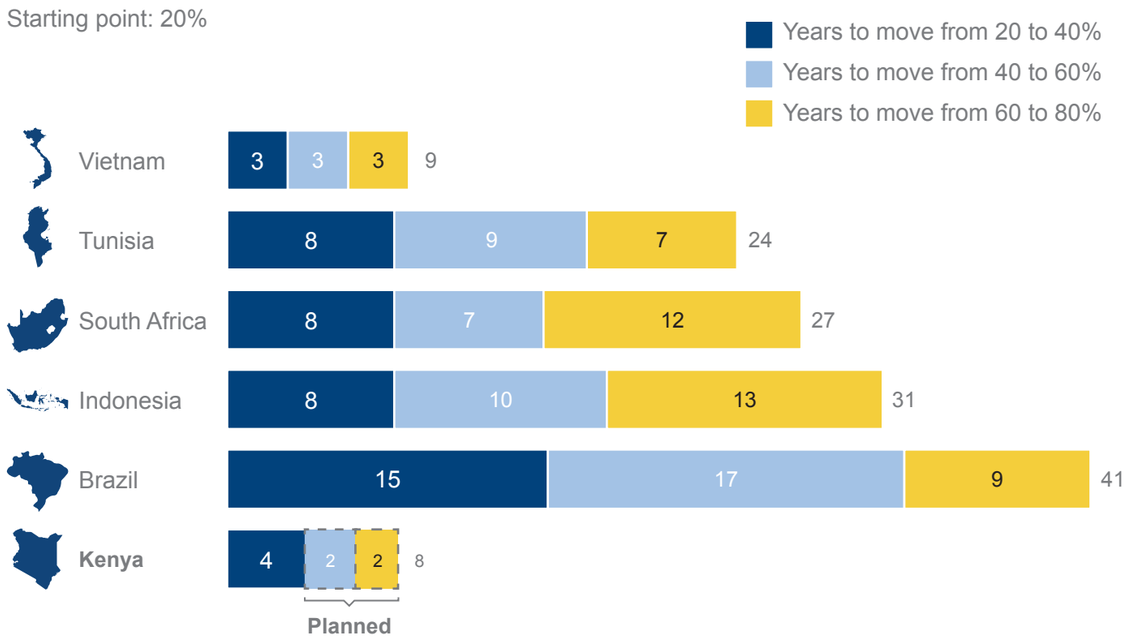
Distribution

Kenya Power (KP) is currently the sole distribution company in Kenya. It operates Kenya's interconnected grid, as well as several off-grid stations in the northern regions of the country.

As the single off-taker in the country, KP negotiates Power Purchase Agreements (PPAs) with generation providers and dispatched energy to 3.6 million customers as of August 2015.

Most impressively, KP has nearly doubled access in Kenya over the last 4 years, from 26% of households in 2011 to 46% in 2015, meeting best-in-class benchmarks globally. KP has been assisted in this effort by the Rural Electrification Authority (REA). Founded in 2006, REA's mandate has been to accelerate the pace of rural electrification across all 47 counties. Since its inception, REA has helped move rural electrification from 4% to 32% of rural households, largely through its efforts to connect ~60,000 public facilities (mostly primary schools) around the country and all household consumers within 600 meters of those facilities[1].

Kenya moved from 26% to 46% electrification in 4 years, meeting best-in-class benchmark



1 REA, 2015
Source: KP – Electricity Connection Data July 2015; team analysis; Brighter Africa report; McKinsey

Together, KP and REA have 4 major objectives to develop distribution and access in Kenya:

- **Reach near-universal access by 2020 by adding 1 million new customers to the grid each year.** The plan is to achieve this largely through the Last Mile Connectivity Program (connecting all consumers within 600 meters of an existing transformer with a subsidized connection price) and through further subsidized connections for consumers in informal settlements
- **Build a stronger and more flexible grid by building in redundancies, reducing losses, and adding in smart technologies.** Current transmission losses are 4.5%, distribution losses are 13.5%.
- **Increase the number of PPAs signed with power generators.** KP currently has 22 PPAs signed and expects to sign ~60 more over the next 5 years
- **Increase renewable off-grid access.** Currently, there are 19 off-grid diesel-powered stations, but there are plans to convert these to solar-diesel hybrids as well as add 43 greenfield solar "mini-grids" through the Scaling Up Renewable Energy Program (SREP)

Photo: Morgana Wingard

Off-grid

Off-grid solutions provide a cost-effective and rapidly scalable way of connecting areas that are rural or have a high cost to connect to the grid. Kenya is home to multiple actors innovating in the off-grid energy access space, including players in solar lanterns, single-home solar systems, and renewable energy mini-grids. The diversity of players and solutions is a testament to Kenya's drive for innovation and entrepreneurship in the energy sector. We believe there is a real opportunity to convert Kenya into a "laboratory" for off-grid solutions that can then be exported to the rest of sub-Saharan Africa.

However, we believe Kenya's off-grid sector is currently facing 2 critical challenges:

- **Lack of an integrated strategy between KP's on-grid connections target and private sector off-grid connections development.** This means off-grid connections may be developed in the same areas where KP is planning on-grid connections. It also means the most cost-effective mix of on- and off-grid connections may not be delivered across the country.
- **Nascent regulatory environment for private mini-grid players.** Regulation was recently put in place to allow mini-grids to operate as private DisCos, but net metering provisions are not yet in place to allow them to eventually connect to the grid.

Photo: Power Africa

Kenya's off-grid landscape

	Description	Example players
 **Mini-grid systems**	• A local energy grid which operates autonomously from the traditional grid	• Husk Power Systems • PowerGen Renewable Energy • PowerHive
 **Single-home systems**	• Use photovoltaic cells and rechargeable battery to provide electrical power off-grid • For example, M-KOPA has sold over 225,000 units. A unit charges 4 lights, a torch, a radio, and cell phones.	• Azuri • d.light • Barefoot Power • Greenlight Planet • M-KOPA
 **Solar lanterns**	• Light fixture composed of an LED lamp, a photovoltaic solar panel, and a rechargeable battery • Can be single function (lighting) or multi-function (mobile charging + lighting)	• d.light • Greenlight Planet • Renewit Solar • Schneider Electric

Finance

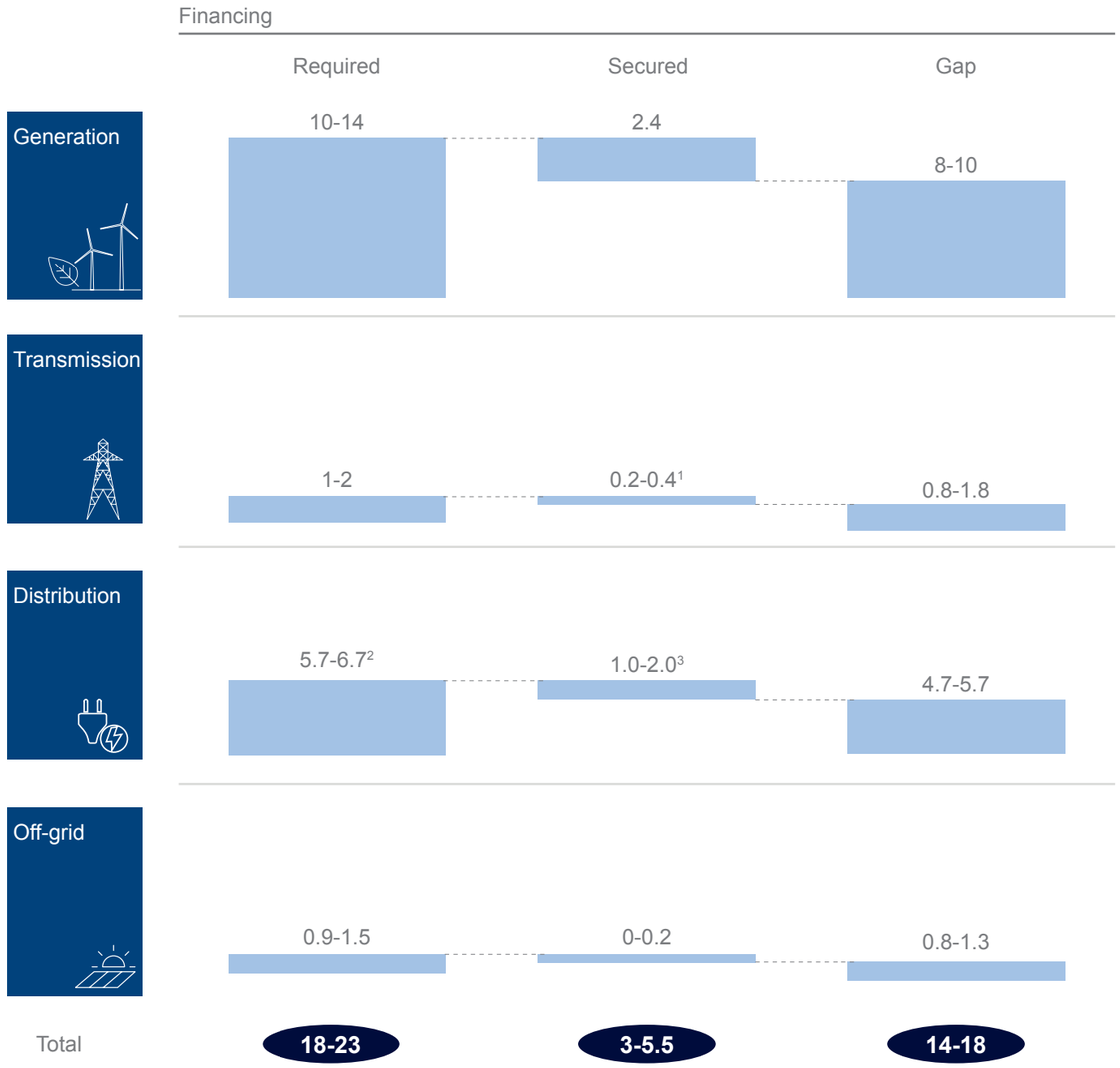
Looking across the entire power sector, we estimate that Kenya will need a total of 18-23 billion USD by 2020 to achieve its targets in the power sector. Of this, Kenya has secured an estimated 3-5.5 billion USD, leaving a gap of 14-18 billion USD in financing.

This financing estimate includes:

- All generation projects in the pipeline, including those expected to be completed post-2020
- Estimated cost of 4,200 km new unfinanced transmission lines
- On-grid connections for 70-80% of the population. Benchmarks from South Africa show the cost per connection more than doubles past an 85% connection rate. Therefore, we have used a 70-80% access rate scenario as a realistic, cost-effective target
- Off-grid connections for the remaining 20-30% of the population. Off-grid solutions present a lower CAPEX-intensive alternative for these more costly-to-connect households
- KP operational improvements to reduce losses and improve system stability

Photo: Morgana Wingard

We estimate the total cost of financing the power sector in Kenya to be 18-23 billion USD, with a current gap of 14-18 billion USD
Billion USD



1 Based on GoK budget allocation for power sector
2 Includes 1.0-1.6 billion USD of investment for operational improvements
3 Assumes 457 million USD for KEMP, 150 million USD other Last Mile funding to be approved by AfDB and GoK commitment to the sector over the next 5 years
Source: Team analysis

Photo: Power Africa

Historically, Kenya has relied on concessional financing from development partners and development finance institutions to provide the capital required for investments in the power sector. However, given the ambitious nature of its current targets and the tight timelines, Kenya can no longer afford to rely entirely on concessional capital. Instead, Kenya must catalyze commercial investments in the power sector to meet its financing needs.

While Kenya's power sector has made significant progress over the past few years and is attractive relative to peers in the region, Kenya still faces a range of challenges to financing the power sector and attracting commercial capital. These challenges include:

- **A challenging financing ecosystem for commercial capital.** Commercial banks are currently often crowded out by MDBs/DFIs on both loan tenure and interest rates. Moreover, the tariff structure places a disproportionate burden on concessional financing across the value chain, especially for solar and wind. In addition, risk models are not tailored to the local Kenyan context, making commercial financing more challenging
- **High GoK financial exposure to the energy sector.** If the government delivers on transmission and distribution targets, the energy sector may exceed 20% of the total government debt burden. PPAs may also sit as contingent liabilities on the sovereign balance sheet
- **Opaque or inconsistent processes which make securing financing difficult.** Unclear approach to project selection at EOI stage, inconsistent application of PPA negotiation process, challenges in securing land, and lack of a standard approach to GoK Letter of Support make securing financing challenging and also lead to cost overruns due to delays, particularly for IPPs
- **Insufficient financing models for state-owned enterprises.** KenGen's balance sheet indicates that it cannot take on significantly more debt to fund expansion; current initiatives to improve balance sheet and operational performance may not be sufficient to bridge the financing gap. GDC's revenue model is not sufficient to cover true GDC costs due to implicit GoK subsidy. KETRACO's inadequate revenue model results in a reliance on GoK financing rather than its own balance sheet. KP's target to reach near-universal access by 2020 may be high-cost, given that we estimate a significant increase in cost per connection past a 70-80% connection rate based on trends seen in other countries
- **Lack of affordable financing for private off-grid developers.** Due to smaller-scale financing needs and more innovative technologies, private sector players have difficulty securing affordable financing tailored to their needs

A group of leaders in the power sector has identified a set of solutions that can overcome some of these challenges and scale up financing in the sector.

Catalyze private investments by:

- Moving all DFI project financing for generation projects to blended financing rather than direct loans, to bring in more commercial capital at lower interest rates and potentially longer tenors
- Pursuing a Build, Own, Transfer model for critical transmission lines with a long-term concession (e.g., 20-25 years), with a clear wheeling tariff established by GoK to fund the projects

Strengthen public utilities by:

- Financing operational transformation and CAPEX execution improvement at KenGen and KP to match performance to best-in-class, supported by impact-based financing (including vendor financing)
- Generating new equity capital from sale of shares in some of KenGen's current operating assets, which KenGen can then allocate to new generation projects

Attract impact investors by:

- Launching a government-backed power sector bond, linked to a "Sovereign Power Sector Modernization Package" with specific reform covenants (e.g., process of accelerating land acquisition, establishing a clear revenue model for KETRACO/GDC), with the capital raised used to pay GoK obligations to scale on-grid distribution
- Creating a facility for social impact investors (e.g., Social Impact Bond) linked to off-grid electrification target delivery

If implemented fully, these solutions can close most of the total financing gap by 2020. In addition, the solutions can also contribute to a long-term sustainable reduction in the customer tariff rate by 6-12%, largely by reducing the fuel surcharge that currently comes from heavy fuel oil generators. These solutions can also reduce the GoK obligation to finance the power sector by up to 60%, largely by bringing in more private capital.

Recommendations for the power sector in Kenya

Based on our findings and discussions with senior stakeholders in the energy sector in Kenya, a set of implementation recommendations were developed to help the power sector achieve its goals.

Multiple other important efforts are currently underway, so this is by no means an exhaustive list; rather, this highlights major gaps in the sector identified through our diagnostic.

		Recommendations
Generation	GDC	• **Clarify role of GDC** with one of multiple options on various fields/blocks, e.g., – Focus GDC only on exploration activities, i.e., up to appraisal drilling, or – Private sector partnership for finance and skills, or – Partner directly with KenGen/IPPs on some fields/blocks
	KenGen	• **Target 2,500 MW by 2025 through SPVs** (vs. 1,300+ MW in established pipeline) • **Finance scale-up** as follows (and reposition KenGen as a growth stock) – Monetize shares of some assets to provide equity for new projects – Re-invest intended dividends as equity into new projects – Improve operational efficiency of current plants (>95% availability) – Implement capital productivity best practices on current projects
	Private sector/ DFIs	• Implement **blended finance model** to attract commercial capital
Transmission	KETRACO	• Pursue **Build, Own, Transfer (BOT)** model on key transmission lines to bring in private capital and skills
Distribution	KP, REA, and Treasury	• **Reduce commercial and technical losses by 5% points** in distribution system • **Transition government power budget funding 80+% to distribution** (vs. Gx or Tx) • Launch **sovereign power sector bond program** of USD 3 bn in tranches of USD 250 mn (local or foreign currency) to fund electrification roll-out
	GoK and private sector	• Launch **off-grid accelerator program** (including new financing options such as social impact bonds)
Overall		• Create a **coordination function** to implement these recommendations

Source: Team analysis; expert interviews

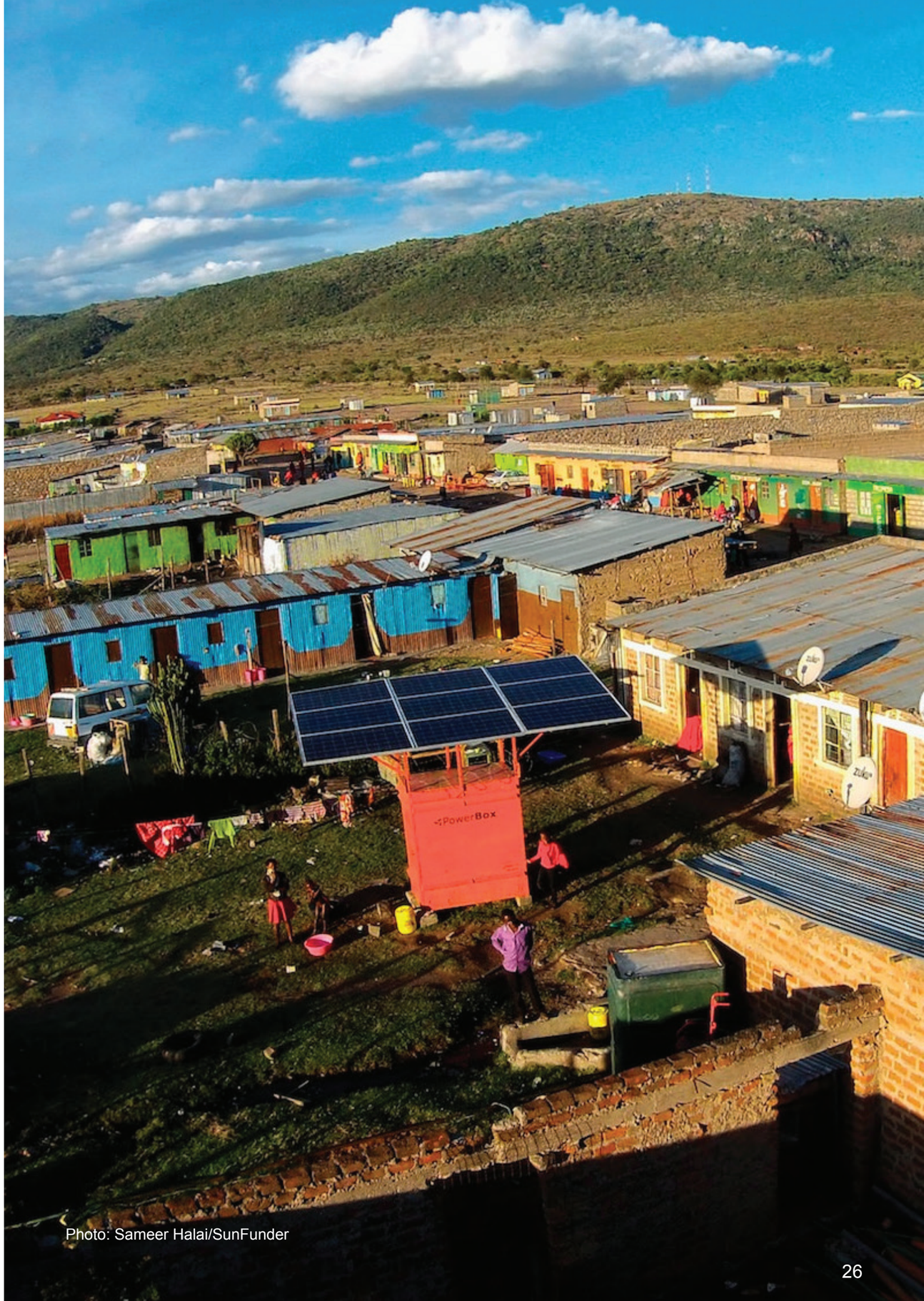


Photo: Sameer Halai/SunFunder

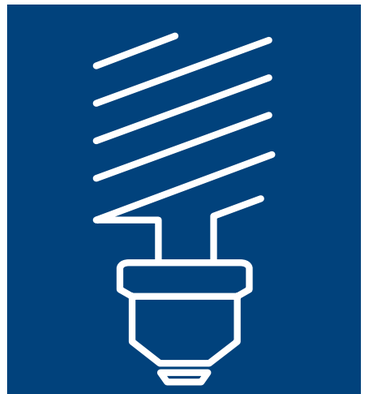
Power Africa's roadmap

In 2015, Power Africa articulated a roadmap highlighting the collective efforts of its more than 120 public and private sector partners to achieve the ambitious goal of adding 30,000 MW and 60 million connections in sub-Saharan Africa by 2030. This roadmap outlines Power Africa's 3 strategic pillars:

PILLAR 1

Increase capacity by 30,000 MW

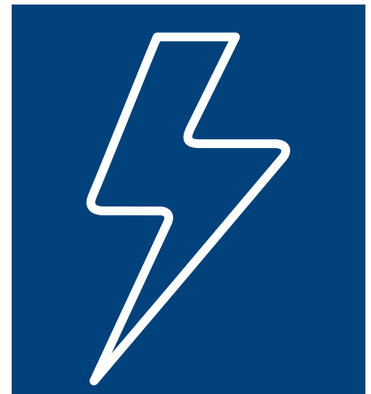
- 18,000-21,000 MW maximising value from existing transactions
- 11,000-14,000 MW advancing new opportunities for gas, solar, wind and geothermal
- 2,000-3,000 MW increasing efficiency of existing generation



PILLAR 2

Create 60 million new connections

- 35-40 million scaling grid roll-out programs for urban and rural
- 25-30 million intensifying beyond the grid efforts with household systems and micro-grids



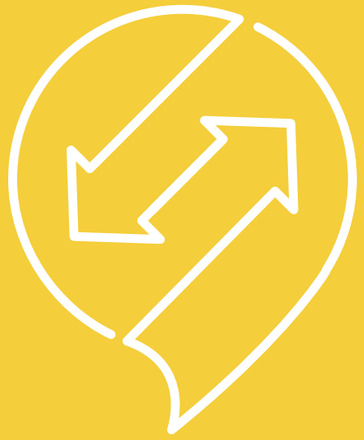
PILLAR 3

Unlock energy sector potential

- Supporting governments with targeted policy interventions that move transactions forward
- Facilitate national and regional power sector integration through regional power pools and electricity trade

The full roadmap can be found at: www.usaid.gov/powerafrica/roadmap

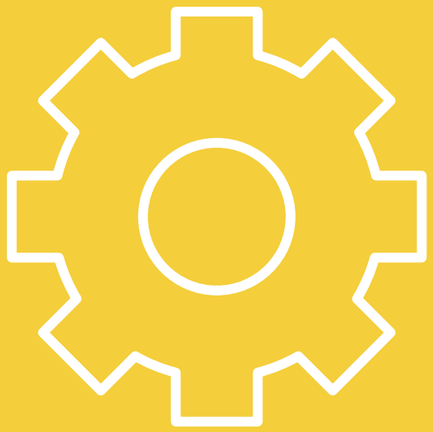
Power Africa's value proposition



On-the-ground support through country teams and transaction advisors

Transaction-focused with a database of projects that tracks progress and bottlenecks

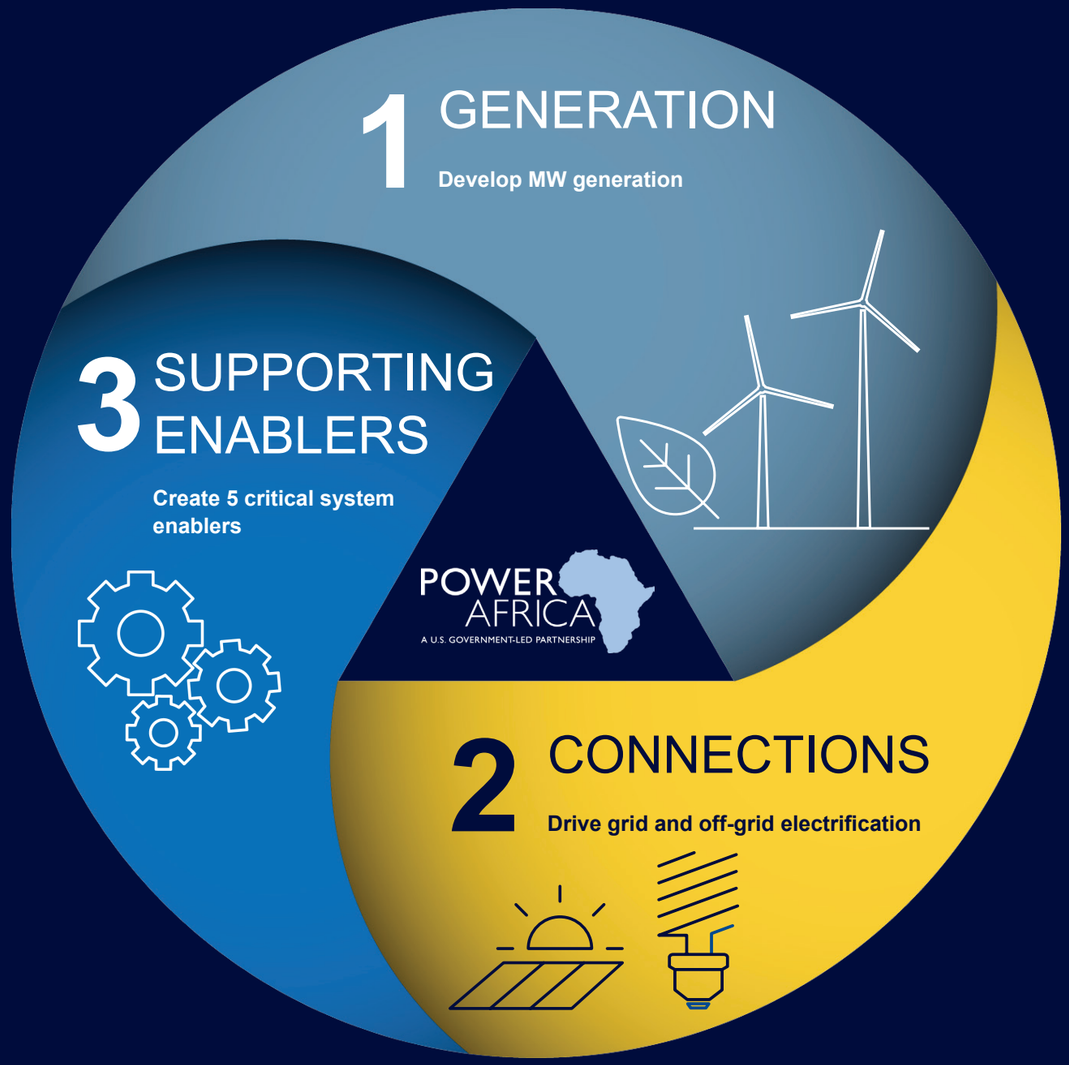
Partnerships among a diverse network of public and private sector players



Toolbox from more than 120 partners to accelerate deal flow, leverage capital, and improve the enabling environment

Power Africa's support in Kenya

Towards achieving our overall objectives of supporting 30,000 MW of generation and 60 million new connections across sub-Saharan Africa and unlocking energy sector potential, Power Africa will support the Kenya power sector in achieving its targets across 3 pillars.



Details on Power Africa's interventions

Power Africa will support the Kenya power sector through 11 interventions across these pillars. In total, these interventions will help deliver 2,000+ MW in generation, 2.5+ million off-grid connections, and enable the whole system.

Details on Power Africa's 11 interventions

Develop MW generation

- Provide critical transaction advisory, technical assistance, market information, and PPA process support for 800+ MW of renewable projects
- 1b Strategic partnership with KenGen to support new generation capacity of 1,300+ MW in established pipeline (with a potential of up to 2,500 MW by 2025) through traditional and new financing mechanisms
- Facilitate and/or provide feasibility, pilot, and project (equity and debt) financing
- Support the Geothermal Development Company (GDC) to develop a Joint Development Agreement, enabling funding for drilling for 645 MW

Drive grid and off-grid electrification

- Develop and support overall off-grid accelerator program, for 2.5+ million connections
- Support distribution system loss reduction and operational efficiency through integrated planning, investment mobilization and technical assistance

Create 5 critical system enablers

- Continue to drive grid management support and capacity building to enable grid adoption of intermittent renewable energy projects
- Develop critical go-to capability for community engagement and land-related challenges
- Build the capacity of GoK entities to undertake critical functions to foster clean energy development
- Develop and support initiatives to finance the 14-18 billion USD gap to achieve generation, transmission, distribution, and off-grid electrification targets
- Provide policy and regulatory design and reform assistance based on global best practice

Photo: Power Africa

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