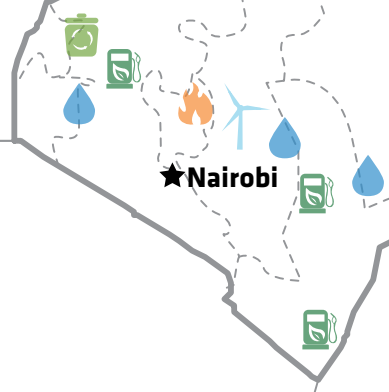
EAST AFRICA

Kenya



GDP: **$60.9bn**
Five-year economic growth rate: **8.8%**
Population: **45.5m**
Total clean energy investments, 2009-2014: **$3.5bn**
Installed power capacity: **2.2GW**
Renewable share: **32.8%**
Total clean energy generation: **2.8TWh**
Top energy authority: **Energy Regulatory Commission**

OVERALL RANKING 2014	OVERALL RANKING 2015	OVERALL SCORE 2015
7	6	1.74

PARAMETER	RANKING	SCORE
I. Enabling Framework	05	1.75
II. Clean Energy Investment & Climate Financing	13	0.80
III. Low-Carbon Business & Clean Energy Value Chains	09	3.62
IV. Greenhouse Gas Management Activities	16	1.74

SCORE SUMMARY

Kenya scored 1.74 in *Climatescope* 2015, placing it 6th on the list of countries overall. Among the 19 African nations, it was second only to South Africa. Its highest ranking was on Enabling Framework Parameter I.

Kenya ranked 5th on Parameter I overall, and second in Africa, thanks to the presence of an extensive policy framework for clean energy as well as its distributed and energy access policies.

On Clean Energy Investment and Climate Financing Parameter II, the country's score improved, though it dropped one place on the overall ranking. It advanced with the largest wind financing in sub-Saharan Africa in 2014.

Kenya's score on Low-Carbon Business & Clean Energy Value Chains Parameter III also dipped, however it still has a comparatively high number of clean energy service providers and value chains.

On Greenhouse Gas Management Activities Parameter IV, Kenya was ranked 16th overall. It scored relatively well for its carbon offsetting activities.

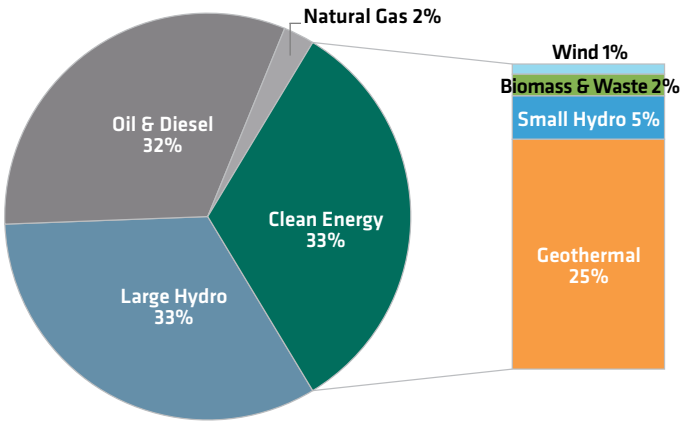
For further information, access www.global-climatescope.org/en/country/kenya

OVERVIEW

Kenya has ambitious energy objectives, aiming to reach just under 22.7GW of power-generating capacity by 2033, under the Least-Cost Power Development Plan 2013-33. Clean energy sources are to play an important role in this development, with 45% of the capacity to use renewables (including large hydro but excluding solar). In comparison, Kenya had some 2.2GW of power-generating capacity at end-2014, of which a third was renewable. In large part, this ambition is driven by healthy economic growth, which saw on-grid peak power demand climb 60% between 2006 and 2014.

INSTALLED POWER CAPACITY BY SOURCE, 2014 (%)

2.2GW total installed capacity



Source: Bloomberg New Energy Finance, Kenya Power & Lighting Company, KenGen
Note: Negligible values for solar cannot be graphically represented due to scale, see source data for the complete numbers.

The East African country surpassed Japan at the end of 2014 to become the eighth-largest producer of geothermal energy after the state-owned generator KenGen commissioned a further 280MW of capacity. Kenya enjoys extensive clean energy resources, with 10GW of geothermal and 3GW of small hydro potential, according to the draft National Energy Policy. Unlike previous versions, this draft does not set out new targets to 2030 for all technologies. Instead, it still aims for 5.5GW of geothermal capacity by that year but only includes goals to end-2016 for other renewable energy sources. These goals were part of the government's plan to reach 5GW of power-generating capacity, to include 1.9GW of geothermal, 635MW of wind and 44MW of biomass cogeneration.

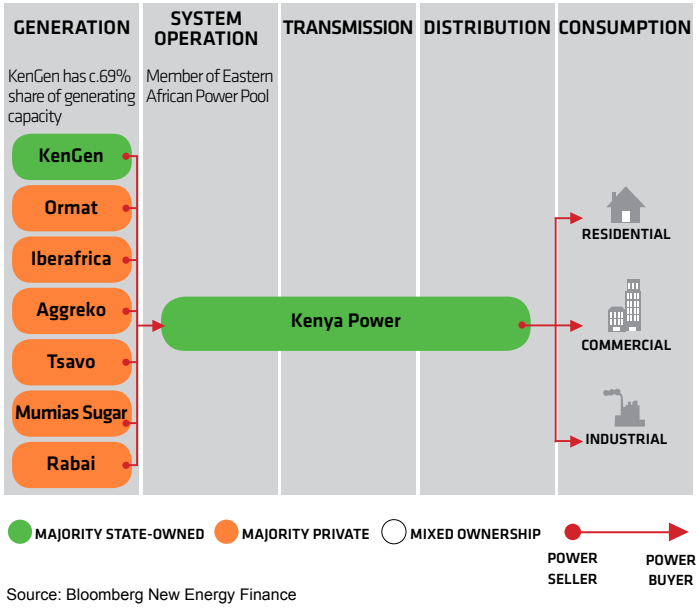
KEY POLICIES

Feed-in Tariff	A 20-year fixed tariff for wind, solar, geothermal, hydro, biomass and biogas projects to be revised in late 2015, alongside a standardized power-purchase agreement.
Energy Target	Current target to reach 20GW of power capacity by 2030, comprising 51% renewable energy. The draft National Energy Policy, yet to be approved as of Q4 2015, contains new shorter-term targets by technology. Target to reach 100% electrification by 2020.
Biofuels	The draft National Energy Policy would introduce a biofuel blending mandate by 2030.
Utility Regulation	Energy management regulations introduced in 2012 aim to reduce losses from industry, commercial buildings and large institutions.
Net Metering	The Q1 2014 draft of the new energy bill, as well as the draft National Energy Policy, contains provisions for net metering for small-scale renewable generators.
Tax Incentives	Investors are eligible for a range of national and regional tax reductions and import duty exemptions.

Source: Bloomberg New Energy Finance Policy Library

POWER SECTOR STRUCTURE

Regulator: Energy Regulatory Commission



Source: Bloomberg New Energy Finance

The single largest project under development is a 310MW wind farm near Lake Turkana, in northwest Kenya. This is a truly flagship project having taken nearly 10 years and a dozen investors to reach financial close in 2014. The developers broke ground in July 2015, with an estimated commissioning date of 2017. A forthcoming 428km overhead transmission line – funded by the government – will connect the project to Suswa, some 100km from Nairobi.

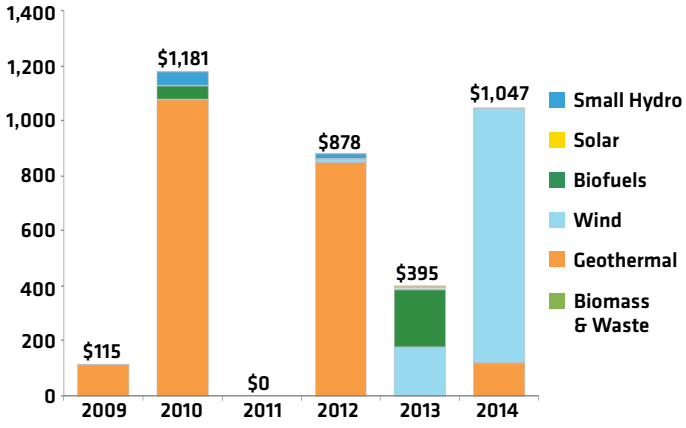
Government-owned Geothermal Development Company (GDC), is working to fast-track the development of Kenya's geothermal resources and plans to replicate a model whereby it conducts the risky and expensive, early-stage exploration and drilling. It then selects by tender the independent power producers (IPP) that will take the project to commissioning. The GDC has become somewhat of a regional center for geothermal, assisting neighboring countries with exploration of their resources and training their workers.

Kenya's power market has been partly unbundled. Kenya Power is responsible for all functions except generation and a small share of transmission. State-owned KETRACO, which was set up in 2008, develops and operates new transmission lines. Though Kenya has more IPPs than many of its neighbors, KenGen still had 70% of power-generating capacity at end-2014. The new National Energy Policy and Bill, which are due to go to Parliament in 2015, propose a raft of measures to separate generation, distribution and retail functions, with a separate unit to be set up in either Kenya Power or KETRACO to become the system operator.

The legislative framework behind the energy sector has been under review since 2011, when a new constitution passed many powers to the county level. The new policy and bill should help spur investment in clean energy, as the draft released in January 2015 proposed the introduction of net metering. Policymakers' original goal had been to incorporate legislation on all energy sources in one bill. However, what was one became two, and now five, pieces of legislation, including local content regulations for energy projects. As of H2 2015, they were under consideration in parliament.

ANNUAL INVESTMENT IN CLEAN ENERGY, 2009-2014 ($m)

$3.5bn total cumulative investment



Source: Bloomberg New Energy Finance
Notes: Total investment includes: Asset Finance, Corporate Finance and Venture Capital / Private Equity Commitments.

The new rules lay out the minimum proportion of goods or services that must come from domestic sources. This could bode well for PV and wind manufacturers in Kenya, such as Ubbink – one of the few solar module makers in East Africa. On the down side, the proposal to implement a range of biofuel blending requirements did not survive through to the latest version of the Policy.

LEAGUE TABLE

2014 Total Investments	$1,047m

Top Three Lead Debt Arrangers 2014 ($m)

1st	European Ivestment Bank	$277m
2nd	African Development Bank	$152m
3rd	KFW	$137m

Top Three Equity Sponsors 2014 ($m)

1st	KP&P BV	$191m
2nd	Aldwych International Ltd	$191m
3rd	European Investment Bank	$142m

Top Three Asset Finance Deals, 2014 ($m)

Rank	Sector	Project	Developer	Value
1st		Lake Turkana Wind Farm	LTWP	$929m
2nd		Geothermal Development Bogoria-Silali Geothermal Project Phase I	Geothermal Development Co	$118m

Source: Bloomberg New Energy Finance
Notes: Figures refer to asset finance investments committed in 2014 and include balance sheet commitments

Kenya's main tool to incentivize renewable energy development is the feed-in tariff, which has spurred some renewables build – though some developers have said the FiTs are not high enough for them to recover costs, in particular for solar projects. IPPs had 1.2GW of wind projects online or in development as of March 2015, together with 272MW of geothermal, 221MW of solar and 28MW of small hydro.

After two rounds of revision, three more technologies (biogas, geothermal and solar PV) have been included in the feed-in tariff and some rates have been increased. The feed-in tariff review that was due to take place last year was not held, but the Ministry of Energy has said it is scheduled to begin in Q4 2015. In the meantime, the government is working on a proposal to implement renewable energy auctions, though there is a question of whether Kenya's renewables market and the required financing structures are sufficiently mature for such a policy mechanism.

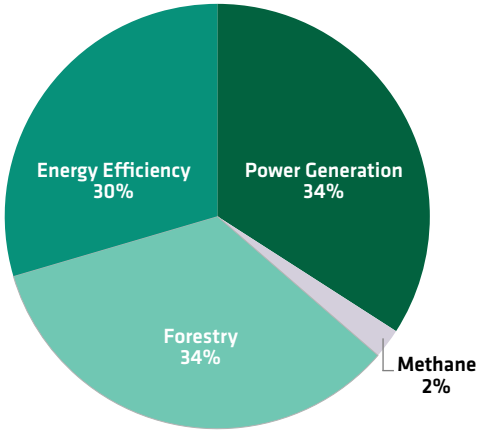
FINANCIAL INSTITUTIONS IN CLEAN ENERGY

✓	Banks	✓	Corporate Finance
	Funds	✓	Impact Funds
	Private Equity / Venture Capital		

Source: Bloomberg New Energy Finance
Note: Refers to types of institutions that finance clean energy projects. Check means that at least one institution is active in that segment in the country

CARBON OFFSET PROJECTS BY SECTOR

44 CDM and voluntary carbon offset projects



Source: UNEP Risoe, Bloomberg New Energy Finance

CLEAN ENERGY VALUE CHAINS BY SECTOR

Sector / Quantity	Available Sub-Sector, Unavailable Sub-Sector
Biofuels	**Producers** ; Engineering ; O&M ; Equipment Manufacturing ; Distribution and Blending
Biomass & Waste	**Project Development ; Engineering ; O&M ;** Equipment Manufacturing ; **Feedstock Supply**
Geothermal	**Project Development ; Engineering ; O&M ; Resource Development ;** Turbines ; Balance of Plant
Small Hydro	**Project Development ; Engineering ; O&M ;** Turbines ; Balance of Plant
Solar	**Project Development ; Engineering ; O&M ;** Polysilicon/ingots ; Wafers ; Cells ; Modules ; **Inverters ;** Balance of Plant
Wind	**Project Development ; Engineering ; O&M ;** Turbines ; Blades ; Gearboxes ; Towers ; **Balance of Plant**

Source: Bloomberg New Energy Finance
Note: Uncolored icons, on the left, refer to each sub-sector of a complete value chain for a given sector, spelled out on the right. Colored icons represent the number of available subsectors for a given clean energy sector value chain. Bold text, on the right, illustrates at least one organization in that sub-sector is active in the country.

Kenya has made significant progress in increasing electricity access by extending the grid and off-grid projects (both diesel and renewable). As a result, electrification rates have nearly doubled since 2010, to 35% by end-2014. Overall, the country now aims to reach universal electricity access by 2020, after the government brought forward the deadline by a decade.

Among the African countries, Kenya hosts the second highest number of carbon offset projects after South Africa. As part of its Intended Nationally Determined Contribution (INDC) in the run up to the Paris climate conference, the country committed to cutting greenhouse gas emissions by 30% relative to business as usual by 2013.