



Power Generation Expansion



MITI

MINISTRY OF INVESTMENTS,
TRADE & INDUSTRY



KENYA
DEVELOPMENT
CORPORATION



DBRT
DEPARTMENT OF BUSINESS
REFORMS & TRANSFORMATION





Contents

01	Why Kenya
02	Investment Opportunity
03	Get Started

Kenya at a Glance



3rd largest

economy in sub-Saharan Africa.



US\$ 110.35 Bn

7.5% growth

Dominant economy in EAC
≈46% of EAC's GDP.



US\$ 2,081.8

+75% growth since 2010

Growing middle-class with an
increasing appetite for high-value
goods and services.



- Regional economic hub
- Host to over 200 Multinational Corporations with regional & continent-wide HQs in Nairobi
- Robust financial system
 - 43 banking institutions
 - 9 representative offices of foreign banks,
 - 13 Microfinance Banks,
 - 3 credit reference bureaus
 - 19 Money Remittance Providers
 - 73 forex bureaus



- Africa's UN HQs (UNON) which is one of four main UN secretariat duty stations globally.
- Global headquarters of UNEP and UN-Habitat, together with a joint presence of 23 other UN Agencies.



- Communications & Logistics hub of the region
- Access to regional transport corridors.
 - 4 international airports
 - 2 sea ports and 2 ICDs
 - 30-freight and 2-passenger rail services daily between Nairobi and Mombasa.

Existing Bilateral Trade Treaties with Kingdom of Saudi Arabia



The Investment Environment is Conducive



Source: World Bank, UNCTAD, CBK, KNBS

1

- Guaranteed repatriation of capital and profits
- Constitutional protection against expropriation
- Investment guarantee against non-commercial risks: ICSID, MIGA and ATIA

2

- One stop shop facilitation
- Periodic Presidential roundtables with private sector
- Digitization of government services
- Facilitative Industrial zone programs - EPZs & SEZs

3

- Political and macroeconomic stability.
- High labour productivity: a large pool of youthful, trainable and literate workforce
- Globally competitive:
 - 56th in the Ease of Doing Business
 - 1st for five years in a row in financial inclusion
 - 1st globally in protection of minority investors
 - Nairobi – Africa's leading business travel destination and hub for impact investors.
 - 2nd in Africa in the logistics performance index

Wide Market Access & Good Trade Relations



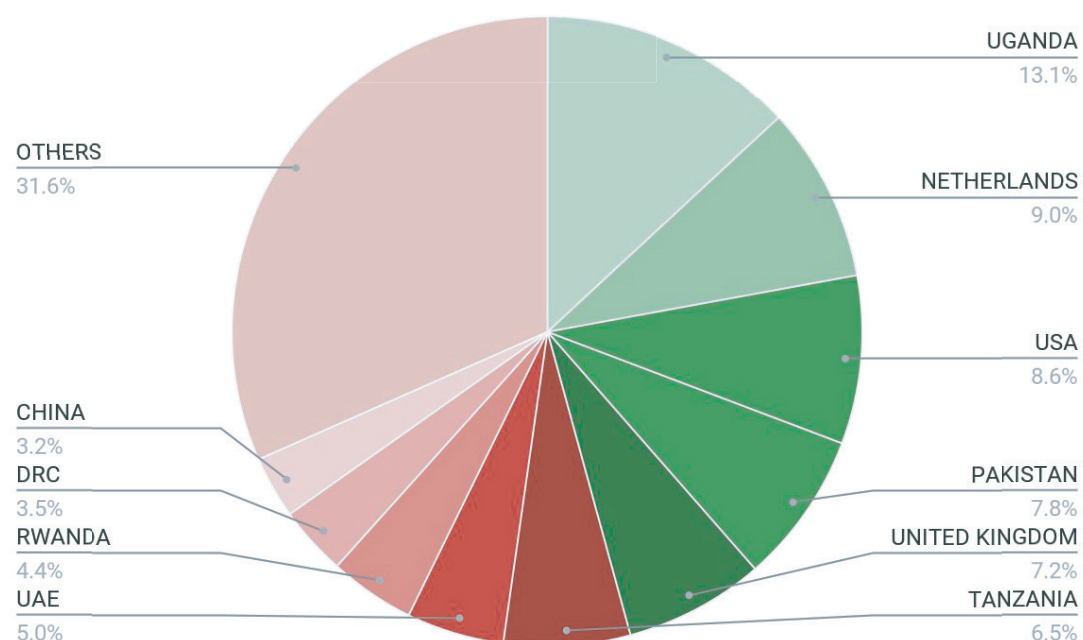
US\$ 17.43 Bn
Total Imports



US\$ 6.09 Bn
Total Exports

Preferential Trade Agreements

1.7Bn ~ **US\$ 40Tn**
Population Market value



Kenya's untapped export potential ~ **US\$ 4.1 Bn (ITC)**



Contents

01	Why Kenya
02	Investment Opportunity
03	Get Started

Executive Summary

Project Name: **POWER GENERATION EXPANSION**



IMPLEMENTING AGENCY: **KENYA ELECTRICITY GENERATION COMPANY (KENGEN) & GEOTHERMAL DEVELOPMENT CORPORATION (GDC)**

LOCATION: **GEOTHERMAL SITES IN KENYA**



ESTIMATED INVESTMENT COST: **USD 6 Million**



INVESTMENT FACILITATOR: **KENYA INVESTMENT AUTHORITY**

ANCHOR INVESTOR: **KENYA DEVELOPMENT CORPORATION**



Preamble: GDC and KenGen

Geothermal Development Company (GDC)

- 100% government-owned company in Kenya's energy sector.
- Formed in 2008 as a special purpose vehicle (SPV) to accelerate the development of geothermal resources in Kenya.

Mandate:

1. Removing upfront risks, and reducing costs through infrastructural development, exploration works and production drilling
2. Promoting direct uses of geothermal resources
3. Developing human capacity for geothermal development
4. Supporting Government of Kenya in fund mobilization
5. Supporting private sector entry and sell steam to power producers
6. Early power generation through installation of well head generating units

Vision: *To develop 1065MWe from Geothermal Resources by 2030.*

Mission: *To reduce the cost of power in Kenya.*

Core Values:

- ✓ Integrity
- ✓ Professionalism

*Source: Geothermal Development Company Website: <https://www.gdc.co.ke/>

Kenya Electricity Generation Company (KenGen)

- Listed on the Nairobi Securities Exchange (NSE).
- GoK holds 70% shareholding and the public 30%, following a successful IPO in 2006.
- Africa's leading Geothermal power producer: unrivalled track record of over 66 years of expertise in running Hydro Power Plants.
- Installed capacity stands at 1,904 MW representing 62% of Kenya's installed capacity.
- 86% of generation portfolio is from renewable energy.
- Four generation modes:
 - Geothermal (799MW),
 - Hydro (825MW),
 - Thermal (254MW) and
 - Wind (26MW).
- Total Assets [Kes. millions]: 502,062.
- Total Revenue [Kes. millions]: 49,226.

*Source: KenGen Integrated Annual Report & Financial Statements for the Year ended 30 June 2022

Background

- The world, Kenya included, is on an epic journey of decarbonisation.
- Geothermal's green properties make it a prized resource owing to its potential to contribute to the net zero plan.
- An accelerated geothermal environment places Kenya at a pole position as it transitions to a 100% Green Grid.
- A robust geothermal regime is required as Kenya marches towards a manufacturing economy.
- This will also help Kenya in the commitment of meeting its international climate obligations of reduced Green House Gas emissions by 32% set for 2030.
- A robust geothermal environment will accelerate energy access, cut costs, and improve lifestyles
- Geothermal energy is a baseload electricity with the highest reliability as compared to other renewables such as hydro, solar and wind.
- It presents the cheapest source of electricity alternative at approximately 8.8 US cents/kWh, against solar or wind that costs approximately 11-12 US cents/kWh
- Potential uses
 - Power generation: 20% of heat from steam is used to generate electricity.
 - Direct-use heat: the remaining 80% can be used for other purposes, offering affordable and reliable heat:-
 - Industrial heating: displace the need to use fossil fuel to heat industrial boilers (e.g milk pasteurization, grain drying, timber drying)
 - Horticulture (e.g. greenhouse heating)
 - Fish farming
 - Leisure and recreation (e.g. geothermal spa)

*Source: Geothermal Development Company Website: <https://www.gdc.co.ke/>



Baringo-Silali Geothermal Project

- A Government of Kenya and KfW - sponsored Geothermal Development Project
 - i. (GoK): funding construction of access roads and well pads.
 - ii. KfW (80 Million Euros loan) : funding the water supply system, drilling of 15-20 geothermal wells,as well as undertaking project related consultancies.
- Covers 3 prospect areas: Paka, Korosi and Silali.
- Has an estimated geothermal potential of 3,000MW
- GDC plans to develop 300MW in the first phase of the project:
 - i. Paka – 100MW
 - ii. Korosi- 100MW
 - iii. Silali- 100MW

*Source: Geothermal Development Company Website: <https://www.gdc.co.ke/>



KenGen Generation Expansion

KenGen plans to grow its generation market share to 70+%.

To be achieved by increasing its generation capacity in the next 10 years, mostly from geothermal generation.

The Company's project pipeline from renewable sources have been included in Kenya's Least Cost Power Development Plan(LCPDP)- a guide to national generation planning.

Projects lined-up for delivery in the medium and long-term:

Projects Pipeline			
	Project	Capacity (MW)	Commissioning Date
1	Olkaria 1 Rehabilitation	60	2024
2	Olkaria IAU & IV Turbine Upgrading	40	2024
3	Seven Forks Solar PV Power Plant	42.5	2025
4	Olkaria VI	140	2026
5	Gogo Power Station Upgrade	8.6	2025
6	LNG Plant & Conversion of Kipevu III	200	2026
7	Raising Masinga Dam	83 GWh energy stored	2024
8	Olkaria I Unit 6	86.3	2022
9	Olkaria VII	140	2027
10	Floating Solar Pre- Feasibility Study	40	2029
11	Battery Energy Storage System (BESS)	250	2025

*Source: KenGen Integrated Annual Report & Financial Statements for the Year ended 30 June 2022



Contents

01	Why Kenya
02	Investment Opportunity
03	Get Started



Get Started with KenInvest and KDC



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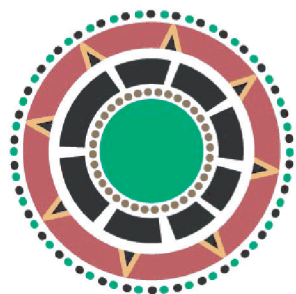


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MAKE IT KENYA



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