

# “AFRICAN RENEWABLE ENERGY FORUM DJIBOUTI 2023

## RENEWABLE ENERGY POLICIES AND REGULATION

### KENYA

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# COUNTRY OVERVIEW

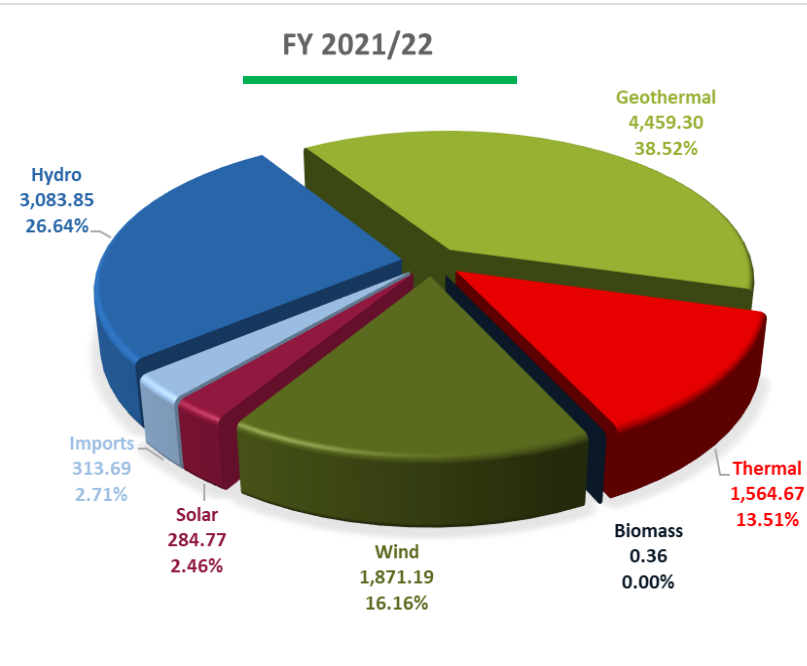
- Kenya is a leader in economic growth in Sub-Saharan Africa
- Key Indicators
  - 53 million population
  - US\$118 billion Gross Domestic Product (GDP)
  - 5% average annual economic growth
  - Economy primarily composed of agriculture, forestry, tourism, mining and energy sectors
  - US\$2,269 GDP per capita
  - 580,367 sq km of land
  - 47 Counties



# ELECTRICITY GENERATION CAPACITY

## Kenya has a low-carbon and diverse energy mix

Generation Type	Jul-18		Dec-22		(% Contribution (Effective))
	Installed MW	Effective MW	Installed MW	Effective MW	
Hydro	826	805	838.5	809.1	27.40%
Geothermal	663	657	950	871.1	29.50%
Thermal (MSD)	716	690	586.3	566.4	19.18%
Thermal (GT)	60	55	60	56	1.90%
Wind	26	26	436.1	425.5	14.41%
Biomass	28	24	2	2	0.07%
Solar	-	-	210.3	210.3	7.11%
Ethiopia Imports			200	200	6.77%
Interconnected System	2,319	2,256	3,283.20	2,930.10	99.21%
Off grid thermal	30	21	35.6	21.3	0.72%
Off grid Solar	0.66	0.49	2.3	1.9	0.06%
Off grid Wind	0.55	0.52	0.55	0	0.00%
Sub-Total-Offgrid system	31.2	22.01	38.45	23.2	0.79%
<b>Total Capacity MW</b>	<b>2,351</b>	<b>2,278</b>	<b>3,321.65</b>	<b>2,953.30</b>	<b>100.00%</b>



- **Generation capacity** is now 3,322 MW
- **Peak demand** – 2170 as of August 2022
- **Renewable energy** share is 78% of installed capacity and **93%** of total power dispatched
- **Geothermal** about 50% of total power generation making Kenya one of the global leaders

# COOKING ENERGY AND APPLIANCES

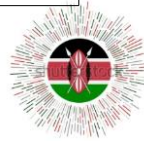
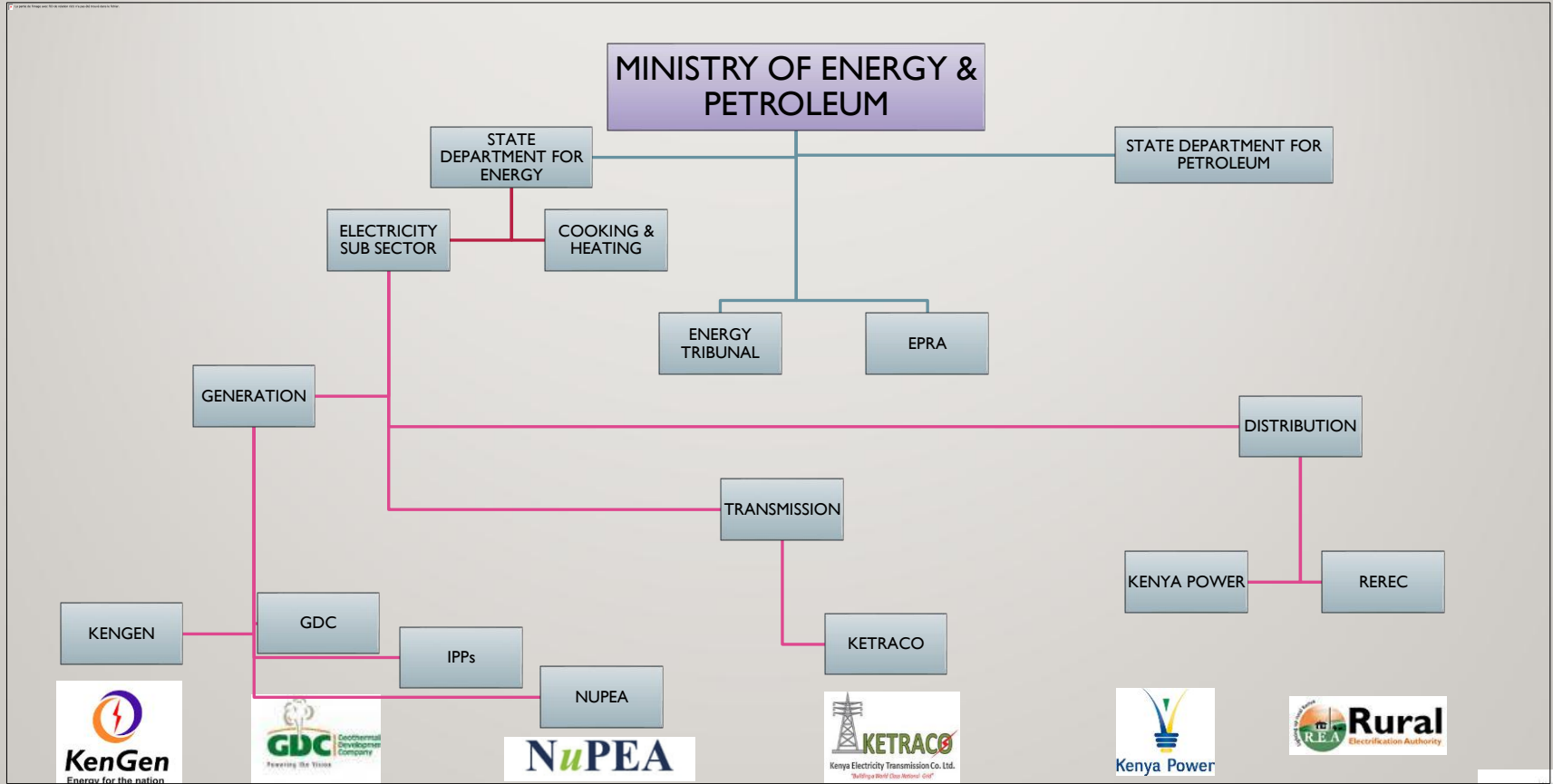
- 68% of the total energy supply is from biomass
- 80% of the cooking energy in rural areas and 50% in the urban areas is from biomass
- Biomass cooking energy is in the form of traditional wood fuel
- About 50% HH use improved cookstoves,
- 29.7% of HH use LPG, (54.2% urban and 18.0% rural)
- 11% of the HH use Kerosene
- 2.8% use electric stoves
- Biogas, biofuels less the 0.1% of the HH
- Stacking of Cooking appliances is common practice. Only 49% use one type of stove.

\* Source - Kenya Household Cooking Sector study

# LEGAL AND REGULATORY FRAMEWORK

- The **Constitution of Kenya** and several Acts of Parliament together regulate and manage sustainable utilization of Renewable Energy Resources. It captures the rights of the citizens and protection of the environment.
- **The Energy policy 2018**
- **Energy Act 2019** consolidates the laws relating to energy;
  - Establishment, powers and functions of the energy sector entities,
  - Promotion of renewable energy;
  - Exploration, recovery and commercial utilization of geothermal energy;
  - Regulation of Energy Sector (EPRA)
  - National and county government functions in relations to energy

# KENYA'S ENERGY SECTOR STRUCTURE



# ENERGY PROJECT PROCUREMENT METHODS

## Competitive Bidding

Through competitive PPP arrangements- Advertisements normally in press and in websites of Ministry and Agencies.

## Feed-In-Tariffs

Renewable Energy Projects done under Feed-in-Tariff Policy  
&  
Energy Auctions Policy,

## PPP initiated Proposals for concessions

Concessional projects e.g. geothermal

# R.E POLICIES, REGULATIONS AND STANDARDS

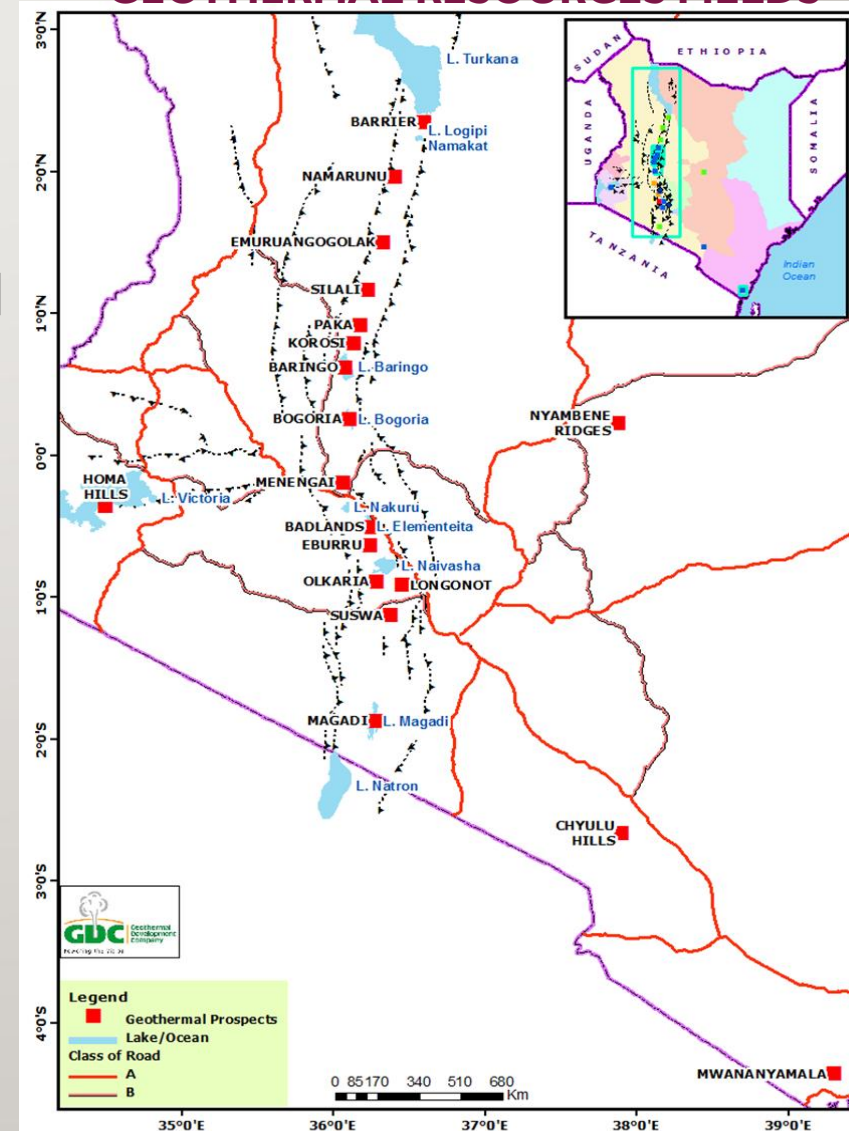
- **Geothermal Resources Act** of 1982 and its supplementary legislation of 1990
- Renewable Energy Auction
- Solar PV regulations, 2012
- Solar Water Heating regulations, 2012
- Energy Management Regulations, 2012
- Improved Cook stoves standards, 2014
- Domestic biogas standards, 2015
- Small hydro power standards – nearing completion
- ***Drafts - The Energy (Net-Metering) Regulations, 2022*** and the ***The Energy (Solar Water Heating) Regulations, 2022***



# FISCAL AND OTHER INCENTIVES

## GEOHERMAL RESOURCES FIELDS

- Duty on power generation equipment waived;
- Policy framework for Issuance of Government Support Measures and Standard Letter of Support prepared;
- Resource Assessment Maps/Atlases available –
  - Wind,
  - Solar,
  - Small Hydro,
  - Geothermal



# KENYA ENERGY ACCESS TARGET

## - To Achieve 100% Power Connectivity By 2030

### Population distribution:

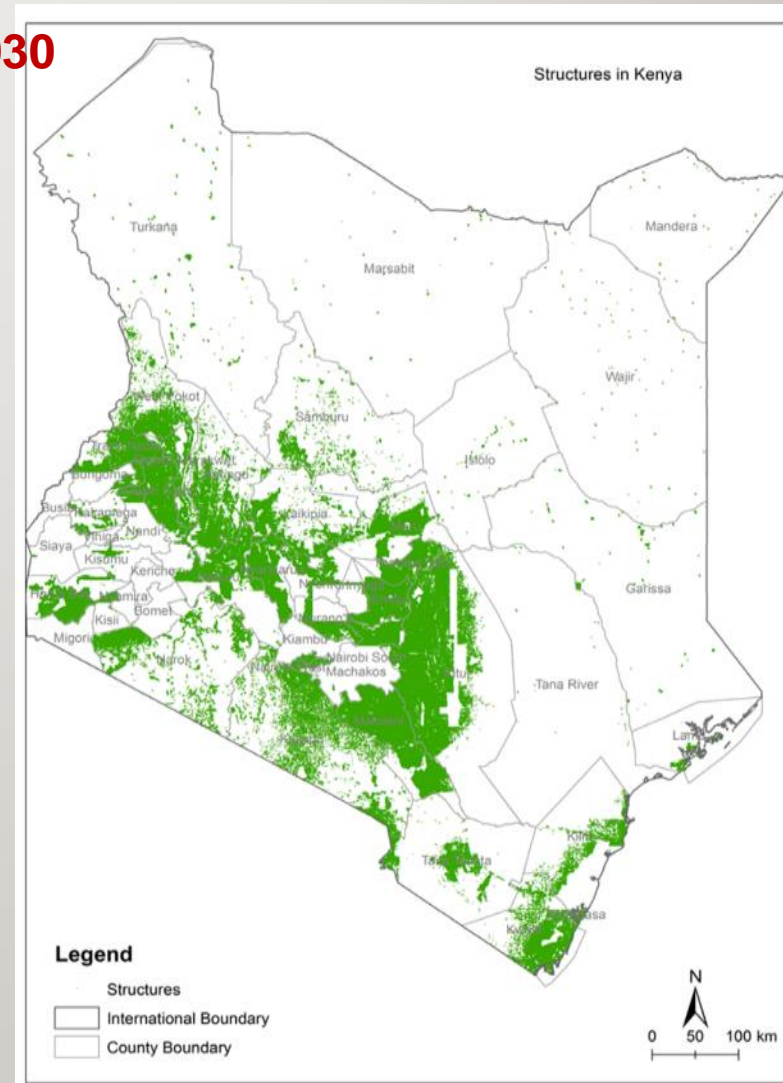
88% of the population resides in less than 18% of the land area.

### The **cost-effective solution for universal access to electricity** involves:

- Grid Extension
- Grid Intensification and Densification
- Mini-grids
- Stand-alone solar systems

## - To Achieve 100% Access To Clean Cooking

- Electricity
- LPG
- Ethanol
- Biomass Improved cook stoves
- Biogas



Thank You