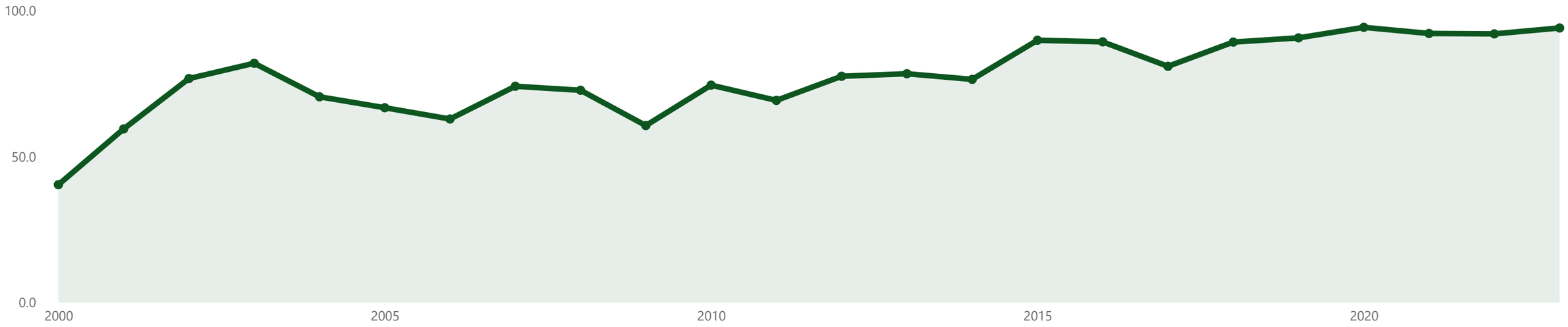
A Renewable Energy Analysis In Kenya

Renewable energy is the type of energy generated from natural resources like Wind, water, sun, and hot springs. The energy types include Geothermal, Wind, Solar, Hydro, and Bioenergy. This analysis looks at the general trend of percentage share of electricity from renewables up to 2023, the installed capacity of Geothermal, Wind, and Solar, and compares the installed capacity of the different types for the year 2023.
NB: Data used is from the Owid updates up to 2022. The 2023 data is researched from other reliable Sources.

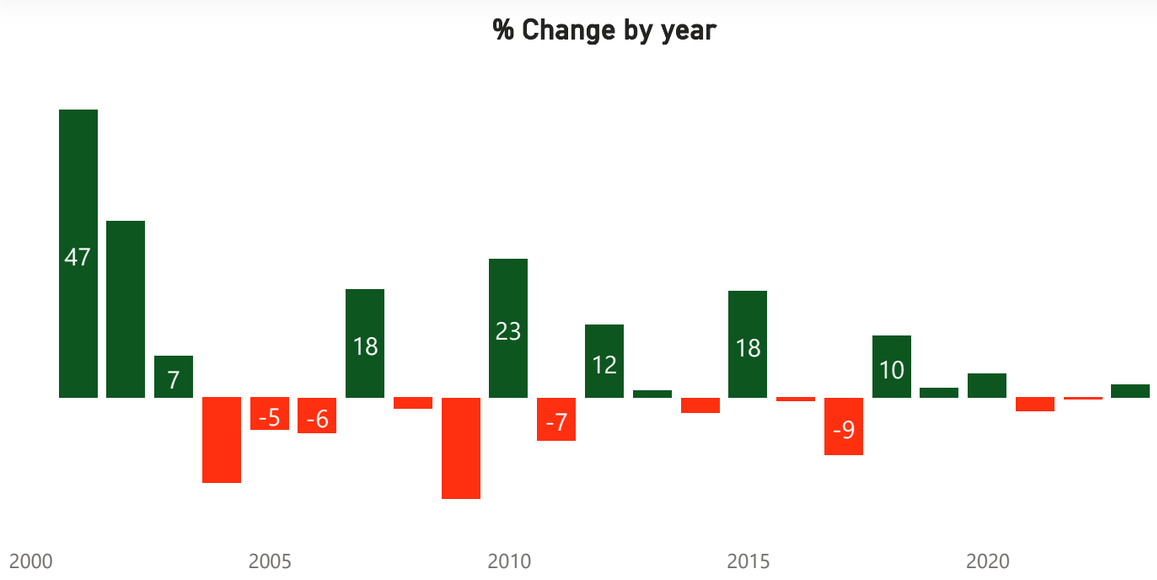
Country

Kenya

% Share of Electricity generation from Renewables



% Change by year

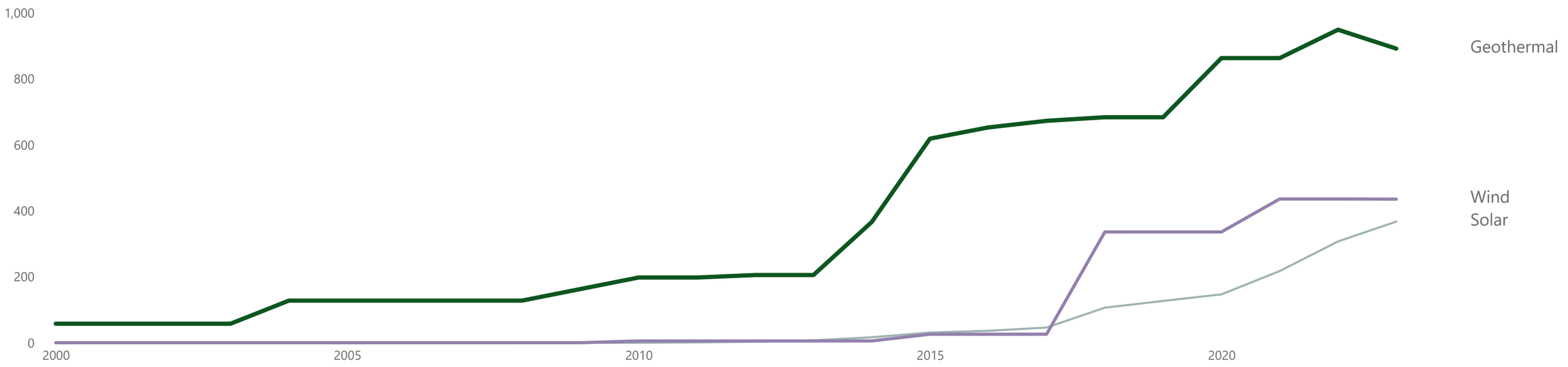


The Percentage share of renewable energy is the proportion of electricity that comes from renewable energy sources. In this visual the % is represented for renewable energy sources including Geothermal, Hydro, Wind, Solar, and other sources like Biomass.
Renewable energy generation has contributed to **94.02%** of electricity generated in the country in 2023 which is a **2.02% *increase of electricity share*** from renewables in 2022. This is more than double the % of electricity generated from renewable energy when the century began.

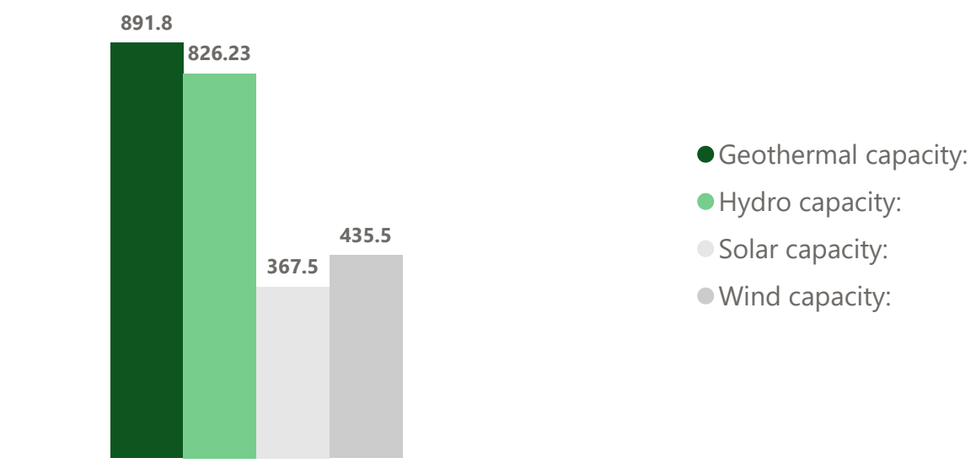
Renewable energy has become common in the country in line with the net zero carbon emissions which can be achieved in one way by utilizing energy sources that do not emit greenhouse gases (the renewables). Renewable energy is generated from natural sources that are constantly replenished and are naturally sustainable over time making renewable energy a long term solution to energy needs.

The progression of increased % of electricity generated from renewables shows that the country is moving towards the **Kenya Vision 2030** which aims at ensuring the country is an **industrialized country with clean and secure environments by 2030.** Clean and secure environments as stated in Kenya Vision 2030 includes also the use of renewable energy which is environmental friendly as the main source of energy across the country.

Installed Geothermal, Wind, and Solar Capacity in MW



Geothermal has The highest Installed Capacity (MW) as of 2023



Installed capacity refers to the amount of energy that a power station or a collection of power generating units can generate under specific conditions. It represents the generation capability of a power plant.
The Installed capacity for Geothermal, Wind and Solar have been increasing over the years with **Geothermal** having the highest installed capacity in 2023 which is a **6.04% decrease** from the 2022 installed capacity.
Geothermal installed capacity has become the highest among the other renewables as a result of abundant Geothermal resources situated along the East African Rift Valley. The Rift Valley has significant geothermal potential with geothermal installed plants such as the Olkaria power generation plants licensed by the Kenya Electricity Generating Company.

As part of the **Kenya Vision 2030**, the country aims to achieve **5,530MW** of ***Geothermal power installed capacity*** making Geothermal the largest source of clean energy by 2030. But 2030 is 6 years away and the ***current installed capacity is 6.2 times less the aimed capacity.*** Can this be achieved?