



GLOBAL SOLAR
COUNCIL

Distributed Solar In Kenya

Short overview of status and
permitting procedures, based on
survey results.

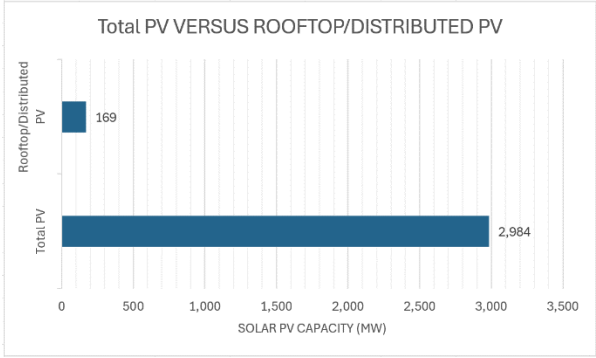
May 2024

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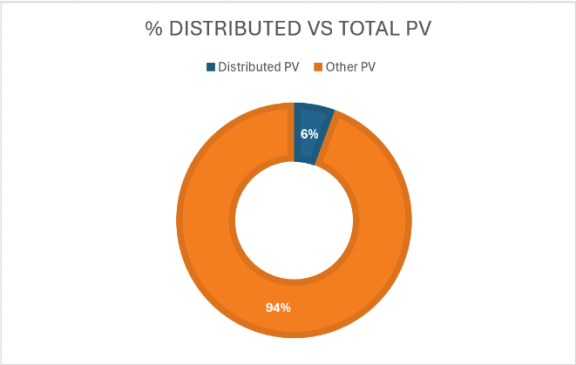


Over the last decade, Kenya has made significant strides in the development of its solar power sector, growing from a modest capacity to a more robust framework capable of supporting the nation’s energy needs. According to the Kenya Projects Organization, as of 2022, the total installed solar capacity in Kenya reached approximately 169.2 MW, with various segments including residential, commercial, industrial, and large-scale installations contributing to this growth.

The installed total capacity of Kenya grew from 2,789MW in June 2020 to 2,984 MW in June 2021. (The Energy and Petroleum Regulatory Authority, 2021)



The country’s solar energy market is divided into Solar Home Systems & Residential (42.02 MW), Commercial & Industrial (40.6 MW), Mini-Grid (1.65 MW), and Large-Scale (84.8 MW) installations, making up the 169.2 MW of distributed solar that represents 6% of total PV capacity in Kenya.



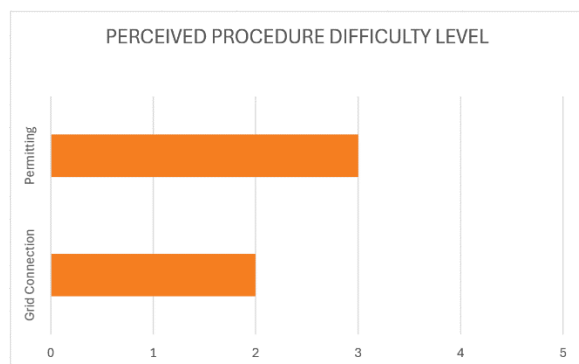
Looking forward, Kenya aims to greatly expand its solar capacity, with an ambitious target to harness its vast potential estimated at nearly 15,000 MW. This projection is underpinned by the strategic use of its significant rural rooftop spaces and other viable locations conducive to solar PV installations. The country is poised to increase its solar capacity dramatically by 2030, fostering a transition towards cleaner and more sustainable energy sources.

PERMITTING AND GRID CONNECTION

In Kenya, the permitting and grid connection processes for solar PV systems present a complex landscape with considerable regional variations.

The Energy and Petroleum Regulatory Authority (EPRA) outlines that while permitting is managed on a local level, the challenge is compounded by the necessity to navigate through a labyrinth of regulations, leading to potential bottlenecks. Specifically, the capacity of local grids often limits project rollout, with certain regions unable to support additional solar infrastructure without significant upgrades.

Moreover, the authorization procedures at a local level are varied and can extend the timeline of project completion. For instance, the overall permitting procedure is rated moderately difficult, scoring 3 out of 5 in terms of complexity and time consumption by Integrated Africa Power LTD. Fulfilling licensing conditions for permitting proves to be the most complex part of this process, due to delayed authorization processes and in some cases, energy auditing in designated industrial facilities. The grid connection process, slightly less cumbersome as rated a 2 out of 5 is also mired by these regional discrepancies, which can discourage potential solar energy producers due to the uncertainty and variability of the process.



POLICY AND INCENTIVES

The Kenyan government has enacted several forward-thinking policies and incentives aimed at boosting the growth of the solar sector. The centerpiece of these efforts is the Finance Act, 2021, which reinstates VAT exemptions on solar and wind generation equipment, making renewable technologies more affordable and accessible, particularly for lower-income and rural populations. This

legislative move is part of a broader strategy to accelerate Kenya's transition to renewable energy, supporting the government's goal to ensure universal access to electricity and clean cooking fuels. Furthermore, Kenya's ambitious net-zero targets are designed to attract significant investment capital and donor support, which is increasingly directed towards low-carbon assets globally.

In addition to these broader policies, specific incentives are in place to encourage the production of power from rooftop PV systems. These incentives are tailored to different plant sizes and product sectors, including self-consumption, energy production, and community energy projects. For instance, the government has recognized the potential for establishing local green manufacturing and the development of low-carbon technologies as crucial elements of its Energy Transition and Investment Plan. This plan emphasizes rapid innovation in clean technology to optimize adoption rates and tailor the technology mix to specific market segments.

The government's strategy also includes detailed objectives under its Alternative Net Zero energy pathways, which focus on environmental sustainability, energy system costs, economic impact, social implications, and security of supply. These pathways aim to cover the majority of emissions abatement through a combination of renewables, low-carbon hydrogen, battery electric vehicles, and clean cookstoves, thereby minimizing energy costs to the Kenyan population and energy-dependent sectors.

To further stimulate the deployment of renewable installations, the government and industry stakeholders are exploring ways to leverage capital markets, which will require strategic de-risking interventions to attract and secure financing. Moreover, the Net-zero 2050 initiative relies on significant emission reductions, supported by Land Use, Land-Use Change, and Forestry (LULUCF) interventions as proposed under the Kenya Long Term Strategy (LTS).

By enhancing its policy framework and implementing these targeted incentives, Kenya aims to harness its renewable resources effectively, promoting sustainable economic growth and environmental conservation in tandem. These initiatives not only help to reduce the country's carbon footprint but also create new economic opportunities in emerging sectors such as green hydrogen and low-carbon technologies, positioning Kenya as a leader in sustainable energy within the region.

