

How many people in Uganda have electricity?

Around 50 % of the country's population have access to any form of electricity and about 24 % have access to electricity for more than 4 hours per day (Tier 1). Uganda has many renewable energy resources that can be used for energy production and the provision of energy services.

Why is universal energy access important for Uganda?

The Report recognizes that for Uganda, achieving universal energy access is as important as achieving a 100% renewable energy production target. It also recognizes that to be sustainable, the renewable energy solutions presented must address poverty and other social needs as outlined in Agenda 2030 /Sustainable Development Goals.

Where does Uganda's Electricity come from?

Most of the country's electricity generation comes from hydro plants owned by the state-run Uganda Electricity Generation Company (UEGCL), with the largest located along the River Nile. Bioenergy, through biomass and biogas, is the most commonly used source of energy in Uganda, accounting up to 94 % of the country's total energy consumption.

What percentage of Uganda's energy is renewable?

The remaining 41 % is met by the biomass supply according to representatives of the Uganda National Renewable Energy and Energy Efficiency Alliance (UNREEA). Solar energy in Uganda has the highest adoption rate among all renewable energy options.

Does Uganda have a mineral resource?

Uganda has no production of critical minerals, but initial exploration in the 2000s suggests that the country has reserves of several minerals critical for the energy transition.

What type of energy is used in Uganda?

Currently, biomass is the leading type of energy used in Uganda, constituting about 94% of the total energy consumed in the country (Okello, C., et al., 2013). Biomass is the major source of energy for rural industries, and its trade contributes to the rural economy in terms of employment, rural incomes and tax revenue [93-95].



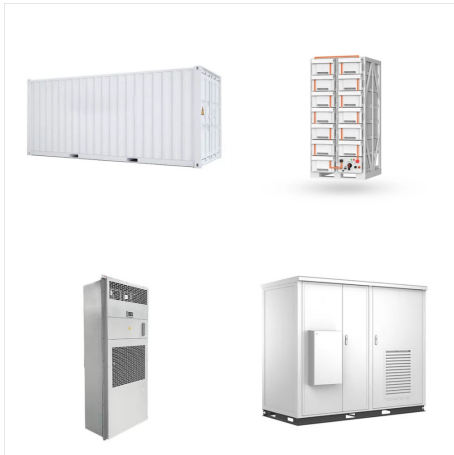
Expanding Uganda's energy mix with renewables such as solar and wind alongside energy storage will boost energy resilience. Regional cooperation through the East African Power Pool, established in 2005, could improve energy security by coordinating cross-border power trade and grid connections.



Renewable Energy Uganda has many renewable energy resources that can be used for energy production and the provision of energy services. These resources include bioenergy, through biomass and biogas, water/ hydro, solar, geothermal and wind energy potential. Many of these resources are yet untapped. The Ugandan government, in coop-



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To make its energy transition a reality, Uganda's plan outlines a long-term vision for the country's energy sector, via specific targets and milestones for the coming decades. These include universal access to electricity and big progress in clean cooking solutions by 2030; a modernized and diversified energy mix, with a significant



This article explores Uganda's renewable energy initiatives, focusing on the potential for solar energy, the current state of the energy sector, and the strategies needed to foster a sustainable energy future. Uganda's energy consumption relies heavily on renewable sources, primarily traditional biomass like firewood and charcoal.



An energy transition based on renewables is urgently needed not just to accelerate economic progress and development, but also to cut emissions that are rapidly warming our planet and high deforestation rates which is a major threat to our biodiversity. Even though Uganda contributes less than 0.1% to global GHG emissions,



the launch of the Energy Transition Plan, Uganda announces its intention to reach net zero emissions in its energy sector by 2065, which paves the way for our country to explore a formal economy-wide target for climate neutrality.



The National Energy Policy for Uganda 2023 focuses on expanding the electricity transmission and distribution grid networks; increasing energy efficiency; promoting the use of alternative sources of energy; and strengthening the policy, legal and institutional framework.



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This comprehensive review explores Uganda's journey towards sustainable energy transitions, emphasizing the pivotal factors influencing their evolution and acceptance. A thorough examination of the current state of Uganda's renewable energy sector is presented, shedding light on both the driving forces propelling its growth and the