

# Solar power generation in Ethiopia

Does Ethiopia have a solar energy sector?

However, despite all its available potential, the country's energy sector especially solar energy is still in its infancy stage. The main objective of this systematic review is to identify the present status of solar energy utilization and development in Ethiopia and any possible challenges that may hinder its' utilization and development.

What are the applications of solar energy in Ethiopia?

It also found that the main applications of solar energy in Ethiopia are dominated by telecommunications, water pumping, public lighting, agriculture, water heating, and grain drying.}, year = {2023} AB - Ethiopia is endowed with abundant solar renewable energy resources, which can meet the ambitions of nationwide electrification.

Why is energy important for Ethiopia?

Energy is one of the most significant sectors for Ethiopia's economic growth and development and is expected to increase significantly in the medium run. Ethiopia has abundant renewable energy resources and the potential to generate over 60,000 megawatts (MW) of electric power from hydroelectric, wind, solar, and geothermal sources.

Are solar PV Grid-connected power plants possible in Ethiopia?

As far as the author knowledge is concerned, only a recent state-sponsored pre-feasibility study on solar energy potential of Ethiopia suggested four sites for solar PV grid-connected power plants.

How much electric power can Ethiopia generate?

Ethiopia has the potential to generate over 60,000 megawatts (MW) of electric power from hydroelectric, wind, solar, and geothermal sources. In addition, in 2022 the GOE certified the presence of seven trillion cubic feet of natural gas reserves in the Ogaden Basin.

Is there a private investment in solar power plants in Ethiopia?

However, there was no private investment in solar power plants in Ethiopia. Mainly the Ethiopian Electric Power Corporation (EEPCo) has been a state-owned and vertically integrated monopoly that controls the market from generation to selling of electricity throughout the country .

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Providing electricity access to all and electrifying productive uses will lead to a fivefold increase in generation in the STEPS, and an even bigger increase in the AC; solar PV and geothermal account for almost 45% of the power mix by 2040 in the AC.

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This study explored the potential of grid-connected solar PV power generation in Ethiopia. Overall, 35 locations were assessed for their technical potential considering a 5 MW PV power plant in each site. Input data sources for the study include the National Meteorological Agency of Ethiopia and the Surface Meteorology and Solar Energy Dataset ...

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Annual generation per unit of installed PV capacity (MWh/kWp) 4.5 tC/ha/yr Solar PV: Solar resource potential has been divided into seven classes, each representing a range of annual PV output per unit of capacity (kWh/kWp/yr). The bar chart shows the proportion of a ...

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