

This paper discussed, described, designed a novel uninterruptible, and environmental friendly solar-wind hybrid energy system (HES) for remote area of Tanzania having closed loop cooled-solar system (CLC-SS).

Solar can be converted directly into electrical energy by using solar photovoltaic (PV) which convert solar radiation by the photoelectric effect, wind energy can be converted into electrical energy by using alternator coupled with a wind turbine.

Tanzania offers excellent conditions for an environmentally friendly power supply due to windy and sunny regions. ABO Energy founded the subsidiary ABO Tanzania Ltd. in January 2017. Together with local partners, we develop both photovoltaic and wind projects. In addition, we develop hybrid energy systems.

Khan et al. designed a new reliable and ecologically friendly solar PV-wind-hybrid system for a far-off location in the United Republic of Tanzania including CLC-SS (closed loop cooled-solar system). The system was optimized using HOMER software.

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Conventional models, such as HOMER, iHOGA, and H² RES, can optimise almost the full range of available electric supply technologies (e.g. SPV, wind, hydro, DG, concentrated solar power, biomass, battery, fuel cell, and hydrogen) with different possibilities for hybrid combinations. TRNSYS and INSEL include thermal technologies.

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