

This paper explores scenarios for powering rural areas in Gaita Selassie with renewable energy plants, aiming to reduce system costs by optimizing component numbers to meet energy demands. Various ...

This article investigates a modelization of the energy management strategy of a grid-tied photovoltaic (PV), wind generator, and battery system. The model uses a smart metering system to collect data from various electrical components of a microgrid.

This article presents an innovative active and reactive energy management system (AR-EMS) specifically designed for residential buildings in Morocco, seamlessly integrated with a Smart Microgrid (SMG) and the Electrical Power Grid (EPG) supplier.

The LARO algorithm was specifically implemented for microgrid design, considering various configurations that include photovoltaic and wind systems, battery energy storage systems, and diesel systems.

The study's goal is to design a microgrid system by the minimization of the total investment cost with respect to the required technical factor, the minimum allowed renewable energy fraction ...

By integrating PV solar, wind turbines, and Pumped Hydro Storage (PHS), the research demonstrates the effectiveness of such systems in meeting the energy needs of Tazarine, a village in the southern Sahara region of Morocco.

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