

Evaluating The Present Energy Demand and Electricity Market in Mozambique: A Thorough Examination of The Energy System

This research thoroughly examines Mozambique's energy system and current energy consumption. Despite having significant natural resources such as hydropower, coal, and natural gas, Mozambique needs help providing its population's energy needs. This study investigates the variables contributing to these issues, such as insufficient infrastructure investment and limited access to finance. It also explores the significance of renewable energy in Mozambique's energy portfolio, emphasising the potential for additional investment in this area. Furthermore, the study dives into the policy and regulatory frameworks required to allow the construction of a more sustainable and reliable energy system in Mozambique. The LEAP model was employed in this study to depict Mozambique's present energy situation and formulate future projections based on specified assumptions. The paper proposes significant infrastructure expenditures and the creation of a solid regulatory framework to support the growth of Mozambique's energy market. The authors claim that shifting to renewable energy sources might alleviate problems confronting the country's energy industry, encouraging a more sustainable and stable energy system. The paper's distinctiveness stems from its unique focus on Mozambique, its complete study of the country's energy system, its identification of difficulties, its emphasis on renewable energy, and a proactive strategy pushing for policy reforms and investments. In conclusion, the study provides valuable insights into Mozambique's energy environment, emphasising the importance of increased investments and regulatory reforms to solve difficulties in the country's electrical market. This study's findings show the importance of a reliable and sustainable energy system in supporting economic growth and improving the quality of life for Mozambicans.

Keywords: Energy Systems; Energy market; Optimisation; Renewable Energy Sources; Energy demand management