

Does Sierra Leone have a long-range energy alternative planning system?

Using the Long-range Energy Alternatives Planning System (LEAP), this work assesses Sierra Leone's energy supply and demand for 2019-2040. We developed three case scenarios (Base, Middle, and High) based on forecasted demand, resource potential, techno-economic parameters, and CO<sub>2</sub> emissions.

Does Sierra Leone have a balance between electricity demand and supply?

Despite various interventions by the government, a balance between electricity demand and supply has yet to be achieved. Using the Long-range Energy Alternatives Planning System (LEAP), this work assesses Sierra Leone's energy supply and demand for 2019-2040.

How can we forecast the long-term electricity demand-supply situation in Sierra Leone?

This study focuses on forecasting the long-term electricity demand-supply situation in Sierra Leone by considering techno-economic and environmental parameters. Three case scenarios have been generated (Base, Middle, and High) that will cover the country's total electricity demand.

Is Sierra Leone struggling with electricity?

The period under study ranges from 2019 to 2040, with statistical data from 2015 included as the baseline year in the LEAP modeling. One of the main reasons for Sierra Leone's struggling electricity system is that little attention has been given to forecasting electricity demand and supply.

Does Sierra Leone have a good energy demand forecasting study?

There has been no proper energy demand forecasting study in Sierra Leone for the past decade. However, energy demand forecasting for short, medium, and long-term planning has been carried out by many researchers.

How much electricity does Sierra Leone have?

Approximately 23% of the Sierra Leone population has access to electricity [5]. 60% of Sierra Leone's population lives in rural areas. Persistent electricity scarcity has crippled the country's economic growth and prevented it from attaining several health and education development goals.

To date, there has been no comprehensive survey on the use of solar energy technologies in Sierra Leone. However, SPV systems in the form of mini-grids, stand-alone systems, and solar ...

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This paper presents a comparative techno-economic analysis carried out to determine the most feasible of four

individual options for off-grid mini-grid power generation system utilizing sources...

This paper aims at analyzing the techno-economic feasibility of a hybrid renewable energy system (HRES) for the sustainable rural electrification of Lungi Town, Port Loko District, Sierra Leone. ...

In Sierra Leone, less than ten percent of rural communities have access to electricity. This study carried out a techno-economic assessment for hybrid power generation for a remote village in ...

Remote area electrification is a crucial need in sub-Saharan Africa's drive to attain universal electrification. In Sierra Leone, with a rural population of over 5 million, the ...

Sierra Leone, under the leadership of President Julius Maada Bio, is gearing up to host a ground-breaking ECOWAS Conference on the Peace and Security Aspect of Autonomous Weapons Systems. Scheduled to take ...

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