

A ROBUST MINIGRID REGULATORY FRAMEWORK

**Energy and Water Regulatory Commission
Sierra Leone
Passed in December 2019**

Based on strong regulatory frameworks in Nigeria, Tanzania, and at the state level in India, the Government of Sierra Leone developed and approved a minigrid regulatory framework that works for the citizens of Sierra Leone while attracting minigrid developers and investors.



**BATTERIES AND INVERTERS
ON A MINIGRID IN SIERRA
LEONE. PHOTO COURTESY
INENSUS**

THE SITUATION

- Sierra Leone has one of the lowest energy access rates in Africa, at 20%. In rural areas, it is even lower, 5%
- Least-cost mapping suggest that around 2.9 million people could be best served by minigrids
- Prior to 2018, there were fewer than six renewable minigrids in the entire country
- One major contributor to this low number was unclear regulatory risk for developers

THE SOLUTION

A robust regulatory framework modeled on lessons from other African countries and India that includes cost-reflective tariffs, a clear process for licensing and permitting, and a plan for when the grid arrives at an off-grid minigrid site.



MINIGRID IN SIERRA LEONE. PHOTO COURTESY INENSUS

THE IMPACTS

- As a result of increased confidence from these regulations and investor support, progress in the sector has accelerated
- In total, 46 minigrids are operational and providing electricity to customers at a tariff approved by the regulator
- Another 27 minigrids are under different stages of construction in 2020, and a total of 94 minigrids are planned

Sierra Leone minigrid regulations and their impact on minigrid development

INNOVATIVE REGULATORY COMPONENT

IMPACT

Tariff Evaluation Approach

Flexibility around the timing of tariff evaluation allows for typical initial fluctuations in expenditures but eventually provides long-term predictability.

Calculating Asset Depreciation

Using annuity-based depreciation instead of straight-line depreciation to determine allowed revenue helps operators charge a flat tariff in the initial years of operation while electricity demand increases.

Performance Related Profit Margin (PRPM)

For a highly subsidized minigrid project, the private operator does not have any scope for margin since the calculated return is very low. Using PRPM per kWh allows the operator to earn a small margin over its operational services, even in the case of high subsidy projects.

Clear Guidelines

The operator is compensated if the national grid arrives within the project's lifetime.

Regulation of Market Entry

Minigrid operators with distributed power up to 10 MW in total are eligible to obtain a **full minigrid license, which simplifies the permitting required for the development of individual sites** and encourages private investors to enter the market.



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The Mini Grid Regulations in Sierra Leone which were approved in 2019 have provided the legal framework for the development of mini grids in the country. They also created a conducive environment for attracting investments by private sector players and donor participation, thereby increasing the general population’s access to electricity.

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Brima Bah

Director Economic
Regulations, SLEWRC

SIERRA LEONE’S ELECTRICITY AND WATER REGULATORY COMMISSION’S MINI-GRID REGULATIONS: CASE STUDY HERE:

www.ewrc.gov.sl/mini-grid-regulations-2018-2

FURTHER READING

- GREEN MINI-GRID HELP DESK: HELP DESK FOR POLICYMAKERS AND REGULATORS
AFDB
- MINIGRID MARKET ASSESSMENT: SIERRA LEONE
Green Mini-Grid Market Development Programme 2019
- POLICIES AND REGULATIONS FOR RENEWABLE ENERGY MINI-GRIDS
IRENA 2018
- PRACTICAL GUIDE TO THE REGULATORY TREATMENT OF MINIGRIDS
NARUC 2017
- THE MINI-GRID POLICY TOOLKIT
EUEI 2014



ELECTRIFYING ECONOMIES

The Electrifying Economies project

demonstrates the role distributed energy will play in ending energy poverty and catalyzing a green and equitable recovery from the Covid-19 crisis. It draws on the latest data and research from around the world to show how distributed renewables can provide sustainable, affordable, and reliable power for all. The project provides information to support policy makers and investors in taking action today, to realize this potential.



#ElectrifyingEconomies
ElectrifyingEconomies.org