



Renewable energy investment factsheet:

Sierra Leone

1. Macroeconomic profile

Population	~8.8 million (2025)
GDP growth	~5.7% (2023)
Historic GDP growth	~4.0% annual average (2010–2020)
Projected GDP growth	5.2% (2025 projection)
GDP per capita	\$883 (2025)
Inflation rate	46.6% (2023)
Fiscal deficit	~5.8% of GDP (2023)
Youth unemployment	~10% (2022 estimate)
Ease of doing business rank	~177 (2020)

Major macroeconomic plans

Sierra Leone's Medium-Term National Development Plan (MTNDP) 2024-2030 is the country's strategic blueprint aimed at accelerating economic transformation, ensuring food security, developing human capital, and creating jobs. The plan is anchored on five key pillars, supported by enabling factors such as governance, climate resilience, and gender mainstreaming. The pillars are:

- **Feed salone:** Boosting agricultural productivity to ensure food security, inclusive economic growth, and social stability.
- **Human capital development:** Scaling up investment in education, health, and social protection to build a skilled and healthy population.
- **Youth employment scheme:** Creating 500 000 jobs for youth to promote economic productivity and national security.
- **Technology and infrastructure:** Increasing investment in infrastructure, technology, and digitalization to drive economic growth and improve service delivery.



- **Transforming the public service architecture:** Ensuring efficiency, professionalism, and effectiveness in the public sector to maximize development results.

The plan also focuses on diversifying the economy, promoting private sector growth, and leveraging the country's demographic dividend and blue economy potential. It aligns with global and regional development frameworks, including the United Nations Sustainable Development Goals (SDGs), the African Union Agenda 2063, and the ECOWAS Vision 2050 (Sierra Leone MTNDP 2024-2030).

Key Economic Transformation Goals

Indicator	2021/2022	2030 target	Expected impact
Annual GDP growth	3.1% (2023)	6%+	Sustainable economic expansion, job creation, and poverty reduction.
Poverty rate	56.80%	<26.5%	Reduced inequality and improved welfare for all citizens.
Agriculture GDP share	57.50%	Increased	Enhanced productivity, diversification, and food security.
Manufacturing GDP share	2%	Increased	Stronger industrial base, increased value-added exports, and job creation.
Renewable energy share		Increased	Transition to a green economy and reduced reliance on fossil fuels.
Tourism earnings		Increased	Increased foreign exchange earnings and job creation in the tourism sector.
Youth employment		500 000 jobs	Economic productivity, social stability, and reduced irregular migration.

2. Energy profile

Installed capacity	250 MW (total generation capacity, with about 98 MW functional)
Renewable energy share	79% of Total Energy Supply (TES) from renewable sources (2020)
Hydropower	87.5% of renewable energy capacity (70 MW)
Wind energy	Potential wind speeds of 7-8 m/s ² at 100-meter hub height
Solar energy	12.5% of renewable energy capacity (10 MW)
Electricity access	27% (national electrification rate)
Urban electricity access	55%
Rural electricity access	5%

Energy transition and green industry development plans

Plan/strategy	Objective	Targets
Energy transition and investment plan	Achieve net-zero emissions by 2050 while promoting green industrialization.	Increase generation capacity to 1 GW by 2035, with 55% hydro, 30% thermal, and 15% solar and renewables. Reduce greenhouse gas emissions by 5% by 2025, 10% by 2030, and 25% by 2050.
Universal electrification and clean cooking	Ensure universal access to electricity and clean cooking solutions.	Achieve 100% electrification by 2035. Increase clean cooking access from 0.8% (2021) to universal access by 2030. Install 200 mini-grids by 2025 and 650 by 2035 to provide electricity to 170 000 households.
Grid modernization and expansion plan	Modernize and expand grid infrastructure to support renewable energy.	Expand transmission network by 2000 km and distribution network by 1600 km by 2035. Improve grid reliability and efficiency.
Green industrialization and manufacturing	Develop green industries and local manufacturing.	Support investments in renewable energy projects, including solar, wind, and hydro. Promote regional integration through the CLSG line and Guinea interconnection project.
Decentralized renewable energy solutions	Foster decentralized renewable energy solutions for rural areas.	Increase rural electricity access from 5% (2021) to 33% by 2035 through mini-grids and off-grid solutions. Promote productive use of energy in agriculture, health, and education sectors.

Key Renewable energy policies & incentives

	Policy/incentive	Objective
Fiscal incentives	VAT reductions	Lower investment costs for private developers and industries.
Off-grid electrification	Mini-grid and standalone solar home system programs.	Expand electricity access to remote and underserved areas with plans to install 200 mini-grids by 2025 and 650 by 2035 to provide electricity to 170 000 households.
Clean cooking	Improved cookstove distribution, LPG promotion	Reduce biomass reliance, improve health, and lower emissions with a target of universal access to clean cooking by 2030 (only 0.8% of the population currently having access.)
Energy transition goals	Increase renewable energy generation.	Increase generation capacity to 1 GW by 2035, with 55% hydro, 30% thermal, and 15% solar and renewables. Reduce greenhouse gas emissions by 5% by 2025, 10% by 2030, and 25% by 2050.

Major strategies and incentives targeting RE investments

- Long-term Power Purchase Agreements (PPAs) to attract private investment in renewable energy projects.
- VAT and import duty exemptions approved on a case-by-case basis for renewable energy equipment
- Public-Private Partnerships (PPPs) promoted large-scale renewable energy projects.
- Off-grid programs developed, including mini-grids, to expand electricity access in rural areas.
- Results-Based Financing (RBF) mechanism introduced for solar mini-grids, supported by EUR 20m EU funding.

Energy Sector Bottlenecks to be addressed

Bottleneck	Impact	Government efforts (ongoing)
High dependence on fossil fuels	Increases energy costs and greenhouse gas emissions.	Diversifying energy mix with 55% hydro, 30% thermal, and 15% solar by 2035.
Underdeveloped transmission infrastructure	High technical and non-technical losses (up to 40%), reducing grid reliability.	Expanding transmission lines (2 000 km) and distribution networks (1 600 km) by 2035.
Low electrification rates (27% national)	Limits economic growth and access to modern energy services.	Installing 200 mini-grids by 2025 and 650 by 2035 to reach 33% off-grid electrification.



High upfront costs for off-grid systems	Slows rural electrification and limits private sector participation.	Introducing Results-Based Financing (RBF) for mini-grids with EU support (EUR 20m).
Policy and regulatory gaps	Creates uncertainty for investors and delays project implementation.	Updating Mini-Grid Regulations, Multi-Year Tariff Orders (MYTO2), and Renewable Energy Policy.
Limited technical and institutional capacity	Hinders renewable energy project development and grid modernization.	Capacity building programs for renewable energy project development and grid management.
High reliance on traditional biomass	Health and environmental impacts, with 85% of energy from biomass.	Promoting clean cooking technologies and aiming for universal access by 2030.
Inadequate revenue collection	Financial strain on utilities, limiting grid expansion and maintenance.	Implementing prepaid metering and improving revenue collection systems.
Land acquisition challenges	Delays renewable energy project development and grid expansion.	Streamlining land acquisition processes for energy projects.
Limited private sector participation	Slows investment in renewable energy and grid infrastructure.	Promoting PPPs, offering VAT/duty exemptions, and developing risk guarantee mechanisms.
Climate vulnerability of hydropower	Threatens energy security due to reliance on hydro (87.5% of RE capacity).	Diversifying energy mix with solar, wind, and battery storage to reduce climate risks.
Low access to clean cooking (0.8%)	Health risks and deforestation due to reliance on firewood and charcoal.	Targeting universal access to clean cooking technologies by 2030.

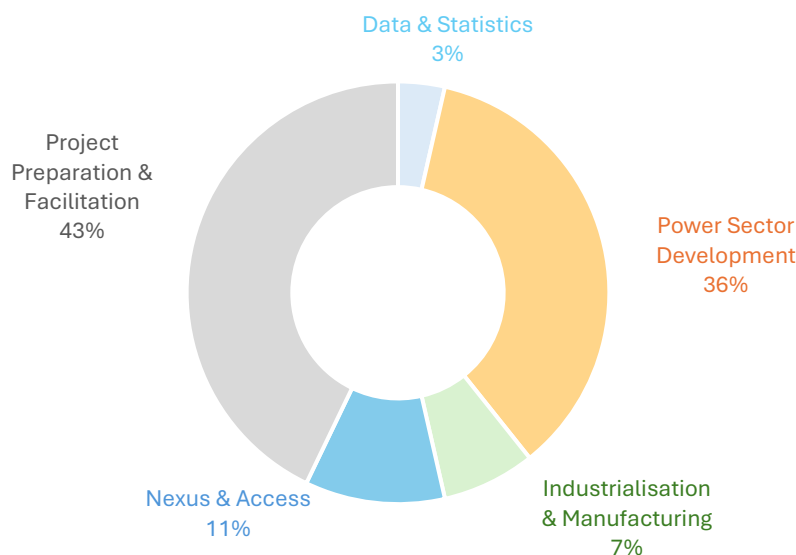


3. Country engagement

A consultation held on **23-25 October 2023** provided the foundation for Sierra Leone’s engagement, facilitating an in-depth assessment of its energy access challenges and pathways for sustainable industrialization. Discussions focused on infrastructure gaps, policy requirements, and investment opportunities to enhance electricity access. The resulting action plan prioritizes universal electrification by 2035, emphasizing increased generation capacity, grid expansion, and renewable integration to support economic development and sustainable mineral extraction. Key interventions include mini-grid expansion, renewable energy deployment in agriculture and mining, regulatory reforms, infrastructure modernization, private sector engagement, and capacity-building initiatives to enhance energy access and resilience.

Number of actions: 28

Distribution of actions by thematic areas



4. Investment prospects

Investing in Sierra Leone offers a unique opportunity to tap into a rapidly growing renewable energy market with vast untapped potential. With an electrification rate of just 27% and a target of universal access by 2035, the country is prioritizing renewables, including 1 885 MW of solar, 131 MW of wind, and 1 079 MW of hydropower. Sierra Leone’s commitment to a diversified energy mix—55% hydro, 30% thermal, and 15% solar by 2035—complements its focus on mini-grids and off-grid solutions, supported by initiatives like the Results-Based Financing (RBF) mechanism with EUR 20 million from the EU.

The government is also modernizing its grid, expanding transmission and distribution networks, and offering incentives like VAT exemptions to attract private investment. As a participant in the West African Power Pool (WAPP), Sierra Leone aims to export 1.8 GW of renewable energy by 2033, positioning itself as a regional energy hub. With abundant resources, strong policy support, and a clear vision for green industrialization, Sierra Leone is an emerging destination for investors looking to drive sustainable growth while addressing energy access challenges.