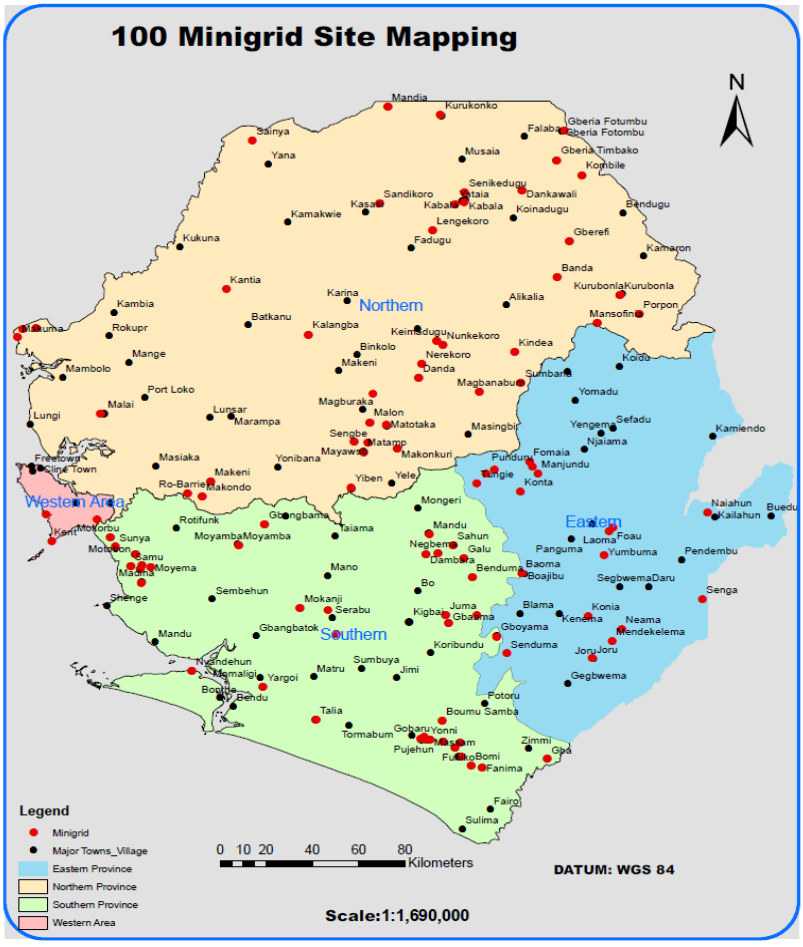
ENERGY SECTOR

2025

Priority rural 100 mini-grids programme

Primary energy input	Renewable
Technology	Solar
Location of project	Various
Estimated cost (US$)	25 million
Coordinating ministry	Ministry of Energy
Supervising agency	Electrical Generation and Transmission Company
Jobs created	To be determined
Construction time	3 years

Figure 1. Map of 100 priority locations proposed for solar based mini-grids



To meet Sierra Leone's targets for access to electricity by 2030, an enhanced programme of mini-grids is proposed for rural areas where connection to the expanded transmission and distribution grids would be uneconomic.

The proposal is for the electrification of 100 priority locations through solar based mini-grids. 100 sites have been selected as offering the best potential for a return to investors while offering electricity at around 45 US¢/kWh. As shown by Figure 1, the sites are spread geographically, except for the Western Province which has the most extensive grid. 30,000 connections are targeted. Priority is given to sites where there is scope for demand growth through economic activity.

ENERGY SECTOR

2025

Investment proposition

Private sector investors will be invited to bid for up to 100 mini-grid concessions covering 30,000 new connections. The estimated investment cost for the full programme is US$25 million and the implementation period from the award of the concession will be three years. Investors will be encouraged to offer value added services (e.g. digital connectivity) to the communities to maximise both the consumer benefit and the investor returns.

All sites will be offered by way of concession to the market through an auction process. The packaging of the sites and terms and criteria for selection of the winning bidders are to be established and it is envisaged that the concession and procurement process will begin in early 2025.

The mini-grid policy and regulatory framework is being revised to remove economic constraints and barriers. There is strong interest in results-based financing.

Financial evaluation

The overall project estimates investment of US$25 million for 100 mini-grid installations working out to an average of US$250,000 per individual mini-grid. The existing investment in mini-grid installations works out to between US$100,000 to US$200,000, which is consistent with this estimate.

The term of the partnership agreement and recovery period is 20 years. After allowing for depreciation of capital expenditure, administration costs and operational and maintenance costs, the achieved return on investment for the first round of mini-grids, has been between 25% to 49%.

