

Sosai Sustainable Minigrids for Energy Access and Social Inclusion Project

About the Project

Sosai Renewable Energies Company Limited (Sosai) seeks to develop solar minigrids in Kaduna, Plateau, and Kogi States in Nigeria. In 2022, with funding from USTDA, Sosai partnered with Energy Markets Group, Sustainable Energy Services International, and Creeds Energy to conduct site assessments of 100 communities for potential development of these minigrids.

Site assessments captured Residential Income, Willingness to Pay, Monthly Energy Expense, Mobile Connectivity, and other relevant demographic information. In addition, Cottage Industries, Productive Users, Anchor Customers, Commercial and Residential customers were all identified and geotagged. The assessment documented load profiles for potential customers and developed a base case and future case scenario for preliminary engineering design and financial model of the minigrids.

Of the initial potential 100 sites, the detailed assessments identified 64 communities as most viable, and suitable for complete feasibility studies (FS) including financial model, minigrid design, and grid network design. Each community was categorized into one of three appropriate project types: 36 microgrids, 23 minigrids, and 5 interconnected grids. The FS for each site comprised:

- (i) Preliminary engineering design;
- (ii) Environmental and Social Management Plans;
- (iii) Regulatory and Legal Analysis;
- (iv) Economic and Financial Analysis;
- (v) Investment Memorandum
- (vi) Development Impact Assessment; and
- (vii) Implementation Plan with recommendations on business growth.

The minigrid system designs total:

| Base Case | Future Case ¹ |
|--------------------------|----------------------------|
| Kilowatts peak: 6009 kWp | Kilowatts peak: 16,544 kWp |
| Battery 9710 kWh | Battery 36150 kWh |
| Inverter 1655 kW | Inverter 5224 kW |
| Generator 1955 kW | |

¹ Based on original survey of residential, commercial, and productive users of appliances and equipment to be purchased with a minigrid in the community.

It is expected that the development of all sites (the Project) would result in new, direct electricity access for over 120,000 rural residents (an estimated 21,000 households) and 20,000 metered connections. The estimated total CAPEX requirement for the Project is approximately \$19 million USD.

U.S. Supplier Webinar

The Project Sponsor with USTDA and Project Partners are hosting a webinar for potential U.S. Suppliers to brief firms on the Project and provide an overview of the minigrid opportunities in Nigeria.

The Webinar will be held on Monday, March 27, 2023, at 10:30am U.S. Eastern Time.

[Please register here](#) to receive a Zoom meeting link for the webinar.