

Load Assessment Report



[A load assessment report is the foundational step in developing an off-grid solar project. It enables the project developer to design and optimize a system that effectively meets the energy needs of the consumers.]

A. Introduction

- Project Overview
- Objective of the Assessment

B. Project Location

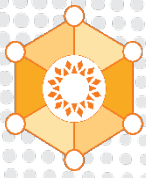
- Geographical location of the project site
- Demographics
- Key socio-economic indicators
- Existing energy sources, reliability and costs

C. Consumer Base Survey and Energy Demand Assessment

- Consumer survey including number of potential consumers and categorization such as residential, commercial, industrial, and critical services, etc.
- Existing average expenditure on energy needs for each consumer category
- Consumer's willingness to pay for energy
- Energy demand analysis including daily load profile and total daily consumption
- Load profile for each category of consumers

D. Conclusion

- Summarize the key findings of the survey and energy demand assessment
- Recommendations for system designing



System Sizing



[Off-grid solar system sizing involves determining the appropriate components and their capacities to meet the energy needs of a location that is not connected to the main power grid.]

A. Introduction
- Project background - Specific goals and objectives
B. Energy Need Assessment
- Community profile including geographical and demographic data - Community energy need assessment including different category of consumers and consumption pattern
C. Site Assessment
- Site visit - Site area and topography - Soil conditions and ground stability - Site Accessibility (via road, railway station, airport, seaport)
D. Solar Resource Assessment
- Analyze project site solar irradiance data - Average daily peak sun hours
E. System sizing
- Determine the nature of energy supply required such as round the clock or for daily few hours - System configuration including size of Solar PV, battery bank and inverter to meet the energy demand - Design of distribution network, if required
F. Conclusion
- Summary key findings - Recommendations for project feasibility and implementation or next steps (proceed, modify, abandon, further study, etc.)