SOLARENA
ENGINEERING

Off-Grid Solar PV Stations



SAVE YOUR ENERGY

OFF-GRID
SOLAR PV SYSTEMS

Overview

An off-grid solar photovoltaic system generates and stores electricity independently from the public electricity grid. The system normally consists of solar panels, an off-grid or hybrid inverter, battery storage, mounting structures, protection devices, cables, and monitoring equipment.

During daylight hours, the solar panels supply the facility's electrical loads and charge the battery bank. Stored energy can then be used at night, during low-sunlight periods, or whenever solar generation is insufficient.

Off-grid solar PV systems provide an independent electricity source for remote locations, facilities without a reliable grid connection, and applications where continuous access to essential power is required..

Features:



- **Energy Independence:.**
- **Battery Backup.**
- **Power for Remote Locations.**
- **Continuous Supply for Essential Load.**
- **Expandable System Design.**
- **Automatic Energy Management.**
- **Quiet and Clean Operation.**



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Applications

- Remote Villas and Residential Buildings.
- Farms and Agricultural Facilities.
- Irrigation and Water-Pumping Systems.
- Desert Camps and Eco-Lodges.
- Remote Telecommunications Sites.
- Security and Surveillance Systems.
- Construction and Temporary Sites.
- Clinics and Community Facilities.
- Remote Warehouses and Service Buildings.
- Essential Loads in Areas with Unreliable Electricity.



Specifications:

An off-grid solar PV system design will depend on several factors:

- Facility Type.
- Total Daily Energy Consumption.
- Maximum Simultaneous Electrical Load.
- Essential and Non-Essential Loads.
- Required Backup Duration.
- Battery Storage Capacity.
- Available Installation Space.
- Geographical Location and Solar Resources.
- Seasonal Variations in Energy Consumption.
- Availability of a Backup Generator.
- Expected Future Load Expansion.
- Financial Capabilities.



Solarena Engineering provides customized off-grid solar solutions tailored to each facility's energy, backup, and storage requirements.

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