Photovoltaic Power Station

A solar power plant powered by photovoltaic panels is at the heart of this project.

Given the **space constraints of a rooftop installation**, our analysis led us to select the **Jinko Tiger Neo 625W panel** due to:

- **High efficiency** (maximizing power per m²).
- **Lower cost** compared to European alternatives.
- **30-year warranty**, ensuring long-term performance.
- **Reduced structural and labor costs** (optimized for rooftop use).

This choice **balances performance, cost, and space efficiency** for an optimal rooftop PV system.

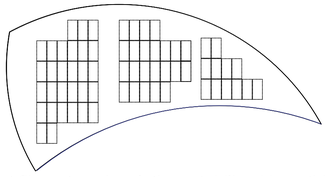
Component Summary

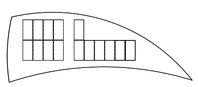
Component	Specification
PV panels	156 × Jinko Tiger Neo 625W (97.5 kW)
Batterystorage	456 kWh Li-ion (e.g., 10 × 46 kWh modulesBYD B-Box HV)
Hybridinverter	75 kW AC (e.g., 3 × 25 kW SMA Tripower)
Charge controller	150A MPPT (e.g., VictronQuattro)
Roof area	~395 m² (15° tilt)
Battery area	5 m².

Public Lighting and Exterior Landscape

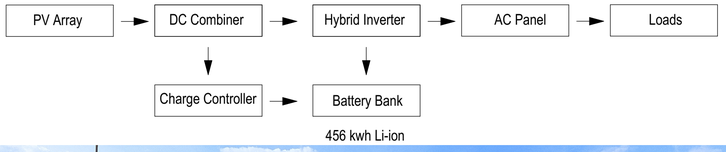
Main Support for Photovoltaic Panels

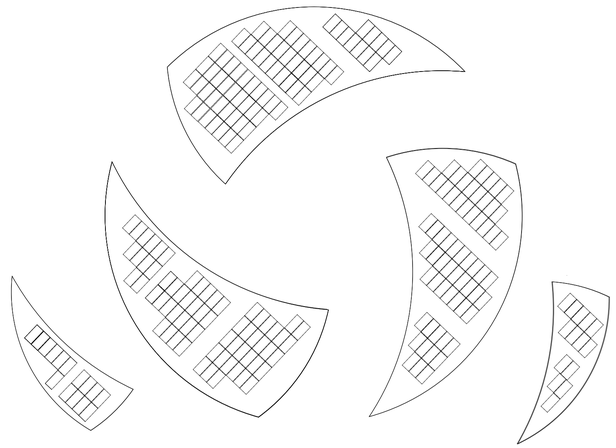
Secondary Base for Photovoltaic Panels





Coconut fiber straw insulation, stabilized by a thin layer of concrete, protects the spaces beneath the photovoltaic panels while ensuring robust anchoring. Two large structures will house community facilities determined through consultations with the residents of Marou. The third structure will provide a covered area for village celebrations and events. The smaller structures, designed as additional shelters, canalso host activities or protect specific spaces.





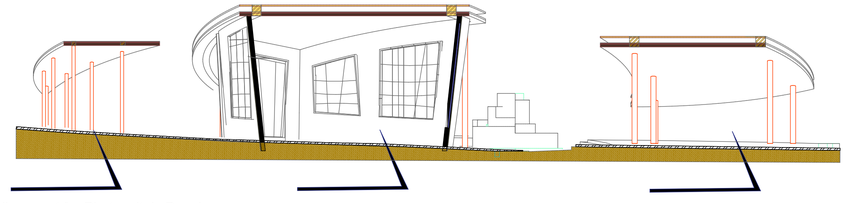
Arrangement of PV panels on concrete structures

This project celebrates the forces of nature and their power to inspire architectural solutions that intertwine symbolism, sustainability, and innovation. It envisions a space where art, culture, and technology converge to reconnect humanity with its roots and environment, while offering an aesthetically and culturally rich space.

Reinforced Concrete Structures and Their Uses

The reinforced concrete structures, selected for their durability against strong windsand frequent cyclones, support photovoltaic panels. The project includes three large structures and two smaller ones, the latter designed to be multiplied in a circular progression to meet future needs. Existing bamboo structures on the site complement the form and can be replaced with concrete versions if necessary.

To reduce the carbon footprint, the concrete incorporates local materials such as regional aggregates and eco-friendly binders, optimizing water resource management while ensuring enhanced resistance to corrosive climates. Inspired by natural forces, the helical shapes combine aesthetics, symbolism, and landscape integration.



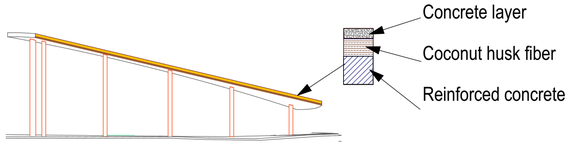
Small support for Photovoltaic Panels

Battery technical room

large support for Photovoltaic Panels

Scale :1/650

Coconut fiber straw insulation, stabilized by a thin layer of concrete, protects the spaces beneath the photovoltaic panels while ensuring robust anchoring.



Section through the concrete structure

Scale :1/330