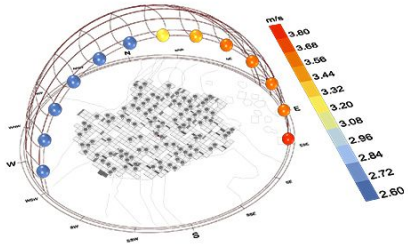
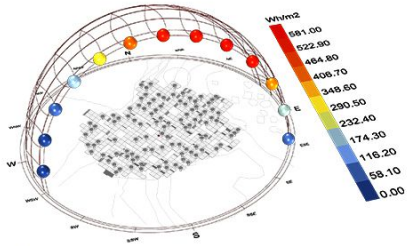


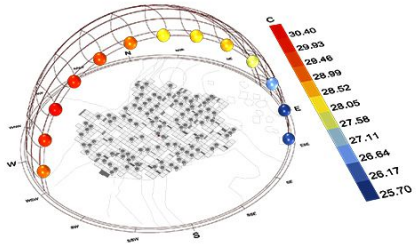
Wind Speed (m\s)
Country: FJI
Date: 2nd January
Time-Zone: 12.0
City: Viwa
Source: SRC-TMYx

This diagram shows how wind speed varies throughout the year.



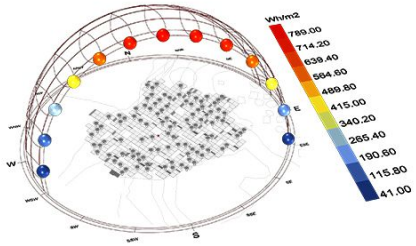
Direct Normal Radiation (Wh\m2)
Country: FJI
Date: 2nd January
Time-Zone: 12.0
City: Viwa
Source: SRC-TMYx

The diagram shows the annual variation of direct normal solar radiation along the sun path and illustrates the intensity of sun light received throughout the year.



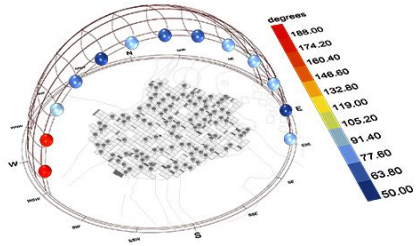
Dry Bulb Temperature (c)
Country: FJI
Date: 2nd January
Time-Zone: 12.0
City: Viwa
Source: SRC-TMYxS

The diagram shows the amount of dry buld temprature along the sun path throughout the year. It also indicates that temperature has minal impact on pv efficiency.



Global Horizontal Radiation (Wh\m2)
Country: FJI
Date: 2nd January
Time-Zone: 12.0
City: Viwa
Source: SRC-TMYx

The diagram shows the total solar energy received on the horizontal surface.



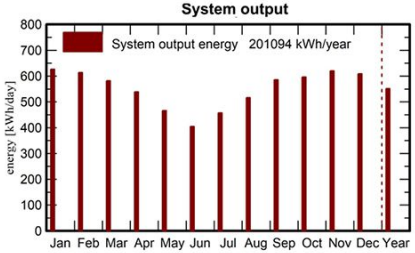
Wind Direction (degrees)
Country: FJI
Date: 2nd January
Time-Zone: 12.0
City: Viwa
Source: SRC-TMYx

The diagram shows that most wind in Viwa , Fiji come from the east and west through the year.

System summary

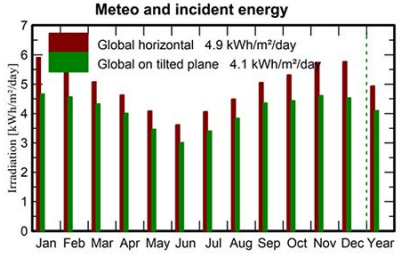
Nominal power	160 kWp	Total area	1000 m²
Module type	Standard	Supports for modules	Facade or tilted roof
Technology	Monocrystalline cells	Ventilation property	Free air circulation

System output



This bar chart illustrates how sunlight availability and system energy output vary throughout the year, highlighting solar power generation for each month.

Meteo and incident energy



This chart shows the Monthly average solar irradiation for horizontal and tilted panels. While horizontal orientation yields higher irradiation, water drainage, and structural safety.

This table shows the irradiation and energy output for each month of the year

	Horizontal global kWh/m²/day	Coll. plane kWh/m²/day	System output kWh/day	System output kWh
Jan.	5.91	4.66	626.7	19428
Feb.	5.51	4.56	613.8	17186
Mar.	5.07	4.33	581.9	18039
Apr.	4.63	4.01	538.8	16164
May	4.09	3.46	465.8	14439
June	3.62	3.01	404.7	12140
July	4.06	3.40	457.1	14170
Aug.	4.49	3.84	515.9	15993
Sep.	5.06	4.36	585.8	17573
Oct.	5.31	4.43	596.1	18481
Nov.	5.74	4.61	620.0	18600
Dec.	5.77	4.53	609.0	18880
Year	4.94	4.10	550.9	201094

According to the results obtained, the total annual energy production is approximately 200,000 kWh. Based on the Marou Energy Demand and Generation document, this corresponds to up to 2.2 times the required capacity. Given the energy demand and the flexibility in choosing the type of solar panel, the production capacity can be adjusted and optimized as needed.

ENERGY STORAGE VESSEL

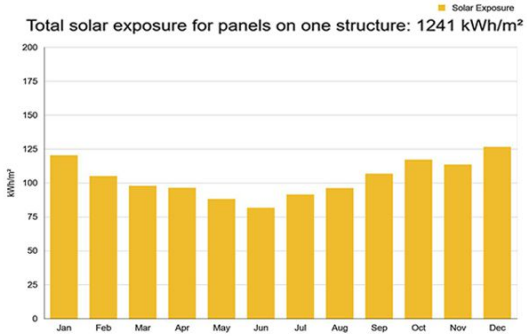
150 % more power
150 % greater capacity
100 % increase in energy density

To maximize overall system efficiency when siting the battery bank, consider the following best practices

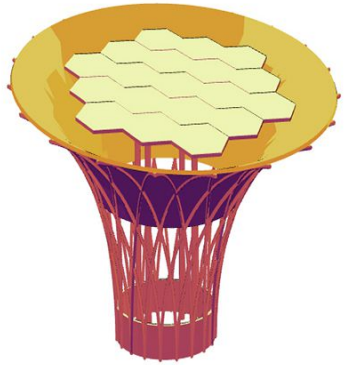
- Minimize DC cable runs between the solar inverter and the battery bank to reduce resistive losses.
- Place the battery bank near the electrical center of the solar array.
- Maintain at least 2m of clear access around the battery bank for routine maintenance and fire-safety egress

With a planned battery storage capacity of 860 kWh, approximately 290 EnerVenue ESV-4 units would be needed to fully build the battery bank for Marou.

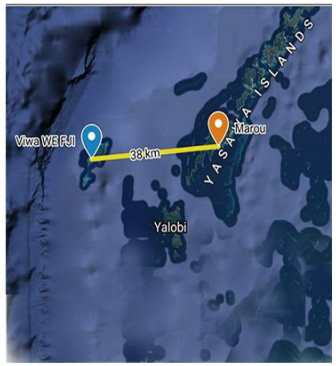
Total solar exposure for panels on one structure: 1241 kWh/m²



This chart shows the monthly solar exposure for all solar panels installed on each structure throughout the year Based on the information in total solar exposure Table and Figure, each structure can generate approximately 1,530 W of power. With 105 structures, based on the site's capacity, the total nominal power generation could reach 160 kW.using system output chart, metro and incident energy chart along with the total system output table, the actual annual energy output can be determined in kWh.



This image shows the total annual solar exposure within the defined range for one structure



Most of the simulation and results are based on data from the FJI WE viwa weather station