

# Project at Sinnar, MH

Grid Tied Solar System

168 kWp installed

Commissioned: January 2022



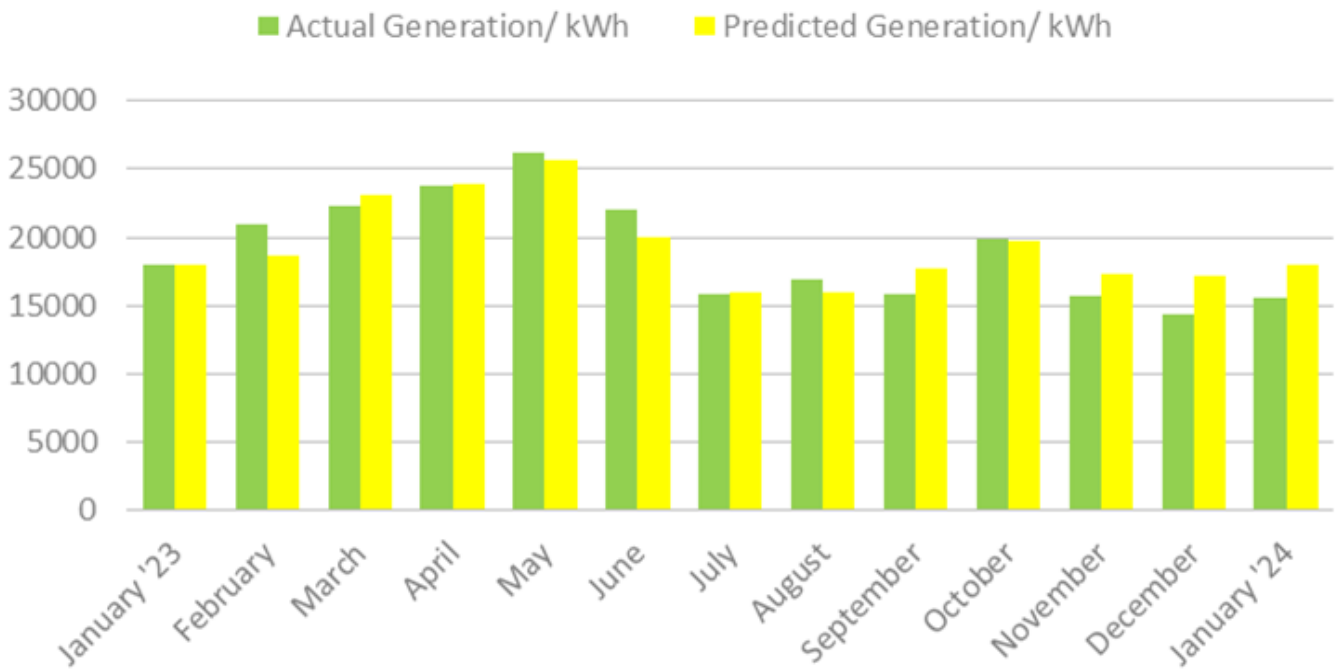
- Annual energy generation of 2.33 lakh units (kWh)
- Actual vs predicted energy generation - deviation of 1.54%



## Technical Specifications:

- Solar module - 450 Wp Mono half cut (Anchor by Panasonic)
- Inverter - 50 kW and 100 kW (ABB-Fimer)
- MMS - Aluminum rails on industrial shed
- Protections - ESE certified lightning arrestor, Surge protection, MCCB, String fuses

# Actual Generation V/S Predicted Generation



The actual generation for the solar system is taken from the inverter data, while the predicted generation is taken from a solar simulation for this plant. The graph shows seasonal variations.

Accurate predictions help in gauging the payback of the system.

## Assumptions made for predicting generation:

- A 3D design simulation for the existing roof structure to predict generation
- Losses due to dust accumulation, shading, cable resistance, environmental conditions, DC/AC conversion losses were considered

## Key factors affecting solar energy generation:

- Stability of grid
- Orientation & inclination of roof
- Climate conditions
- Cleanliness of solar panels' surface
- Sizing & quality of components