

Site Survey: SPV System

Presented by
Prof. Nimay Chandra Giri

Solar Site Survey

- Whether the location is suitable or not for solar panel installation.
- What and where are the shaded areas that might fall on proposed solar arrays during day time with maximum sun.
- What type of mounting is required for the solar array.

Importance

- Each Rooftop or ground location is unique
- Shadow analysis is crucial
- Electricity Bill & sanctioned Load is required
- It helps us ensure our rooftop or ground is usable
- It helps to design a system
- Any special requirements can be addressed

Site Assessment

- A suitable location for Solar Panels.
- What and where are the shaded areas that might fall on proposed Solar arrays during day time with maximum Sun, typically 9.00am to 4.00pm
- What type of Mounting is required for the Solar Array
- Where do we locate the Balance of System components? Ex: Inverter, DC Combiner box, AC Distribution Box, Batteries, if required.
- What are the Energy Needs of the Building? A detailed Loading Sheet is present here .
- How is the PV system going to be connected to the existing electrical systems.

Solar PV Array Area

- A typical 250W poly crystalline solar panel is of size 1.7×1 sq m or it's equivalent to 1.7sqm or 18.2sqft. So 1kWp Solar Panel array would take around 72sft or 7sqm.
- Considering that you need to give spaces between each panel array, as a thumb rule you can consider 80 to 100sqft or 7.4 to 9.3 sqm of shade free south facing area per kW of solar PV panels.
- Once the Site survey is done and the energy needs of the building is assessed we are ready to do the system sizing.
- As a thumb rule, you require 10 sq meter area for a 1 kW solar system capacity.

Photographs

