Solar PV Power Plant of 3kW1ph

DD/MM/YYYY

On grid Solar Power plant Installation work

Confidentiality

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Solar Potential

The amount of solar electricity produced by solar PV power plant depends on many factors but primarily on solar irradiance at a given location. In fact, the output of PV power plant is proportional to the global solar radiation in the plane of array. A number of environmental factors such as ambient temperature, rain, moisture, wind, dust and pollution also affect the performance of the PV power plant.

Solar Radiation

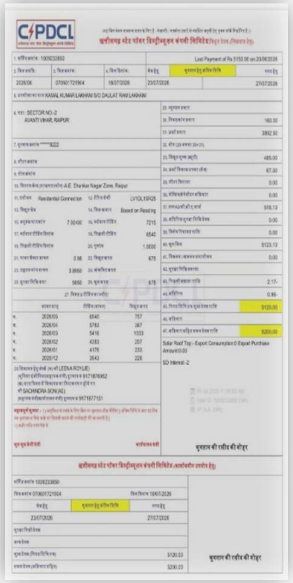
The solar irradiation data of a location is either measured or estimated by the well-established model. The equipment like pyranometer and pyrheliometer are used for measuring solar irradiation on the ground. NASA data also estimates the solar irradiation data based on space radiation measurements. The NASA irradiation data are used when ground measurement data are not available. For Bhopal, we also have ground based solar radiation data recorded by Solar Energy Centre, MNRE.

Rooftops area required for PV installation

Rooftop area required for the installation of 3kW1p Solar Rooftop power plant is around 19 **m^2** where the PV plant can be installed. The proposed rooftop space for PV installation should be shadow free.

Shading and obstructions at Site

For a Solar power plant it is very important that the site should be free of shadows and obstacles like trees, tall building, towers or other such structures which can cast shadow over the modules. This can have a significant impact on the production and reliability of the plant. Site selected for PV installation should not have any obstacles.



Based on your last 6 months' bills (Dec-25 to May-26), I analyzed your electricity consumption pattern.

Total Consumption 2825 units/6 months

Average Monthly Consumption 471 units/month

Seasonal Pattern	
Summer (Mar-May)	Winter (Nov-Feb)
Consumption is very high	Average unit Consumption 300
Mar-26 → 1033 units Apr-26 → 367 units May-26 → 757 units	
This means your consumption fluctuates a lot.	

Project Implementation

Project implementation governs with various activities from the planning stage to the commissioning of the project. There are various permissions and approvals required which are listed in further sections. The further sections also give a brief about the site development activities, EPC activities and the power evacuation or commissioning activity. The project timelines is also described in this section.

Engineering, Procurement and Construction (EPC)

The project development activity includes site development, design and engineering, on site activities and construction.

Site Development

During implementation of the project, the work starts with development of the site to make it suitable for installing solar. The work involved in site development would include easy access up to terrace and other activity.

Design and Engineering

The design and engineering activity would include the system design and component selection and would cover up the detailed engineering of the project. It would include, PV Plant layout drawings, PV array layout drawings, Single line diagrams (SLDs), shading scenario, optimization of losses, cable routing and layout, power evacuation drawings, earthing and ACDB fabrication, General arrangement drawings, Good for Construction (GFC) drawings, preparation of BoQ and etc.

Procurement

Procurement would involve sourcing of various equipment and components for the project. The major components to be procured are PV Modules, Solar Inverter, PV Module Mounting Structure, Cables and Balance of Systems (BoS) and accessories.

Installation, testing and commissioning

The installation and commissioning activity would include the civil works to be performed on the site. It would include, preparation of foundations for PV module mounting structure, erection of structure, Module mounting and fitting, inverter installation

During installation activity is being performed, testing of each of the equipment is also carried in parallel in order to save time so as to reduce the completion time. Though commissioning would include power evacuation (described in further section), it would be performed once testing is completed.

Component Make list

Solar PV plant - Make and Specifications of major components

S.No.	Item	Make	Specification (if any)
1	Solar PV Module 5 number	Adani / Waaree	600-630 Wp TOPCon
2	Solar Inverters 3kw 1 phase	Eastman / havells / Polycab	High Efficiency String/Central/Single phase
3	Module Mounting Structure (MMS) (Fixed Tilt) with required accessories	Structure angle will be fixed, can not be changed.	Hot Dip Structure
4	DC-AC power cables with required accessories like conduit, glands, connectors, cable ties, ferrules etc.	POLYCAB, RR, Havells	Single/Multi Core, Shielded, Al Armored, / CU flexible
5	String Combiner Box with String Monitoring Unit	Elmec	Fitted with Surge Protection Devices
6	Complete plant Earthing system, Separate DC and AC earthing	Reputed	GI electrode
7	Civil PCC	400x 400 x400 mm	

Residential Offers, Terms & Conditions

Below Table 3 shows the Capex Residential offers of 3kW1p grid connected rooftop Solar PV Power plant net metering work

TABLE 1: 3KW GRID CONNECTED ROOFTOP SOLAR PV POWER PLANT

Project size	Price Per Watt +GST	Solar Project Cost +GST
3kW1ph	**Rs 61.3** +GST	**Rs** 183654.73+GST

Sr. No.	Particulars	Amount (INR)
1	Supply of **3kW1p** Solar PV Power Plant	Rs 183654.73
2	GST 8.9%	Rs 16345.27
3	Installation and Commissioning	Included
	Total Project Cost	**Rs 2,00,000**

NOTE- Net meter, approvals & other government formalities are included in the project cost.

Roles and Responsibilities

Various roles and responsibilities are to be carried out by the SESS and CLIENT, which are mentioned as follows:

For SESS:

The plant will be handed over to the client after 1 week of proper testing and commissioning.

For Client:

- Provide space for installation of PV plant.
- Provide basic infrastructure like water supply at the rooftop for module cleaning, internet connection for data logging, temporary power supply at time of installation.
- To provide 1/3 phase connection for the running of 3kW solar power plant, as the system is 3 phase so 3 phase connection is mandatory.
- If required customer has to change the power supply cable

Payment Terms

- **Advance Payment: 90% of the total order value shall be paid along with the purchase order.**
- **Balance Payment: The remaining 10% shall be paid after the material reaches the site and before commencement of installation.**

- **Mode of Payment:** Payment shall be made by Demand Draft or Cheque drawn in favour of **"KISLAY RENEWABLE ENERGY"**, payable at **Bilaspur, Chhattisgarh**.

BANK DETAILS :	
Bank Name	State Bank Of India
Name	Kislay Renewable Energy
Branch	Rajkishore Nagar
Account No.	45142766207
IFSC	SBIN0009408

General Terms and Conditions

- Solar PV Modules and Inverter types are subject to availability. Equivalent components will be supplied based on availability and other market factors.
- The customer shall provide space and other facilities, if required to, to carry out the activities required for completion of the project. Water, Electricity, access to site to our employees and workers, and storage space for materials should be provided as required.
- Changes and additions, if any to scope of work or to this agreement have to be done in a written form and must clearly be marked. The above price is on deliverables as defined in the current proposal.

List of Exclusions

The following items are not part of the price quoted. They can be supplied under Extra Scope for a price.

- Canopy roof, if PV Array is setup on raised structure as opposed to terrace or flat roof.
- Any additional civil, mechanical or electrical work required for completion of project.
- Any other costs that are not directly related to component costs or service costs for supply and installation of the plant.
- Permissions and Approvals required for construction of the plant and power evacuation.
- Safety, Security and Insurance of the plant during installation and post commissioning.
- Internet/Wi-Fi connectivity for monitoring.
- Grid Power supply cable.
- **Dismantling and re installation of solar power plant in future will be charged extra**
- **Subsidy Benefit**
  The subsidy under **PM Surya Ghar: Muft Bijli Yojana** shall be provided strictly as per the prevailing Government of India guidelines. The eligible subsidy amount will be credited directly to the customer's registered bank account. **The vendor does not receive, hold, or disburse subsidy payments on behalf of the customer.**
- **On-Grid Solar System**
  This proposal is for an **On-Grid Solar PV System**. The primary purpose of the system is to reduce electricity consumption and monthly utility bills. In the event of a DISCOM/grid power failure, the solar plant will automatically shut down and will not supply power to the premises for safety reasons.

Government subsidy is currently applicable only for eligible **On-Grid and Hybrid Solar Systems**, subject to applicable norms.

- **Cleaning**
  This proposal does not include periodic cleaning, housekeeping, or water arrangements for cleaning of solar panels. Regular cleaning shall be the responsibility of the customer unless covered under a separate AMC agreement.
- **Generation Performance**
  Solar power generation depends on solar irradiation, weather conditions, seasonal variations, and site-specific factors. Actual energy generation may vary from estimated values.
- **Force Majeure**
  The vendor shall not be held responsible for delays or losses arising due to natural calamities, government restrictions, strikes, war, or any circumstances beyond reasonable control.
- **Taxes & Government Charges**
  Any future changes in GST rates, government duties, statutory charges, or DISCOM fees shall be borne by the customer, if applicable

Warranties and Guarantee

- PV modules - 30 years of product warranty, 90% of nominal power output for a period of 10 years and 80% of nominal power output for rest 15 years.
- Inverters – 8/10 years of product warranty.
- All component warranties are back-to-back to the client from manufacturers.
- Warranties and guaranties will not be valid if:
- Will-full damage is made to the equipment/components.
- Improper use or abuse of the components/equipment.
- Modifications are made by the purchaser or third party without intimation to the supplier.

Project Schedule

1) Material procurement will take around 7 to 11 days from the date of order finalization
2) Once the material is delivered on site Plant installation will take 4 to 6 days.

Validity

This Proposal is valid for 10 days from the date of submission.

Contact Details:

Please feel free to contact for further queries. Please contact.

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