



# POORNIMA

## COLLEGE OF ENGINEERING

Promoted by Shanti Education Society, Affiliated to Rajasthan Technical University & Approved by AICTE

### A REPORT ON INSTALLATION OF ROOFTOP PHOTOVOLTAIC SYSTEM

- ♦ **TITLE:** “Installation of Rooftop Photovoltaic System in PCE, Jaipur”
- ♦ **SPONSORS & SUPPORTERS:** Not applicable.
- ♦ **INSTALLATION AGENCY:** VG Energies
- ♦ **ABOUT THE ROOFTOP PV SYSTEM:**

Rooftop solar PV systems are distributed electricity generation options, which help to meet a building’s energy needs, or provide electricity within an existing distribution network. The size of the installation can vary dramatically, and is dependent on the size of the building, the amount of electricity required, the funding available for the project, and the grid operator’s willingness to accept excess capacity. Core system components include PV modules, their accompanying mounting structure and an inverter.

However, other components can also be incorporated into the system, depending on its size and complexity. These include:

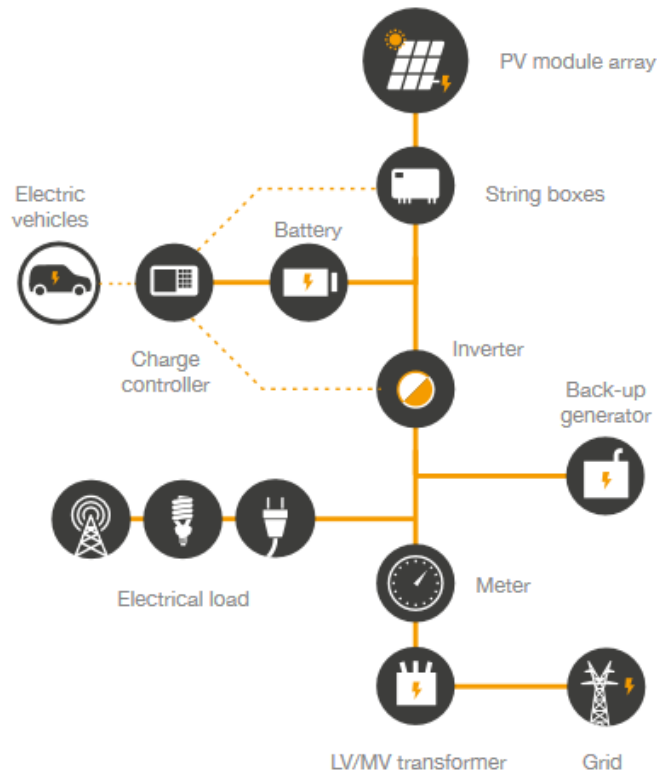
- String boxes;
- Batteries;
- Generators;
- Transformers; and
- Meters

The layout and configuration of systems can differ, depending on the load type and the energy supply requirements. An indicative layout is shown. The number and size of PV installations has increased exponentially since 2000, with Europe, China, the Americas and Asia-Pacific driving this growth.

The increase in the uptake of solar PV installations is influenced by:

- Decreasing PV technology costs;
- Economies of scale achieved;
- The learning curve associated with utility scale installations;
- Increasing grid supplied electricity prices;
- The availability of preferential feed-in-tariffs or other financial incentives for renewable energy technologies (including tax credits);

- Carbon emission reduction targets;
- The availability of alternative financing options;
- Air pollution concerns; and
- Energy security concerns



PV systems provide a clean and increasingly affordable option for building owners and occupants to produce their own electricity. Globally, investments in small scale PV installations increased consistently between 2006 and 2012. This trend is expected to continue going forward, and it is estimated that solar PV installations could total 403GW by 2020. The cost of installing a PV system is driven by the cost of the following:

- PV system component costs;
- Project development costs; and
- Installation and commissioning costs

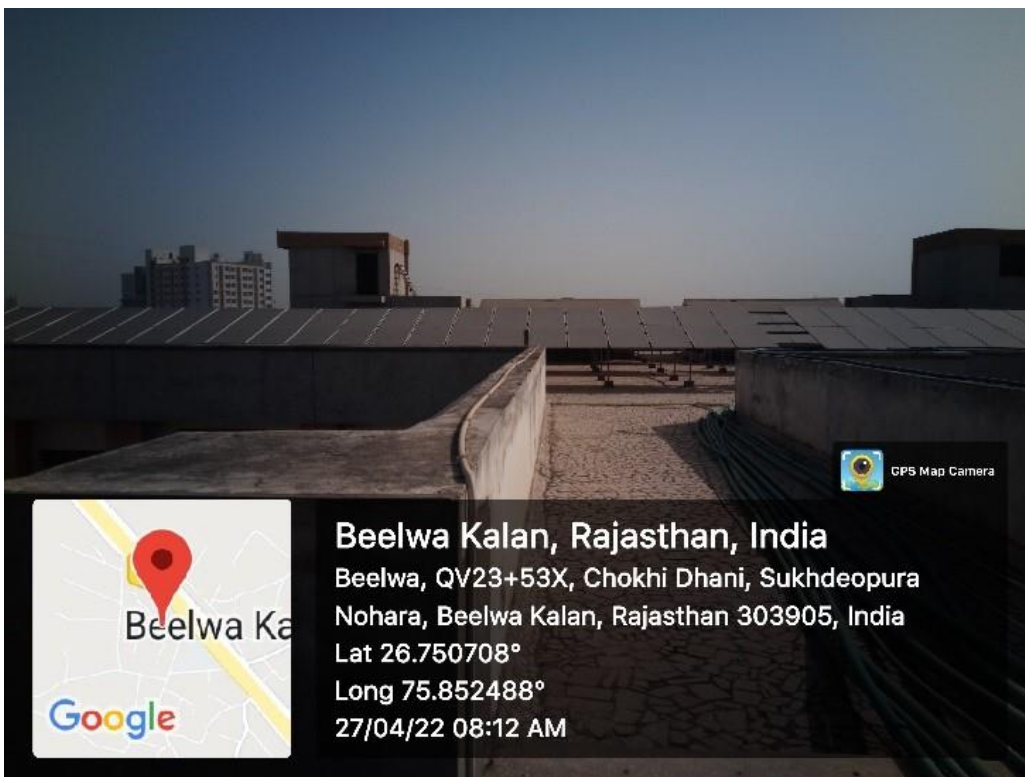
System components make up the majority of the overall capital cost, with modules and inverters accounting for more than 60% of total costs. Balance of system (BOS) costs include the mounting system, electrical equipment (such as transformers and cables), grid connection, installation and planning costs. Overall installation costs for PV technologies have decreased significantly in recent years; the cost of generating electricity from crystalline PV modules, for example, has dropped by approximately 53% since 2009. This does not include any backup supply options, such as batteries or generators. This trend is expected to continue going forward and overall system costs are forecasted to decrease by between 40% and 75% by 2050, compared to 2014 costs.

◆ PROJECT PHOTOS:












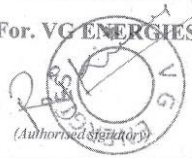
◆ BUDGET & ACTUALS



# VG ENERGIES

DATE : .....  
31-03-21

GST NO.- 08AAKFV8950A1ZY

<b>RETAIL INVOICE</b>											
M/s. :	SHANTI EDUCATION SOCIETY	INV NO.	:	67							
NAME	POORNIMA COLLEGE OF ENGINEERING	CH.NO.	:								
ADDRESS:	ISI-6 RIICO INSTITUTIONAL AREA GONER ROAD SITAPURA, JAIPUR-302022	TRANSPORT	:	AUTO							
M:		EXECUTIVE	:	ANURAG							
GSTIN		CUSTOMER CARE	:	0141-4063409							
EWAY NO. 7111-8406-9942											
Sr.No	PRODUCT	HSN CODE	Rate..	Qty.	Amount..						
	<b>SOLAR POWER PLANT</b>										
	184KW										
1	RENEWSYS SOLAR MODULE -WS-330	85414011	5512.18	544	2998625.92						
2	POLYCARBON GRID INVERTER	85044090	333928.00	2	667856.00						
3	BOM WITHOUT MODULE & INVERTER	84	5500.00	180	987250.00						
4	WIFI DEVICE	85044090	2500.44	2	5000.88						
5	INTALLATION		3147.28	184	579099.52						
<p>APPROVED FOR PAYMENT OF RS. 5703999.38 31/3/21 Authorized Signatory</p>											
Rs. {in words} :		FIFTY SEVEN LAKH FOUR THOUSAND ONLY		Total .....	5237832.32						
		CGST	2.50%	91662.06							
		SGST	2.50%	91662.06							
		CGST	9.00%	141421.47							
		SGST	9.00%	141421.47							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">FIXED ASSETS</th> <th style="width: 50%;">EXPENSES</th> </tr> <tr> <td>S.No. 1205</td> <td>S.No.</td> </tr> <tr> <td colspan="2">Amt. 5703999.38 Amt.</td> </tr> </table>		FIXED ASSETS	EXPENSES	S.No. 1205	S.No.	Amt. 5703999.38 Amt.		<b>TOTAL</b>		<b>5703999.38</b>	
FIXED ASSETS	EXPENSES										
S.No. 1205	S.No.										
Amt. 5703999.38 Amt.											
OUR BANK : KOTAK MAHINDRA BANK, JAIPUR		ROUND OF		0.00							
A/C NO : 0413772907 IFSC/RTGS/NEFT/ CODE : KKBK0003537		<b>TOTAL</b>		<b>5704000.00</b>							
<b>Terms &amp; condition :</b> 1. Goods once Sold will not Be taken back 2. Subject to Jaipur Jurisdiction . E.&O.E.											
<b>For. VG ENERGIES</b>  (Authorized Signatory)											

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