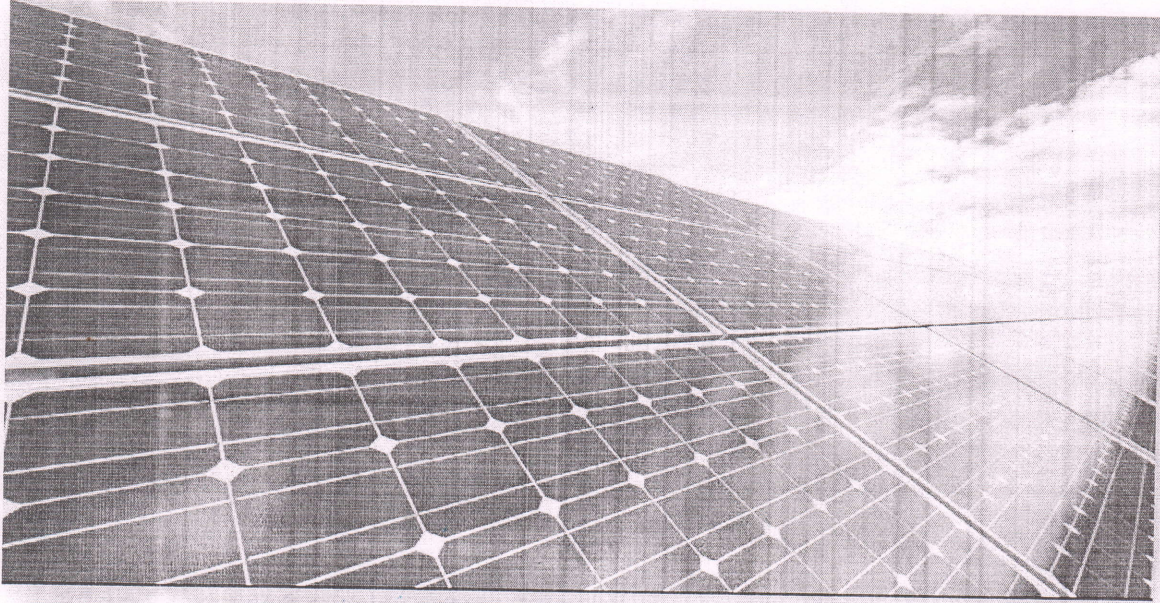


# VPS SOLAR TECHNOLOGY

6/33, RavivarPeth, Opp. Market Yard, Solapur.

Rooftop Solar PV Plant (On grid)



Client Name: M/s. Bhose Agro Producer Co. Ltd.

At Post :- Bhose Tal :- Pandharpur.

Project Type- Solar Rooftop On grid Installation of 120 KW 12BB Latest Technology.

for Bhose Agro Producer Co Ltd

B.B. Pool Kumbhkar s.n.  
Authorised Signatory

**VPS Solar Technology, Solapur** recommends that client uses a Grid Synchronous Solar Power system that will reduce the demand of electricity from the grid (MSEDCL) and the solar system will pay for itself over the medium term by significantly lowering electricity costs. This Solar system will feed electricity directly into the building's main/LT panel and result in reduction of annual electricity bill. Excess units are exported back to the grid through net-metering scheme.

1. **Life of system: 25 years generation warranty on solar panels.**  
(Tier 1 Make, Highest Efficiency up to 17.2%, Low Temperature Coefficient)
2. **5 years warranty of Inverter**  
(String Level Monitor, String Level Protection)
3. **Online Monitoring, Quick Troubleshooting;**

#### TECHNICAL DESCRIPTION

Solar energy is important for many reasons and has great positive impact on environment. Solar / Photovoltaic devices convert light from sun into usable form of electrical energy.

These mainly consist of PV modules, module mounting structures, inverters, batteries, monitoring devices etc. The system is further classified as Grid Connect (where the energy from PV system is fed into the Utility Grid) and Off-grid (where the energy generated by the PV system is stored and used when required) and Hybrid (where multiple sources are used for generation of power including conventional sources and utility). **The proposed system is a Grid Connected system.** As the name suggest, Solar Grid Interactive solutions work in tandem with grid electricity, or in some cases in reference with another constant electrical energy source like diesel generators. The systems are designed to reduce energy consumption from the DISCOM, and hence directly help in reducing the energy bills.

For Bhoose Agro Producer Co Ltd

B.B.Pool, Kumbhreesa  
Authorised Signatory

## Solar Roof Top Systems: Unique Features:

- All our Solar Grid Tie systems come with worlds most technically advanced Inverter which has unique and unmatched features as below.

### CONSTRAINT FREE DESIGN:

- Strings of uneven lengths
- Modules in multiple orientations and different roof facets in a single string
- Modules in shaded areas

More modules on the roof **More** power, **More** revenue & **More** aesthetic rooftops.

### HIGHER LIFETIME VALUE:

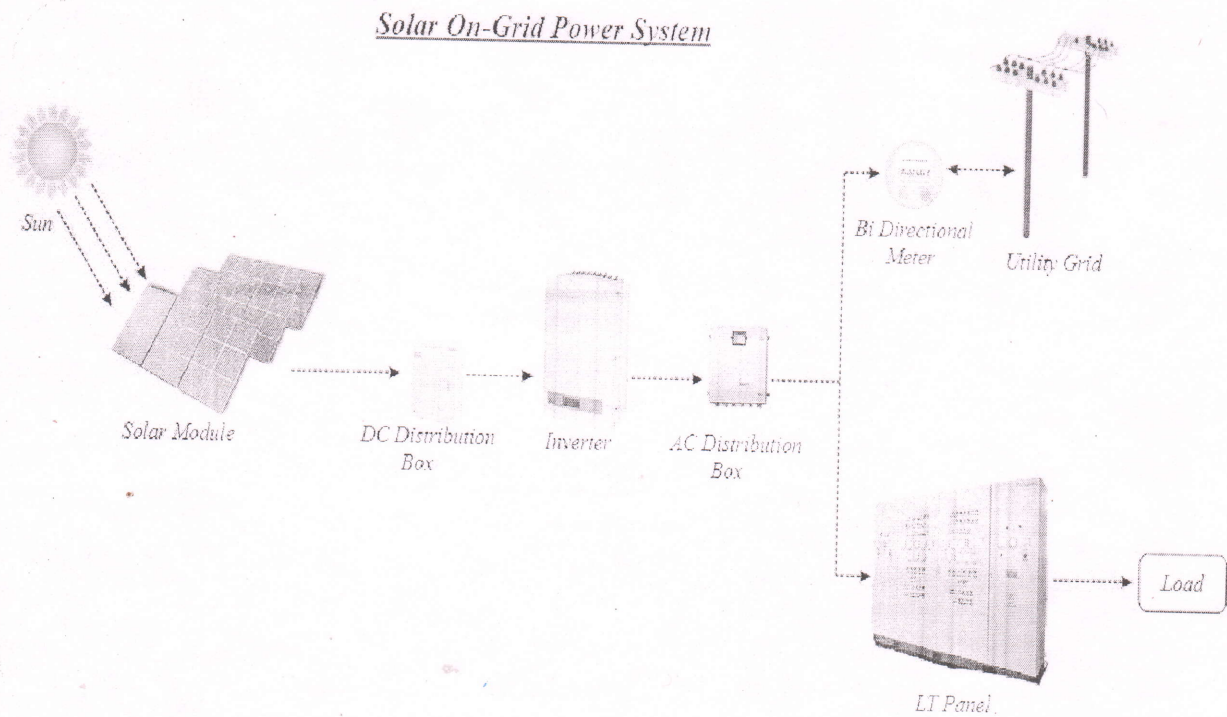
The high quality Solar DC inverter solution enables higher system lifetime value by maximizing revenue and saving installation and maintenance costs. Power generation is optimized at the panel level, which minimizes power losses and leads to a higher lifetime revenue from the PV systems. While the initial cost of the solar inverter is generally slightly higher than the equivalent traditional inverter system, the total installation cost, such as **Bos components, as well as the lifetime operations and maintenance cost, is low.**

- We work on a pre-defined transparent & a completely ethical process. Our principal is based on selecting the best technological partners & highest returns over the life of the project.

For Bhoose Agro Producer Co Ltd

B.B.Pool Kambhore SA  
Authorised Signatory

GRAPHICAL REPRESENTATION – CONVENTIONAL SOLAR POWER PLANT:



**WORKING PRINCIPLE:**

- The solar modules when exposed to sunlight generate DC electricity.
- Solar Grid Tied Inverter performs the conversion of the variable DC output of the PV modules into a clean AC power.
- This inverter needs a synchronizing power with Grid (MSEDCL).
- The Solar Current will be given lead angle in synchronization process and it will be forcefully injected into the bus bar.
- The Loads will be supplied with Solar Power as a prime source of energy and Grid power will supply remaining part of requirement.

For Bhoose Agro Producer Co Ltd  
B.B. Pool, Kumbharg S.A.  
Authorised Signatory

## SCOPE OF WORK:

Scope of Work in this offer includes the following

- Design & Engineering
- System design
- Engineering drawings
- Detailed Bill of Materials & Project Report.
- Installation, Commissioning & Testing.
- DISCOM Approved Meters Lessoning.

### Electrical Works:

- Wiring of Modules
- Cabling from Modules to Inverter
- Cabling from AC Distribution Box to LT Panel Earthing.
- Cabling from Inverter to AC Distribution box

### Installation Work:

- Feeder / LT panel for connection to grid will be made available at site and shall be in Client's Scope.
- Net Metering permissions and follow up with respective dept.
- Warranty as per terms and conditions mentioned herein.
- After sales service during above period, directly or through local contractual arrangement.

## ASSUMPTIONS

Bill of Material & Proposed Capacity may vary from actual site condition and after detailed engineering. Module layout is proposed assuming the standard mounting practice on a flat roof surface. Peak sun shine availability of 5 hours – average as per the geographical site conditions. It is assumed that sufficient shadow free area will be available for installation of modules. In case of restriction due to already installed equipment, other roof ( as available at site ) may have to be used keeping minimum impact on generation Making the site ready and clearing the terrace / roof of any unwanted items is not included in scope of work. Necessary support will be extended to our Installation team for taking material inside the premises and also to the roof top. The same has to be kept at proper and secure place till completion of Installation. Load bearing capacity of the roof should be adequate to carry the load of the MMS system considering the wind load of zone. Water & Electricity required for construction of solar power plant shall be in Owner's scope. Spare feeder for termination of Solar ACDB to Owner's LT Panel will be in Owner's scope. Cleaning of Modules is not in our scope. Client is request to clean panels twice a week.

For Bhose Agro Producer Co Ltd

B.B. POOL Kumbhars s.a

Authorised Signatory

## BILL OF MATERIAL

Sr. No.	Component	Description	Make	Quantity
1	120 KW Solar Module	(535-550) W (144 cut cell) (Mono PERC Half cut cell)	Renewsys/ Trina / Jinko	220
2	100 KW 3 Phase Grid Tie Inverter	100 KW Phase with MPPT base with Remote monitoring.	Sun grow	1
3	Module Mounting Structure or Clamping on Roof	Hot deep galvanized structure for 150km/hr wind pressure	As per Standard	As Per Design
4	MCCB	4 Pole as per design	Legrand / L&T	1
5	A.C. Distribution Box	3Ph.A.C. Distribution Box with(Tribox),Type II Surge Protection Device,amp MCCB,Fuses etc.	Chint/Linder / Phonix	1
6	Walkway	DC Distributioin Box with SPD , MCCB and Fuses	As per Standard	1
7	Lightning Arrester	Copper LA Heavy duty 02Mtr.long	-	1
8	Earthing patti (25x3mm) for LA	CuCable10-16Sq mm	-	As Per req.
9	Earthing Electrode Rod with chemical 10Kg bag(for LA)	50mmDia, 1mtr.long ,with chemical earthing bag (LA side)	POWERTRACK/ Microsence	As Per req.
10	AC Cable	Al Armored cable	Polycab	As Per req.
11	DC Cable	4 sq.mm 1 Core XLPE Solar Cables Black	Polycab	As Per req.
12	MC4 Wire Connector	1000V/30 Amp UV Sustainable as per IEC29	Kripson/ Flin - Energy/ Tyco/Similar	As Per req.
13	Meter	Three Phase Meter	Secure	2

SrNo.	Component	Description	Make	Quantity
14	Walk way	-	Reputed	As Per Design
15	Cable Tray	-	Reputed	As Per Design
16	Earth Pit	1.5 m depth, With Watering	Standard	3

**WARRANTY:**

**MODULE:**

- ❖ 10 Years Product warranty.
- ❖ All solar modules are covered under linear performance warranty of 25 years.
- ❖ At least 90% of rated performance up to 10 years.
- ❖ At least 80% of rated performance warranty for next 15 years.

**INVERTER:**

- ❖ Inverter Warranty 5 years.

**SERVICE:**

- ❖ One year free Technical service

**IN ONE ROOF: - STRUCTURE DESIGN, FABRICATION, ELECTRICAL DESIGN AND CONSULTANCY.**

## COMMERCIAL PROPOSAL

### QUOTATION for Solar (PV) Plant 120 KW 03 Phase

Description	Amount
100 KW Solar Panels On grid Solar Inverter Mounting structure (Normal) AC Cables, Cables ACDB Junction Box Earthing system Installation & commissioning	4113528/- b
Project Cost per Watt	49.5 /-
GST(9%)	740385 /-
Net Meter, Generation Meter & DISCOM Approved Meters Lisioning	1,25,000 /-
Total Cost	4978 964/-

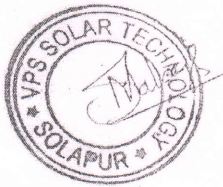
#### NOTE:

- MSEB Load Extension or Name change any fees/cost/Deposits are in client Scope at Actual.
- Project Completion Time is 100 Days from Date of PO.
- Quotation Valid for 15 days from offer date.

#### Payment Terms and Conditions:

- 40 % amount Advance along with the Purchase Order.
- 50 % amount on material before dispatch
- 10 % amount within 20 days from installation and commissioning of the plant.

We are sure that you will find our proposal meeting your requirement and thus look forward to your positive response on the same. Do let us know if you need any further information or clarifications.



Thanks & Regards,  
VPS Solar Technology, Solapur.  
(Vijay Malage: - 9028991439)  
( M.Tech IIT Roorkee)

Date: 21/05/2022

For Bhose Agro Producer Co Ltd  
B.B. Pool Fumbhare S.A  
Authorised Signatory