

# SOLAR PHOTOVOLTAIC POWER CONSULTANTS, DESIGNERS & INTEGRATORS

### **ABOUT US**

- Specialize in Conceptualization of Solar PV Projects & Applications
- Developing Solar Architecture and Designs
- Experienced in Designing Solutions on all Solar Technologies
- Clientele includes reputed government and private companies like Hindustan
   Petroleum Corporation Ltd, Bharat Petroleum Corporation Ltd., CIPLA LTD etc.
- Experienced Professional from the Energy Sector in the team.
- Maxwell has executed more than 5 MWp Roof top Solar PV Plants in India.
- Presently advising HPCL on 5 MWp Solar PV Plants at their various POL terminals



### **ABOUT US**

- Maxwell has immense local experience and has developed a 5 MWp Solar
   PV Power for EMCO Ltd, at Fatehpur, Surendranagar, Gujarat under the Gujarat Solar Policy.
- Maxwell has executed the first Solar Rooftop Project Under MSEDCL Net metering in 2016
- Maxwell has executed 324kWp & 258kWp Solar PV Power Plants for Lokmat, Nagpur and Aurangabad respectively and successfully deployed the REC mechanism for the same.
- Dedicated team for Design Engineering, Site Development, Installation & Commissioning.
- Experienced Supervisory & Construction Team.

### **ABOUT US**

- Site Assessment
- Concept Design
- Technology Selection
- Financial Analysis
- Project Management

- Detailed Engineering
- Site Development
- Procurement
- Installation &
  - Commissioning
- Supervision
- Maintenance



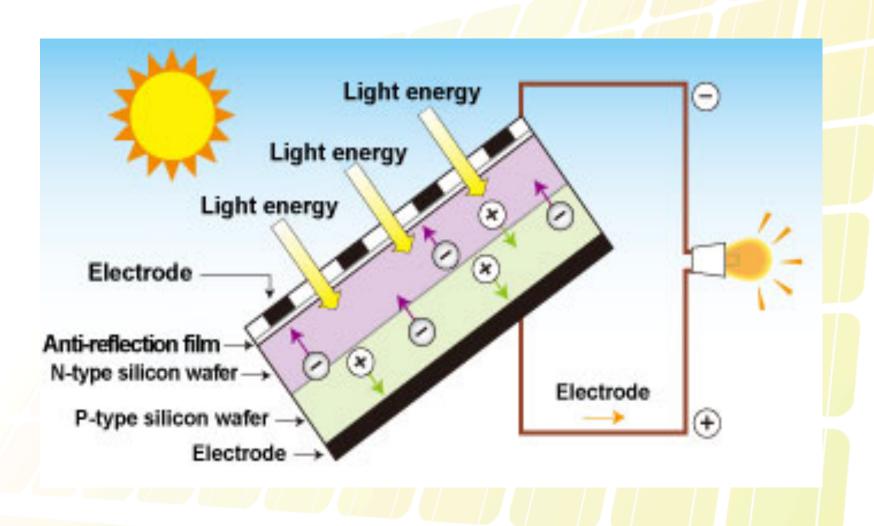
### **WHY SOLAR?**

#### **BENEFITS**

- Perennial, abundant and ever lasting source of energy
- Clean Source, eliminating use of diesel generators and causes no noise and air pollution.
- Modular and Scalable designs.
- Versatility and flexibility in designs enabling small to large scale application;
   eg. Rural Household to Large Scale Solar Power Generation Plants/ Farms.
- Solar Systems can be ground mounted as well as roof mounted.
- Energy Storage with lesser losses possible.
- One time fixed Cost for life.
- Solar energy systems are virtually maintenance free.
- Photovoltaic technology is proven, reliable, and has no moving parts.
- Solar Modules have come with a 20 to 25 year power warranty.

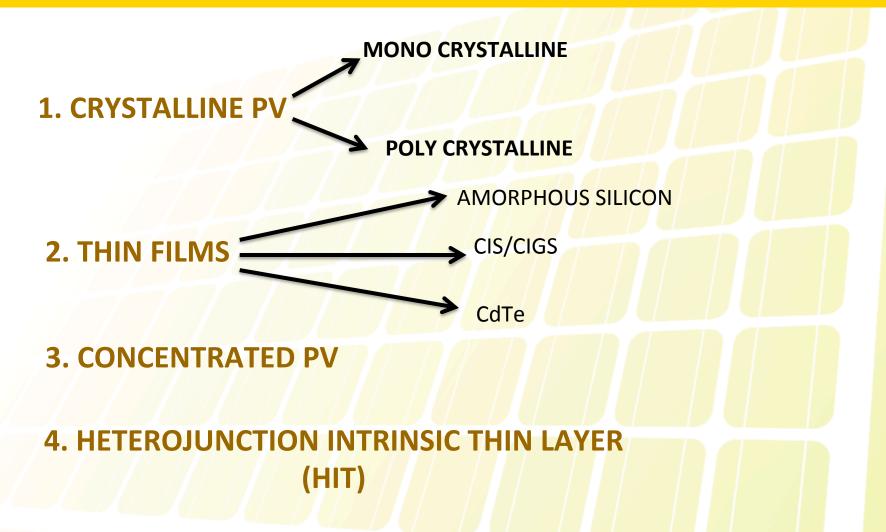


## PHOTOVOLTAIC PRINCIPLE





## SOLAR PV TECHNOLOGY





## **TECHNOLOGY COMPARISION**

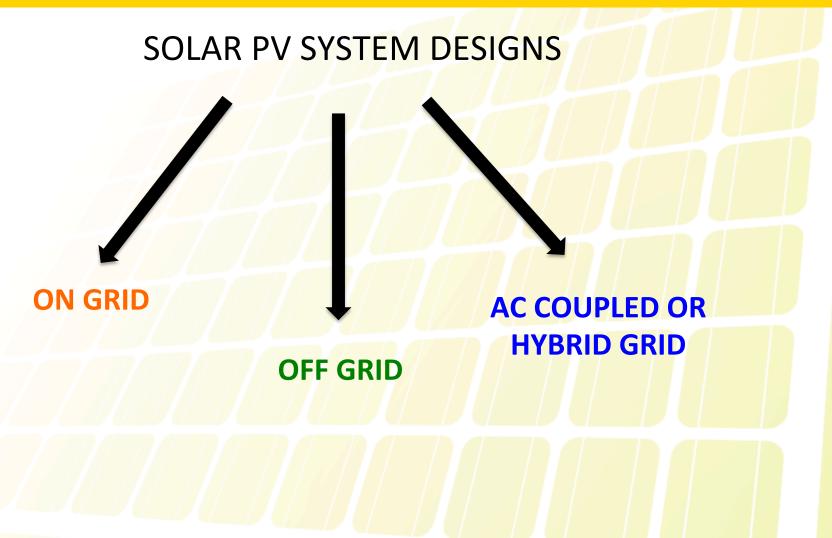
	CRYSTALLINE	THIN FILMS	CON.PV	HIT	
MATERIAL	SILICON	LESS OR NO SILICON	SILICON WITH CONCENTRATI ON LENSES	MONO- SILICON & THIN FILM	
MODULE EFFICIENCY	MAX 16-17% FOR POLY AND 17-18% FOR MONO	7% FOR a-Si 12-14% for CIS/ CIGS 12% CdTe	25% -28%	19-22%	
MOUNTING	FLAT PLATE, SINGLE AXIS TRACKER/ 2 AXIS TRACKER	FLAT PLATE	ON 2 AXIS TRACKER ONLY	FLAT PLATE	
AREA/MWp	3.5 TO 4 ACRES	5-7 acres	5 acres	3.0 to 3.5 acres	

## **TECHNOLOGY COMPARISION**

	CRYSTALLINE	THIN FILMS	CON.PV	HIT
PRODUCT WARRANTY	25 years	25 years	25 years	25 years
PERFORMANCE /ISSUES	GOOD PERFORMANCE UNDER BRIGHT SUNLIGHT, LESSER GENERATION IN CLOUDY WEATHER.	GOOD PERFORMANCE IN BRIGHT AND CLOUDY WEATHER	EXCELLENT PERFORMANC E IN BRIGHT SUNLIGHT, LESSER GENERATION IN CLOUDY WEATHER.	GOOD PERFORMAN CE IN BRIGHT AND CLOUDY WEATHER
MAINTENANCE	CLEANING OF MODULES	CLEANING OF MODULES	TRACKER MOVING PARTS AND MODULE CLEANING	CLEANING OF MODULES



### SOLAR PV SYSTEM DESIGNS





### ON GRID SYSTEMS

- Systems can be designed independent of the load
- System design simple
- No recurring cost as there are no batteries involved.
- Reduction in utility energy bills.
- Very less maintenance, so recurring costs involved
- System is scalable



#### MAHARSHTRA SOLAR POLICY

- Maximum installed capacity by single consumer = 1 MWp
- Cumulative capacity of rooftop solar PV on particular distribution/power transformer = 40 % of Distribution Transformer's rated capacity
- Maximum installed capacity by any consumer ≤ Sanctioned Load in kW ( or Contract Demand in kVA).
- Monthly settlement of units.
- The unadjusted net credited units of electricity as at the end of each financial year be purchased by the distribution licensee at its average cost of power purchase (APPC) as approved by the commission for that year, within the first month of the following year.



### BENEFITS TO INDUSTRY

- 40% Accelerated Depreciation can be availed
- Reduction in utility bills
- Independence from increasing utility tariff rates
- Can use the available roof areas to harness power



### CONSTRUCTION OF GROUND MOUNTED PROJECTS



### CONSTRUCTION OF ROOF MOUNTED PROJECTS



### **CONSTRUCTION OF TERRACE MOUNTED PROJECTS**









## LOKMAT MEDIA, NAGPUR: 324 kWp CAPTIVE GRID INTERACTIVE





## LOKMAT MEDIA, AURANGABAD: 258 kWp CAPTIVE GRID INTERACTIVE





# ACE HYGIENE PRODUCTS PVT. LTD, TALEGAON: 56.7 kWp NET METERING GRID INTERACTIVE



# WORLD TRADE CENTRE, MUMBAI 250KWp GRID CONNECTED UNDER NET METERING







## MOUNT BLISS, AMBY VALLEY, 280kWp



## GURUDEV SIDDHAPEETH ASHRAM, GANESHPURI, THANE, 500kWp NET METERING GRID INTERACTIVE



# WASAN MOTORS, VASAI: 33kWp CAPTIVE GRID INTERACTIVE





## BAY CONTAINER TERMINAL, SHIRDHON PANVEL 50.7 kWp CAPTIVE GRID INTERACTIVE





# PANASONIC INDIA LTD, JHAJHAR: 30kWp OFF-GRID SYSTEM





# EMCO LTD, FATEHPUR, GUJARAT: 5MWp FEED IN TARIFF UNDER POLICY





# TRIBAL SCHOOLS – TALAVALI & GANDOOLWAD 6 kWp AC COUPLED SYSTEM



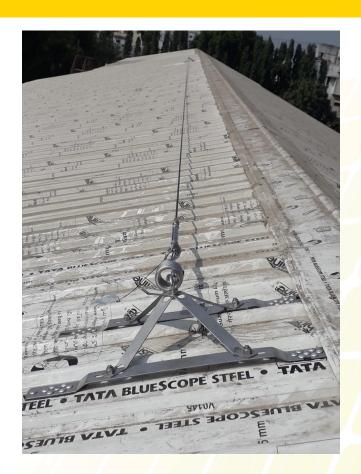








#### LIFELINE & WALKWAYS







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#### MAXWELL STRENGTH & MARKET DIFFERENTIATOR

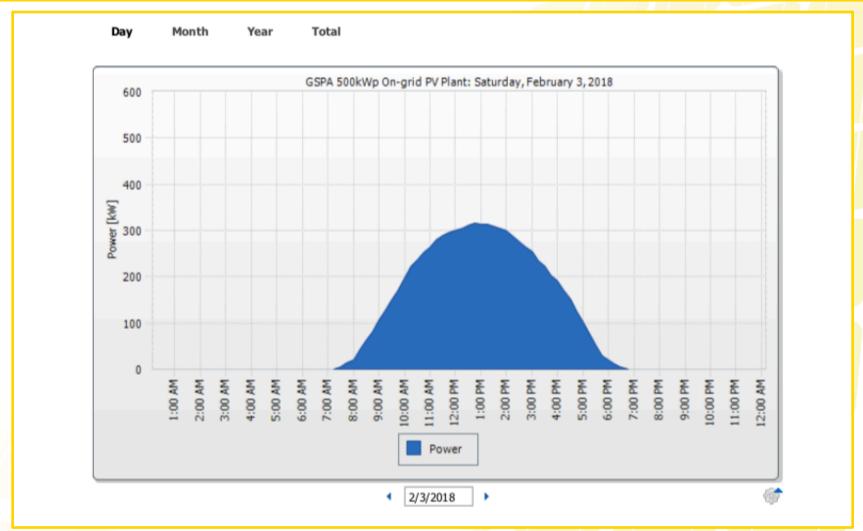
- Provides end to end solution from energy assesment, conservation, management to recomending and deploying appropriate renewable energy solutions
- Inverters (the heart of the solar system) are necessarily european technology as they are proven and time tested
- Special emphasis on customised design solutions to maximize benefits to clients.
- Team includes ac side experts and structural engineer who are critical to roof top and selfconsumption projects
- All installation with remote monitoring facility.
- Module warranty of 10 years. Inverter warranty 5 years extendable to 25 years.
- Experienced field staff for installation & commissioning of solar I.T & h.T side.
- Vast experience in off grid solutions

### REMOTE MONITORING REPORT





### REMOTE MONITORING SCREENS





### WHY MAXWELL?

#### **END TO END SERVICE PROVIDER**

Project Development	Engineering	Procurement	Construction	Operation & Maintenance
Consulting & Planning	Detailed Technical Planning	Quality Management	Supervising	Monitoring
Site Inspection	Energy Use Analysis	Procurement & Logistics	Turnkey Construction	Technical Management
Feasibility Study		Commissioni ng	Project Acceptance	Training
Recording on site energy data				Full Service Support
Project Costing				
Grid Analysis				



### **O.E.M SUPPLIERS**

























#### **OUR TEAM**

ARIF PETIWALA:
MANAGING DIRECTOR



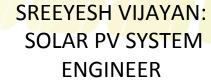


KAUSTUBH APTE: TECHNICAL DIRECTOR

PRADEEP
PATHAK:
ELECTRICAL
HT
CONSULTANT









SANJAY
SHIRGAONKAR:
ARCHITECT &
STRUCTURAL
DESIGNER



#### **THANK YOU**

Harness Solar Energy...
... for a cleaner, brighter &
Sustainable future

