

IMAGINEERING THE FUTURE OF ENERGY SOLAR POWER



MARO WORLD INDUSTRY
WORLD OF HUMANS

Realising the tremendous potential of solar energy, MWI is harnessing this non-conventional resource to promote green energy. MWI's capability spectrum covers development of economically viable and technically superior solutions in Engineering, Procurement and Construction (EPC) of Solar Energy Projects by partnering with core solar technology providers. MWI competencies encompass all the key elements in the solar value chain covering concentrated solar power and solar photovoltaic technologies.

MV METAL PROFI has indigenous capabilities to design solar photovoltaic power plants, balance of system and the requisite power evacuation systems from "concept to commissioning" basis for utility scale solar PV and CSP power plants as well as off grid and rooftop solar PV systems. MWI, an established leader in power generation, transmission and distribution is now playing a crucial role in the power requirements of the nation by bringing solar energy to the forefront to help India address the twin challenges of energy security and combating global warming and climate change.

BUSINESS AREAS

Grid Connected PV (Utility Scale)

- The Largest Player - MWI is the leader with demonstrated experience of having completed 114 MWp on ground in India
- Cumulative order book of 320+ MW in India including 200+ MW by Mar '12
- Technologically agnostic, Independent & Flexible with high Bankability factor
- Fastest execution time, Highest Yield per MWp & Lowest Cost has been the strategy with resounding success in the Indian solar space

Concentrating Solar Power (CSP)

- Only pure play Indian EPC to be present in Solar PV and Solar CSP arena
- Currently doing EPC for 125MW Solar CSP (Solar Thermal) Power Project in Rajasthan, which on completion would be India/Asia's largest Solar CSP Power Project in 2013

Providing EPC Services for:

- Standalone CSP Plants.
- Solar Steam Augmentation Projects
- Solar Direct Steam Application like industrial/process heat application.

Rooftop & Micro-grid PV Systems

- Created a 1MWp Rooftop project (India's unique technology test bed/ pilot project) at various MWI campuses across India to evaluate various technologies and configurations.
- MWI Solar's Design & Project Operations team has derived a lot of valuable insights on various aspects of the solar power systems over the last 3 years since installation
- Active in the rooftop/ micro-grid segment with multiple projects under construction/ planning.

Location : 26.82 Latitude, 71.99 Longitude
 Project Size in acres : 341.78 acres
 Year Built/ Scheme: Mar '18, Open Access
 Modules : Thin-Film (5,03,660 Nos. First Solar)
 Inverter : Power One

Performance Data:

Annual Generation : Approx 71,400+ MWh
 CO2 displaced : Approx 66,600 tonnes per year
 Special Feature : One among the largest PV plants in India.
 Commissioned in record 129 days
 From Concept to Commissioning



40 MWp SOLAR PV POWER PROJECT AT DHURSAR VILLAGE, POKHARAN TESHIL, JAISALMER DISTRICT, RAJASTHAN, INDIA



Location : 23.54 Latitude, 71.11 Longitude
 Project Size in acres : 46.57 acres
 Year Built/ Scheme : Jan '17, Gujarat Solar Policy
 Modules : Thin-Film Frameless (46914 Nos. -Sharp)
 Inverter : Power One

Performance Data:

Annual Generation : Approx 9500+ MWh
 CO2 displaced : Approx 8900 tonnes per year
 Special Feature : One of the consistent top performing projects in the Gujarat Solar Park.
 Intersolar India Projects Award '12

6MWp FIXED MOUNTING, GRID CONNECTED SOLAR PV POWER PLANT, SOLAR PARK, GUJARAT

Location : 23.3 Latitude, 71.65 Longitude
 Project Size in acres : 73.17 acres
 Year Built/ Scheme : Jan '16, Gujarat State Policy
 Modules : Tracker Technology (33288 Nos. - TRINA SOLAR & SOLARFUN
 Inverter : SMA

Performance Data:

Annual Generation : Approx 18,750+ MWh
 CO2 displaced : Approx 17,500 tonnes per year
 Special Feature : Superior CUF and Top Class performance.
 Proves tracker suitability to Indian conditions



10 MWp SOLAR POWER PLANT AT DHAMA, GUJARAT (MILLENIUM PROJECT)

PORTFOLIO

Location : 23.54 Latitude, 71.11 Longitude
Project Size in acres : 149.02 acres
Year Built/ Scheme : Jan '15, Gujarat State Policy
Modules : Thin-Film Frameless(1,56,702 Nos-Sharp)
Inverter : Sharp

Performance Data:

Annual Generation : Approx 31,500+ MWh
CO2 displaced : Approx 29,500 tonnes per year
Special Feature : One of the biggest plants in Charanka,
Top performer in generation details
(Source: SLDC generation data)



20MWp SOLAR POWER PLANT AT CHARANKA, GUJARAT

CONCENTRATING SOLAR POWER (CSP)



Location : Pokhran, Rajasthan
Project Size in acres : 600 acres
Year Built/ Scheme : May '14 (Under Construction)
Technology : Compact Linear Fresnel Technology (CLFR)

Performance Data:

Temperature : Upto 400 deg C
Pressure : Upto 106 bar
Special Feature : Upon completion would be Asia's largest CSP plant

125 MWe CSP PROJECT (LINEAR FRESNEL TECHNOLOGY)- RAJASTHAN, INDIA

ROOFTOP & MICRO GRID PV SYSTEMS

Location : 13.02 Latitude, 80.17 Longitude
Year Built/ Scheme : 710kW commissioned till date (in phases)
1st Phase 406.8kW (in 2009)
Rest under commissioning
Modules : Sharp/HHV/Solyndra/BHEL/Novergy
Inverter : Sharp/Vacon/ Kaco/ Delta/ SMA

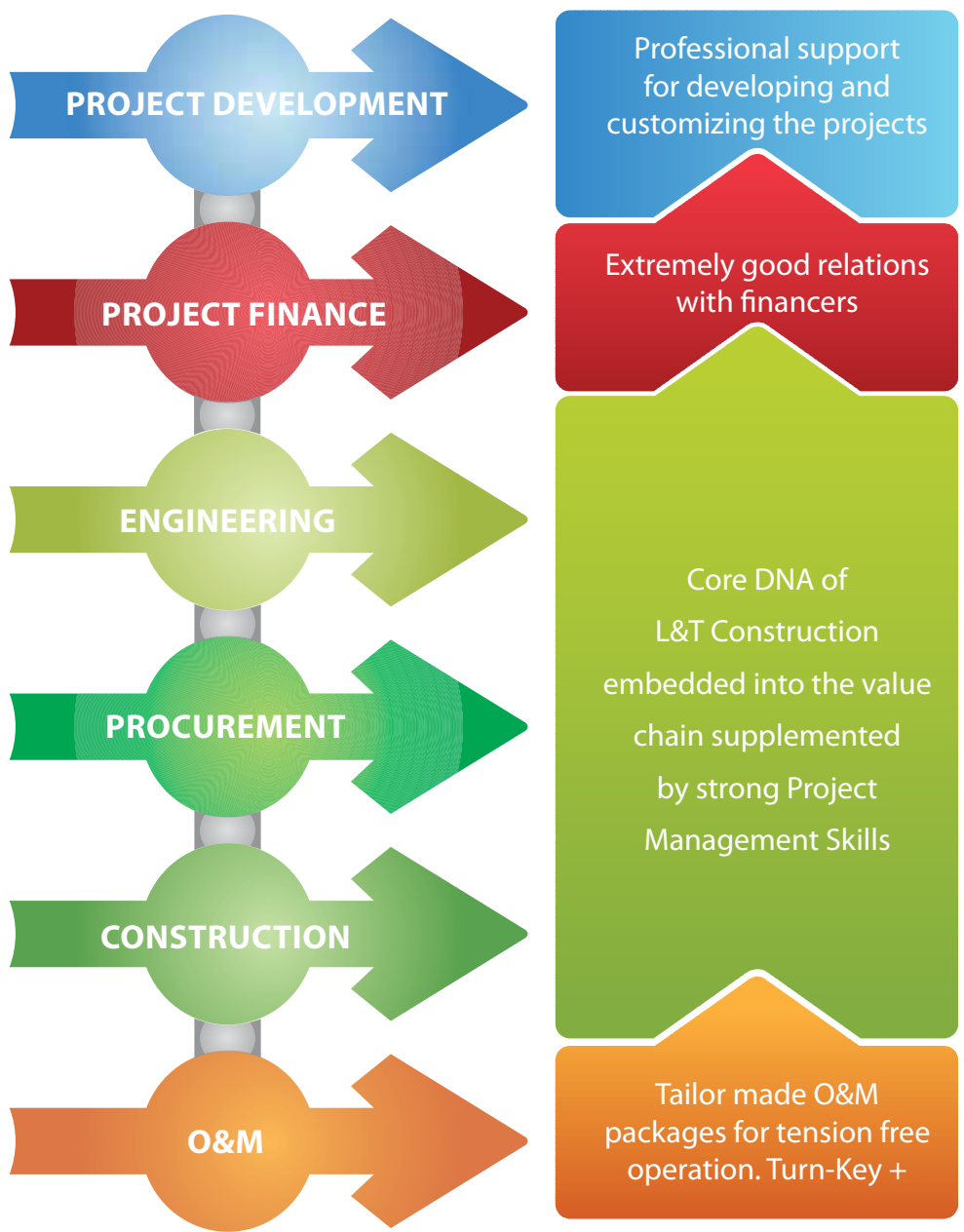
Performance Data:

Annual Generation : Approx 990+ MWh
CO2 displaced : Approx 720 tonnes per year
Special Feature : This unique BOS project with east-west wave configuration resulted in yields ~ 6% more than conventional south facing layout



1 MWp ROOFTOP PROJECT AT CHENNAI & KANCHEEPURAM, INDIA- PILOT PROJECT (TECHNOLOGY TEST BED)

ECONOMICALLY VIABLE – TECHNOLOGICALLY SUPERIOR



ENGINEERING

- Highest engineering standards
- Adoption of Best-In-Class practices
- Dedicated in-house design experts
- Continuous innovation
- Optimized designs for lowest LCOE & higher ROE
- Cutting edge software's
- Site selection & assessment
- ISO & OHSAS certified facilities for manufacturing structures
- Site specific Technology selection

PROCUREMENT

- Wide experience across global supply chain
- Long term component partnerships
- Excellent bargaining power
- Best access to the best of technologies
- JIT techniques for optimization of resources

CONSTRUCTION

- Single point responsibility
- Fixed cost of project
- Timely completion within budget
- Achievement of performance guarantees
- World class construction management
- Project management and planning
- Safety programs
- Shortest gestation period in the industry



LET US LEAD YOU LIGHT



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