



TATA POWER SOLAR

SOLAR PV FARM – A CASE STUDY

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10 MW Solar Power Project

Brief Understanding of Scope

- Complete EPC of 10 MW(AC) Grid Connected Solar Power Project + 10 Years O&M
- Domestic C-Si (as per NVVN norm)
- DC:AC=1.02 – 1.1
- 33kV Evacuation System
- 2kM Fencing, 4kM Road
- Water Supply System
- 3.5 kM Transmission Line
- Other Scopes as specified in the issued RfP

How we execute?



Safety guided by our HSSE policy is license to work.

Civil foundation



Conventional
70/day



Pile, mechanised
200 / day



Ramming, mechanised
400 / day

Structure



IS angles
10 foundations



Purlins
4 foundations



Purlin with
Rammed pole or sheet pile

Site Office



Storage of Modules



Roads & Drains



Templates for Foundations





RCC construction



PEB



Container / Outdoor units

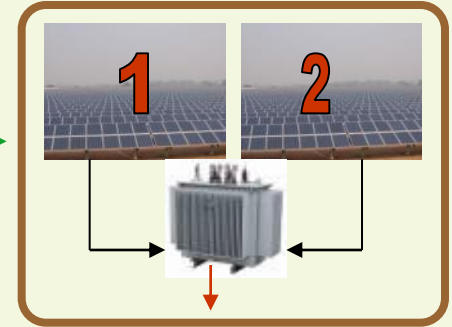
Power evacuation



Outdoor (discrete systems)



Compact sub-station



Block evacuation

Design configuration

- Solar module 180Wp
- 10 input combiner box
- 250 / 500 kW inverter



- Solar module 230 Wp
- 12 input combiner box
- Main junction box
- 500 kW inverter



- Solar module > 235Wp
- TF technology offer
- 16 input combiner box
- MJB eliminated
- 630 kW inverter

Team

Start-up



O2G S&M
O2G Engg
O2G Purchase
O2G Projects
O2G O&M



- Skill Build
- Civil expertise
- Contractor & supplier engagement

Site Office



Storage of Modules



Roads & Drains



Templates for Foundations











Compact Substation (CSS)



Inverters



String Junction Box









Control Room



Control Room



Inside Control Room



LT Panel





Fencing - TBPS



MODULE INSTALLED BY TBPS –



Critical Success Factors

Good
Design

Detailed
Engineering

High Quality
Products

EPC
Capability

Conducive
Policy &
Infrastructure

Knowledge,
Experience &
Commitment



**1 MW Solar Power Plant;
Delhi**



5 MW Solar Power Plant ; UP



**17 MW Solar Power Plant ;
Mithapur, Gujarat**

What We Have Acheived

Large Scale Projects – O2G



National Solar Mission

MARKET



State Policy
REC / RPO

PRODUCTS

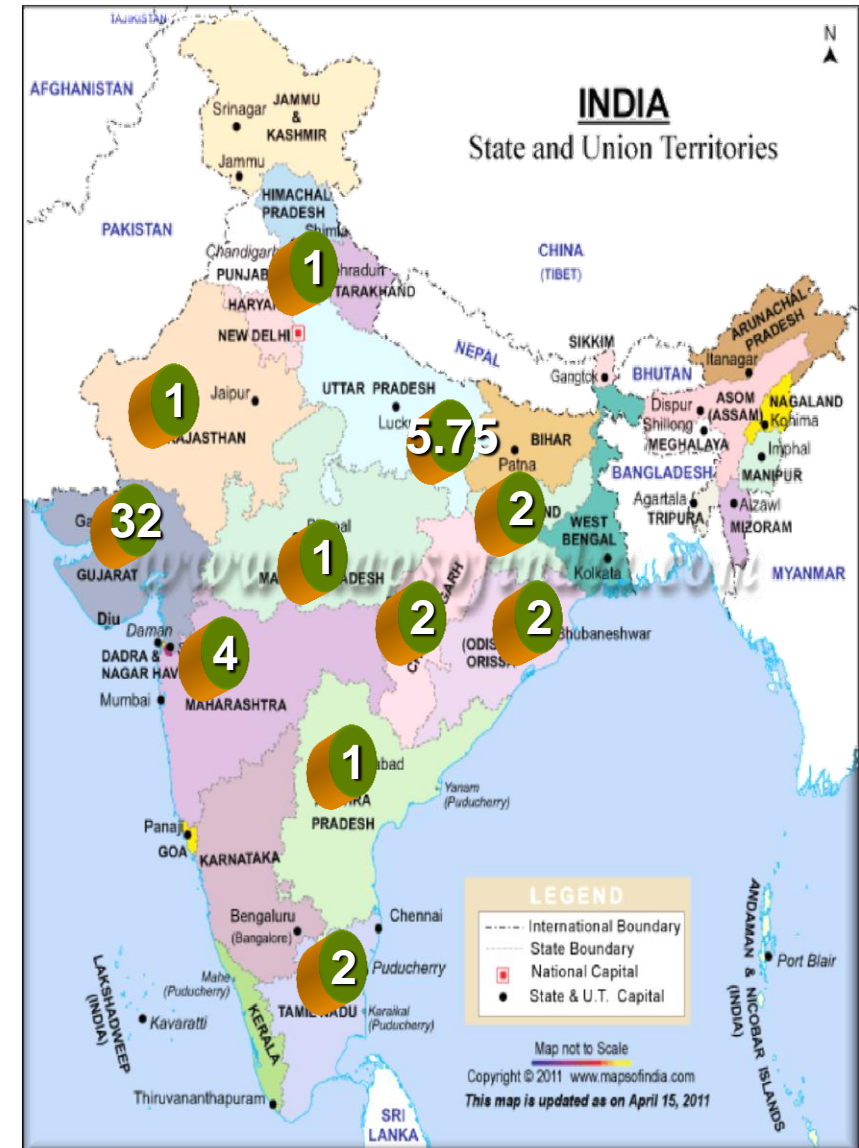


EPC Solar Grid connect
plant

CUSTOMER



- Project Developers
- Obligated entities
- Industries
- Corporate



O2G Growth road map

2009-11

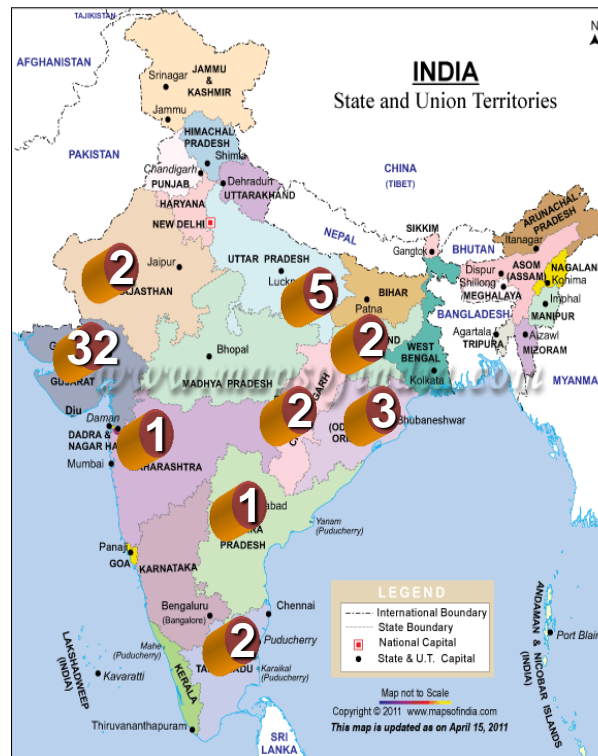
- NDPL 1MW
- Tata Power 3MW

2011-12

50 MW projects
In various locations
Across India

2012-13

100 MW projects
targeted



Large Scale Projects – O2G

17MWp, Mithapur



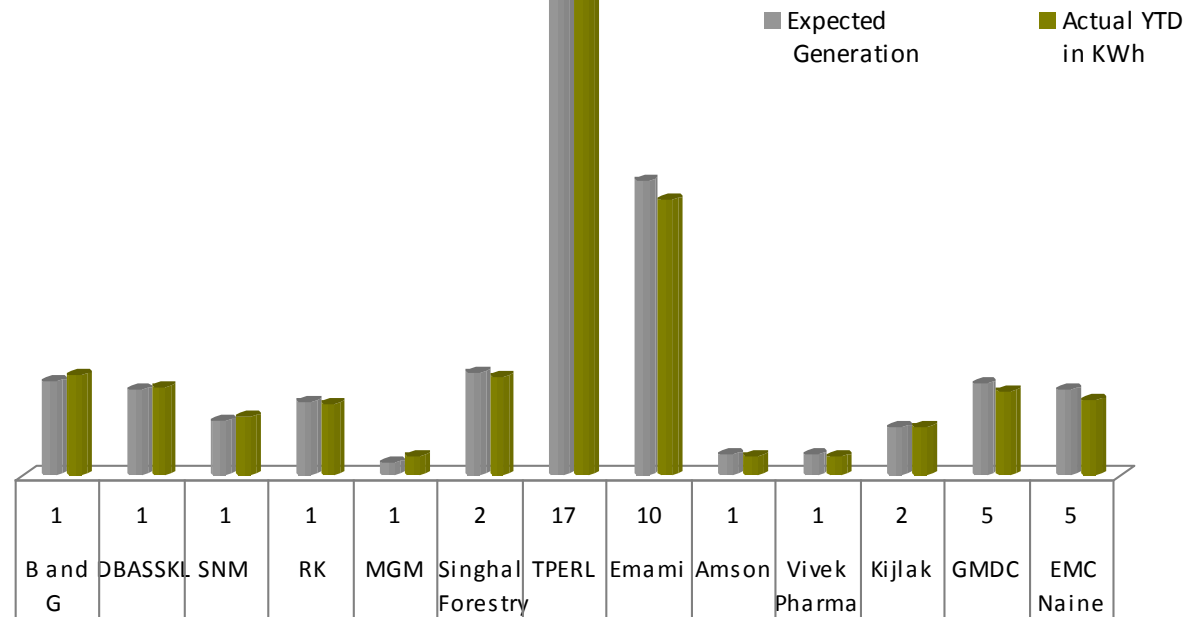


**1 MWp Solar Power Plant in
Tamil Nadu**

Commissioned: June, 2011

**180 days ahead of Scheduled time
Generating 105% of the guaranteed units**

Energy Excellence – O2G Projects



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Thank You