



Mapping Solar Energy Investment Opportunities in India and Preparing Project Proposals for Potential Investors

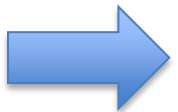
**UNCTAD-Invest India Workshop
on Promoting FDI in Solar Energy Projects**

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Introduction



- Experts expect that energy demand in India will more than triple from 1,127 terra watt hours (TWh) in 2013 to 3,793TWh in 2032
- Signals of a major shift in its energy composition are apparent as India increased its PV capacity by an additional 2.7GW in 2015. This will place it fifth globally for PV capacity addition in 2015
- The Indian Government have made clear their plans to utilise solar energy generation as a major component in tackling their growing energy deficit.



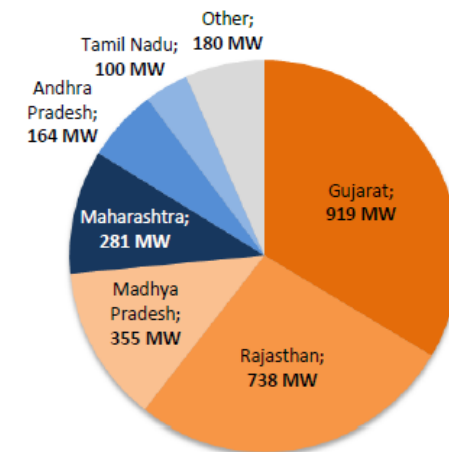
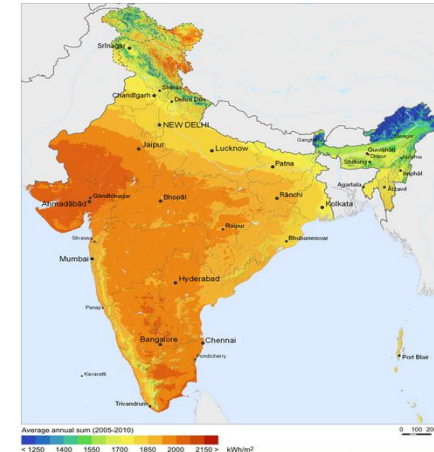
How can we promote these opportunities and support Investors in order to maximise the benefits for the Indian economy

Market Prospects



Overview solar energy in India

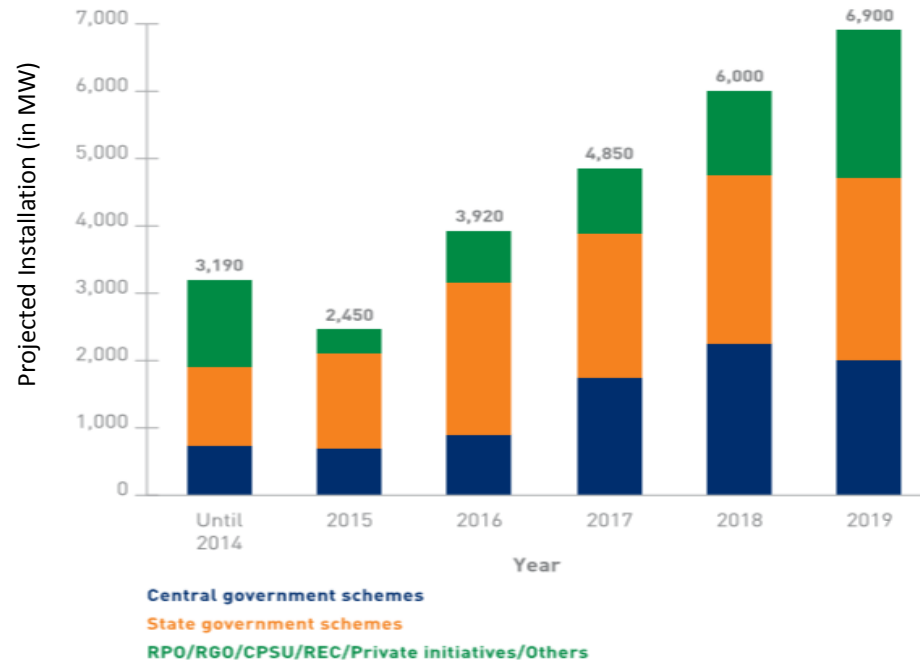
- The target of the NSM of 100GW by 2022 is an ambitious goal in view of the current level – if achieved this will significantly draw investments in this sector
- As of May 2015 India had installed 4.1GW of utility scale solar capacity but had around another 7.2GW commissioned or under development
- Gujarat and Rajasthan in the Northwest of India are the leading solar states in India which is reflected in their exposure to average annual radiation



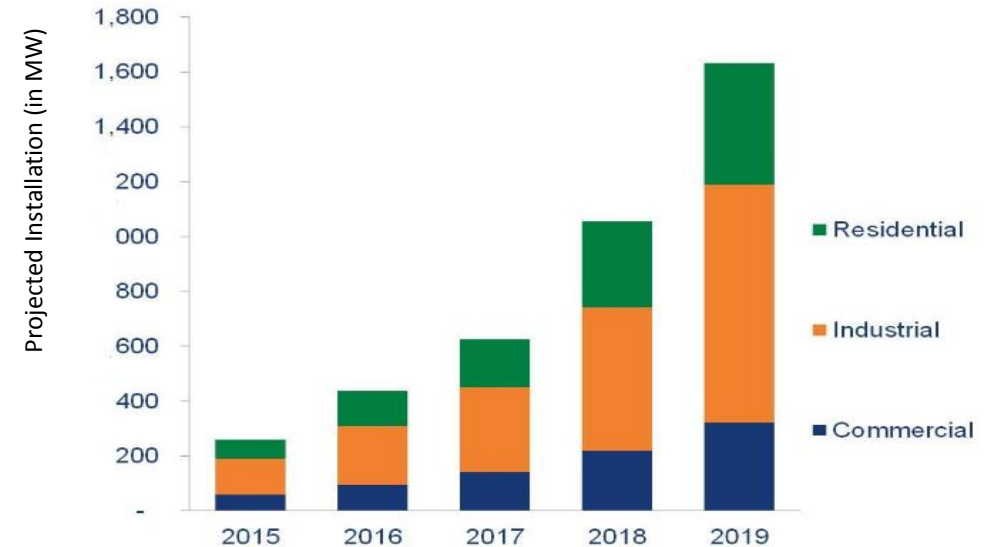
Market Prospects



Expected addition of 24GW of utility scale solar power PV capacity till 2019



In Rooftop Solar PV a capacity addition of 4GW is expected till 2019



Government Support Schemes



Government Incentives for the deployment of solar energy projects

- National Feed-in-tariffs (FiT)
- Viability Gap Funding (VGF)
- Subsidies
- Accelerated Depreciation
- Corporate Social Responsibility (CSR)
- Net metering

Government Support for Local Manufacturing

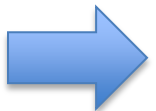
- Solar park on-site manufacturing
- Domestic Content requirements
- Tax exemptions, capital subsidies and incentives for selected components

Investment Opportunities



Investment opportunities in Solar PV Upstream Manufacturing Activities

- National Manufacturing Policy has defined the solar energy sector as an industry with strategic importance
- Target to build a complete ecosystem for solar energy - In order to achieve the 100GW target in 2022 it would require investments of up to US\$100 billion
- Key drivers for foreign investments in India:
 - growing market demand
 - opportunity to export to other countries against lower import duties
 - favourable location conditions primarily from a cost perspective



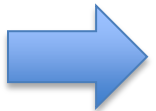
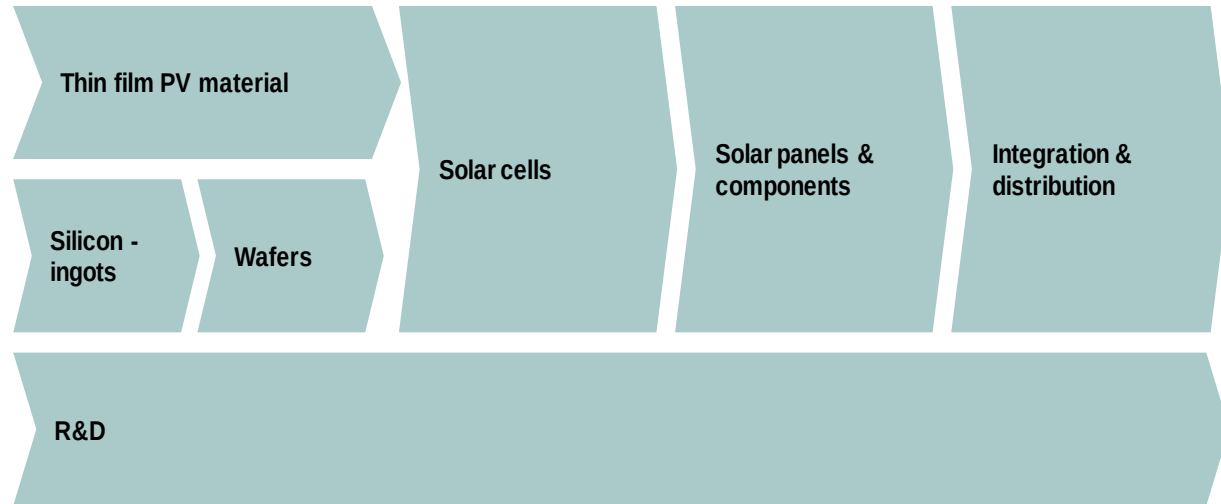
Attractive business opportunities along the entire solar energy value chain in India

Investment Opportunities



Selected opportunities to localize manufacturing activities in the Indian solar PV segment

- Silicon supply chain and raw material production
- Balance of System components
- Production, Test & Measuring equipment

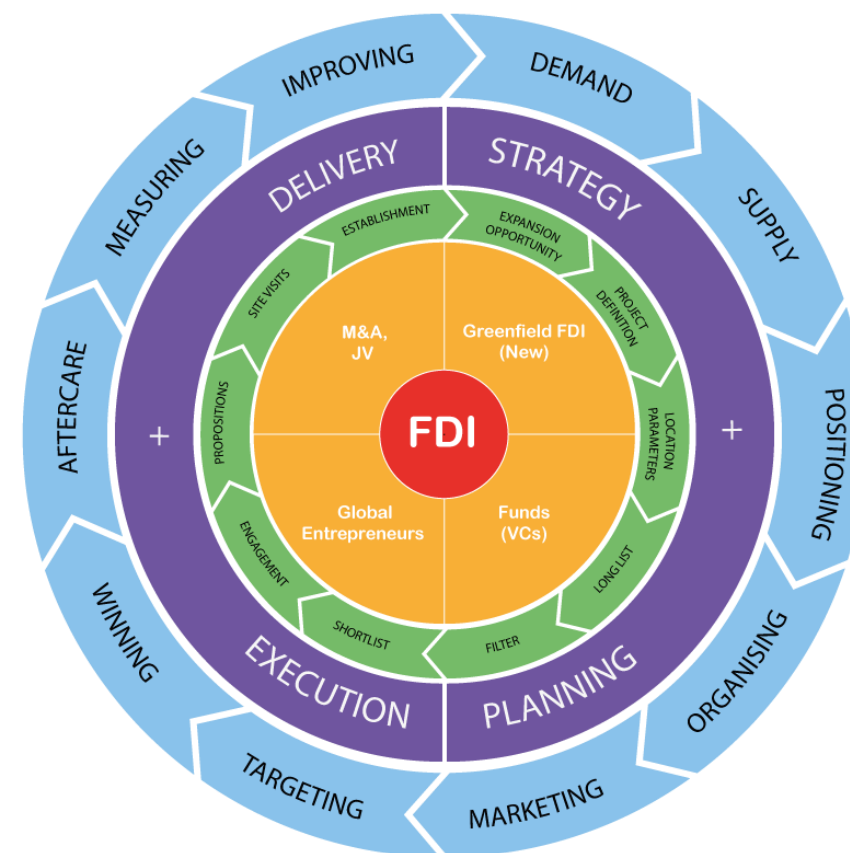


Targeted promotion activities in prioritised manufacturing fields with key selling arguments according to specific investment drivers

Putting it in FDI promotion context

Deep insight on target sectors and companies requiring:

- Access to the right data
- Construction of tailored databases and 'smart' targeting tools
- Detailed company profiling – to identify where their need overlaps with your offer
- Comprehensive industry and multiplier networks
- An agile and flexible approach to investor outreach
- Structured approach to aftercare: ~50-70% of FDI comes from existing investors and they become advocates for new investors



Promoting PV Projects



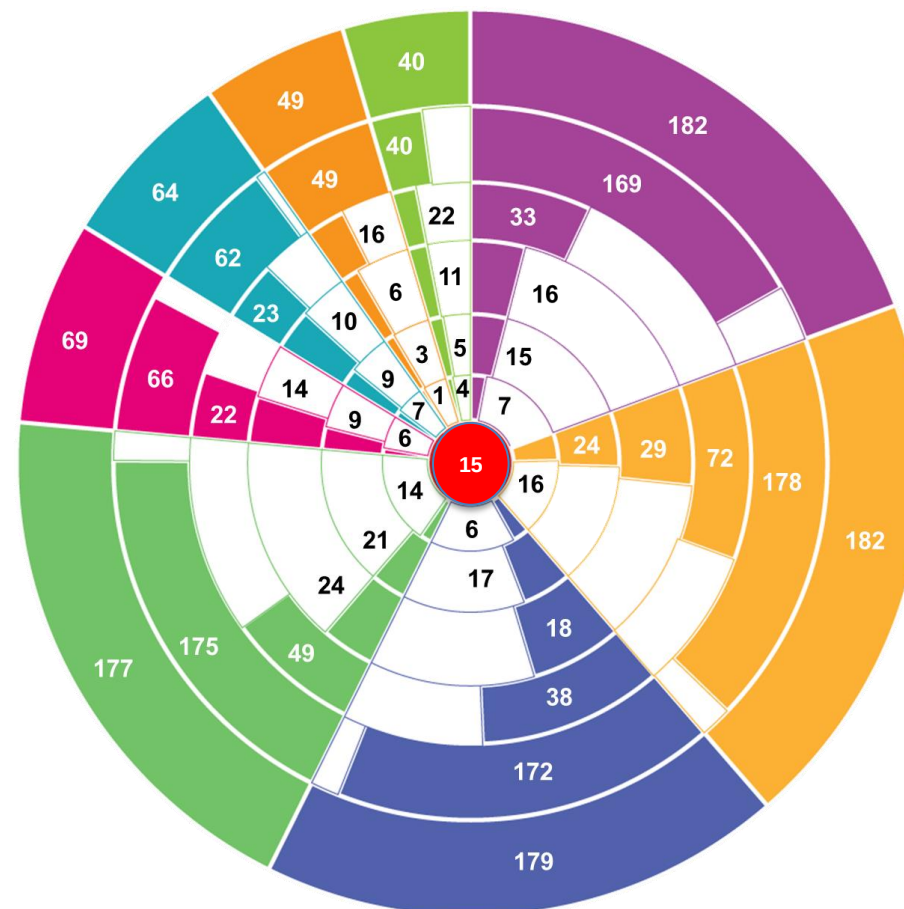
I. Project General Information:		II. Site:		V. Government Support or Incentives:		VI. IPA Point of Contact	
Project Title:		Location:		Fiscal or Financial Support:		Contact Person at the IPA:	
Project Description:		Land/Site Ownership:		• FiT:			
Plant/System Capacity:		Size:		• Import duty exemption:			
Projected Investment:		Costs:		• Other national fiscal or financial support or incentives:			
Location:		Accessibility:		• Government support or incentives at the State level:			
• City/Town, Region:		Terrain Description:		Capital Support:			
• Latitude:		Distance to and Capacity of the Nearest Transformer (in km)? Is it MV or HV?		• Committed capital participation by government or State-owned entities:			
• Longitude:		Grid Owner and Operator (if relevant):		• Potential debt funding:			
• Elevation:		Solar Radiation (GHI in kWh/m ² /day and DNI in kWh/m ² /year):		• Other potential sources of capital:			
Project Developers (if relevant):		III. Target Market		Services or Support Provided by the IPA:			
Project Partners (if relevant):		Off-Takers/Potential Customers:		• Site acquisition:			
Expected Year & Month for the Start of Project Development:		Power Price Setting Mechanism (PPA, FiTs or others):		• Licensing:			
Expected Timeframe for Implementation:		Other Terms of Purchase Agreement:		• Negotiation of PPAs:			
• Site lease		Total Estimated Demand (if relevant):		• Securing government incentives:			
• Permitting		Other Market Information:		• Import assistance:			
• Supply chain setup		• Other energy generation sources in the vicinity (50-100km)		• Trouble shooting:			
• Construction		• Current average price per kWh of alternative energy sources		• Other pre- and post-establishment services or support:			
• Commissioning		IV. Policy and Permitting Pre-Clearance:					
Permitting Government Agency & Point of Contact:		Has a pre-feasibility study been carried out?					
		Has an Environmental Impact Assessment (EIA) been carried out?					
		Has any other policy and permitting pre-clearance been done?					

Targeted FDI promotion Example

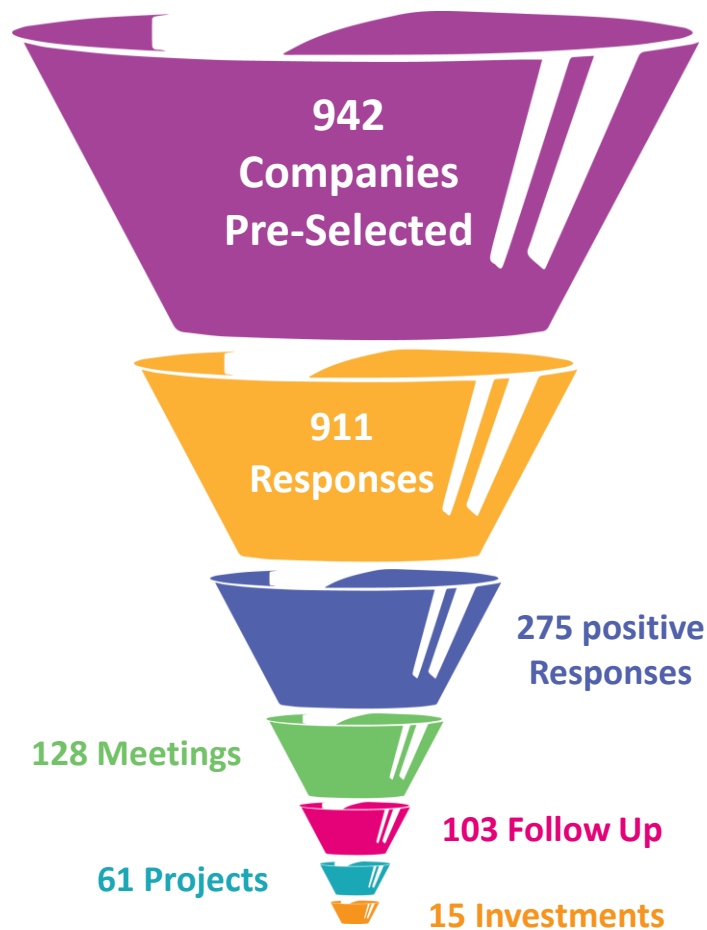


Invest India
NATIONAL INVESTMENT
PROMOTION AGENCY

The example of JETRO



- Life Science
- Environmental Energy
- Infrastructure
- IT/Electronics
- Finance/Services
- Tourism
- Agriculture
- Education



Thank you for your attention.

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