

# Financing of Solar power plants



# Sector Overview

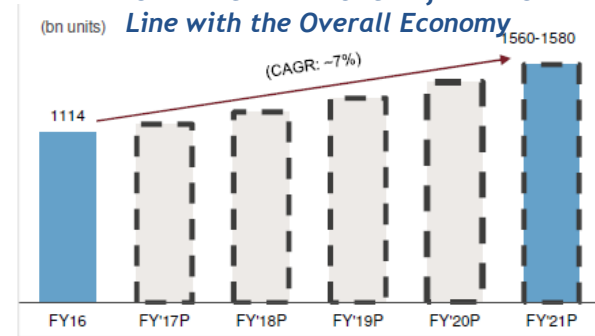
## INDIAN POWER SECTOR - KEY TRENDS

### Demand Growth

#### Drivers of Growth

- GDP Growth and Industrialization
- High latent demand
- Rising disposable income
- Rapid urbanization
- Government initiatives such as rural electrification and 24x7 power

#### Power Demand Should Grow At CAGR of 7% in Short Term In Line with the Overall Economy



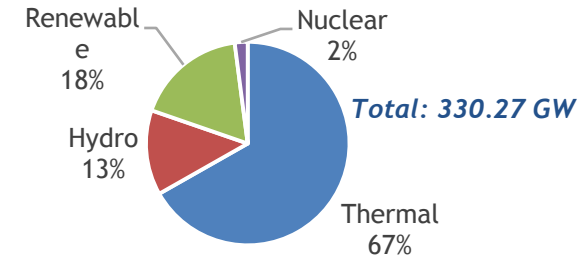
Source: CRISIL Research

### Increase in installed capacity driven by RE

Capacity Addition CAGR: FY13 - April 2017	
Coal	10%
Gas	6%
Diesel	(9)%
Hydro	3%
Nuclear	9%
Renewable	20%
Total	10%

- Predominance of thermal generation
- Govt. target is 175 GW of RE by 2022
- In addition to RE, the govt. target is 88.5 GW under the 12th Plan (2012–17) and around 100 GW under the 13th (2017–22) from conventional sources. 12<sup>th</sup> Plan target has been met.

#### Power Installed Capacity as of June 2017



### Increasing investments

- 100 per cent FDI allowed in the power sector has boosted FDI inflows in this sector
- New tariff policy and tax policy aimed to encourage investments in the power sector
- Investment for 7 new transmission systems that includes strengthening of national grid have been sanctioned

### Fixing Discoms

- Govt. has promoted a comprehensive restructuring scheme (UDAY) as per which States shall take over 75% of DISCOM debt over two years.
- Govt. will provide financial incentives (capital grants etc) subject to improvement in operational performance
- As of Mar 2017, 27 states have signed up to UDAY

### Large-scale government initiatives

- India has reiterated its commitment to install 175GW of renewables by 2022 from the current 58 GW in its INDC document.
- In June 2017, the government announced intentions to set up an asset reconstruction company for handling the stressed assets in power sector. This would also help in the transfer of stressed power generation assets of stalled power projects, which would then be auctioned.



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# Key Issues (I)

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## 1. Falling tariffs and returns

*Tariffs have fallen by over 50% in last one year. Sustainability of project returns at this tariff given the costs have not fallen by same amount is an issue.*

## 2. Quality of project assets given low tariffs

*Given the tight tariffs, developers may try to reduce project costs at the expense of quality to increase the IRRs.*

## 3. Long Tenor of Loan and High leverage

*Sponsors seek Debt: Equity of 80:20 and 20 year tenors for loans*

## 4. Anti dumping

*There have been discussions that the Govt is planning to put anti dumping duties on imported solar panels in India, which could make the prices of solar panels go up making tightly bid solar projects unviable.*

## 5. Financing Open Access PPAs

*Given the falling tariff and changing regulatory scenario, financing of projects with off-take based on open access has become an issue*

## Key Issues (II)

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### 6. Regulatory Risk

*Renewable energy projects in India are dependent on RE policies. Subsidies on transmission, open access charges may be phased out.*

### 7. Curtailment Risk

*Curtailment risk due to unwillingness to offtake power or lack of adequate transmission may reduce the viability of RE projects*

### 8. Refinancing risk

*Increasingly, developers are looking to issue bonds and refinance existing loans. Early repayments affect lender profitability*

### 9. Solar rooftop financing

*Relative size of rooftop projects and diligence required for non-standard project contracts make the process cumbersome for both developers and lenders*