



Get  
SUNplugged

## Welcome to the Webinar on

### Developing Bankable Solar Projects

Date : Wednesday, May 06, 2020

Time : 4 pm onwards

In conversation with



Mr. Chintan Shah  
Director (Technical)



Mr. Kushagra Nandan  
Co-founder & President



Mr. Harvinder Singh  
Head - Project Finance



Mr. Prashant Mathur  
Chief Marketing Officer

Moderated by



# Webinar on Developing Bankable Projects

Session by Mr Kushagra Nandan,

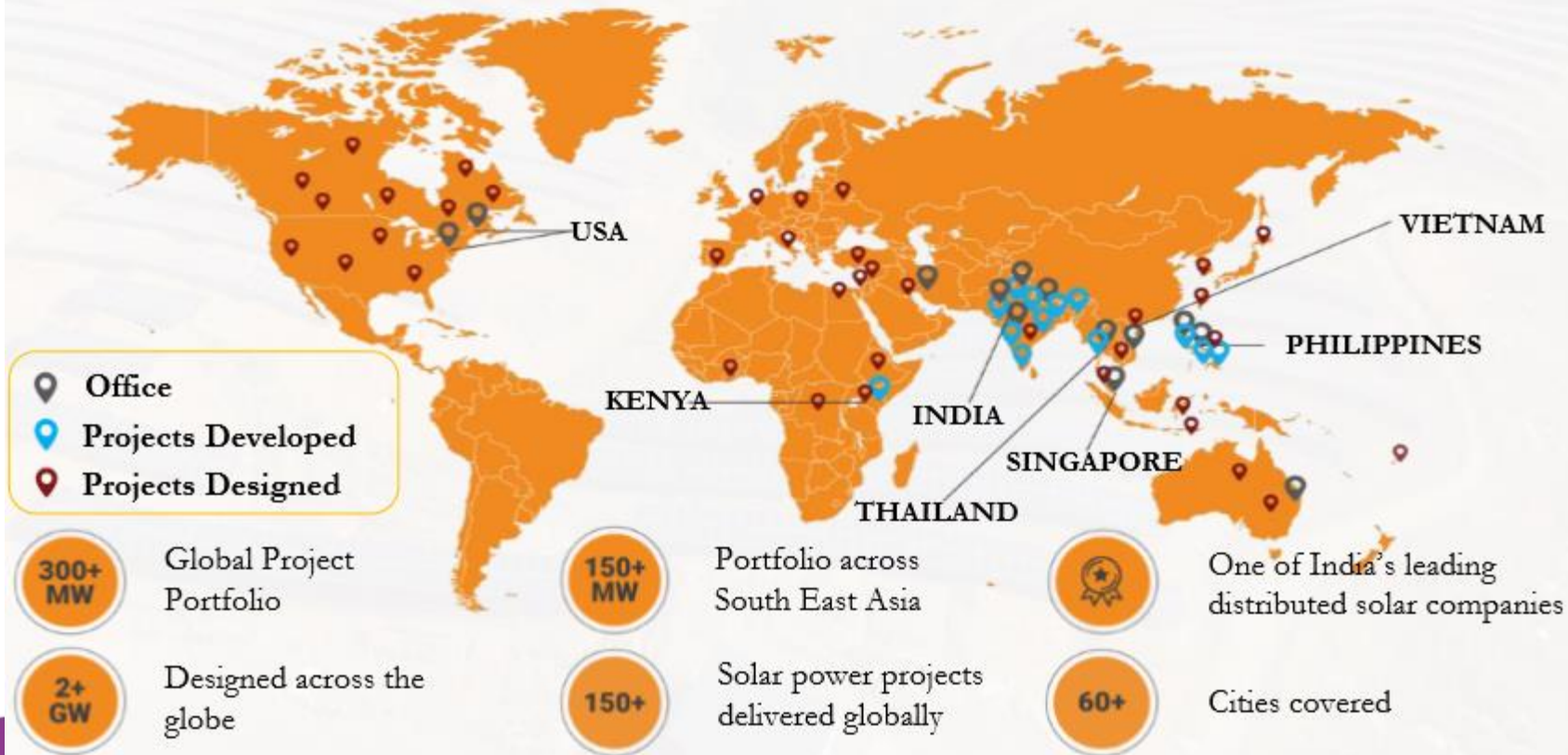
Co-founder Sungrow Energy



**SunSource Energy**  
Solar From The Core

**SunSource**  
**ENERGY**  
SOLAR FROM THE CORE

## A Leading Global Distributed Solar Company



SunSource is an investee company of the State Bank of India (SBI) and U.K. Government



# Realizing the dream of running the world on clean and smart technologies

We aim to make clean energy and technology a simple alternative for all organizations



Sincerity

Reliability

Discipline

## SunSource | Customized Business Models

### PPA/BOOT

- We own, install, and operate a rooftop solar system on the site host's property
- Customers pay for power (kWh) the solar systems produce

### LEASING

- We install, own & operate a solar project on the host's property
- The site host pays for the solar project through monthly installments
- The site host further receives benefits in terms of energy savings or FiT income
- Interest rates vary; lease term varies from 15-25 years
- Performance guarantee and warranty provided for the lease term

### EPC – O&M

- Engineering
  - Procurement
  - Supply
  - Construction & Implementation
  - Testing & Commissioning
  - Operation & Maintenance
- \* After the operating and maintaining the solar power plant for the agreed time period, the solar power plant is then handed over to the client.

### EPC/BOT

- Engineering
  - Procurement
  - Supply
  - Construction & Implementation
  - Testing & Commissioning
- \* After the commissioning the solar power plant is then handed over to the client.

SunSource is a leading Integrated Solar IPP with a proven expertise in EPC

## SunSource | A Unique Opportunity



### Integrated Profile

- End to End solutions - We **structure and deploy capital** to **design, build and develop** the solar power plants to **Operate and Maintain** the projects for the duration of the contract
- Flexible offerings across the value chain. High quality equipment



### A Reliable Partner

- Experienced developer with **150+ projects** across **24+ states** in India and **6 countries** globally for **marquee customers**
- **Strong Leadership** Team and an uncompromising **long term approach**
- Backed by **Neev Fund** – A PE fund backed by **SBI** and the **UK Government's DFID**



### Innovative Solutions

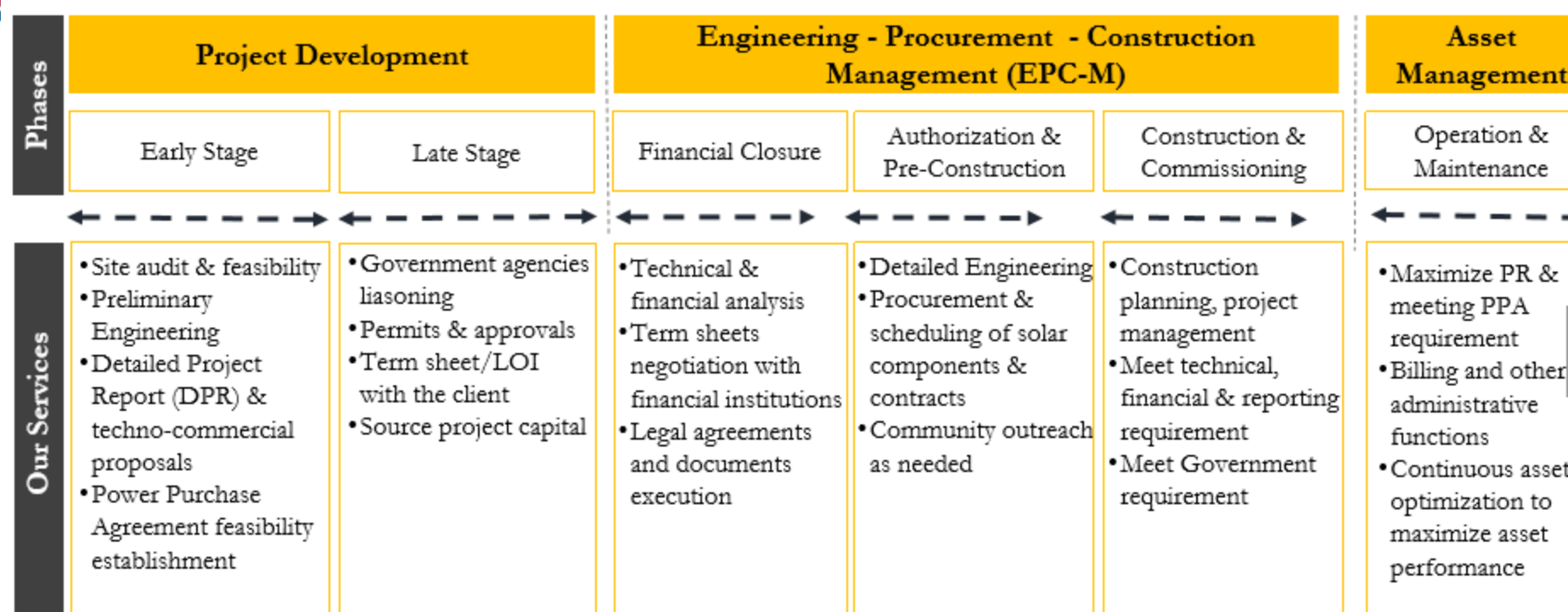
- Existing portfolio include **Hybrid** (Solar + Storage and Solar + Diesel), **Floating Solar**, **Ground Mount Solar** (fixed tilt, seasonal tilt, single-axis tracker) and **Rooftop Solar** (Industrial Sheds, RCC Roofs, Carports and Ballasted) projects
- Developed one of **India's first** grid connected private solar projects and Hybrid solar projects in 2013



### Guaranteed Savings

- Tariffs **lower than grid tariff** in most states
- Cheaper than any other existing alternative source of power

## End-to-End Solar Development and Execution Services



← We support every phase of solar project development →

\* Timelines depend mainly on size of projects and other project-specific factors

## A Global Organization With Local Expertise

### High Focus on Project Quality



### Local Development Expertise

- Presence across 24 states in India and 6 countries globally
- Covered over 350+ rooftops in 60+ cities
- Technology and design flexibility to support customized local solutions
- Strategic partnership with leading infrastructure players
- Won various leadership awards including the BW Businessworld 40 under 40 Award, the 'Google Global Impact Challenge Award', the EESA Excellent EPC in Energy Storage Award, the 'DLA Entrepreneur of the Year Award', and the ET Now Green Future Leadership Award, among others

These capabilities clubbed with world class global tie ups have made SunSource a preferred partner for its C&I customers

## Full-Stack Asset Management Offerings by In-House Team

Spectrum of Offerings

Core Services

Additional Services



### ON-SITE OPERATIONS & MAINTENANCE

On-site and corporate teams to monitor and tackle any deviations  
Critical deviations escalated to CEO

Regular check-ups and cleaning of solar power plants

Spare parts and inventory management including timely inverter replacement

Plant security

Warranty claim activities and records



### REMOTE MONITORING

Production and performance analysis report

Alarms, incidents and interventions report

Network operating center (NOC) software for real time monitoring of the asset, improving performance and system life.

Offered on a standalone basis as well

**Managing performance of 100+ sites & optimizing power output through diligent monitoring & maintenance**

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- **EXIM Bank** empaneled, **MNRE** channel partner, **SP1A** rated by **CARE**
- **Strong Leadership** Team and an uncompromising **long term approach**
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### Innovative Solutions

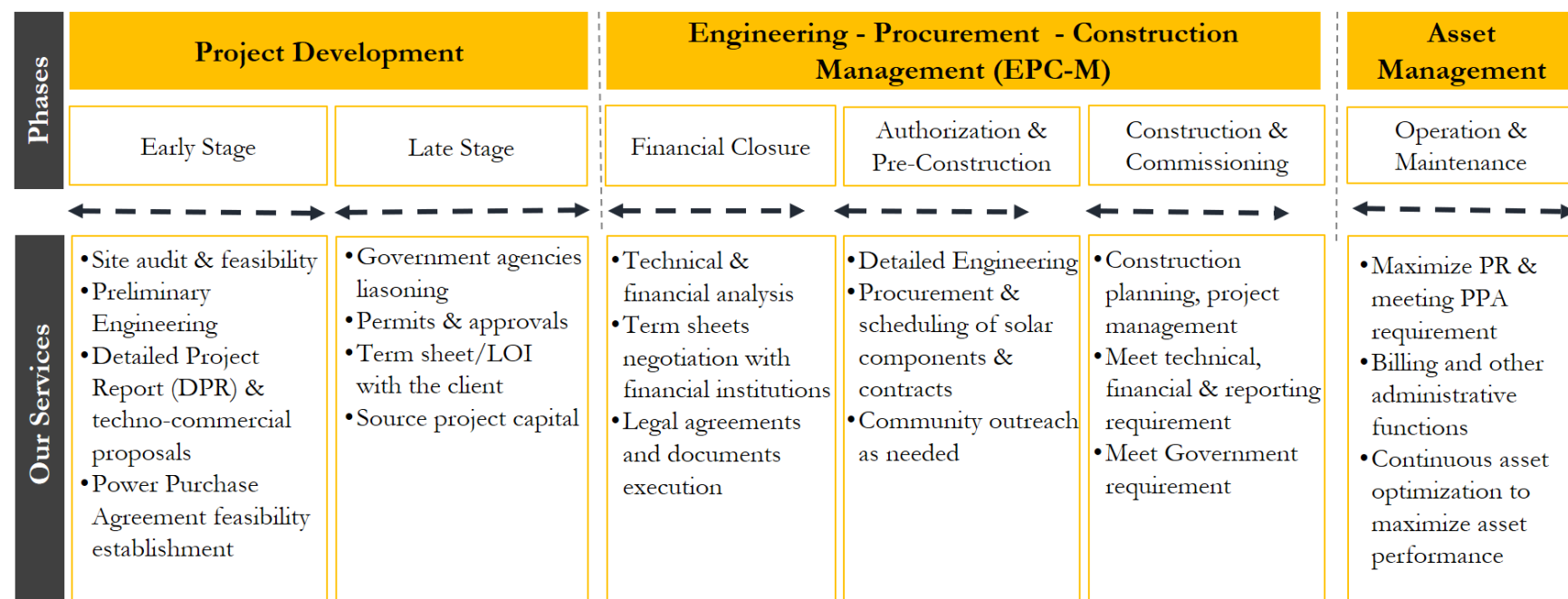
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## Efficient Financing for EPC/ Developers

### Term Financing options\* for Behind The Meter (BTM) solar

- SBI- World Bank Line at an attractive interest rate of ~8.5%
- PNB – ADB line and REC-KFW line is also available at similar interest rate

### What will help: Working capital support

- For PPA projects: Working capital line or corporate financing to support IPPs with short term financing needs, reducing time to execute projects
- For Capex projects: Financing lines with 3-5 years term for repayment for off takers, expanding solar savings option to less creditworthy C&I clients

\* Currently available

## Challenges faced by EPC/ Developers in financing and refinancing:

### Financing availability & delays

Longer timeline of project sanction leading to delay in project execution

### Regulatory challenges

Liquidity issue in the industry due to NBFCs not participating or showing much interest in financing rooftop projects

### Technology acceptability

Low acceptability for new technology or formats, like BESS (battery system) and open access projects

Ad hoc policy changes by regulatory agencies.

Lack of working capital funds and non fund based limit restricting higher number of execution.

Lack of innovative products in financing like financing for lease financing etc.

## Challenges faced by Lenders in financing and refinancing:

### Major challenges faced by Lenders:

Lack of good experienced EPC players/ developers

Lack of policy support, ad hoc changes in policy

Off takers falling below investment grade

Quality compromise by some developers/ EPC to win projects

Lack of focus on Environment, Health and Safety (EHS)

Lack of focus on key equipment selection

## Efficient Financing To-Do's

### Let's define "Efficient" financing

- Time efficient
- Scale efficient
- Flexible

### Let's pinpoint common bottlenecks for Lenders & Developers

- Regulatory uncertainty: changes in rules, policies
- Less defined technical standards
- Lack of commonly accepted benchmarks and information on technology

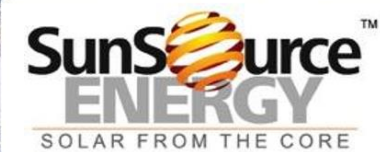
### Let's think about possible solutions (for discussion only)

- Create lines of working capital for qualified companies: to resolve liquidity and delay issues
- Define indigenous standardization processes like BIS standards, customized to the solar industry
- Create knowledge dissemination initiative from IIT's and elsewhere with periodic updates on technology parameter and cost movements - e.g. annual, to act as references



Low hanging fruit – there are many more possibilities!

\* Currently available



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# Webinar on Developing Bankable Projects

## Session by Mr Harvinder Singh, Head Project Finance, Amplus Solar



A member of PETRONAS group

Developing Bankable  
Solar Projects

# Webinar on Developing Bankable Projects



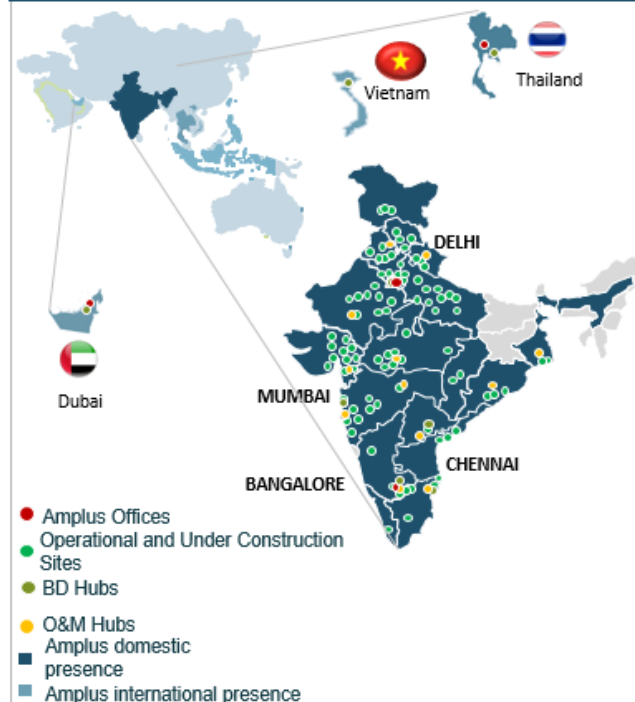
A member of PETRONAS group

## AMPLUS BACKGROUND : LEADER IN C&I ENERGY SOLUTIONS

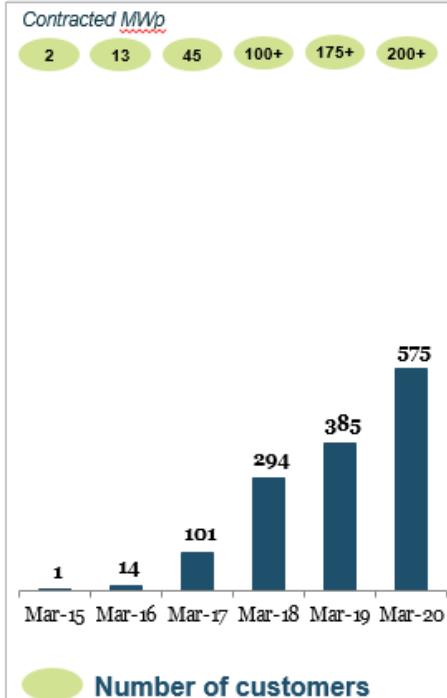
### Amplus Overview

- One of India's largest dedicated owners & operators of distributed energy solutions for Commercial and Industrial (C&I) customers
- Current Solution Offerings:
  - On-site projects (Rooftop and Ground mounted)
  - Open Access projects
  - Energy Storage Solutions
  - Residential Solar
- In-house end to end execution capabilities resulting in one of the lowest EPC costs and highest quality standards
- 100+ exclusive channel partners with success fee arrangement ensures low cost business development
- Portfolio of 575 MWp of contracted capacity spread across India
- Strong relationship with 200+ C&I customers with strong credit profiles
- Healthy pipeline of leads and local collaborations across targeted countries in Southeast Asia and the Middle East

### Presence in C&I Solutions



### Growth of the company



# Webinar on Developing Bankable Projects

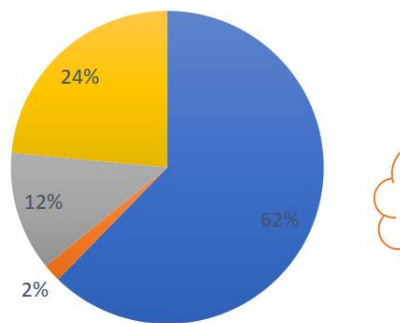
## EVOLUTION AS THE MARKET LEADER



# Webinar on Developing Bankable Projects

## Industry Overview

### Installed Capacity (%)



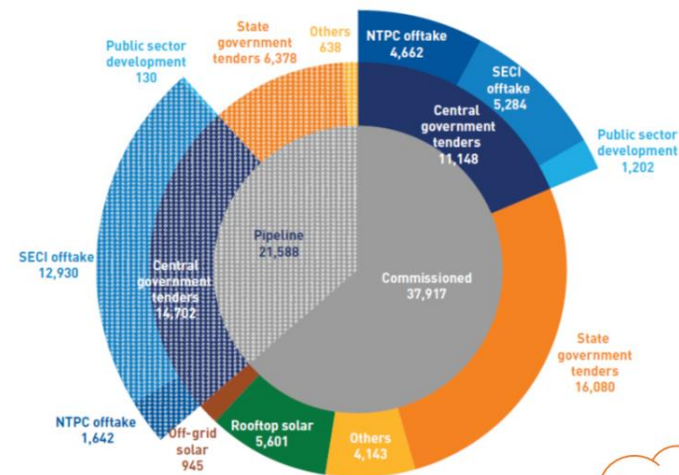
Target  
175 GW  
by 2022

■ Thermal ■ Nuclear ■ Hydro ■ Renewable

As of March 31 2020, Total Renewable installations  
87 GW.

Sources : CEA, MNRE, Bridge to India

Figure: Total installed and pipeline capacity as on 31 December  
2019, MW



~INR 54k Crs  
of Debt  
Funding

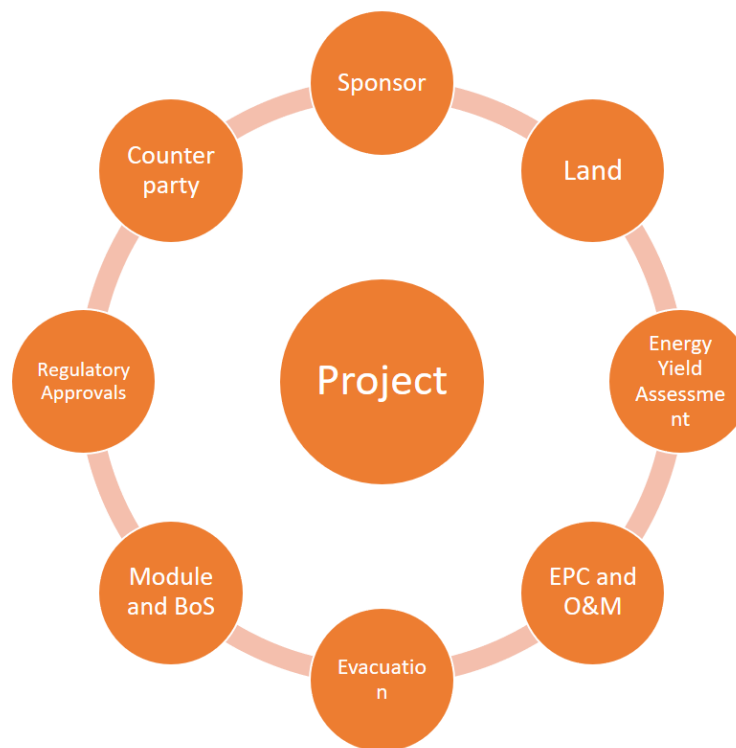
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## Lenders Overview

Types of Lenders	Category	Active in Renewable Sector
Banks	Private Sector	Yes
	Public Sector	Yes, but mostly look for recourse funding.
	Foreign	Yes, but with short term financing structures ( Mini-perm)
Institutional Investors	NBFC (IFCs)	Yes
	IDFs	Yes, but can finance project post 1 year of operations.
	Mutual Funds/Insurance	Yes, but with some credit enhancement structures.
Development Banks/Multi Laterals	Indian	Yes
	Foreign	Yes , but they have limitation on percentage of exposure

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## Key Components of Solar Project - Lender's perspective



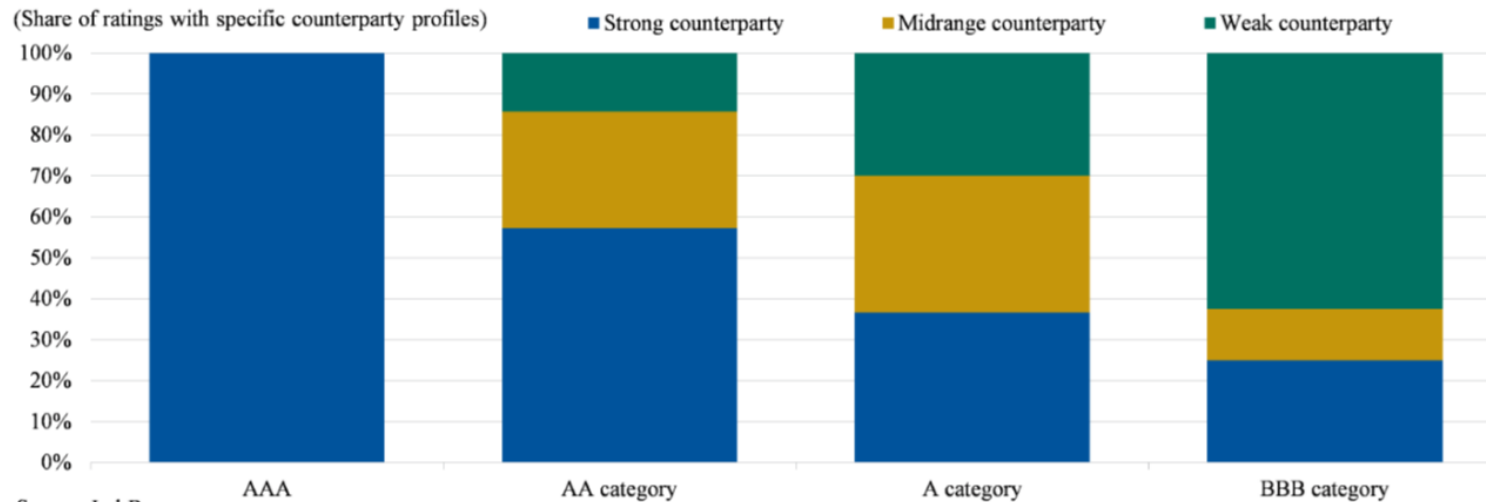
Lenders Risk appetite is considerably lower than that of a equity investor

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Counterparty impact on Credit Rating of Asset.....

## Increasing Share of Weak Counterparties in Lower Rating Categories

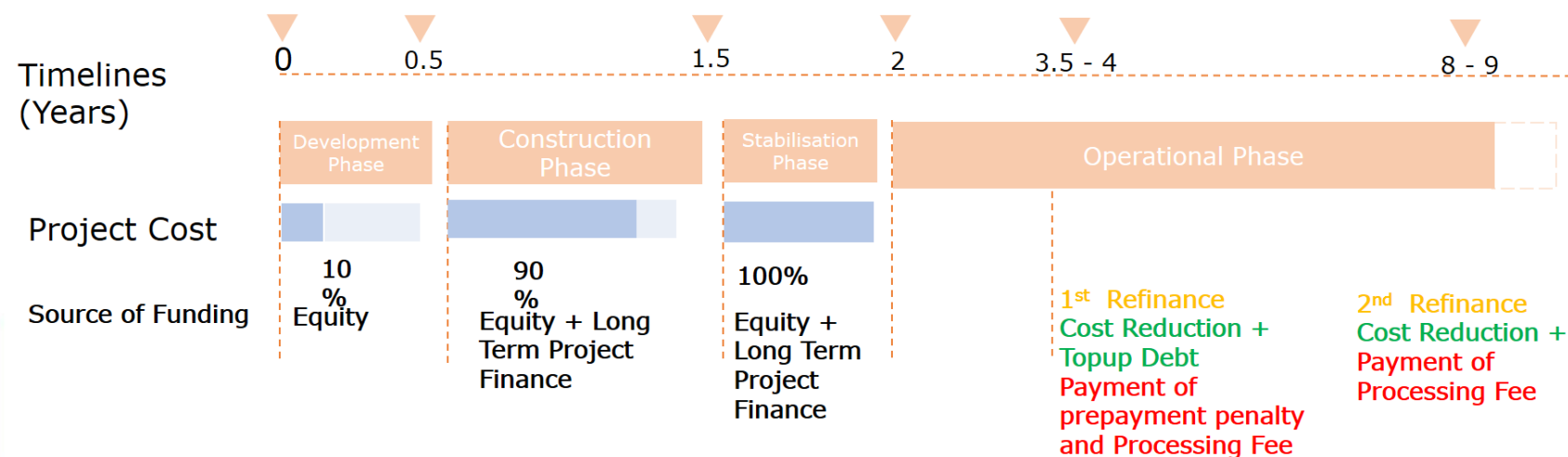
(Share of ratings with specific counterparty profiles)



Source: Ind-Ra

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## Project Finance over project life



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## Alternative Structures.....

Project Stage	Alternative Options
Development and Construction Finance	<ul style="list-style-type: none"> <li>- Construction finance ( Mix of trade loan and Short Term loan upto project stabilisation Phase)</li> <li>- Platforms backed by Indian Corporate can avail Corporate Loans from PSU lenders.</li> <li>- SBLC backed structures to defer equity infusion. Equity to include Sub Debt component.</li> </ul>
Operational Stage ( post stabilization)	<ul style="list-style-type: none"> <li>- Better credit rating provides comparatively low cost funding.</li> <li>- Non recourse or limited recourse</li> <li>- Option to go for fixed rate loans available.</li> <li>- Portfolio Financing ( rooftop or smaller size projects)</li> </ul>
Operational Stage (post 1.5 – 2 year)	<ul style="list-style-type: none"> <li>- Refi the Sub debt part of the equity.</li> <li>- Take out financing option provided IIFCL can be explored.</li> </ul>
Operational Stage ( post 3 year)	<ul style="list-style-type: none"> <li>- Green Bond</li> <li>- Credit enhancement structures ( partial guarantee schemes)</li> </ul>

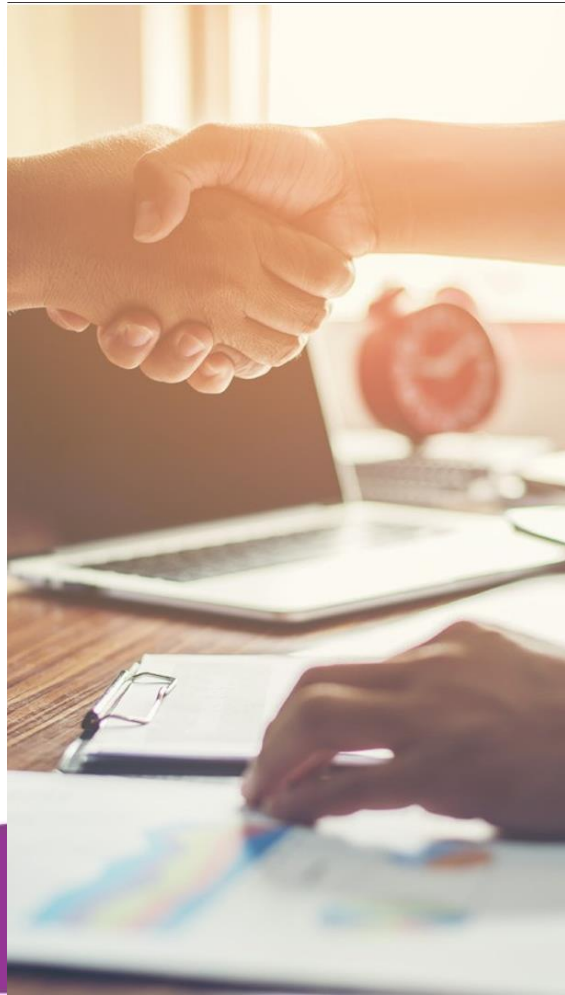
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Utility Business ...



**it's a marathon  
not a sprint**

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## THANK YOU

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**You're invited**  
**Webinar on**  
**Selecting critical components of**  
**Solar Power plant**

**Date: Friday, May 15, 2020**

**Time: 4pm onwards**

In Conversation with our Team of Experts

