



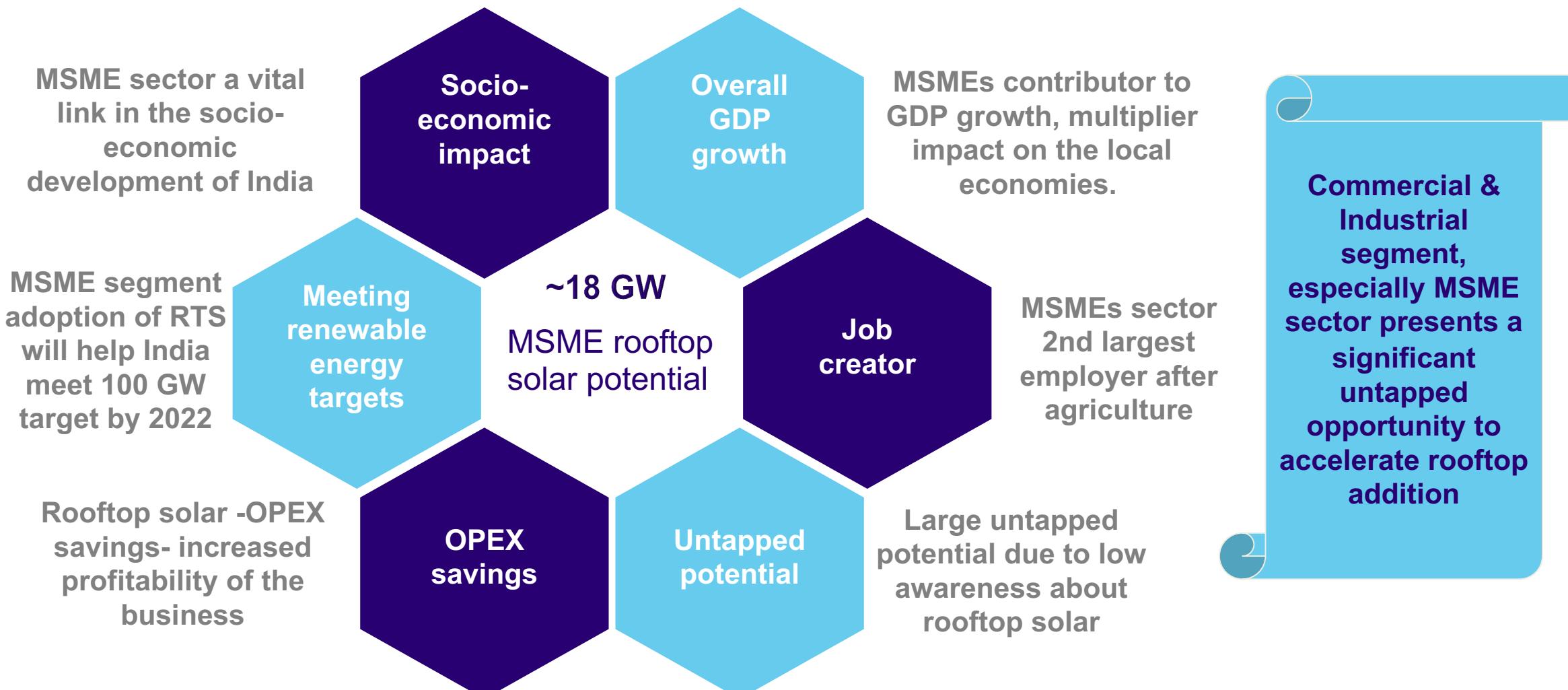
STATE BANK OF INDIA – WORLD BANK

**GRID CONNECTED
ROOFTOP SOLAR PV PROGRAM
(GCRSPV)
FOR MSMEs**



14th July 2021

Why MSME sector is in focus ?



Aim of this session

Assess your awareness
about Rooftop Solar

Are you aware about
benefits of Rooftop
Solar?

Assess your receptiveness
about Rooftop Solar

Are you interested in
using it for your
business

Ease of financing for Rooftop
Solar

Are you aware about
programmes for
financing Rooftop
Solar?

Objective



To conduct an interactive session and create
awareness about rooftop solar among MSME's
and address any concerns and questions
regarding rooftop solar

Why rooftop solar is good for your Business?

The Concept: Utilization of the existing rooftop infrastructure of any sort of establishment to generate electricity by installing PV panels on the rooftop.

Savings on energy bill which is a big portion of your OPEX

Unused ample rooftop space-
Rooftop solar /No investment
in land required

Protection against rising Grid
Tariffs-Tariff lock-in for a 25
year time period

Have RPO or Green
procurement obligations
specified by your components
procurer

Prosumer: Additional Income
generated

Tax benefits: Accelerated
depreciation (40% PA) under
the provisions of Income Tax.



Mode of Installation of Rooftop Solar: Capex and RESCO Mode



Capex Mode

- Own Investment and Ownership of asset
- Higher electricity savings
- Setup responsibility of the owner
- Tax benefit accrue to Owner
- Owner to seek permission from DISCOM and SNA
- Owner to undertake O&M of the plant
- Can be set up in both Gross metering and Net Metering Mode



RESCO Mode

- Investment by 3rd party, no ownership of the asset
- Lower electricity savings as compared to Capex Mode
- Setup responsibility of the RESCO
- RESCO will take permissions from the DISCOM and SNA
- RESCO to undertake O&M of the plant
- Requires Net Metering to be operationalized

SBI can help you achieve your Solar Dream



-  A customized product for projects **up to 1 MW capacity**, to give thrust to smaller size projects

-  Loan amount – **up to 80% of project cost**

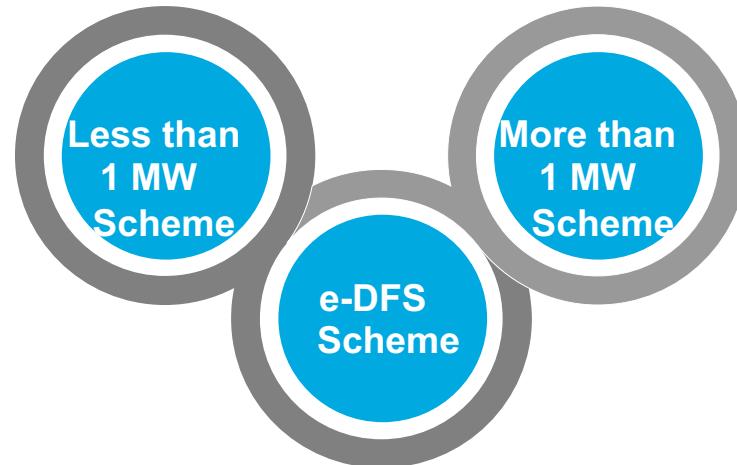
-  Loan permissible to **unrated Capex borrowers** also

-  **DSRA reduced** to 3 months' principal + interest

SBI- World Bank US\$ 620 Million Line of Credit Features

- **Largest line of credit** facility in rooftop solar with dedicated schemes for propagation of solar sector in country.
- **Focus on RESCo (Opex) and CAPEX borrowers** for higher penetration and wider reach.

- ▶ Loan amount – up to 80% of project cost
- ▶ Loan permissible to unrated Capex borrowers
- ▶ DSRA reduced to 3 months' principal + interest



- ▶ Loan amount – up to 75% of project cost
- ▶ Door-to-door tenor of upto 15 years
- ▶ 3 months DSRA principal + interest



The World
Bank

- ▶ Facility for 10,000+ borrowers with e-DFS facility with bank
- ▶ Potential of CAPEX financing of around 100 MW capacity under rooftop solar.
- ▶ Attractive interest rate of 8.15% to 8.45% presently.



SBI- World Bank GCRSPV Scheme Features

Parameters	Up to 1 MW	e-DFS	exceeding 1 MW
Business model	Sole Proprietorship Firm, Partnership Firm including LLP and Company/SPV/ NBFC CAPEX/RESCO	Corporate/ Non-Corporate/ Partnership/ Proprietorships having e-DFS facility under tie-up with IOCL/ BPCL/ HPCL CAPEX	Corporate/ Non-Corporate/ Partnership/ Proprietorships
Ratings	CRA: SB 10 & better; ECR: Investment Grade for >Rs. 10 crore exposure; (unrated borrowers for Capex projects may be considered);	Borrower's CRA / ECR – as per the Bank's extant instructions	CRA: SB 10 & better; ECR: Investment Grade for >Rs. 10 crore exposure; (unrated borrowers for Capex projects may be considered)
Loan Amount	Up to 80% of project cost	Up to 80% of project cost	Up to 75% of project cost
Rate of Interest	6 Month MCLR (6.95%) + 120 to 150 bps based on rating i.e. 8.15% to 8.45% If rating of borrower is below hurdle rate / unrated, then 6 Month MCLR (6.95%) + 190 bps i.e. 8.85%, acceptable only for existing connections with the Bank <i>Loans extended to MSMEs will be linked to SBI's EBR (6.65%) plus spread (120 to 150 bps) i.e. 7.85% to 8.15%</i>		
Tenor	Maximum tenor of 10 years or 80% of tenor of PPA/ Lease Agreement	Maximum tenor up to 10 years	Maximum tenor 15 years
Moratorium	Up to 6 months	Up to 3 months	Up to 12 months
Security	Hypothecation of Plant & Machinery, Receivables; Collateral if FACR is below 1.10; PG/CG, Assignment of PPA/Lease Agreement.	Hypothecation of assets created out of Bank finance, extension of charge on collateral security under e-DFS; PG of the proprietor/ partners/ promoters of unit	Hypothecation of assets created out of Bank finance, Assignment of Project Documents, Charge on Cash flows, charge on lease hold rights

Definition of Rooftop Solar Power Plant

Amendment in Definition Of Rooftop Solar Power Plant

"The Rooftop Solar (RTS) power plant is a solar power plant installed on the roof of the residential/institutional/commercial/industrial building and/or on the appurtenant land up to an area equivalent to **two time the total super built up area** of the residential/institutional/commercial/industrial building. The super built up area shall include all residential/ institutional/commercial/industrial structures being used for these activities and shall also include store, covered parking etc. as determined by the appropriate State Authorities. The appurtenant land shall be contiguous to the residential/ institutional/commercial/industrial structure."

Amendment in Regulations for Net Metering for Rooftop Solar Systems

- Under the latest Electricity (Rights of Consumers) Amendment Rules, 2021, the arrangements for net-metering, gross-metering, net-billing, or net feed-in would follow the regulations made by the State Commission from time to time.
- The Ministry of Power ([MoP](#)) has issued the amendment to the Electricity (Rights of Consumers) 2020 Rules concerning net metering for rooftop solar installations. **The amendment permits net metering to the prosumer for loads up to 500 kW or up to the sanctioned load, whichever is lower.**
- The latest amendment considers net billing or gross metering for rooftop solar systems over 500 kW capacity. For the net metering facility, a single bidirectional energy meter is used at the point of supply where the energy imported from the grid and the energy exported from the grid-interactive rooftop solar system of a prosumer is computed at two different tariffs.
- The amendment has also permitted gross metering for prosumers who would like to sell all the solar energy generated to DISCOM instead of using net metering. The Commission would decide the generic tariff for gross-metering as per tariff regulation.
- **Kindly keep an eye out for the policy update from State of Tamil Nadu.**

Documentation gives Borrowers a seamless experience

Funding Documentation (Indicative List)

- ID and address proof of the applicant and guarantors, if any. E.g. voter ID, PAN no. voter ID, Aadhar No, MOA, AOA etc).
- Income tax return, Wealth Tax Returns of the applicant and guarantors for the past three financial years.
- Annual Report consisting Audited balance Sheets with Trading & Profit & Loss Account, for the last three years
- Memorandum and Articles of Association, Certificate of Commencement of Business in case applicant is a Company.
- GST returns for the last three years.
- Copy of DPR (Detailed Project Report) along with Projected Balance Sheet, Profit & Loss Account and Cash Flow Statement with assumptions made /TEV (Technical Evaluation) study of the projects.
- Copy of Resources Study done

Project economics for a Rooftop Solar plant in Maharashtra: CAPEX mode



**Area Required
5000 Sqft**

Assumptions : (as per MNRE rooftop calculator)

Average sunshine hours: 5.5

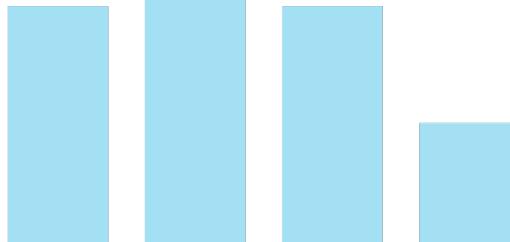
1 kW will produce: 5.0 kWh per day

50 kW will produce: 6250 kWh / month

Commercial rate by MAH govt: ~Rs. 11.5 /unit

~6250 kWh/month @INR 11-11.5/kWh of grid power replaced

**Annual Generation : ~
75000 kWh**



**System
Cost
(INR)**

**~20
Lakhs**



**Lifetime
Savings
(INR)**

**~2.07
Crores**



**Monthly
Savings
(INR)**

~72K



**Payback
Period**

**3-5
Years**



**CO₂
emissions
mitigated**

**1538
tonnes**

*As per MNRE Rooftop Solar Calculator
https://solarrooftop.gov.in/rooftop_calculator*

Project economics for a Rooftop Solar plant in Maharashtra: RESCO mode



Area Required
5000 Sqft

~INR 7.5/unit savings
on 6250 units per month

Annual Generation : ~
75,000 kWh



CAPEX
Invested

Lifetime
Savings
(INR)

Monthly
Savings
(INR)

PPA Rate
(INR/kWh)

PPA Term

SBI Branches in Chennai Circle

Branch Code	Branch Name	Name of Branch Head	Email ID	Contact
13241	SME Chennai	Ram Anand	RAMANAND.RAMANAND@SBI.CO.IN	9445860644
06616	SME Siruthozhil Chennai	Mohan Kumar S	MOHANKUMAR.S@SBI.CO.IN	9444402871
07314	SME Pondicherry	Vasanth Krishnan Kb	VASANTH.KRISHNAN@SBI.CO.IN	9445862181
04327	SME Guindy	Uppiliappan Srinivasan	UPPILIAPPAN.SRINIVASAN@SBI.CO.IN	8939899328
12776	SME Coimbatore	Naveen Raj S	NAVEEN.RAJ@SBI.CO.IN	9442648701
07023	SME OB Tirupur	Renganathan Ramasamy	R.RENGANATHAN@SBI.CO.IN	9443418458
00988	SME Madurai	Ram Sowmi Raja Ram	SOWMI.RAM@SBI.CO.IN	9445863069
12758	SME Dindigul	Subburamu R	RAJU.SUBBURAMU@SBI.CO.IN	9444144140
00943	SME Tuticorin	Subramanian M	SUBRAMANIAN.M@SBI.CO.IN	9445863554
04060	SME Tiruchirapalli	Saravanan Jembu Thulasiraman	SARAVANAN.JEMBU@SBI.CO.IN	9585053727
07771	SME SiruthozhilKarur	Aravanai Selvan R	ARAVANAI.SELVAN@SBI.CO.IN	9444362392
12777	SME Erode	Ilankumaran Sargunan	ILANKUMARAN.S.KUMARAN@SBI.CO.IN	9442576321
18326	Siruthozil, Theni	Vijayakumar Haridas	VIJAYAKUMAR.HARIDAS@SBI.CO.IN	8248391755

Contact us at

Reach out to us at **rooftopsolar.cc@sbi.co.in**

SBI – World Bank Rooftop Solar Scheme abridged version:

<https://sbi.co.in/> → Other Services → SBI-World Bank

OR

https://www.sbi.co.in/documents/16012/1557541/080920-SBI_WORLD_BANK+26.08.2020.pdf

Thank You



SBI- World Bank GCRSPV Scheme Features

Parameters	Up to 1 MW	e-DFS	exceeding 1 MW
Business model	Sole Proprietorship Firm, Partnership Firm including LLP and Company/SPV/ NBFC CAPEX/RESCO	Corporate/ Non-Corporate/ Partnership/ Proprietorships having e-DFS facility under tie-up with IOCL/ BPCL/ HPCL CAPEX	Corporate/ Non-Corporate/ Partnership/ Proprietorships
Ratings	CRA: SB 10 & better; ECR: Investment Grade for >Rs. 10 crore exposure; (unrated borrowers for Capex projects may be considered);	Borrower's CRA / ECR – as per the Bank's extant instructions	CRA: SB 10 & better; ECR: Investment Grade for >Rs. 10 crore exposure; (unrated borrowers for Capex projects may be considered)
Loan Amount	Up to 80% of project cost	Up to 80% of project cost	Up to 75% of project cost
FACR	Minimum 1.20; ICR: Min. 1.75	Minimum 1.20; ICR: Min. 1.75	Minimum 1.25
Avg DSCR	At P90: 1.10	At P90: 1.10	At P90: 1.15
Rate of Interest	6 Month MCLR (6.95%) + 120 to 150 bps based on rating i.e. 8.15% to 8.45% If rating of borrower is below hurdle rate / unrated, then 6 Month MCLR (6.95%) + 190 bps i.e. 8.85%, acceptable only for existing connections with the Bank <i>Loans extended to MSMEs will be linked to SBI's EBR (6.65%) plus spread (120 to 150 bps) i.e. 7.85% to 8.15%</i>		
Tenor	Maximum tenor of 10 years or 80% of tenor of PPA/ Lease Agreement	Maximum tenor up to 10 years	Maximum tenor 15 years
Moratorium	Up to 6 months	Up to 3 months	Up to 12 months
Security	Hypothecation of Plant & Machinery, Receivables; Collateral if FACR is below 1.20; PG/CG, Assignment of PPA/Lease Agreement.	Hypothecation of assets created out of Bank finance, extension of charge on collateral security under e-DFS; PG of the proprietor/ partners/ promoters of unit	Hypothecation of assets created out of Bank finance, Assignment of Project Documents, Charge on Cash flows, charge on lease hold rights

MNRE Benchmark Rates for RTS for Year 2020-21

Benchmark Costs for Grid Connected Rooftop Solar Power Projects for the Year 2020-21

Capacity**	Benchmark Cost for States Other Than Special Category States				Benchmark Cost for Special Category States including North Eastern States, Uttarakhand, Himachal Pradesh, J&K and UTs of Andaman & Nicobar Island and Lakshadweep					
	2020-21		2019-20		% of variation	2020-21		2019-20		% of variation
	₹/W	\$/W	₹/W	\$/W		₹/W	\$/W	₹/W	\$/W	
1 kW	47	0.63	54	0.72	-13.0%	52	0.70	59	0.79	-11.9%
Above 1 kW to 2 kW	43	0.58	54	0.72	-20.4%	47	0.63	59	0.79	-20.3%
Above 2 kW to 3 kW	42	0.56	54	0.72	-22.2%	46	0.62	59	0.79	-22.0%
Above 3 kW and Upto 10 kW	41	0.55	54	0.72	-24.1%	45	0.60	59	0.79	-23.7%
Above 10 kW and Upto 100 kW	38	0.51	48	0.64	-20.8%	42	0.56	53	0.71	-20.8%
Above 100 kW and Upto 500 kW	36	0.48	45	0.60	-20.0%	40	0.54	50	0.67	-20.0%

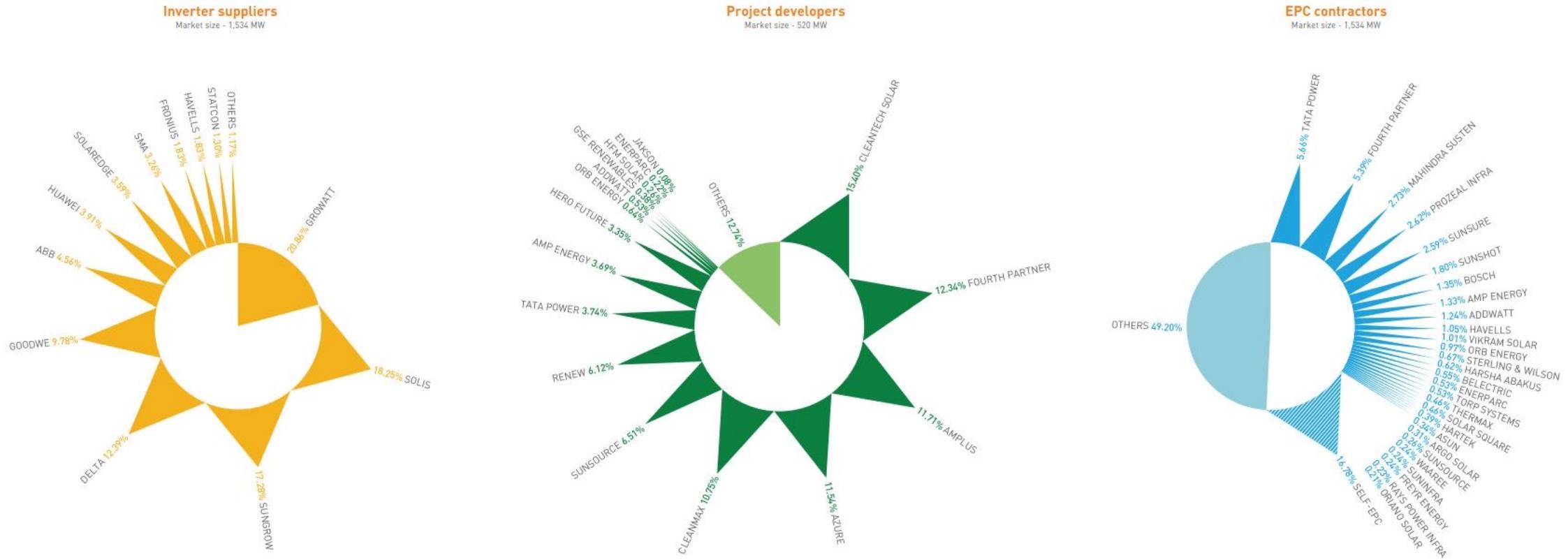
* Capacity will be calculated based on the inverter capacity or the SPV module array capacity whichever is lower

** The separate benchmark cost for special category states will be applicable for projects under phase II of the program only

Source: MNRE

Mercom India Research

MNRE Benchmark Rates for RTS for Year 2020-21



Source: Bridge to India, Dec 2019

SUPRABHA Rooftop Solar Technical Assistance program



Technical Assistance: **USD 13 million**
www.suprabha.org

Funding body



Implementing agency



Installation target

**600 MW
GRPv**

Interventions

- 1 Policy & Regulatory
- 2 Capacity Building
- 3 SSN Knowledge Exchange
- 4 Media & Outreach
- 5 Process Streamlining
- 6 Demand Aggregation

Stakeholders



Regulators & Distribution companies



Residential Consumers



Urban Local Bodies



Financial Institutions

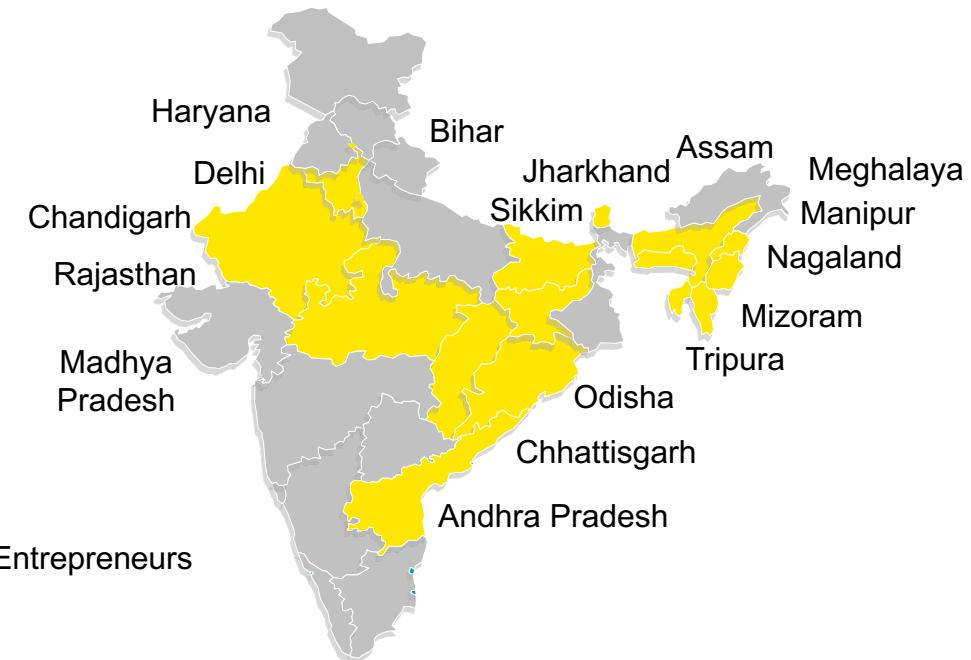


Entrepreneurs



C&I Consumers

Across 17 Indian states



**350+ SBI officers trained
150+ more by this month**