

MONTHLY RE UPDATE

Indian Solar and Wind sector

March 2020

Lead sponsors

WAAREE[®] ReneSola
One with the Sun

Contents

Tenders	2
New RFS Issued	2
Retendered/ Date extension	3
Result announced/ Bids submitted	4
Projects Commissioned	5
List of recently commissioned Projects	5
Investments/ Deal.....	6
Monthly import-export statistics	6
Global Price Trends	7
Policy and Regulation.....	8
Essential operation of renewable energy generating utilities and permission for material movement needed during COVID 19 outbreak	8
Time extension in scheduled commissioning of RE projects due to supply chain disruption because of COVID19 outbreak in China or any other country as Force Majeure event	8
Extension of Atal Jyoti Yojna (AJAY): Phase II	8
No ceiling tariffs/ caps for wind and solar tenders	8
State subsidy of INR 15,000/ kW for residential rooftop solar systems of 1-10 kW capacity	9
Additional state subsidy for residential rooftop solar systems 1-10 kW in Punjab.....	9
Policy directives issued by RRECL with regard to Solar and Wind power generation	9
Opening and Maintaining Letter of Credit as Payment Security Mechanism under PPA by DISCOMs	10



Tenders

- About 9,889 MW of renewable tenders are issued in March 2020, including- 7,816 MW of utility scale solar tenders, 2,000 MW of wind tenders, 61 MW of rooftop solar tenders and 10 MW of floating solar tenders.
- Auction is completed for about 1,400 MW of tenders.

New RFS Issued

Tender Name	Technology	Capacity (MW)	Other details	Bid submission date
SECI, Pan India, 5,000 MW, Thermal+RE, Mar 2020	Thermal+RE	5,000	EMD: INR 0.5 million/MW/Project PBG: INR 1.0 million/MW/Project	4-May-2020
SECI, Pan India, 2,000 MW, SPV Project, ISTS-IX, Mar 2020	Solar	2,000	EMD: INR 4 Lakhs/MW/Project PBG: INR 0.8 million/MW	5-May-2020
SECI, Pan India, 2,000 MW, Wind, Tranche- IX	Wind	2,000	EMD: INR 0.6 million/MW/Project PBG: INR 1.2 million/MW/Project	6-May-2020
NTPC, Rajasthan, 735 MW, BOS, Mar	BOS	735		27-Apr-2020
GUVNL, Gujarat, 700 MW, Phase IX, Mar 2020	Solar	700	EMD: INR 0.4 million/ MW PBG: INR 0.94 million Ceiling Tariff- INR 2.92/ unit	18-Apr-2020
NVVN, Jharkhand, 50 MW, SPV Project, Mar 2020	Solar	50	EMD: INR 25 million	30-Mar-2020
SECI, Telangana, 34 MW, SCCL Plant, Mar 2020	Solar	34	EMD: INR 30.872 million	20-Apr-2020
SECI, Telangana, 32 MW, SCCL Plant, Mar 2020	Solar	32	EMD: INR 20.956 million	22-Apr-2020
CREDA, Chhattisgarh, 20 MW, Rooftop Solar, Mar 2020	Rooftop Solar RESCO Model	20		15-Apr-2020

EESL, Andhra Pradesh, 20 MW, Rooftop Solar PV Project, Mar 2020	Rooftop Solar RESCO Model	20	EMD: INR 9.15 million for package I, INR 10.4 million for package II, INR 1.94 million for package III	18-Mar-2020
Nalanda University, Bihar, 5 MW, Rooftop Solar, Mar 2020	Rooftop Solar	5	EMD: INR 3.4 million	14-Apr-20
BREDA, Bihar, 7 MW, Rooftop Solar, Mar 2020	Rooftop Solar CAPEX Model	7	EMD: INR 0.2 million	16-Apr-20
REIL, Madhya Pradesh, 3.6 MW, Solar Project, Mar 2020	Rooftop Solar	3.6	EMD: INR 1.35 million	24-Mar-20
REIL, Maharashtra, 3.5 MW, Solar Project, Mar 2020	Rooftop Solar	3.5	EMD: INR 2 million	27-Mar-20
CEL, Tamil Nadu, 1.6 MW, Rooftop Solar, Mar 20	Rooftop Solar	1.6	EMD: INR 0.1 million	26-Mar-20
MES, Agra, 1.5 MW, Solar, Mar 2020	Rooftop Solar	1.5	EMD: INR 0.85 million	
AAI, Raipur, 1.5 MW, On Grid Solar Project, Mar 2020	Rooftop Solar	1.5	EMD: INR 1.57 million	20-Mar-20
REIL, Uttarakhand, 500 kW, Rooftop Solar, Mar 20	Rooftop Solar	0.5	EMD: INR 0.25 million	21-Mar-20
WBPDCL, West Bengal, 10 MW, Floating Solar, Mar 2020	Floating Solar	10	EMD: INR 10.2 million PBG: 10% of LOA	15-Apr-20

Source: JMK Research

Retendered/ Date extension

Tender Name	Technology	Other details	Bid submission date
NTPC, Wind, Pan India, Tranche IX, 1,200 MW	Wind	Bid security: INR 6 lakhs/ MW	Bid submission date extended from 30 Mar to 20 Apr 2020
SECI, Leh and Kargil, 14 MW Solar Power Plant with 42 MWh BESS, VGF, Jan 2020	Energy Storage	EMD: INR 1,96,00,000	Bid submission date extended from 16-Mar-20 to 16-Apr-20

SECI, Pan India, 1,200 MW, Hybrid, Tranche-III, BOO Basis Jan 2020	Hybrid	EMD: INR 5 Lakh/ MW/ Project PBG: INR 20 Lakh/ MW/ Project	Bid submission date extended till 30-Apr-20
SECI, Diglipur, North Andaman, 4 MW Floating Solar Project with 2 MW BESS, BOO Basis Jan 2020	Floating Solar	EMD: INR 54 Lakh PBG: INR 1.08 Crores	Bid submission date extended till 13-Apr-20
RUMSL, Neemuch, Madhya Pradesh, 500 MW, Jan 2020	Solar		4-Aug-20
RUMSL, Shajapur, Madhya Pradesh, 450 MW, Jan 2020	Solar		15-Jul-20
RUMSL, Agar, Madhya Pradesh, 550 MW, Jan 2020	Solar		1-Jul-20
Damodar Valley Corporation, 50 MW, solar, Jharkhand	Solar	EMD: INR 18.5 million	10-Apr-20

Source: JMK Research

Result announced/ Bids submitted

Tender name	Status	Capacity tendered (MW)	Capacity allotted/ bid submitted (MW)	Bidders/ winners details
GUVNL, 500 MW, Gujarat, solar, Phase VIII, Feb 2020	Project allotted	500	350	Tata Power- 120 MW INR 2.64/unit), Juniper Green-190 MW INR 2.63/unit), Vena Energy- 40 MW (INR 2.61/unit)
MSEDCL, Maharashtra, 500 MW, Intra State Solar, Phase V, Dec 2019	Bid submitted	500	350	Avaada-250 MW Tata Power-100 MW
SECI, 400 MW, s "Round-the-Clock" Supply of	Bids Submitted	400	850	Greenko- 400 MW ReNew- 400 MW Ayana- 50 MW

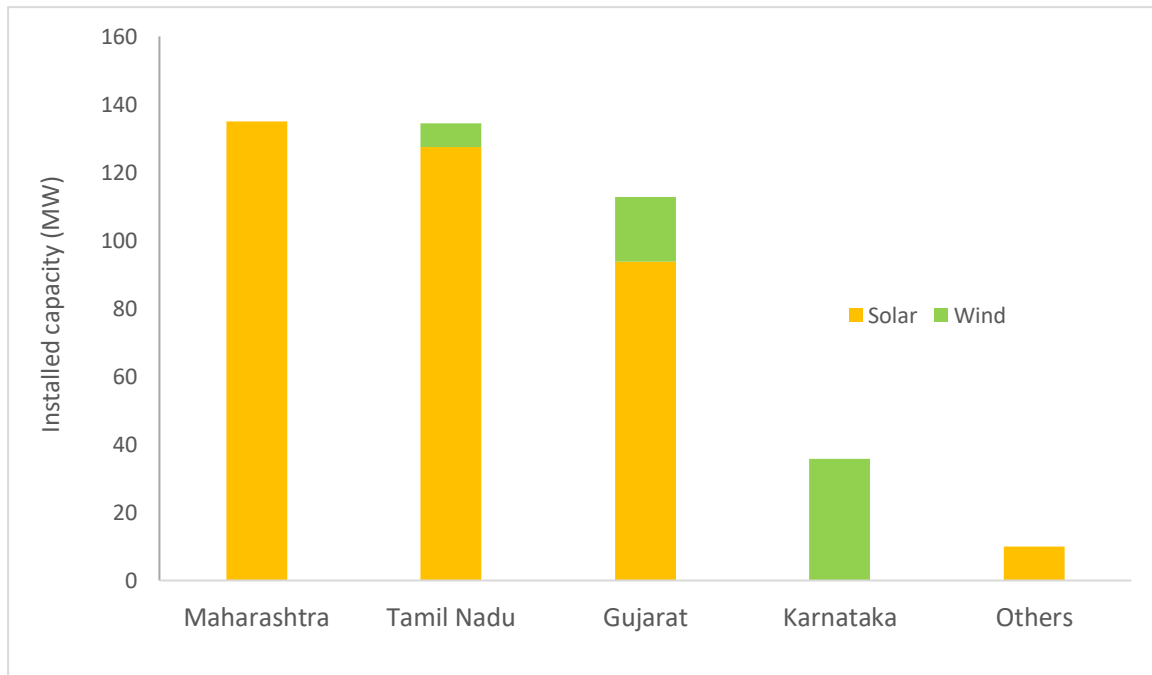
Source: JMK Research



Projects Commissioned

In February 2020, about 366 MW of new solar capacity and 62 MW of new wind capacity is added.

State-wise installations in solar and wind during February 2020 – 427 MW



Source: MNRE, JMK research

List of recently commissioned Projects

Project developer name	Technology	Capacity (MW)	Tender name	State	Date of commissioning
Adani Green Energy	Wind	50	PPA with SECI at INR 2.65/kWh		Mar 2020
Chitturi Projects Pvt Ltd.	Solar	1	Captive	Andhra Pradesh	Mar 2020

Source: JMK Research

Investments/ Deal

Date	Company name	Deal type	Sector	Acquirer/ Investor	Deal value	Stake Acquired
12 Mar 2020	cKers Finance	Debt	Solar	New Energy Nexus	\$5 million	
20 Mar 2020	ZunRoof	Equity	Solar	Godrej	\$3 million	NA
17 Mar 2020	Fourth Partner	Debt	Solar	Gramin Impact India	\$5 million	NA
12 Mar 2020	Azure	Equity	Solar	CDPQ	\$11 million	1.5%
31 Mar 2020	Rising Sun Energy	M&A	Solar	Yinson Holdings	\$7.3 million	37.5%

Source: JMK Research

[FIMER completes acquisition of ABB's solar inverter business](#)

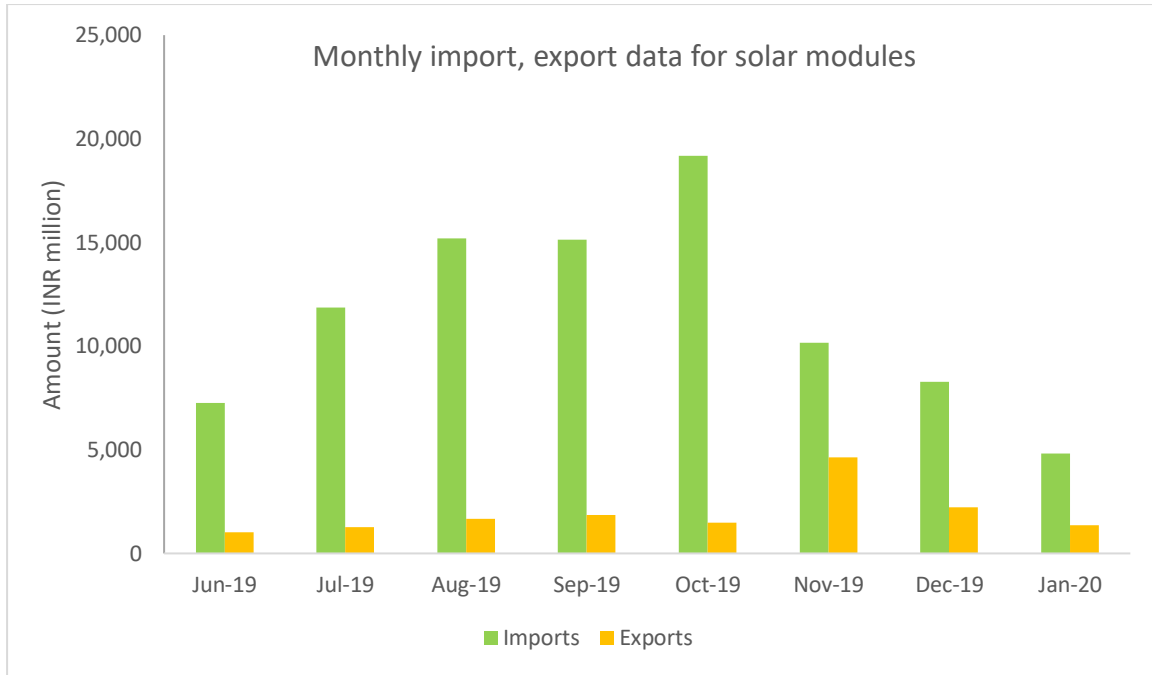
FIMER has completed the acquisition of ABB's solar inverter business that was announced on July 9, 2019. The Italian company is now the 4th largest solar inverter manufacturer in the world. The takeover of ABB's solar inverter business, which registered revenues of approximately \$340 million in 2019, includes 800 employees in 26 countries as well as two manufacturing plants, in Italy and in India, and a R&D facility in Finland.

[Grapevine: GAIL to buy into ACME Solar Holding](#)

State-owned GAIL, formerly known as Gas Authority of India Ltd, is in talks to pick up 49-74% stake in privately owned ACME Solar Holding Ltd, four people aware of the matter told The Economic Times.

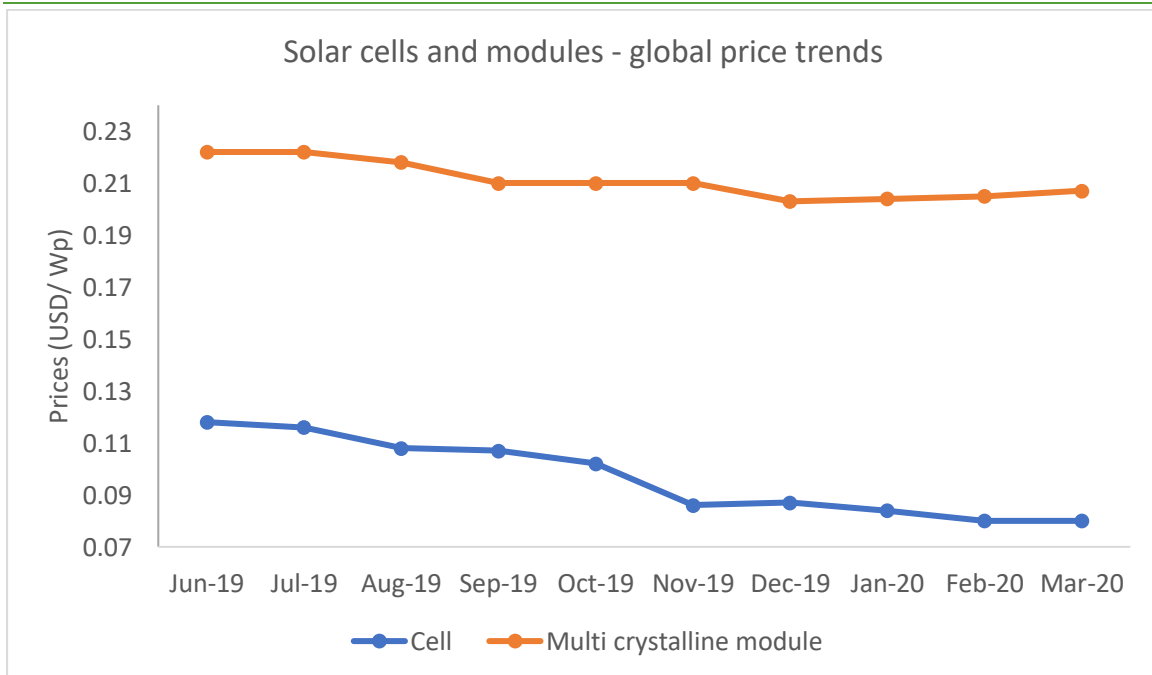
Monthly import-export statistics

Monthly imports have fallen sharply by about 42% in Jan 2020 compared to Dec 2019 imports.



Source: Ministry of Commerce, JMK research

Global Price Trends



Source: EnergyTrend, JMK Research



Policy and Regulation

Essential operation of renewable energy generating utilities and permission for material movement needed during COVID 19 outbreak

Renewable Energy Generating stations (REGS) are critical for maintaining power supply across the country in a COVID-19 outbreak scenario where conventional power plants may not be running at optimal levels due to logistics constraints with respect to supply of fuel like coal, natural gas, diesel, etc. Therefore, power generation through these REGS are considered as 'essential services'.

Time extension in scheduled commissioning of RE projects due to supply chain disruption because of COVID19 outbreak in China or any other country as Force Majeure event

- All RE implementing agencies (SECI/ NTPC/ others) of MNRE to treat delay on account of disruption of supply chain due to spread of coronavirus in China or any other country as Force Majeure.
- These agencies can grant suitable time extension to developers based on evidence/ documents produced to support the claims
- Implementing agencies shall also ensure that no double relief is granted due to overlapping periods of time extension granted for reasons eligible for such relief
- State Energy Departments (including Power/ Energy Departments of states but dealing in renewable energy) are also requested to treat such delays as Force Majeure only and shall issue their own instructions on the subject.

Extension of Atal Jyoti Yojna (AJAY): Phase II

- Government has extended the second phase of its Atal Jyoti Yojana (AJAY) for a period of one year till March 31, 2021. Earlier, the AJAY scheme was launched by the Ministry of New & Renewable Energy (MNRE) on December 18, 2018 for a period of one year.
- Energy Efficiency Services Ltd (EESL), nodal agency implementing the scheme, will continue to implement the scheme as per the earlier approved guidelines.
- The vendors already empaneled by EESL for the scheme will continue to install solar street lights against the sanction for MPLAD funds issued or to be issued by the respective DMs till March 31, 2020.
- The total cost for implementation of Phase-II was budgeted Rs 761 crore out of which Rs 571 crore was MNRE's share and Rs 190 crore was MPLAD funds.
- The phase-II of AJAY will cover installation of 3,04,500 solar street lights (SSLs) of 12 W capacity and 75 percent of the cost will come through the MNRE budget and rest 25 percent will be provided from MPLAD funds.

No ceiling tariffs/ caps for wind and solar tenders

MNRE issued a directive to Solar Energy Corporation of India (SECI), NTPC and state government departments to remove upper ceiling tariff/ tariff cap on renewable energy project auctions

MNRE has directed Solar Energy Corporation of India (SECI), National Thermal Power Corporation (NTPC), state distribution companies (DISCOMs), and other implementing agencies that they will procure renewable energy (RE) power either through single renewable source or various combinations of renewable sources with or without storage as per their procurement policies.

State subsidy of INR 15,000/ kW for residential rooftop solar systems of 1-10 kW capacity

Under Rooftop Phase II program, UPNEDA has announced state and central subsidies for rooftop solar projects to be set up in the residential sector.

As per the department notification, for rooftop solar projects ranging between 1 kW and 10 kW will receive a state subsidy of Rs 15000 per kW, with the maximum subsidy that can be availed by residential rooftop projects capped at Rs 30000.

Central subsidies will vary depending on the size of the projects and the location of the projects. For systems ranging between 1 and 3 kW, central subsidies will cover 40% of the total cost. For 3-10 kW projects, there is 20% percent central subsidy. For projects >10 kW capacity for group housing societies, the central subsidy will cover 20% of the total cost.

Additional state subsidy for residential rooftop solar systems 1-10 kW in Punjab

- Punjab has announced subsidies for grid-connected rooftop solar systems ranging between 1 and 10 kW only in the residential sectors.
- The subsidy is not available for installations in the non-residential sectors like social, government, educational, public sector undertakings, statutory or autonomous bodies, private, commercial, and industrial sectors.
- Government is providing additional 40% subsidy for systems up to 3 kW.
- In the recent tenders floated by the Punjab State Power Corporation Limited (PSPCL), the discovered rate for the installation of these systems (with state government subsidy) has come to about INR 37,000/kWh.

Policy directives issued by RRECL with regard to Solar and Wind power generation

The Government of Rajasthan decided to provide various concessions and facilities to solar/wind-solar hybrid power projects in the Rajasthan Solar and Wind Hybrid policies 2019 issued by it. Following provisions are given under this directive:

Banking

Banking shall be allowed for captive Consumption and third party sale within State on yearly basis. Banking charges will be @ 10% of the banked energy. The banking year shall be from April to March. However, drawl of banked energy will not be allowed during peak hours as determined by DISCOMs. The unutilized banked energy at the end of year shall lapse.

Transmission and Wheeling charges

For Power Projects set up for captive use/third party sale within the State after the commencement of “Rajasthan Solar Energy Policy, 2019” and “Rajasthan Wind and Hybrid Energy Policy, 2019” and up to March 2023 or for a capacity of 500 MW (Solar, Wind and Wind-Solar Hybrid, with or without storage, taken together) whichever is earlier, the transmission and wheeling charges will be levied as under-

- For Power Project set up for captive use and third party sale-@ 50% of normal transmission and wheeling charges for a period of 7 years from date of commissioning of the project.

- For Power Project with storage system and repowered wind projects set up for captive use and third party sale-@ 25% of normal transmission and wheeling charges for a period of 7 years from date of commissioning of the project.
- For Power Project set up for Electric Vehicle (EV) Charging Stations for captive use and third party sale-@ 100% exemption in normal transmission and wheeling charges for a period of 10 years from date of establishing of EV Charging Station.
- The above provisions will be applicable for an individual plant capacity of maximum 25 MW.

Power Projects with Storage Systems

- Initially, power up to the capacity of 5% of RPO target in MW (Solar & Non-Solar combined) from Solar, Wind and Wind-Solar Hybrid Power Projects with Storage System) will be procured by Rajasthan DISCOMs at a tariff discovered through competitive bidding, in addition to the RPO target.
- The minimum rated energy capacity of an Energy Storage System (ESS) shall be equal to 'X/2' MWh, where 'X' is the installed capacity of the Project in MW. For example, in case the installed capacity of a Project is 50 MW, then minimum energy rating of the ESS installed shall be 25 MWh.

Roof Top Solar System

- Under Net metering Scheme, Discoms will allow Solar Rooftop capacity addition up to 50% of the capacity of the distribution transformer of the area.
- Benefits, such as banking facility and payment of surplus energy by DISCOMs under Net-metering Scheme as applicable to domestic consumers, will also be applicable to Government offices, Government schools, Government colleges, Government hospitals and any other Government buildings.
- Solar Rooftop Systems can also be set up under Gross Metering Scheme. The entire generated power will be supplied to DISCOMs at a tariff determined by RERC. Solar Rooftop Systems up to 1 MW capacity will be allowed under this Scheme.

Opening and Maintaining Letter of Credit as Payment Security Mechanism under PPA by DISCOMs

- Ministry of Power (MoP) issued a circular regarding the opening and maintaining of adequate Letter of Credit (LC) as payment security mechanism under the power purchase agreements (PPAs) by the distribution licensees.
- Considering the unprecedented and force majeure situation, MoP has issued a directive stating that the power may be scheduled even if the payment security mechanism (PSM) is reduced by 50% against the initial contract.
- The order will be valid until 30 June, 2020.