JMK Research & Analytics

MONTHLY RE UPDATE

Indian Solar and Wind sector

February 2020

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Contents

Tenders

- About 2,676 MW of renewable tenders are issued in February 2020, including- 1,887 MW of utility scale solar tenders, 600 MW of wind tenders, 150 MW of renewable power procurement tenders and 40 MW rooftop solar tenders
- Auction is completed for about 4.9 GW of tenders.

New RFS Issued

Tender name	Technology	Ceiling Tariff (INR/kWh)	Other details	Bid submission date
NTPC, 600 MW, Wind, Pan India	Wind		Bid Security: INR 6 Lakh/MW	30-Mar-2020
NTPC, 1200 MW, Solar, Pan India, Feb 20	Utility scale solar	2.78	EMD: INR 4 Lakh/MW	19-Mar-2020
GUVNL, 500 MW, Gujarat, solar, Phase VIII, Feb 20	Utility scale solar	2.65	EMD: INR 4 Lakh/MW	7-Mar-2020
GSECL, 185 MW, EPC, Gujarat, solar, Feb 20	Utility scale solar		EMD: INR 4 Lakh/MW	6-Mar-2020
TPDDL, 150 MW, Delhi, Short term power procurement, Feb 20	Renewable Power procurement		EMD: INR 30,000/MW/Month	21-Feb-2020
HPCL, 2 MW, Bengaluru, solar, Feb 20	Rooftop Solar		EMD: INR 1.52 million	2-Mar-2020
BHEL, 1.7 MW, Madhya Pradesh, Solar, O&M, Feb 20	Solar O&M		EMD: INR 15,100	10-Feb-2020
IPGCL, Delhi, 30 MW, Solar Rooftop PV Plant, Feb 20	Rooftop Solar	4.5	EMD: INR 5 Lakh/MW	13-Mar-2020 for CAPEX 30-Mar-2020 for RESCO
KBUNL, 125 kWp, Bihar, Rooftop Solar PV Plant, Feb 20	Rooftop Solar		EMD:1 Lakh	26-Feb-2020
WBGEDCL, 750 kWp, West Bengal, Rooftop solar, Feb 20	Rooftop Solar		EMD: INR 8,10,000	28-Feb-2020
MMRDA, 4.43 MW, Mumbai, Rooftop solar, Feb 20	Rooftop Solar		Security amount: INR 996,000	26-Mar-2020

BSNL, 2.5 MW, Maharashtra, Rooftop solar, Feb 20	Rooftop Solar			17-Mar-2020

Source: JMK Research

Retendered/ Date extension

Tender name	Technology	Ceiling Tariff (INR/ kWh)	Other details	Bid submission date
APDCL, Assam, 100 MW, solar	Solar	4	EMD: INR 672,000/ MW PBG: INR 1.7 million	21-Feb-2020 (earlier issued in January 2018)
APDCL, Assam, 30 MW, Solar PV Power Project, CPSU Phase II, Jan 2020	Solar	3.13	EMD: INR 6,55,000/MW Each region PBG: INR 16,37,000/ MW	Bid submission date extended from 27-Jan-20 to 19-Feb-20
SECI, 400 MW, s "Round-the-Clock" Supply of RE Power to NDMC	Solar +storage		EMD: INR 3 million/ MW PBG: INR 6 million/ MW	Bid submission date extended from 20 Feb 2020 to 6-Mar-20
MSEDCL, Maharashtra, 200 MW, Intra State, Wind, Long term basis, Dec 2019	Wind power procurement	2.52	EMD: INR 0.5 million/MW	Bid submission date extended from 22-Jan-20 to 28-Feb-20
PGVCL, Gujarat, 600 MW, Jul 2019	Residential Rooftop Solar		EMD: For 'Category-A' bidders- Rs. 7.00 lakhs For Non-MSME Units in Rs. 7.00 lakhs MSME Units in Rs. 4.00 lakhs	Bid submission date extended till 28-Feb-20

Source: JMK Research

Result announced

Tender name	Status	Capacity tendered (MW)	Capacity allocated (MW)	Bidders/ winners details
NHPC, 2,000 MW, ISTS-I, Solar PV Project	Bid submitted	2,000		ReNew-600 MW SoftBank-600 MW Avaada-600 MW Tata-300 MW O2 Power-300 MW Brookfield-400 MW AMP Solar-300 MW NTPC-300 MW EDEN-300 MW
CEL, Maharashtra, 44 MW, Solar, Dec 2019	Project allotted	44	44	Gensol Engineering Pvt Ltd-13.2 MW (15.05) Kor Energy India Pvt. Ltd.-11 MW (15.05)

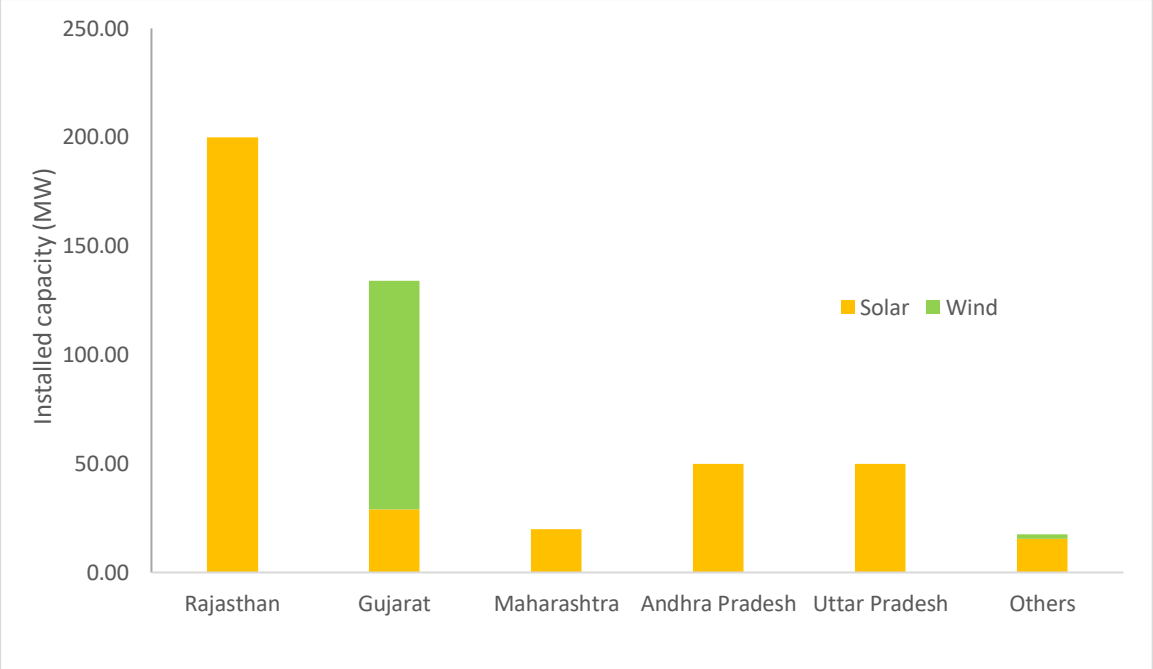
				Purshotam Profiiles Pvt Ltd-8.8 MW (15.05) Mitcon Consultancy and Engineering Services Ltd-6.6 MW (15.05) Kalpa Power Private Ltd-4.4 MW (15.05)
UPNEDA, Uttar Pradesh, 500 MW, Solar	Project allotted	500	184	NV Vogt Singapore-50 MW (INR 3.17/ kWh) Jakson in consortium with Al-Jomaih -100 MW (INR 3.18/ kWh) Vijay Printing Press 25MW (INR 3.18/ kWh) SolarArise- 9 MW (INR 3.18/ kWh)
SECI, 1200 MW, SPV Power Project, Pan India, VIII, Jan 20	Project allotted	1,200	1,200	SB Energy-600 MW (INR 2.50/ unit) AMP Solar- 100 MW (INR 2.50/ unit) EDEN-300 MW (INR 2.50/ unit) ReNew-200 MW (INR 2.51/ unit)
SECI, 1,200 MW, ISTS connected RE with storage, Phase VII	Project allotted	1,200	1,200	Greenko -900MW (Peak tariff 6.12, off peak 2.88) ReNew -300 MW (Peak tariff 6.85, off peak 2.88)

Source: JMK Research

Projects Commissioned

In January 2020, about 364 MW of new solar capacity and 107 MW of new wind capacity is added.

State-wise installations in solar and wind during January 2020 – 471 MW



Source: MNRE, JMK research

List of recently commissioned Projects

Project developer name	Technology	Capacity (MW)	Tender name	State	Date of commissioning
ENGIE	Solar	50	NTPC Andhra Pradesh 250 MW, Mar-2017	Andhra Pradesh	Feb 2020
EDF Renewables and SITAC	Wind	105	SECI Pan India 1,200 MW V, Sep-2018	Gujarat	Jan 2020
Hero Future Energies	Solar	200	SECI Rajasthan 500 MW, Dec-2017	Rajasthan	Feb 2020

Source: JMK Research

Investments/ Deal

Date	Company name	Deal type	Sector	Acquirer/ Investor	Deal value	Solar Asset Acquired	Stake Acquired
7 Feb 2020	Adani Green Solar	Equity	Solar	Total	INR 3,633 Crore	NA	50%
11 Feb 2020	Origin Renewables Pvt Ltd	M&A	Rooftop Solar	Everstone Capital and Lightsource BP	NA	NA	100%

21 Feb 2020	Mahindra Renewables	M&A	Renewable	CLP India	INR 340 crore	122 MW	100%
28 Feb 2020	Acme Clean Tech Solution	M&A	Solar	Actis	INR 3,000 crore	600 MW	100%

Source: JMK Research

Brookfield, Mubadala may invest $600m in Tata Power's InvIT

Global investors including Brookfield, Omers, Mubadala and Abu Dhabi Investment Authority (ADIA) are in early stage discussions with Tata Power to invest around $500-600 million (Rs 3,500 crore-Rs 4,200 crore) in its renewable energy platform. The company is planning to unlock value and pare debt by creating an infrastructure trust (InvIT) for its wind farms and solar parks, and bring on board investors, said people in the know.

NTPC hopeful of completing NEEPCO and THDC acquisition by next month

State-owned power producer NTPC Ltd is hopeful of completing the planned acquisition of the government's 100 per cent stake in North Eastern Electric Power Corporation Ltd (NEEPCO) and 74.5 per cent stake in THDC India by the end of the current financial year.

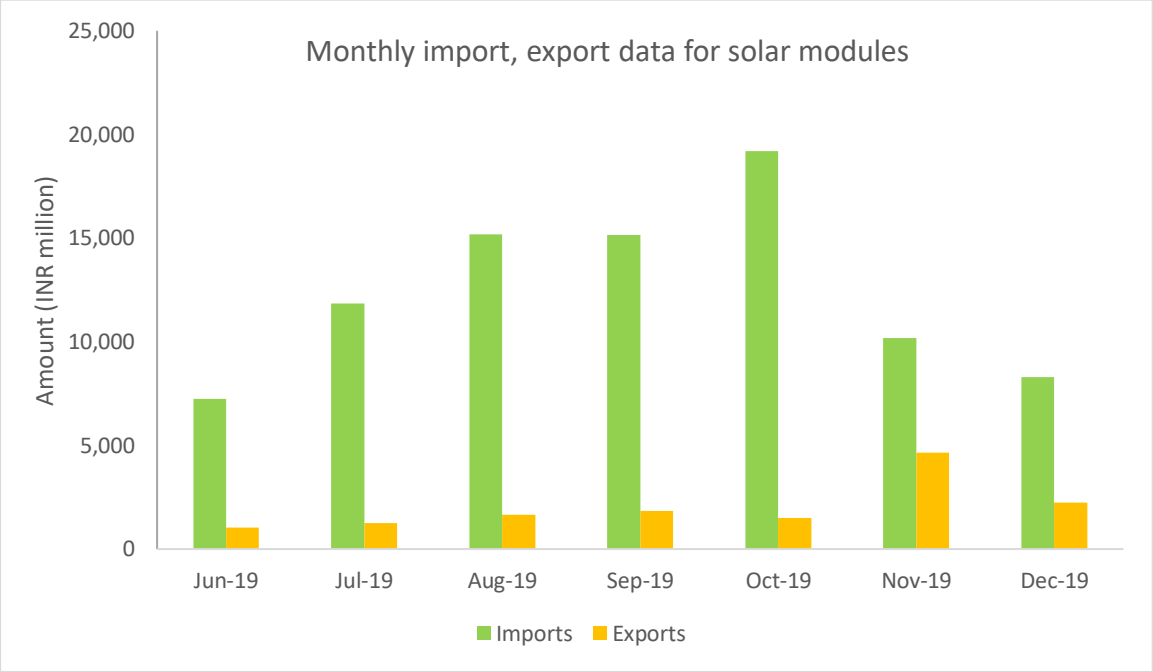
SBI approves Suzlon Energy's Rs 12,700 crore debt-restructuring plea

The State Bank of India (SBI) has approved Suzlon Energy- a wind power company — proposal to revamp its Rs. 12,700 crore debt. The largest Indian Commercial Bank's move is seen as a big relief for the debt-laden wind energy firm Suzlon Energy. Under the SBI approved debt revamp plan, Suzlon Energy's Rs 12,700 crore debt will be converted into sustainable debt and non-sustainable debt. Suzlon Energy will pay this debt for over 20 years.

NTPC raises $750 million to fund green push

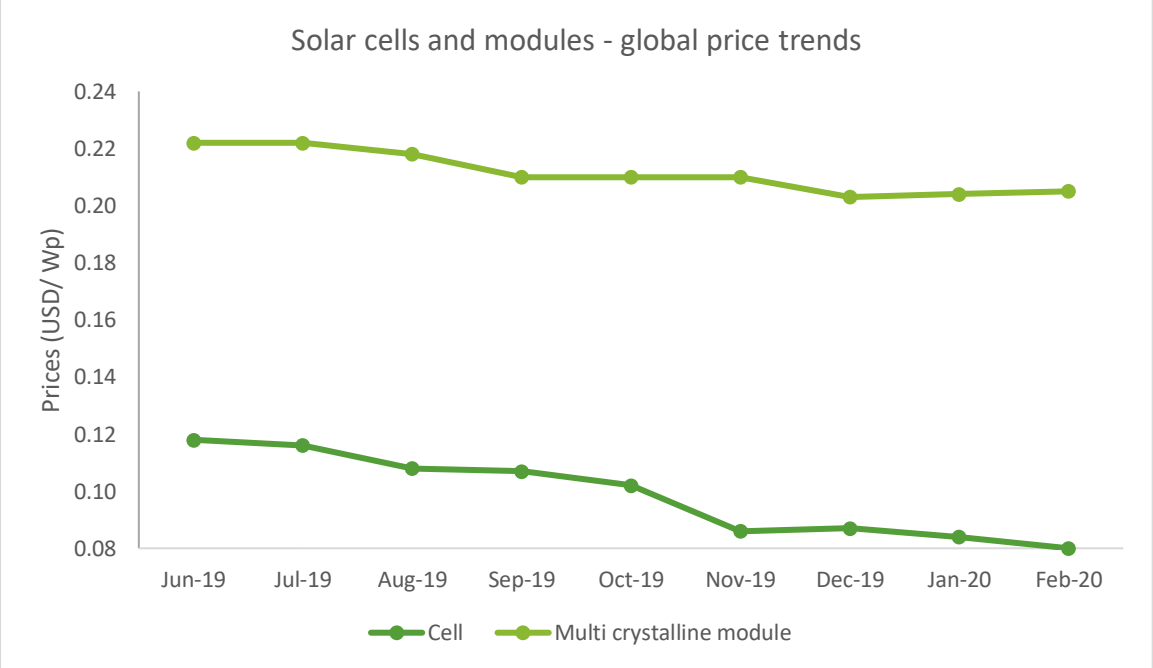
State-run generation utility NTPC has raised a Japanese yen loan worth $750 million, the largest ever debt raised by any Asian Corporate from offshore Samurai loan market, to fund its green push and acquisition of hydel units under the Centre's disinvestment plan.

Monthly import-export statistics



Source: Ministry of Commerce, JMK research

Global Price Trends



Source: EnergyTrend, JMK Research

Policy and Regulation

Ministry of Finance issued clarification related to force majeure due to Corona Virus

- Supply chain disruption are expected due to spread of coronavirus in China
- Ministry of Finance has issued a clarification that coronavirus will be covered in the force majeure clause (FMC) and should be considered as a case of natural calamity.
- It further states that FMC clause should be invoked wherever it is appropriate.

MNRE notifies clarification on Approved List of Models and Manufacturers (ALMM)

This order explains the definition of the model, application fee, and provisions for manufacturers currently exempted from BIS certification for ALMM application purposes.

A. Classification of the Models

- As per the order, the model, as mentioned in the ALMM guidelines, refers to modules or cells of the same nominal power output rating. All BIS approved modules or cells with the same nominal output rating will be treated as one model.
- Since a single model of a module has a range of power wattage, the ALMM application form provides for specifying both the mean wattage and the applicable range of wattage. However, such a range of wattage may vary from among manufacturers based on the method used by them for categorizing the model.
- The clarification states that all the modules based on the same technology (monocrystalline, multi-crystalline, mono-PERC, bifacial, half-cut, and others) and having the same number of cells and having power ratings within ±5% of the mean wattage will be treated as one model.

B. Application Fee

- The application fee for one model of module or cell will be Rs. 5,000 /MW of the total installed manufacturing capacity for solar PV modules or cells.
- This amendment also specifies that for PV module manufacturers having total installed manufacturing capacity of modules less than or equal to 50 MW, the application fee for one module will be Rs. 2,500 /MW of the total installed manufacturing capacity of solar modules or cells.
- In earlier notification, there was no provision for small PV module manufacturers having capacity less than or equal to 50 MW.

C. Enlistment under ALMM under PV manufacturers currently exempted under BIS standards

- Solar PV manufacturers who are exempted from BIS registration are eligible to enlist their solar PV modules. However, the validity of their enlistment in ALMM will be in line with the validity of the exemption from BIS certification.
- If the solar PV manufacturer has enlisted his products under ALMM without BIS certification, the manufacturer will have to obtain BIS registration and submit the documents to MNRE at least one month before the date of the expiry of the ALMM enlistment.

MNRE clarifies Basic Customs Duty (BCD) on import of solar photovoltaic cells and modules

- The MNRE notification clarifies that though the tariff rate for solar cells (not assembled) and solar cells that are assembled in modules or made up into panels has been increased

from nil to 20% in the Union Budget 2020-21, however the effective basic custom duty remains to be zero.

MNRE request Solar Manufacturers to list machinery/ capital goods for exemption in BCD

- MNRE has issued a notification asking solar PV manufacturers and associations to submit a list of machinery and capital goods which is required for setting up manufacturing units for solar cells, modules, wafers, ingots, and polysilicon.
- These machinery and capital goods can be included in Basic Customs Duty (BCD) exemption list.

MNRE forms Renewable Energy Standardization Cell (RESC)

- MNRE has formed RESC comprising of members from various organizations including MNRE, NISE, NIWE, NIBE, IIT.
- The objective of this cell would be:
    i. To identify areas in renewable energy where standard needs to be developed
    ii. Identify international standards such as International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) for applications in Indian climatic conditions
    iii. Initiate the process of developing standards involving experts from research and development (R&D) institutions, test labs, and industry.

MNRE forms Renewable Energy Industry Promotion and Facilitation Board (REIPFB)

- MNRE has formed REIPFB to Deal with challenges and issues being faced by renewable energy sector and to remove obstacles and difficulties which investors face in bringing investment to the sector
- The objective of this board would be:
    i. Provide all assistance to the industry in project development and implementation
    ii. Suggest steps for enhancing ease of doing business, increasing confidence of investors and reducing risk and problems of RE (renewable energy) sector.
    iii. To liaise with governments for smooth implementation of RE projects
    iv. To liaise with financial institution for easy access of finance for RE projects
- The REIPFB will meet twice a month

MNRE informs for setting up two ultra-mega renewable energy parks of 50 GW

- MNRE plans to set up two ultra-mega RE parks to set up solar, wind and hybrid projects.
- Location of the parks is as below
    i. Khavada, Gujarat
    ii. Jaisalmer District, Rajasthan
- All the necessary clearances required to develop RE parks from state government and ministry of defence are already in place.

NTPC designated as Renewable Energy Implementing Agency

- In reference to CERC regulation for grants of connectivity, long term access and medium-term access in inter-state transmission and related matters, 2019 NTPC is designated at renewable energy implementing agency
- It will facilitate the application of connectivity for LTA in ISTS network.

KERC issues Renewable Energy and Net Metering Regulations, 2020

- DISCOMS and all the obligated entities have the following RPO to be fulfilled:

	RPO % of total energy consumption		
Financial Year	**Non- Solar**	**Solar**	**Total**
2019-20	8.00	4.00	12.00
2020-21	9.00	5.25	14.25
2021-22	10.25	6.75	17.00
2022-23	*	*	*
2023-24	*	*	*

*Will be notified by the commission later

- Discom shall provide net metering to the prosumer on first come first serve basis, within 10 days from the date of submission of the approval from the Electrical Inspector.
- If the DISCOM is unable to provide a net meter within ten days, then the consumer can purchase the net meter at his own cost.
- Regulatory commission will penalize distribution licensees Rs. 1000 per day for each day of delay if they fail to meet the timelines as specified in these regulations.
- The penalty accrued during the year will be deducted from the Return on Equity of the Discom for that year.
- Exemption from transmission and wheeling charges and cross-subsidy surcharges for the electricity generated and consumed under the net metering facility
- Discom shall constitute an in-house renewable energy cell to promote renewable deployment in the state within one month.
- Renewable energy systems installed by a prosumer at his premises should not be less than 1 kW or exceed 1 MW capacity.
- The cumulative capacity of distributed energy systems allowed to be interconnected with the distribution network shall not exceed 75 % of the distribution transformer capacity.
- Prosumer have the right of wheeling and consumption of excess electricity in the other premises irrespective of the category of tariff.
- Banking is allowed with the distribution licensee and to be carried forward to the subsequent billing periods of the settlement period.

Himachal Regulatory Commission notifies RPO Amendment

- RPO obligation to be fulfilled by obligated entity, other than the distribution licensee, shall fulfill from renewable sources other than the hydro-electric sources.
- This comes due to the order from Ministry of Power in 2019, where large hydro electric power is also considered as Renewable Energy.

Punjab Regulatory Commission defers implementation of Forecasting, Scheduling, Deviation Settlement Regulations

PSERC has notified forecasting and scheduling regulation in January 2019. These regulations should have come into force six months from the date of publication. However, Punjab State Transmission Company has requested PSERC to extend the deadline for implementation of these regulations to 1st January 2020. Now again they have requested for the extension of the timeline for implementation of these regulation. PSERC has agreed to this and now Forecasting, Scheduling, Deviation Settlement Regulations will come into force from 1st January 2021.

Gujarat Electricity Regulatory Commission release draft paper for procuring of solar power by distribution licensee

The Commission has proposed the following:

- Tariff for all prospective Solar power projects should be done based on the rates discovered through competitive bidding, and discontinue the practice of determining generic tariff.
- Tariff for projects less than 5 MW, tariff would be additional 20 paisa per kWh from tariff discovered under the competitive bidding in different time period of 6 months of the year.
- 100% transmission losses and charges would be applicable for captive as well as third party.
- Wheeling charges are 50% for captive use, 100% for third party sale.
- If solar power generator wheels electricity to more than two locations, then he will have to pay INR 0.05/unit for the energy fed into the grid
- CDM benefit can be retained in first year, and it will increase by 10% from second year until it reaches 50%.
- Banking shall be allowed within one billing cycle of the consumer, however peak charges shall be applicable for consumption during peak hours.
- Surplus solar energy not consumed shall be bought by Discom at Rs. 1.75/unit.

The Tamil Nadu Electricity Regulatory Commission TNERC release draft paper for procuring of solar power by distribution licensee

The Commission has proposed the following:

- To levy 100% of the charges transmission, wheeling charges, scheduling, and system operation charges as applicable to conventional power plants
- To levy 100% of cross-subsidy surcharge applicable to conventional power.
- To levy reactive power charges as specified in its Order issued from time to time.
- Any power drawn during the non-generating period of solar power (beyond 7.00 AM to 6.00 PM) will be charged at high tension (HT) industrial tariff.
- Any Power drawn during 7.00 AM to 6.00 PM in excess of generation will also be charged at HT industrial tariff.
- If the energy drawn by the captive user or third-party buyer exceeds the generation, the energy and demand charges will be regulated as per the Commission's open access regulation and the deviation settlement mechanism (DSM).
- The wheeling of energy for solar power will be permitted only during the generation of electricity and will be adjusted for the billing period.

- The excess energy generated but not consumed (subject to the cap fixed) can be sold at the rate of 75% of the respective solar tariff fixed, and where no tariff is fixed, it can be sold at 75% of the lowest tariff discovered during the year through competitive bidding process.
- Any generation in excess of 10% of annual consumption in a financial year will not be considered for the payment of unutilized energy.

The Tamil Nadu Electricity Regulatory Commission TNERC release draft paper for procuring of wind power by distribution licensee

The Commission has proposed the following:

- Two methods of banking are proposed
    i. Any generation in excess of 10% of annual consumption from the WEGs in a financial year will not be considered for payment of unutilized banked energy
    ii. Banking of energy is proposed to be withdrawn in phases for the old machines. As a first step, banking in kind is proposed to be withdrawn for the WEGs that completed 10 years
    iii. There shall be no facility of banking of energy for third party power purchase
- To levy 100% of the charges transmission, wheeling charges, scheduling, and system operation charges as applicable to conventional power plants
- To levy 100% of cross-subsidy surcharge applicable to conventional power.
- 25 paise per 21 kVARh will be levied on wind energy generators, who draw reactive power up to 10% of the net active energy generated. Anyone drawing in excess of 10% of the net active energy generated will be liable to pay double the charge.
- If the energy drawn by the captive user or third-party buyer exceeds the generation, the energy and demand charges will be as per the Commission's open access regulation and the deviation settlement mechanism (DSM).
- The excess energy generated but not consumed (subject to the cap fixed) can be sold at the rate of 75% of the respective wind tariff fixed, and where no tariff is fixed, it can be sold at 75% of the lowest tariff discovered during the year through competitive bidding process.
- Any generation in excess of 10% of annual consumption in a financial year will not be considered for the payment of unutilized energy.