

RE monthly Update

October 2020

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1. Tenders

New Tenders

- About 726 MW of renewable tenders are issued in October 2020, including 265 MW of EPC tender by NHPC and SJVN. Another 278 MW of solar project development tenders was issued by various government agencies. BHEL has issued three O&M tenders of 90 MW in Gujarat, Telangana and Andhra Pradesh.
- Apart from this, there are about 93 MW of rooftop tenders that were issued in last month
- Bids of 4900 MW were also submitted for SECI 1070 MW Solar tender under Tranche III.

New RFS Issued

Table 1.1: New RFS issued

Tender Name	Technology	Tender Scope	Capacity (MW)	Other Details (EMD)	Bid Submission date
UREDA, 250 MW, Solar, Uttarakhand, Oct 2020	Distributed Solar	Project Development	250		30-Nov-20
NHPC, 100 MW, Solar, Rajasthan, Oct 2020	Utility scale solar	EPC	100	INR 33 million	17-Oct-20
SJVN, 100 MW, Solar, Gujarat's Raghnes-da Solar Park (Phase X), Oct 2020	Utility scale solar	EPC	100	INR 60 million	19-Oct-20
NHPC, 65 MW, Solar, Uttar Pradesh, Oct 2020	Utility scale solar	EPC	65	INR 3 million	18-Nov-20
BHEL, 50 MW, Solar, Kadiri, Ananthapur, AP, Oct 2020	Utility scale solar	O&M	50	INR 130,000	26-Oct-20
MPUVNL, 30 MW, Grid-connected Rooftop Solar, Madhya Pradesh, Oct 2020	Grid-connected Rooftop Solar	RESCO	30	INR 24 million	27-Nov-20

Tender Name	Technology	Tender Scope	Capacity (MW)	Other Details (EMD)	Bid Submission date
BHEL, 30 MW, Solar, Telangana, Oct 2020	Utility scale solar	O&M	30	INR 1.28 million	30-Oct-20
Electricity Department Puducherry, 30 MW, Rooftop Solar (Phase II), CAPEX Mode, Oct 2020	Rooftop Solar	CAPEX	30	INR 200,000	20-Nov-20
(NBPDC) Bihar, 20 MW, Residential Rooftop Solar, Bihar, Oct 2020	Rooftop Solar		20	INR 200,000	3-Nov-20
GEDA, 12 MW, Grid-connected Rooftop Solar, Government Buildings, Gujarat, Oct 2020	Rooftop Solar		12	INR 300,000 for systems between 3 kW-10 kW INR 500,000 for systems between 10 kW to 25 kW and 25 kW to 50 kW*	9-Nov-20
ANERT, 10 MW, SPV Power Plant, Kerala, Oct 2020	Utility scale solar	Project Development	10	INR 500,000	20-Oct-20
OREDA, 10 MW, Solar, Konark Town, Oct 2020	Utility scale solar	Project Development	10		10-Nov-20
BHEL, 10 MW, Solar, Gujarat, Oct 2020	Utility scale solar	O&M	10	INR 662,000	30-Oct-20
Uttar Pradesh Jal Nigam, 2 MW, Solar, Varanasi, Oct 2020	Distributed Solar		2	INR 1.66 million	19-Oct-20
Gujarat's Sabar Dairy, 2 MW, Solar, Idar and Dhansura, Oct 2020	Solar		2	INR 1 million	23-Oct-20
Eastern Coalfields, 1.4 MW, Rooftop Solar, Jharkhand and West Bengal, Oct 2020	Rooftop Solar		1.4		4-Nov-20
Military Engineer Services, 1 MW, Solar, Mathura, Oct 2020	Solar		1	INR 675,000	21-Nov-20
NRANSCL, 2.9 MW Solar Rooftop	Rooftop Solar	CAPEX	2.9	INR 1,348,600 million	17-Nov-20

Date Extension

Table 1.2: Date Extension

Tender Name	Technology	Other Details	Bid Submission date
SECI, 7.5 GW Solar Power Projects in Leh and Kargil, Jammu and Kashmir, Dec 2018	Solar	INR 600,000	Bid submission date extended till 30-Nov-2020
SECI, 2.5 GW ISTS-connected Solar PV Power Projects at UMREPP, Koppal District, Karnataka (ISTS-X), Apr 2020	Solar	INR 400,000/MW/Project	Bid submission date extended till 27-Nov-2020
SECI, 100 MW, Solar, Chhattisgarh, 50 MWh BESS, Sep 20	Solar + Battery Storage	INR 70 million	Bid submission date extended till 27-Nov-2020
SECI, 1.2 MW, wind-solar hybrid (Tranche III, ISTS program),	Wind-Solar hybrid	"INR 500,000/MW Ceiling tariff = INR 2.88/kWh for 25 years"	Bid submission date extended till 11-Nov-2020
SECI, 5000 MW, Thermal + RE Pan India, Mar 2020	Renewable + Thermal	INR 0.5 million/MW/Project	Bid submission date extended till 3-Nov-2020
SECI, 15 MW, Grid-connected Floating solar PV, Bilaspur, Himachal Pradesh	Floating solar PV	"INR 13,500,000 million The maximum levelized tariff = INR 3.41/kWh for 25 years"	"Online – 30-Nov-2020 Offline – 2-Dec-2020"

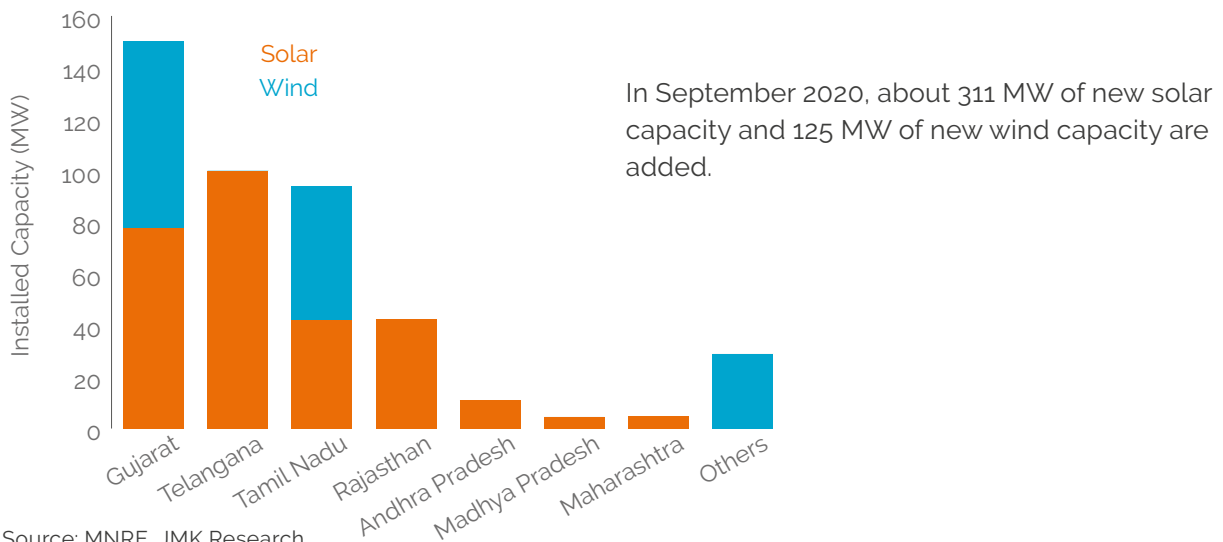
Results Announced

Table 1.3: Results Announced/ Bids submitted

Tender name	Status	Capacity tendered (MW)	Capacity allotted (MW)	Bidder details
SECI, 1070 MW, Solar, (Tranche III), Rajasthan, July 2020	Bids submitted	1070	4900	<ul style="list-style-type: none"> • NTPC – 600 MW • SJVN – 400 MW • Brookfield – 400 MW • SembCorp – 400 MW • O2 Power -300 MW • Eden – 300 MW • Ayana – 300 MW • Vector Green – 300 MW • Acme – 250 MW • ReNew – 250 MW • Azure – 250 MW • Hero – 250 MW • Tata – 250 MW • Sprng – 250 W • Torrent – 200 MW • Amp Solar – 100 MW • Solar Arise – 100 MW

2. Projects Commissioned

Fig 2.1: State-wise installations in Solar and Wind during September 2020 – 436 MW



Source: MNRE, JMK Research

3. Investments/ Deals

Table 3.1: Investment and deals in October, 2020

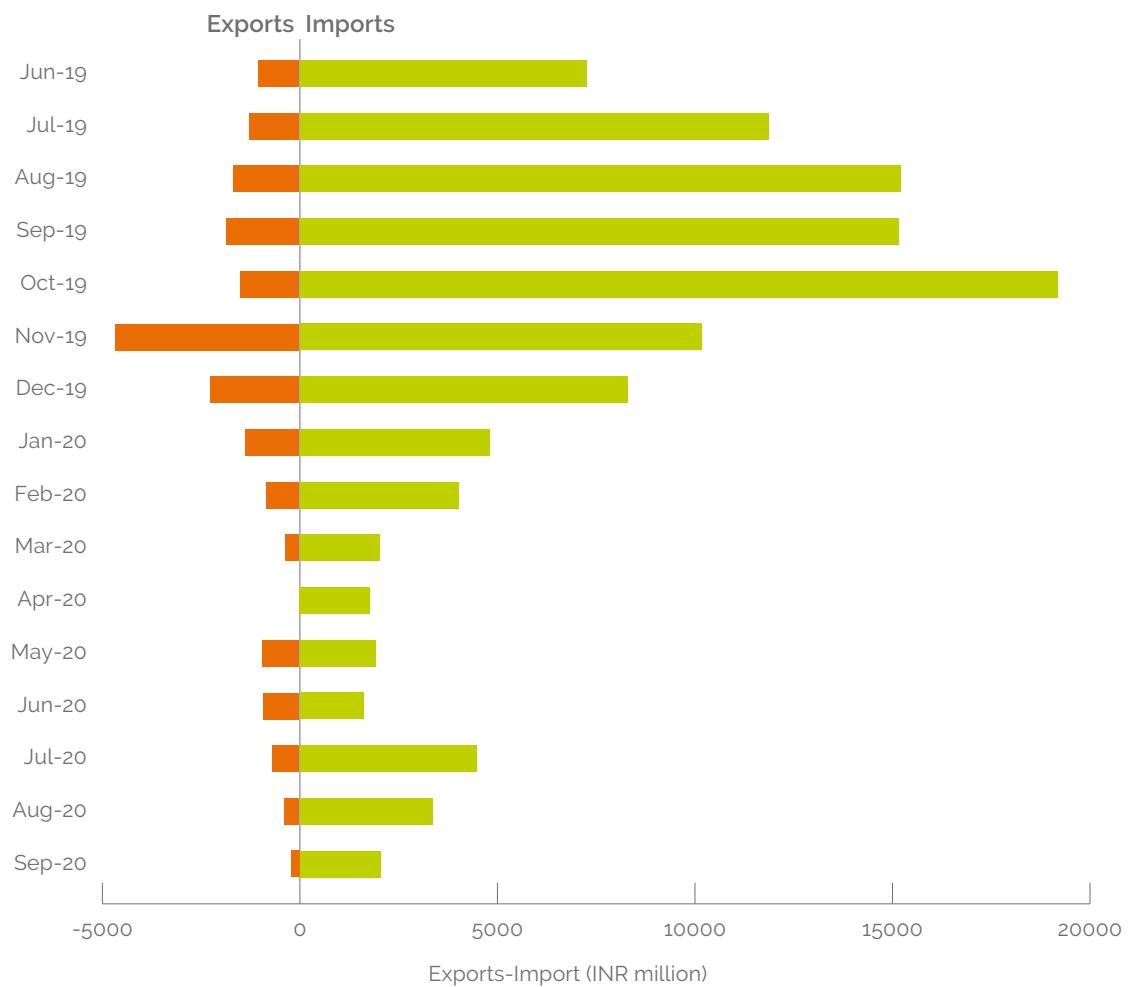
Company Name	Deal Type	Sector	Asset	Investor	Deal Value
Adani Green Energy Limited	Joint Venture	Solar	205 MW	French Oil and Gas major TOTAL	INR 16.32 billion
Adani Green Energy Limited	Acquisition	Solar	205 MW	Essel Green Private Limited and Essel Infraprojects Limited	INR 13 billion
ReNew Power	Green Bond				\$325 million (with rate of 5.375% and maturity period – 3 and a half year.)
Avaada Energy Private Limited	Equity	Diversified portfolio (Solar and Wind)	Avaada aims to reach 4.3 GW of capacity by 2022	Deutsche Investitions- und Entwicklungsgesellschaft (DEG) and KfW Group	\$10 million
CLP Wind Farm (India)	Green Bond	Wind			\$2.96 billion

Source: JMK Research

4. Monthly Import/ Export Trends

Compared to August 2020, the imports have decreased by 39% while exports have fallen by 44% in September 2020.

Fig 4.1: Exports - Imports trend



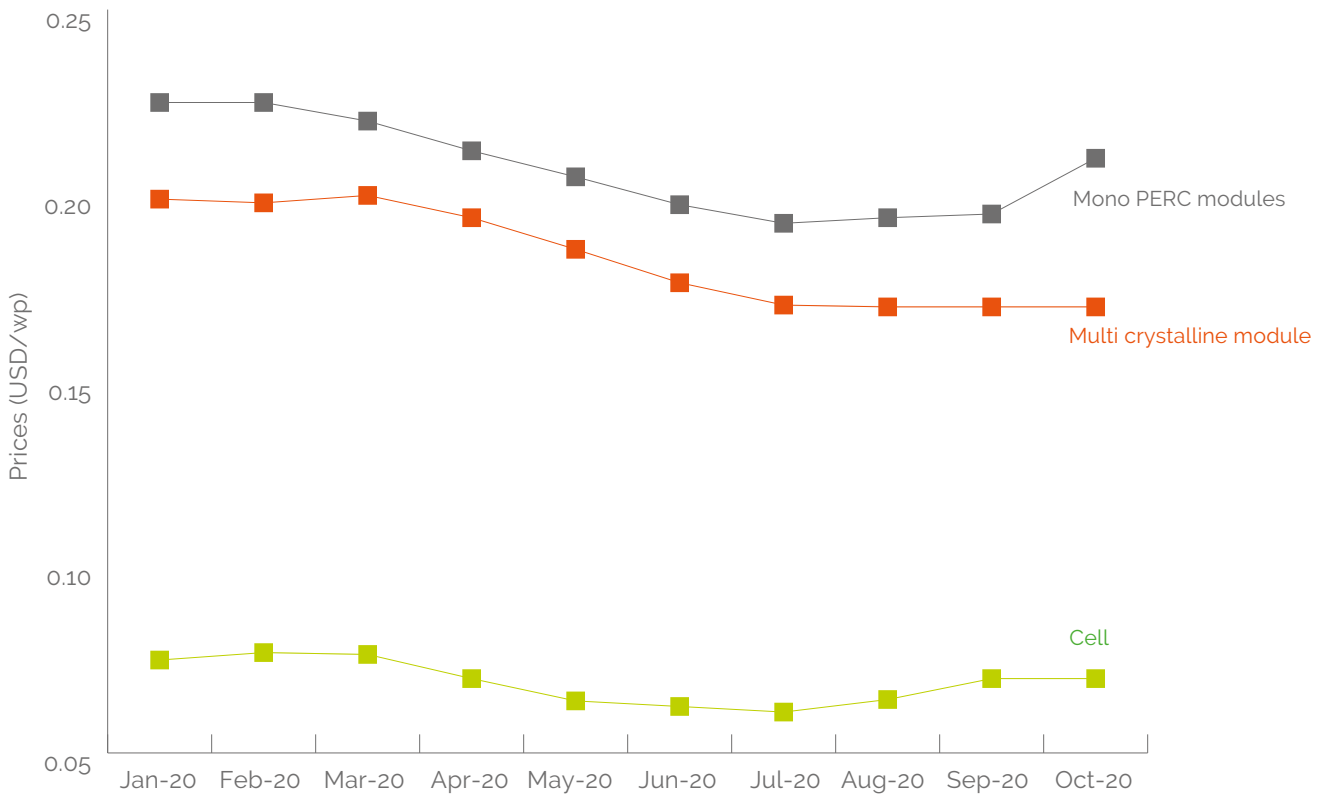
Source: Ministry of Commerce, JMK Research

5. Module Price Trends

Solar cells and modules - Global price trends

Compared to September 2020 prices of cells, multi crystalline and mono PERC modules increased marginally by 1%, 1.5% and 0.5% respectively.

Fig 5.1: Solar Cells and Module price trends

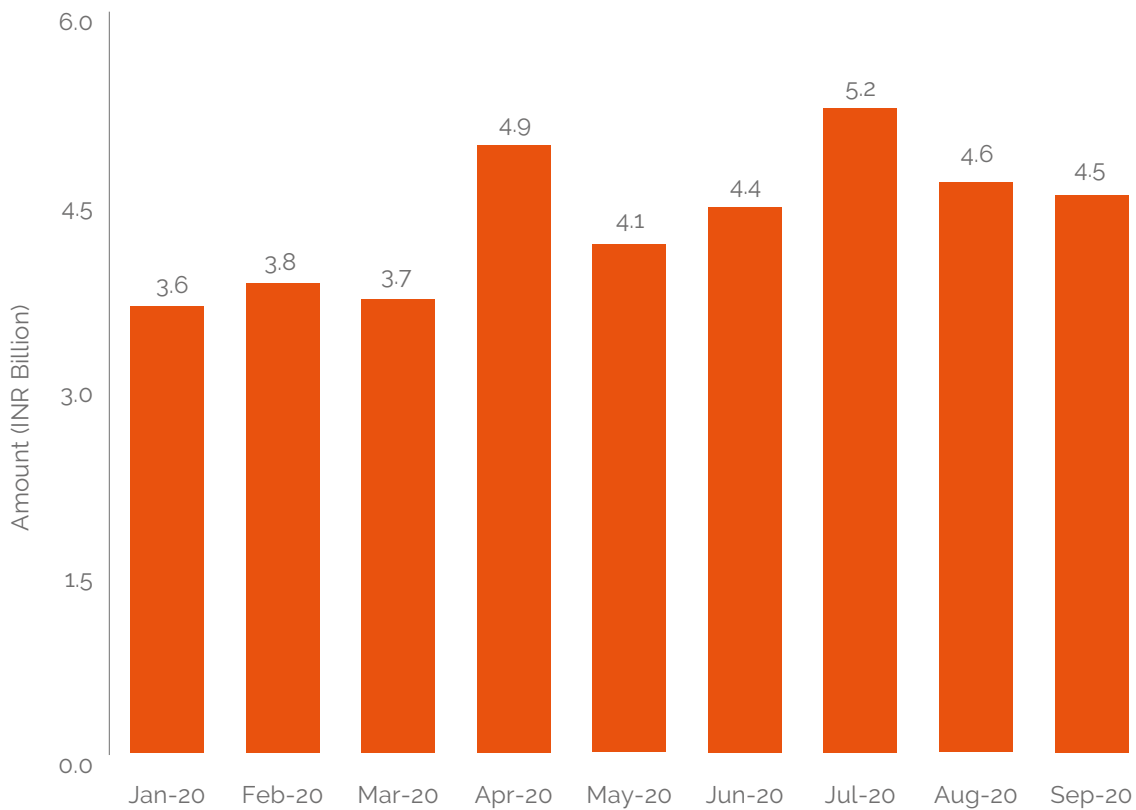


Source: PVInfoLink, JMK Research

6. Monthly payments by SECI

The Solar Energy Corporation of India Limited (SECI) paid nearly INR 4.53 billion to developers for the purchase of solar and wind power in September 2020. Compared to August 2020, the payment disbursal decreased by ~1.52%.

Fig 6.1: Monthly payments by SECI to solar and wind developers



Source: SECI JMK Research

7. Policies and Regulations

Central

MNRE issues Amendments to Guidelines for Tariff based Competitive Bidding

- MNRE with its notice dated 6 October, 2020 has issued amendments to the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects.
- The amendments address the minimum period of controlling shareholding to be maintained by the developers and the alternative arrangement for deposits and bank guarantees in the form of a letter of undertaking (LoU).
- If the successful bidder is a single company, its shareholding in the special purpose vehicle or company executing the power purchase agreement (PPA) should not fall below 51% in one year before the commercial operation date (COD) of the project. Earlier, this time frame was three years. Similarly, for a consortium, the members' combined shareholding should not fall below 51% in the one year before the COD. Further, the successful bidder should ensure that its promoters would not cede control of the bidding company or consortium in one year from the COD, which was earlier set at three years.
- As per the amendment, bidders should furnish the earnest money deposit (EMD) in the form of a bank guarantee or a LoU. If the solar power generator fails to execute the PPA within the stipulated period, the procurer will forfeit the EMD. Earlier, the EMD was only considered through bank guarantees.
- These amendments considered the proposal to accept letters of undertaking from three non-banking financial institutions as bank guarantees in renewable tenders. These three lenders are the Indian Renewable Energy Development Agency Limited (IREDA), Power Finance Corporation Limited (PFC), and REC Limited (REC).

Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects

- Individual minimum size of project allowed is 50 MW at one site and a single bidder cannot bid less for less than 50 MW. Further the rated

power capacity of one resource (wind and solar) shall be at least 33% of the total contracted capacity.

- The minimum annual Capacity Utilization Factor (CUF) shall not be less than 30%. In case of less energy supply than the energy corresponding to the minimum CUF, the HPG will be liable to pay @50% of the PPA tariff for the shortfall in energy terms and in case of more energy availability, Generator will be free to sell it to any other entity.
- In case the Procurer purchases the excess generation, the same may be done at 75% of the PPA tariff, and provision to this effect shall be clearly indicated in the RFS document.
- The Wind-Solar Hybrid Projects may be located at the same or different locations. The minimum capacity to be injected at each injection site shall be 50 MW.
- The Power Purchase Agreement (PPA) period should not be less than 25 years from the date of Scheduled Commissioning Date (SCD).
- Storage facility may be added into the hybrid projects.
- The Commissioning period of hybrid projects should take place within 18 months from the date of execution of the PPA.
- In case if SECI (nodal agency) unable to enter into a Power Sale Agreement (PSA) within 6 months of issue of letter of award, then those projects will get cancelled.
- If there is delay in grant of Long Term Access (LTA) by the CTU or there is a delay in readiness of the Inter State Transmission System (ISTS) substation at the Delivery Point. These delayed projects shall be revised to a date 60 days subsequent to readiness of the Delivery Point.
- Two kinds of tariff based bidding are there: (a) fixed tariff (b) escalating tariff. The Procurer may select either of the following options.
- Hybrid Power Generator have right to use 100% of the required land for a period not less than the complete terms of PPA, on or before the Scheduled Commission Date (SCD).
- The Power Generator shall be eligible for a Minimum Generation Compensation (due to back down) from the Procurer. This Generation Compensation is to be paid as part of the energy bill.

- Bidders need to qualify technical and financial criteria. For financial criteria the net worth requirement should be at least 20% of the Estimated Capital Cost for project for the year in which bids are invited.

MoP issued Draft Electricity (Change in Law, Must-run status and other Matters) Rules, 2020

- MNRE with its Notice dated 1 October, 2020 has issued Draft Electricity (Change in Law, Must-run status, other Matters) Rules, 2020. MNRE has invited comments on aforementioned rules within 21 days by 22 Oct, 2020.
- This draft is mainly related to “pass through option” in the event of change in law and compensation to renewable energy generators for losses due to power not being scheduled by procurers.
- As per these Draft rules any project developer may modify tariffs to compensate for change in law events within 30 days without need to file petition with regulatory body.
- According to these Draft rules, the parties affected by a change in law event must be restored to the same economic position as before the event by way of adjustments to the monthly tariff. The final pass through based on the formula is to come into effect after 30 days of the change in law event and is to be set on a per-unit-of-electricity-basis.
- On the basis of submission of relevant documents by generator, procurer, or intermediary procurer, the regulator will verify the calculation and true it up within 60 days of the pass-through coming into effect.
- As per these proposed rules any wind, solar, wind-solar hybrid, hydro-power project, or any other renewable energy-based power project will be considered a must-run power project. They should not be subjected to power curtailment or regulations on account of merit order dispatch or other commercial considerations.
- The only exceptions for curtailment of these projects must be in the event of any technical constraints or grid security reasons. In these cases, the power procurer is expected to compensate the generator for any losses as per the rates prescribed in the PPA.
- It also stated that if a notice of curtailment is provided 24 hours before

the scheduled supply, the generator is required to sell the unscheduled power to the power exchange. The amount from such sales must be adjusted against any compensation payable as per the PPA every month. Any excess amount is to be carried forward and adjusted in the next month.

- As per these rules when the rate of compensation is not specified in the PPA or the power sale agreement (PSA), the rate will be set at 75% of the PPA rate per unit.
- The rules also made provisions for trading licensees and distribution licensees who have already signed agreements to sell renewable power before the date of effect of these new rules. They said that the tariff would be set based on the weighted average of all tariffs quoted by other selected suppliers.

Kerala

Kerala resume GBI for off-GRID Captive Solar Projects

- Kerala State Electricity Regulatory Commission (KSERC) with its Order dated 1 October, 2020 has issued Order in the matter of in the matter of Generation Based Incentive (GBI) for Off Grid Captive Solar Power Plant.
- On 30 September, 2014 the Commission issued Order in the matter of Generation Based Incentive (GBI) for Off Grid Captive Solar Power Plants with following directions: -
 - All licensees shall provide generation based incentive (GBI) at the rate of Rs. 1.00/unit for a period of five years from 30.09.2014 or till KSEB Ltd meet its solar RPO for any year by purchasing solar energy or producing solar energy by its initiatives whichever is earlier.
 - The energy for which incentive paid by the licensee to the consumer shall be accounted towards the solar renewable power purchase obligation of each licensee.
- The order was set to expire on 30 September, 2019. KSEB was yet to reach its RPO targets when the program expired. However, the validity was later extended by two years, until 30 September, 2021, through a suo motu order.

Telangana

TSERC proposes Pre-fixed levelized Tariff of Rs. 3.13/kWh for KUSUM Solar Projects

- Telangana State Electricity Regulatory Commission (TSERC) with its suo-moto notice has proposed norms for a pre-fixed levelized tariff for solar projects under Component-A of the Pradhan Mantri Kisan Urja Suraksha EvamUtthan Mahabhiyan (PM KUSUM) program.
- Earlier Government of India had launched the PM-KUSUM Scheme comprising the following components:
 - **Component-A:** Setting up of 10,000 MW of Decentralized Ground Mounted Grid Connected Solar Power plants of individual plant size up to 2 MW;
 - **Component-B:** Installation of 17.50 Lakh Standalone Solar Powered Agriculture Pumps of individual capacity up to 7.5 HP;
 - **Component-C:** Solarisation of 10 Lakh Grid-Connected Agriculture Pumps of individual pump capacity up to 7.5 HP.
- TSERC proposed a pre-fixed levelized tariff of Rs.3.13 /kWh for solar projects between 500 kW and 2 MW in size which are to be commissioned under Component-A of the PM-KUSUM program.

Rajasthan

Rajasthan rules in favour of DISCOM for not fulfilling RPO

- Rajasthan Renewable Energy Corporation Ltd. (RREC) has filed a petition on 17 June, 2019 seeking directions against the Discoms for non-compliance of Renewable Energy Purchase Obligation (RPO) for the financial year 2015-16, 2016-17 and 2017-18.
- Rajasthan Electricity Regulatory Commission (RERC) in May issue new amendments to its regulations on renewable energy certificate (REC) and RPO compliance framework passed in 2010. The new rules came into effect from April 1, 2019. RPO targets for FY 2015-16, FY 2016-17 & for FY 2017-18 are 10.2%, 11.4% and 14.25% respectively.
- RRECL in its Petition submitted that DISCOMs did not fulfill the targets, and there was a shortfall in compliance.
- However, DISCOMs argued said that the purchase of energy from renewable sources depends on renewable energy availability. Hence, the shortfall in RPO compliance cannot be attributed to the DISCOMs.

- DISCOM stated the reason for not achieving the RPO target was that some of the projects had not come upon the scheduled date of commissioning. The DISCOMs stated that one of the main reasons for the shortfall was the fact that the actual capacity utilization factor (CUF) achieved by the wind generators was only 15.83%, 15.17%, and 17.07% in the year 2016-17, 2017-18, and 2018-19, respectively against the normative CUF specified by the Commission.
- RERC pointed out that the DISCOMs had made every effort to comply with RPO targets and had signed a sufficient number of PPAs under which the required quantum of electricity could have been obtained.
- The regulatory authority pointed out that even though the DISCOMs signed an adequate number of PPAs in the past, the generation in terms of energy was not to the expected level. Consequently, there was a shortfall in RPO compliance.
- After hearing both the parties, the Commission advised the DISCOMs to assess the energy requirement for RPO compliance more realistically in advance and sign the PPA accordingly in the future and comply with RPO regulations without fail.

Haryana

HERC Asks LR Energy to Supply Power to Haryana DISCOMs

- The Haryana Electricity Regulatory Commission (HERC) with its order dated 14 Oct, 2020 has approved the draft power purchase agreement (PPA) to be executed between LR Energy Private Limited and the Haryana Power Purchase Center (HPPC) for the purchase of 20 MW of solar power for 25 years. HERC order said that the open access solar project would supply power to the state DISCOMs.
- HERC directed LR Energy to file a separate petition for the determination of the tariff. HPPC had filed a petition to approve the draft PPA with LR Energy to purchase 20 MW of solar power for 25 years at a tariff to be determined by HERC.
- The project is being developed in Haryana's Bhiwani district as an open access/captive power project. The project achieved final connectivity for the sale of power under open access on 10 October, 2019.
- HPPC noted that with its current arrangements, it would have a total installed capacity of 1.19 GW of solar and 1.5 GW non-solar renewable energy power by the end of FY 2021-22 to meet its renewable purchase obligation (RPO) targets. Considering the anticipated upward

revision of solar RPO targets beyond 10.5%, additional solar power will be required to fulfil the anticipated solar RPOs for FY 2022-23.

- Haryana DISCOM further said that since the project is close to being commissioned, it can immediately supply power that will count towards meeting RPO from FY 2020-21 onwards. HERC has the power to determine a project-specific tariff for the solar project if the developers opt for it.
- HPPC added that the project was conceptualized as an open access/captive power project. In case this project starts selling power under the captive route, this will lead to loss of cross-subsidy surcharge and additional surcharge from the industrial consumers who will be the captive users of the project. At this stage, these charges amount to Rs.1.77/kWh, and that will be a direct loss to the DISCOMs, which will be ultimately borne by the end consumers.
- In the overall interest of the consumers of the state, it may be preferred that the project sells power to the DISCOMs rather than selling to consumers under captive route," said the state DISCOM. Besides this, with the project being set up in Bhiwani, power distribution losses would also be low, the developer said. It will also generate employment for the local population.
- HERC in its order dated 1 June, 2020, had already noted that the DISCOMs had defaulted in meeting their solar RPO targets. The shortfall in meeting the solar RPO up to FY 2018-19 was 1,850 million units. Further, during FY 2019-20, the shortfall in their solar RPO stood at 1,532 Mus upto Dec, 2019.
- HERC noted that though the state had decided to waive off the backlog due to the ongoing pandemic, it had directed the DISCOMs to make every possible effort to meet the RPO targets.
- HERC cited the case of Amplus Sun Solutions, where it had approved HPPC's draft PPA with Amplus Sun Solutions Private Limited. The PPA was signed for 50 MW of solar power from its project in Bhiwani. Interestingly, this decision to procure 50 MW of solar energy from Amplus has landed in court. The Punjab and Haryana High Court has ordered this petition would be treated as public interest litigation.
- HERC after considering all facts, approved the draft PPA to be executed with LR Energy Private to purchase 20 MW of solar power for 25 years. It directed the generator to file a separate petition for the determination of tariff.

Uttar Pradesh

UPERC Accepts Delay in Forecasting Rules Implementation Due to Ongoing Pandemic

- Uttar Pradesh Electricity Regulatory Commission (UPERC) has issued an order dated 13 Oct, 2020 accepting delays by the state load despatch center (SLDC) in implementing its procedures for forecasting, scheduling, and deviation settlement due to the difficulties caused by the Coronavirus pandemic. The Commission has asked the SLDC to enforce the regulations from 14 October, 2020.
- Uttar Pradesh State Load Despatch Center (UPSLDC) had filed a petition with the state Commission seeking relaxation under the UPERC Forecasting Regulations, 2018.
- As per the regulations, it is required to provide a plan for data collection, communication requirements, the format of forecast submission, and other details as part of a detailed procedure prescribed by the Commission. The state load despatch center said that it had submitted the plan to the Commission, and it was approved on March 18, 2020.
- However, to adopt these procedures, the center said it would first have to make arrangements to undertake aggregate forecasting of solar and wind-based power to be injected into the state's grid. It is added that it would also have to modify the energy accounting and settlement system (EASS) or scheduling portal with a service provider's help. Alternatively, it would have to acquire software to carry this out.
- UPSLDC explained that it had assigned this work to a service provider, but because of the global pandemic and the subsequent nationwide lockdown, the service provider could not carry out the work. In light of this, it asked UPERC for a six-month relaxation to implement the procedure. However, it noted that the work has been completed and that it is ready to implement it.
- UPERC after analysing the submission, said that UPSLDC submission that the procedures were delayed due to the COVID-19 pandemic was legitimate. In its final order, it overlooked the delay and allowed it to implement the regulatory procedures starting 14 October, 2020.

Solar Developer in Uttar Pradesh Penalized for Not Complying with UPERC Order

- Uttar Pradesh Electricity Regulatory Commission (UPERC) with its Order dated 13 Oct, 2020 had penalized project developer for non-com-

pliance with its previous order.

- UPERC has given Pinnacle Renewable Energy Private Limited four weeks to state the reasons for its non-compliance with its order passed in March 2019.
- UPERC also directed the solar developer to pay a penalty of Rs. 100,000 plus an additional applicable penalty for not complying with the earlier order for setting up an evacuation system.
- Uttar Pradesh Power Corporation Limited (UPPCL) had filed a petition seeking appropriate action against the developer for their "intentional and deliberate defiance" of directions of the order passed by the Commission on 5 March , 2019.
- UPERC in its Order had asked the developer to set up the power project by 15 April, 2019, subject to the imposition of liquidated damages as per the power purchase agreement. UPERC had also directed UPPCL to provide connectivity to the petitioner from 33 kV Kanduni substation after payment of the bay's cost within 15 days.
- UPERC said that the developer should deposit the cost for laying the 132 kV transmission line to the UPPCL in the next 15 days. The UPPCL said that Pinnacle Renewable Energy had not complied with UPERC order and had challenged the order before the Appellate Tribunal for Electricity (APTEL). Later, APTEL had directed UPPCL to grant temporary connectivity from the 33 kV substation, subject to certain conditions.
- UPERC noted that APTEL had observed that Pinnacle Renewable Energy had completed the solar project. The only question that would arise was putting up the evacuation system in place.
- UPERC also noted that sufficient time had passed since its last order, in which the developer was directed to pay for the cost of the bay and the cost of laying 132 kV transmission line to UPPCL. The Commission observed that Pinnacle Renewable Energy had not placed on record the project's status and the directives' compliance.
- Accordingly, UPERC directed Pinnacle Renewable Energy to respond to the show-cause notice within four weeks and explain why action should not be taken against them for non-compliance with the Commission's order. UPERC also directed the developer to pay a penalty of Rs. 100,000 plus an additional penalty for non-compliance.

Delhi

Delhi Expands Applicability of Virtual Net Metering for Renewable Consumers

- Delhi Electricity Regulatory Commission (DERC) with its notice dated 19 Oct, 2020 has amended its regulations i.e. Group Net Metering and Virtual Net Metering for Renewable Energy Guidelines, 2020.
- In this amendment, DERC has modified its guidelines on the applicability of virtual net metering. Virtual net metering is an arrangement for consumers who do not have a suitable roof for installing a solar power generating system but want access to a solar net-metering facility. With virtual net metering, consumers can own a part of a collectively-owned solar power generating system. All energy produced by such a solar system will be fed into the grid through an energy meter, and the exported energy, as recorded by that meter, will be credited to the electricity bill of each participating consumer based on beneficial ownership.
- The purpose of this group net-metering framework is to help maximize the utilization of rooftop space for solar energy generation for consumers with multiple buildings and service connections.
- This amendment has broadened the scope of applicability for virtual net metering connections. Earlier, it applied only to residential consumers, including group housing societies, government offices or local authorities, and renewable energy generators registered under Mukhya Mantri Kisaan Aay Badhotari Yojna.
- Now, the amendment says that virtual net metering will be applicable for consumers under the domestic category as well as consumers such as hospitals, colleges, schools, other institutions run or managed by charitable institutions, non-profit organizations, trusts that do not fall under the category of domestic consumers, and renewable energy generators registered under Delhi's solar program.
- DERC had finalized the group and virtual net metering guidelines in June 2019. It had set the minimum project capacity at 5 kW while the maximum was 5 MW at a single location. The DERC had issued draft guidelines in December 2018.
- In 2018, the Delhi government approved the Mukhyamantri Solar Power Program to give the necessary and required boost to solar power adoption in the national capital. This program applies to domestic category consumers in Delhi.

Tamil Nadu

TNERC issued new Tariff Order for Solar Procurement

- Tamil Nadu Electricity Regulatory Commission (TNERC) has issued a tariff order for solar power procurement by distribution licensees. The effective date of the order is 16 October, 2020.
- TNERC in its order has permitted the procurement of solar power by distribution licensees to meet their renewable purchase obligations (RPO) through the competitive bidding route.
- Licensees are expected to get the TNERC approval if they deviate from the prescribed bidding guidelines. The Commission noted that clean development mechanism (CDM) benefits will be shared at 100% in the first year and reduced 10% annually until both the developer and consumer get an equal share (50:50).
- TNERC added that licensees are allowed to exceed their RPO limits for purchasing power if the rates discovered in the competitive bidding process are comparable and below the variable cost of power from conventional fuel-based power sources.
- TNERC had proposed to levy 100% of the charges applicable for conventional power for transmission, wheeling charges, scheduling, and system operation charges for open access. However, stakeholders said that given the low yield in solar power generation, this might affect the project's viability. They asked the Commission to retain the existing charges.
- After taking these views into opinion and factoring in the adverse effects of COVID-19, the Commission retained the rates of open access charges at 50% of that applicable for conventional power for transmission, wheeling charges, scheduling, and system operation charges. However, it noted that 100% of the respective charges would be applicable for projects availing renewable energy certificates (REC).
- TNERC has retained the existing charges at 70% after requests from stakeholders.
- TNERC declared that excess power drawn during the solar generation period between 7 AM and 6 PM that is over the generated amount would be charged at high-tension (HT) industrial tariffs. It also said that any power drawn outside this period would also be charged at HT industrial tariffs since solar generators do not need start-up power, unlike some other power sources.

- TNERC did not amend its proposed energy accounting and billing procedures, citing complications that arose due to the COVID-19 pandemic.
- If a captive user or third-party buyer draws more power than they generate, the energy and demand charges will be regulated as per the TNERC open access regulation and the deviation settlement mechanism (DSM). Distribution licensees are expected to raise bills at the end of the billing period for the net energy supplied if a solar power generator uses power under Captive mode or sells it to a third party.
- TNERC declared that wheeling solar power would only be allowed when power is being generated. This will then be adjusted for the billing period. Excess consumption will be charged at the tariff that applies to the consumer.
- Excess energy that has been generated but not consumed (subject to the cap fixed) can be sold for 75% of the respective solar tariff. If a tariff has not been set, this power can be sold at 75% of the lowest tariff discovered through competitive bidding during the year.
- TNERC decided not to implement any cap on payments for excess power generated or unused energy. The Commission said that these orders would apply to solar power projects that are of at least 1 MW capacity.
- It added that open access charges, other terms and conditions specified in the order apply to solar power generators regardless of when they were commissioned. It also declared that the control period would be valid until 31 March, 2021, and the tariff period would be as prescribed in the bidding guidelines.

Andhra Pradesh

APERC approved reduction of Tariff from Rs. 3.57 to Rs. 2.95/kWh for 400 MW of Solar Projects

- Andhra Pradesh Electricity Regulatory Commission (APERC) announced a new tariff of Rs. 2.95 kWh for 400 MW of solar projects in Ananthapuram II ultra-mega solar park that were supplying power since March 2019. The proposal was developed by Andhra Pradesh Power Generation Company (APGENCO).
- Tariff of Rs. 3.57 /kWh was proposed by APGENCO and the Andhra Pradesh Solar Power Corporation Limited (APSPCL) back in 2017. They

have been paying Rs. 3.50 /kWh since the commercial operation date (COD) of the project was declared in March 2019 and continued with the same tariff while the application was being processed.

- APGENCO in September had asked the APERC to approve its PPA with DISCOMs signed in 2017 and for the approval of a tariff of Rs. 3.57/kWh for power from these projects. These tariffs were not discovered through competitive bidding but were based on the tariff arrived through calculating the actual cash flow by APGENCO. The PPA was signed in 2017, and 250 MW of capacity was commissioned in October 2018. The remaining 150 MW was commissioned in February 2019.
- APERC said the new tariff would be effective from the COD. In light of this, DISCOMs were entitled to a refund of Rs.600 million. It also added that the new tariff would help DISCOMs save about Rs.10.4 billion.
- APERC stated that it scrutinized the project's tariff components concerning the Central Electricity Regulatory Commission's (CERC) norms to arrive at the new tariff. Following this, it was able to come up with a comparable tariff to the ones discovered through competitive bidding.
- APERC identified that land cost could not be a tariff component while lease rentals are being charged, and the ownership of land will continue to remain with APSPCL at the end of the 25-year agreement period.
- APERC also found that the APGENCO's computation for operations and maintenance (O&M) costs and escalation was not in line with the current regulations. It ordered that computing O&M charges for the last 20 years of the agreement have to be competitively discovered the same way they were for the first five years.



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