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## Electricity Act Amendments Could Spark the Renewable Sector

The amendment proposes several changes in the archaic Electricity Act to propel the domestic renewable industry

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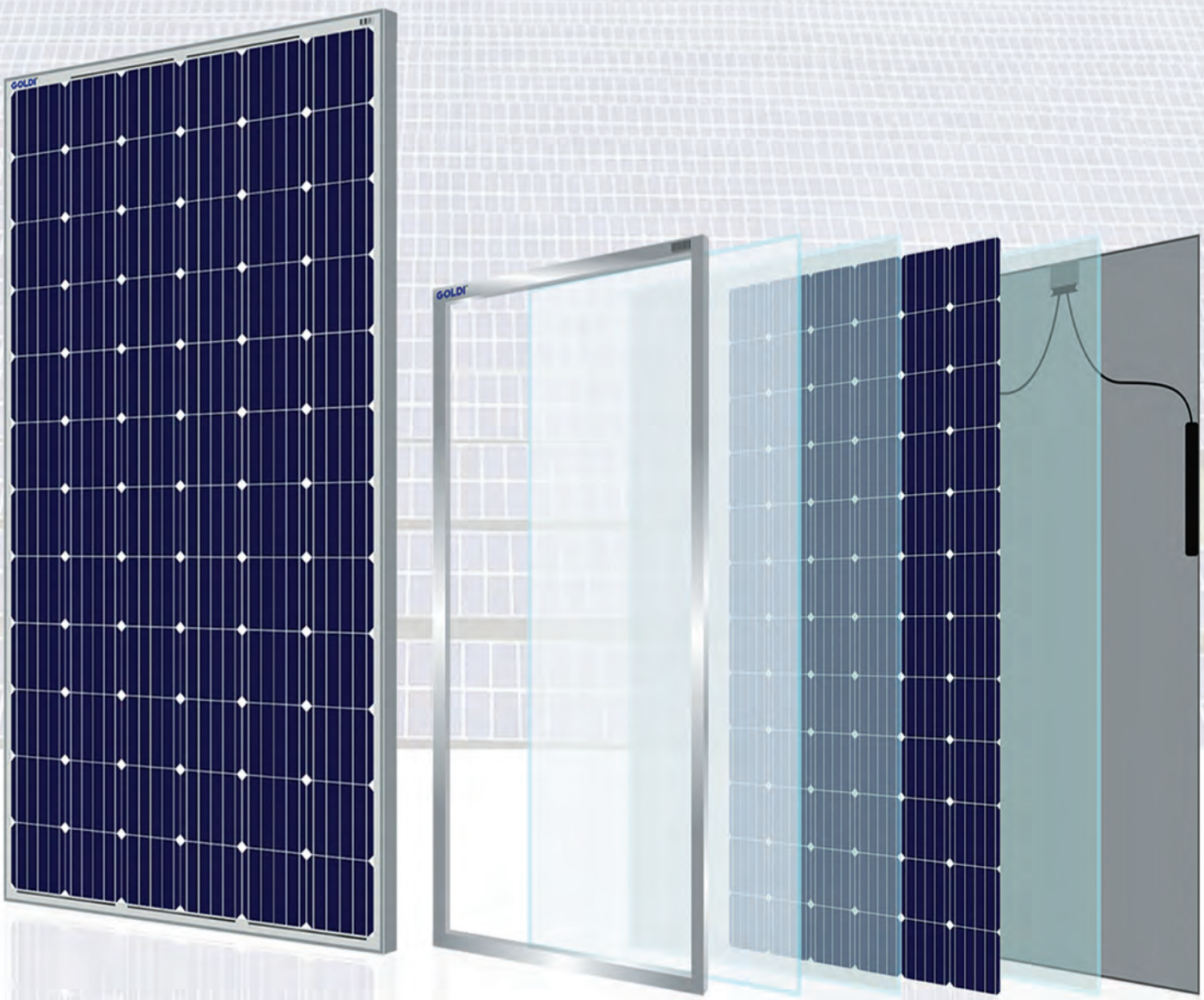



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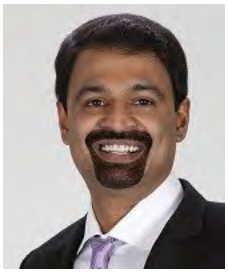
# Foreword



As we enter the month of August, coronavirus is still raging on in many parts of India. The development activity is still very weak as labor shortage and availability continue to be a problem. We are anticipating for the second quarter to be a washout. At this point, most of the projects will get moved to the last quarter of 2020 and 2021.

Safeguard duty is set to end of July 2020, but last week, the Director-General of Trade Remedies recommended the extension of safeguard duty on solar cells and modules for another year starting July 30, 2020. In its notice, the DGTR recommended a rate of 14.90% for the first six months and 14.50% for the subsequent six months on all solar cells and modules imported from the China PR, Thailand, and Vietnam.

This announcement was a surprise as most of the industry expected the safeguard duty to expire and Basic Customs Duty to be imposed in its place. This announcement has created further uncertainty at least for a few weeks as two different scenarios are emerging. In the first scenario, the safeguard duty recommended by the DGTR would be rejected in favor of a 25% basic customs duty for a year, after which, the duty would increase to 40%. In the second scenario, the safeguard duty recommendation would be accepted, and a basic customs duty would be imposed on top of that to get to the desired number that would deter imports.

No matter which scenario plays out, the cost of solar components will go up soon.

The central government is struggling to implement its policies, especially for renewables, without the support of states for years now. The sector has been held back by the archaic policies and has suffered from patchy on-ground implementation over the years. To rectify this, the Ministry of Power has issued a draft proposal with a significant focus on the renewable energy sector.

Some of the important amendments include a National Renewable Energy Policy to promote renewable power generation in the country and to prescribe RPO targets, a National Tariff Policy to address cross-subsidies and tariff adoption by state commissions; a proposal to set a time limit for tariff adoption by state commissions. The amendment has called for a 60-day window for commissions to adopt the tariff discovered, failing which, the tariff will be deemed to have been adopted, a proposal to establish the Electricity Contract Enforcement Authority to decide on matters regarding the enforcement of contractual obligations on purchase or transmission of electricity.

These are some extremely important amendments proposed in the Electricity Act. If adopted, they could foster critical changes that are sorely needed to fix the structural issues that have frustrated the renewable industry for a long time. The amendments, if executed well, could propel the industry forward during these challenging times.

**Raj Prabhu**
CEO
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# India's Wind Sector Slows Down in 1H

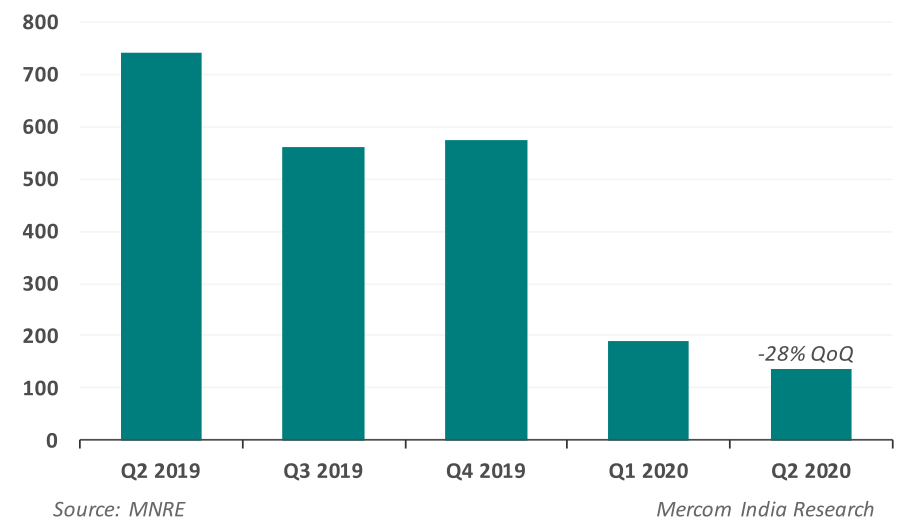
## *Wind installations plummeted 82% year-over-year with Gujarat and Karnataka collectively installing 136 MW*

By : Nithin Thomas Prasad

India installed 136 MW of wind power projects in the second quarter (Q2 2020) of the calendar year (CY), data from the Ministry of New and Renewable Energy (MNRE) showed. This was a whopping 82% decline in installations compared to 743 MW in the same period last year, and a 28% fall from 187 MW in the previous quarter (Q1 2020).

The data showed that as of June 30, 2020, cumulative wind installations in the country stood at 37.8 GW, up from 37.7 GW at the end of the previous quarter.

Of the 136 MW of wind power capacity added during the quarter, Gujarat installed 132 MW, while Karnataka installed about 4 MW. These were the only two states that added wind capacity in the country during this




period.

Tamil Nadu stood first in terms of cumulative installations, accounting for 25% of overall wind installations in the country with over 9.3 GW of wind projects as of June 30, 2020. Gujarat came in second with 7.6 GW of cumulative wind capacity, accounting for a 20% share of the country's wind generating capacity. Maharashtra's installed capacity stood at around 5 GW - a 13% overall share.

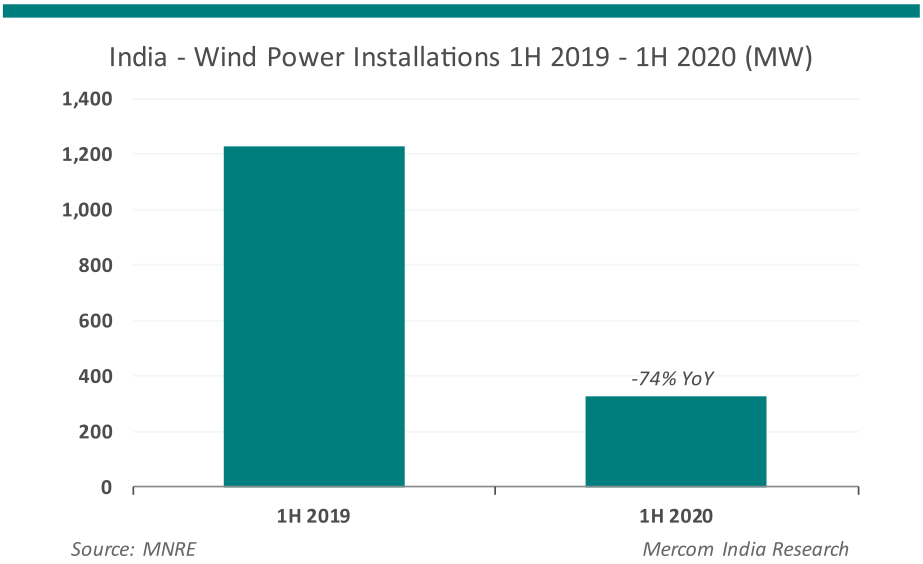
In 1H 2020 (CY), 324 MW of wind power projects were installed in the country. This was a sharp decline from over 1.2 GW of wind projects installed during the first half of 2019.

Previously, Tamil Nadu, Gujarat, Maharashtra, Karnataka, and Rajasthan were the top five states in the country for wind installations. Wind power represented 10.1% of the total installed power capacity in India as of Q1 2020.

Although the MNRE has granted a 'must-run' status for renewable energy projects, transport restrictions and supply chain disruptions have severely impaired the industry. The COVID-19 crisis has impacted the renewable industry like all others, and the slowing economy is making matters worse

A recent Global Wind Energy Council report analyzed how COVID-19 is impacting the global wind industry, including India. According to the report, to comply with the lockdown in India, both local and international turbine original equipment manufacturers and components manufacturers had temporarily suspended their production activities in India.

***As of June 30, 2020, cumulative wind installations in the country stood at 37.8 GW***



# Solar is Key in Our Net-Zero Carbon Strategy: Infosys

Infosys, an Indian information technology company, recently signed up for 'The Climate Pledge,' committing to achieve net-zero carbon emissions across its businesses by 2040, making it the first Indian company to make such a commitment.

The Climate Pledge is an initiative taken by e-commerce giant Amazon and Global Optimism, a Great Britain-based company with a focus on action against climate change. The pledge calls on new signatories to become net-zero carbon emitters across all their businesses by 2040, well before the Paris Climate Agreement's goal of 2050.

By signing the pledge, Infosys has set a significant precedent for other Indian companies to ramp up their climate change mitigation goals. Mercom recently interviewed Bose Varghese, Head - Green Initiatives, Infosys, to talk about the company's plans to fight against climate change and achieve net-zero carbon over the coming years. Here are the edited excerpts:

**Bose Varghese**
**Head – Green Initiatives, Infosys**

**Could you elaborate on some of the measures Infosys is taking to move towards its net-zero carbon emissions target?**

Our net-zero strategy is built on three pillars: energy efficiency to reduce emissions, use of renewable energy to avoid emissions, and use of high-quality offsets to address any remaining emissions. Remaining emissions typically include those emissions from business travels.

We set new benchmarks in energy efficiency through highly efficient new building designs, innovative technologies, deep green retrofits, smart automation, and, more importantly, continuous monitoring. Our energy efficiency program is highly data-driven, monitored 24X7 through our central command center at Bangalore. We have invested significantly in smart automation and monitoring to ensure operational efficiencies. Today, 25 million square feet of office space at Infosys is certified with the highest levels of green building rating. All newly constructed facilities in India are getting added to this list. Our concentrated approach towards energy efficiency has provided per-capita efficiency of over 55% since 2008.

Our renewable energy program is based on captive generation as well as the procurement of green power through power purchase agreements (PPAs) with third-party generators.

Our carbon offset program is also anchored on socio-economic benefits to the rural communities. Our current portfolio of offset projects is directly benefitting over 100,000 rural families across India.

**What role is solar energy going to play in achieving net-zero carbon**

**emissions? How much solar has Infosys installed so far, and how many megawatts do you have planned for the rest of 2020 and 2021?**

Solar energy is and will be a key component of our net-zero emissions strategy. While a significant part of our total carbon dioxide (CO2) emissions still comes from the use of electricity generated from fossil fuels, our aim is to avoid the emissions associated with electricity use by transitioning into 100% renewable power. Our renewable energy program is a combination of captive generation and green power procurement. Last year, we consumed close to 120 million units of renewable power, including captive generation.

**Are you looking to transform your corporate fleet vehicles to EVs? If so, by what date?**

Our corporate vehicle fleet is relatively small. We are constantly working towards adding new electric vehicles as replacements. Using electric vehicles for mass transport/multi-utility vehicles (MUVs) is still a fairly new concept in India, and is currently evolving. We will transform as the ecosystem develops.

**Can you elaborate on the company's renewable targets over the coming years?**

We were the first Indian company to join the RE100 campaign, and we remain committed to transitioning to 100% renewable power. In the financial year (FY) 2020, 44.3% of our electricity came from renewable sources. We will continue to pursue 100% renewable energy through a combination of captive generation and procurement.

**What were some of the factors that compelled Infosys to commit to such a goal?**

The Climate Pledge requires members to become net-zero carbon by 2040. This is meaningfully aligned to our belief that climate change demands urgent and universal action, and we understand some of the large global corporations have already joined the pledge. Being one of the largest companies in the world, we are certain that Amazon can take forward the global climate action agenda in a big way. We see The Climate Pledge as a great beginning to the movement that we've been working towards for several years now and believed this would augur the change by this pledge.

**Do you expect the rest of corporate India to follow your path? What is your message to them?**

What we have done through the various programs we have undertaken is to demonstrate a scalable and replicable model for climate action. The UN recognized our carbon neutral program as a 'Momentum for Change Lighthouse Activity' with the 2019 Global Climate Action Award. Therefore, we certainly hope that others would get inspiration from it.

We undertook this challenging climate commitment years before the Paris Agreement, with a realization that climate change is a serious threat to life on the planet and that we collectively have a responsibility to act with urgency. Today, the threat of climate change is direr and clearly evident than ever before, and climate action needs everyone's commitment, and a collective will to act. As a corporation of repute, we have an added responsibility to step up and take the lead in the climate action movement.


# Power Supply Deficit Widens to 0.5% in Q2

*With the ongoing pandemic adversely affecting power generation, distribution, and consumption, India's power supply deficit has widened, albeit narrowly*

By : Nithin Thomas Prasad

India's power supply deficit widened to 0.5% in the second quarter of 2020 (Q2 2020), up from 0.4% in the same period last year, according to the data from the Central Electricity Authority (CEA).

The data showed that between April and June 2020, about 291.8 billion units (BU) of power was supplied against a demand of 293.29 BU, representing a deficit of 1,484 million units (MU) or 0.5%. In the same period last year, 346.21 BU of electricity was supplied against a demand of 347.77 BU, a shortfall of 1,563 MUs over the targeted energy requirement.

The quarter also saw a peak demand of 166.89 BU being met with a supply of 166.23 BU, a 664 MU (0.4%) shortfall. In Q2 2019, 182.53 BU was supplied against a peak demand of 183.67 BU of electricity, 1,140 MU lower than the required, resulting in a peak power supply deficit of 0.6%.

The southern and western regions were the only regions with no supply and peak supply deficit during the quarter.

The western region, which includes Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra, Daman and Diu, Dadra and Nagar Haveli, and Goa, was able to supply all of the 86.73 BU of power demanded. It was also able to meet its peak demand of 51.15 BU entirely.

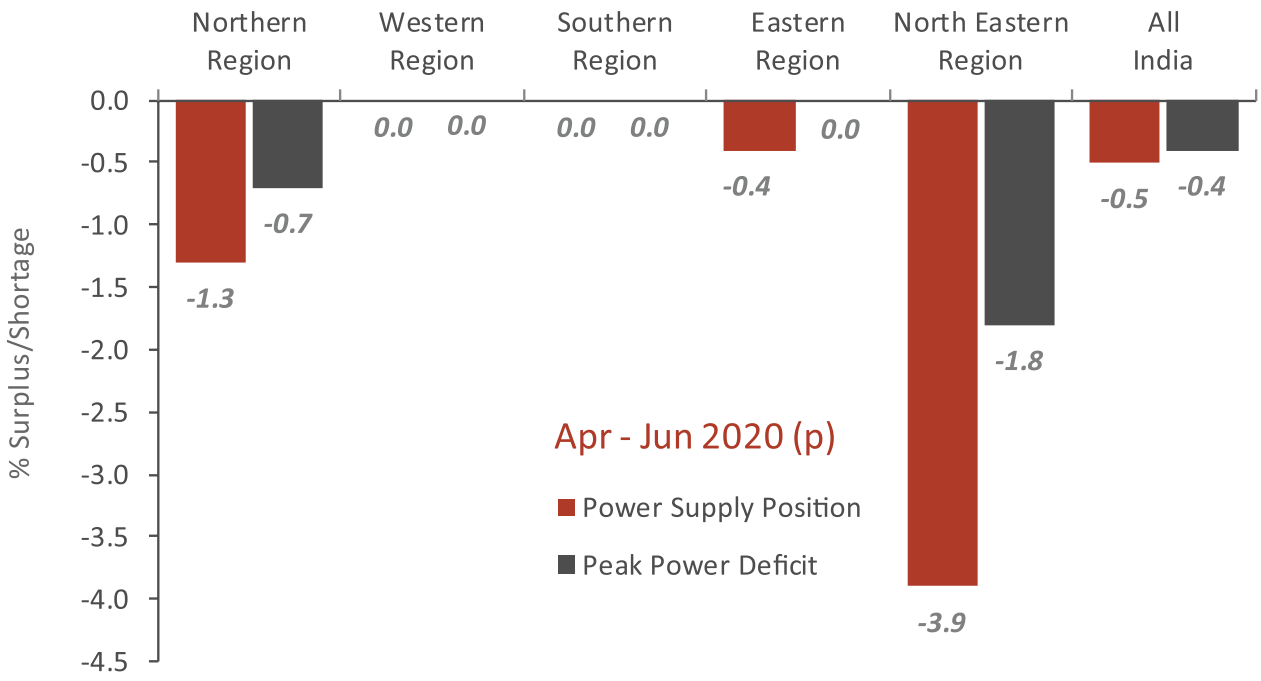
***Peak power demand shortfall in the country stood at 0.4% during the quarter***

Similarly, the southern region, which includes Andhra Pradesh, Telangana, Karnataka, Kerala, Tamil Nadu, Puducherry, and Lakshadweep, also met its power demand of 79.11 BU with a negligible shortfall of 2 MU. The region met its peak demand requirements of 45.66 BU with a shortfall of only 13 MU.

Previously, India's power supply deficit stood at 0.5% at the end of March for the financial year 2019-20, and the peak power deficit stood at 0.7%, according to the CEA's data.

In December last year, in its load generation balance report, the CEA had projected that India's anticipated power supply position for the year 2019-20 would reflect a surplus of 5.8% (80.38 billion units) and a peak surplus of 8.4% (15.9 GW). The CEA said the demand-supply gaps were not due to the non-availability of power, but because of transmission and distribution constraints. It noted that there were short-term surpluses in most of the states at some point in time and that this surplus power was sold to deficit states or neighboring countries through bilateral contracts, power exchanges, or traders.

## Region-wise Power Supply Position and Peak Demand for Apr-Jun 2020 *(Provisional)*




*Data from CEA*

*Mercom India Research*

# India's Open Access Segment Struggles

***The open access segment offers potential but has been marred by inconsistent policies and reluctance of DISCOMs. However, a few conducive measures can catapult this segment's growth***

By : Ankita Rajeshwari

On the Indian power sector, open access means a mechanism in which large consumers have access to the transmission and distribution network so that they are free to obtain power from suppliers other than the local power distribution company. The rationale behind its introduction was to provide an opportunity for the energy-intensive industries and commercial establishments to source power directly from the market to remain competitive. Open access solar offers an attractive option for larger power consumers of over 1 MW in selecting their power suppliers, accessing green power, and reducing power costs.

The open access solar market in India offers parallel opportunities for stakeholders, including large corporates, solar project developers, investors, and power distribution companies, to participate in India's solar dream.

Third-party sales and captive power generation primarily make up the open access market in India. But due to a slew of charges and regulations, third-party sale projects have come to a standstill. Under the captive power generation, a single entity sources the power. The same captive power sourced by a group of companies is known as group-captive projects.

Open access has not seen the kind of growth that was initially expected of it. This segment suffers from a variety of constraints and disadvantages on account of regulatory ambiguities and lackluster implementation.

### The Roadblocks

One of the primary reasons for the slowdown in the open access segment has been inconsistencies in policies across states. These inconsistencies range from levy of charges like for banking and wheeling of energy to favoring one business model over the other. For instance, states like Gujarat insist on the beneficiary opting for the CAPEX model while discouraging OPEX. These inconsistencies also include the introduction of new surcharges or changes in the structure of existing charges like cross-subsidy every year. Such inconsistencies make the long-term planning for open access projects difficult and unviable. States like Madhya Pradesh and Maharashtra have cases where surcharges have been levied even when the project in question was installed in the premises of the beneficiary.

***Several states have levied additional surcharges on open access, making it more expensive***

Recently, Mercom reported that Haryana imposed an additional surcharge on the purchase of open access power. Before that, Maharashtra and Gujarat announced an additional surcharge for open access consumers.

Also, for large consumers in special economic zones or those with shared premises who do not have a meter

connection in their names, there is no provision to avail open access power. Besides this, getting approvals for open access projects is also an arduous process with a plethora of approvals required from several departments of the state government.

For those who have already availed open access facility, there are other problems. For instance, the arbitration process is lengthy as any dispute needs to be addressed in a petition before the state electricity regulatory commissions, which are then escalated to the appellate tribunal if required. Usually, cases take as long as six months to be heard.

Another significant issue that has been gravely affecting the expansion of open access is the reluctance of distribution companies to help this segment grow. Often, they see open access as a competition eating into their revenue and thwart the growth of this segment by imposing unreasonable rules and processes. Developers also say that there have been arbitrary restrictions on open access, like restricting solar capacity to contract demand (power demand agreed between the consumer and the DISCOM). Then, the DISCOMs are also known to delay payments to open access projects and often curtail renewable power.

Curtailment of electricity generation has long been a regular occurrence in the electric power industry. It occurs for a variety of reasons, including a lack of transmission access or transmission congestion.

Recently, the National Solar Energy Federation of India (NSEFI) wrote to the Government of Telangana, asking it to address the issue of the state load despatch center haphazardly restricting solar power generation in the state.

***DISCOMs often view open access as a competition eating into their revenue***

Alok Verma, Vice President at Amplus Solar, told Mercom, "Like other infrastructure projects, investment (debt and equity) in open access projects are recovered in the long run and therefore, needs long term certainty to sustain. Open access is a completely regulated business and follows the provisions laid by the regulations. Here, we see a clear conflict of interest in the fundamentals. While state regulations have empowered DISCOMs to facilitate open access, they are the most affected ones, as they lose their revenue. This causes hurdles in open access. Haryana is a recent example where the DISCOM is completely denying open access and has ignored the investment made already. This is where the government needs to re-look at the fundamentals and have a neutral body to facilitate open access."

**The Way Forward:**

After interacting with several open access developers, Mercom found that consistent and long-term policies can bring about a sea of change in this neglected segment. Easing the complicated approval processes

through single-window clearance, providing incentives to developers, and establishing an independent ombudsman, are some of the other ways to propel open access projects across states.

An ombudsman is an official appointed by the government to investigate complaints against businesses, financial institutions, or government departments, to resolve the conflicts or concerns raised, either by mediation or by making recommendations.

Andrew Hines, chief commercial officer at CleanMax, told Mercom, "We are witnessing a very strong demand for open access and group captive supplies of power from commercial and industrial customers across India seeking a combination of cost savings and environmental benefits. We are able to supply renewable energy via open access in most major states in India, and we are expecting strong growth in this segment. What would enable stronger growth in this segment would be a more consistent policy and regulatory approach to these contracts. Investors, developers, and power consumers all require long-term clarity before getting into long-term contracts. So, more predictable, rational charges for usage of grid infrastructure, and more consistent approvals for projects would be beneficial to this segment."

Several developers also support the launch of Green Term Ahead Market, which would allow spot trading of renewable energy through power exchanges. This trading window lets corporate consumers buy renewable power without entering into power purchase agreements with the DISCOMs.

Most DISCOMs in the country are suffering from the poor financial health of their own making. The DISCOM revenues are substantially lower, with power tariffs not reflecting true cost coupled with a growing number of subsidized customers. To make up for this loss of revenue, DISCOMs resort to levying high charges on open access. Developers believe that the introduction of the "Direct Benefit Transfer" (DBT) program would save the money for DISCOMs that are currently draining out as subsidies. This is expected to make the DISCOMs financially stable and hopefully decrease their inclination to hike open access charges. The DBT program was introduced by the government to reduce leakages and delays in the disbursal of subsidies by directly transferring them into the bank accounts of the recipient.

Incentivizing DISCOMs by letting them claim RPOs (renewable purchase obligation) for green open access transactions and providing flexibility for open access and captive projects to supply power to a combination of off-takers is another suggestion by the industry.

While there are several challenges in this segment, there are plenty of solutions also. These problems have persisted in the segment for too long, with little done so far to encourage consumers to adopt solar power through the open access mechanism.

The total installed solar capacity in the open access market reached 3.6 GW at the end of the calendar year 2019. The pipeline of projects under development and in the pre-construction phase is estimated to be approximately 1.5 GW, according to Mercom India Research.

***Developers support Green Term Ahead Market, which allows for spot trading of renewables through power exchanges***

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# Another Anti-Dumping Duty Comes into Force

***In yet another protectionist measure for domestic manufacturing, the government has imposed anti-dumping duty on flat-coated products that are used in solar mounting structures***

By : Nithin Thomas Prasad

The Ministry of Finance (MoF) has imposed an anti-dumping duty on aluminum and zinc coated flat products from China PR, Vietnam, and Korea RP to protect the domestic industry.

These flat products are used in solar projects. Solar modules are placed on mounting structures that are made of aluminum and zinc coated flat products.

The duty will be effective for five years from October 15, 2019, the effective date of the previously implemented provisional anti-dumping duty.

It noted that the duty would not be levied for the period between April 15, 2020, the date of lapse of the provisional duty, and June 22, 2020, the day preceding the date of the gazette announcement.

In July 2019, Mercom reported that the Directorate General of Trade Remedies imposed a provisional duty on the imports of aluminum and zinc-coated flat products originating in or exported from China PR, Vietnam, and Korea RP. After examining the submissions made by the parties, DGTR found that there is a significant increase in the imports of subject goods from concerned countries in absolute terms as well as in relation to the production and consumption in India.

The Ministry noted that the duty does not apply to the following products:

1. **Flat-rolled steel products coated with zinc without the addition of aluminum**
2. **Flat-rolled steel products coated with aluminum without the addition of zinc; and**
3. **Pre-painted or color-coated aluminum-zinc alloy coated steel sheets (steel galvanized line)**

In March, the DGTR had recommended the imposition of anti-dumping duty on aluminum and zinc coated flat products from China PR, Vietnam, and Korea RP. It stated that the purpose of anti-dumping duties was to eliminate the material injury caused to the domestic industry by unfair trade practices of dumping from foreign markets.

## Background

JSW Steel Coated Products Limited, the domestic industry, had applied to the DGTR, for the imposition of anti-dumping duty on imports of aluminum and zinc-coated flat products originating in or exported from China, Vietnam, and Korea.

The authority issued a public notice on April 2, 2019, initiating for an investigation to determine the existence, degree, and effect of the alleged dumping of the products, and to recommend the amount of anti-dumping duty, which if levied, would be adequate to remove the "alleged" injury to the domestic industry.

In July 2019, the DGTR issued its preliminary findings wherein it recommended the imposition of provisional anti-dumping duty on the imports of such products originating in or exported from China, Vietnam, and Korea.

At the stage of initiation, the product under consideration was defined as:

*Flat-rolled product of steel-plated or coated with an alloy of Aluminum and Zinc. This alloy of Aluminum and Zinc may contain one or more additional elements which, in individual or combination, shall not exceed 3% by weight.*

According to DGTR, there were three other producers of the products under consideration in India; Tata BlueScope Steel Private Limited, Tata Steel BSL Limited, and Asian Colour Coated Ispat Limited.

***The duty will be effective for five years starting from October 15, 2019***

# The Curious Case of Haryana's Policy Flip-Flops

*After the infamous Andhra debacle between the government and renewable developers, another state has started making things difficult for solar expansion*

By : Rakesh Ranjan Parashar

The 2022 deadline for India's solar target is looming large, and now is the time when all states should be working cohesively towards enabling solar expansion. Instead, several states in the country have ended up creating more roadblocks for project development. The ongoing debacle between renewable developers and the Andhra Pradesh government over the past year is well documented. Now, Haryana seems to be heading in a similar direction.

### Hurdles in Haryana

Solar developers claim that low land clearances, high cost of farmland, transmission woes, and lack of support from the distribution companies (DISCOMs) have derailed the growth of the solar in the state. There have been many instances when the final connectivity and connections have been denied to the developers, which is a major impediment for the smooth functioning of the entire system.

The regulatory hurdles created by the state distribution utility, coupled with the helplessness of the state government, have made developers with upcoming projects in the state skeptical about the future. Some fear that they might lose their investments if things do not improve.

So far, around 1.05 GW of projects have been allocated in the state. The developers claim they have invested nearly ₹20 billion (-$265.14 million) towards the development of solar projects in the state, which now hangs in the balance with the state distribution utility creating hurdles.

***Haryana has a total of 83 MW of solar projects in operation and 427 MW in the pipeline***

Developers are hoping that the state government will intervene to find an amicable solution to this problem. According to the developers, the state DISCOMs are denying the signing of the connection agreement and granting long-term open access (LTOA) to solar power parks and projects allocated by the Haryana Vidyut Prasaran Nigam Limited (HVPNL), the state entity responsible for power transmission.

### The Series of Events

In 2016, the state government issued the Haryana Solar Policy inviting developers to set up solar power projects and solar parks under the open access system in the state. In July 2018, the Haryana Renewable Energy Development Agency (HAREDA) issued the final guidelines for solar projects and parks and started accepting applications for the development of solar projects in the state.

Following this, the developers were asked to acquire land, submit financial

closure letter, application fees, and bank guarantees.

Then, in November 2018, HAREDA issued a notice saying that the guidelines under which the projects were allocated would be treated as provisional, and another meeting would be organized.

Then, in a month, it canceled all the allocations and termed them as null and void.

In 2019, HVPNL issued final guidelines with changes, and consequently, new applications were sought from developers.

In March 2019, the state announced that wheeling and transmission charges would not be levied for ten years from the date of commissioning for all those captive solar PV projects which have submitted applications for registration, purchased land or have taken the land on lease for 30 years and have bought equipment and machinery or invested at least ₹10 million (-$0.14 million)/ MW to set up such captive solar PV projects till February 13, 2019. It also said that cross-subsidy charges and additional surcharges do not apply to

## *Developers claim they have invested nearly ₹20 billion for solar project development*

captive solar PV projects. Following this announcement, Amplus and CleanMax Solar both initiated the process for setting up solar projects in the state. While Amplus said that it would be investing ₹7.5 billion (-$110 million), CleanMax Solar's invested ₹6 billion (-$86.4 million).

HVPNL granted in-principle feasibility to the solar projects, and the developers were again asked to acquire land, get the financing, and submit the bank guarantee. The projects were to be completed in a year.

Further, HVPNL approved the construction of transmission lines and bays for the projects. Following this, the DISCOM demanded the cancellation and stay of the project development, citing technical and financial reasons.

Then, HVPNL objected to this move by the DISCOM, calling it "anti-renewable." They further alleged that the technical and financial reasons put forth by the DISCOM were baseless.

Meanwhile, the state DISCOMs requested Chief Minister (CM) M.L Khattar to change the definition of captive power projects and change the entire selection criteria for the permission to grant connectivity and connection to the nearest substation.

Subsequently, HVPNL asked the developers to resubmit information for the re-evaluation of applications according to the new terms and conditions. All these factors and delays have created a sense of uncertainty and skepticism in the minds of the developers who are not sure about the future.

Compared to the target of 2.5 GW, only 38 MW of solar projects have been approved in the state. Around 380

MW of projects have been awarded final connectivity by HVPNL and are in various stages of completion. As per the state guidelines, huge investments have been made towards land and bank guarantees by the developers, even before the grant of open access, which shows the commitment on the part of the developers.

Speaking on the current situation in Haryana, Amritesh Singh Soora, AGM-Business Development at Sunsure Energy, said, "The current situation is building up like the Andhra Pradesh and shares many similarities. However, in the case of Haryana, it is the same government which had issued the state solar policy that is now backing away from it. This change is in contradiction with the regulations issued, and when the regulations were issued, the department of renewable energy was with the previous CM of Haryana."

As reported by Mercom earlier, the Andhra Pradesh government's decision to renegotiate power purchase agreements (PPAs) had created a huge uproar among the stakeholders in the state. The new government led by Jagan Mohan Reddy had said it would cancel the PPAs for wind and solar projects signed by the previous administration, which was led by Chandrababu Naidu unless the PPAs were renegotiated.

*The state and the central government are of the same party, but differ in how they promote renewable energy*

"Incidentally, the state and the central government are of the same party, yet there is a difference in how they view and promote renewable energy. However, the government is backing away from its obligations and duties. By allowing renewable energy within the state, the state government can reap manifold benefits and create real earnings for the people of Haryana," he added.

The investments made by the developers in solar projects across the state have been backed by leading investment firms like Petronas, UK Climate Investments LLP-UK, International Finance Corporation (IFC), Asian Development Bank (ADB), and Dutch Finance Development Company FMO among others. India's financial institutions like the Indian Renewable Energy Development Agency (IREDA), Tata Cleantech, and others have also backed the developers for establishing solar projects in the state.

Speaking about the demands of developers, Soora, said, "All qualifying criteria set by the state government and power utilities to weed out non-serious players have been followed, yet the nodal agency for open access is not granting the approvals. This is in contradiction to the rules and policies set by the state and the Haryana Electricity Regulatory Commission (HERC). The exercise being undertaken to delay the issuance of approvals and the limitation of the control period is not required and creates a negative sentiment. The developers hope that the government bodies recognize the benefits of renewable energy and abide by the Electricity Act, which has been passed by the Parliament of India."

Recently, HERC waived off renewable

purchase obligation backlogs up to 2019 for the DISCOMs and imposed an additional surcharge of ₹1.15 (-$0.015)/kWh on the purchase of open access power. The DISCOMs had also requested HERC to impose restrictions or even suspend open access facilities during off-peak hours of the day as required.

### What Should be Done?

Developers still believe that this delay will further extend as the last of many high-level meetings (including CM's meeting with the departments) ended without any firm decision. After a long wait, a few developers have put up a petition with the state regulatory body to speed up the signing of the connectivity agreement. However, the decision has not been taken yet.

Speaking on the latest development, Gurjeet S Barara, Executive Director at LR Energy, said, "It seems that the plight of solar developers is never-ending. The developers are keen to continue and request the government to come up with some relief and decision to speed up the approval process. Right now, the need of the hour is a swift response from the state government."

Recently, the Ministry of New and Renewable Energy (MNRE) had to intervene to calm the matters in Haryana. MNRE directed the Government of Haryana to honor all the allocations made to the solar power projects and solar parks and treat them as sacrosanct.

"The government has to take positive steps to clear all the projects which are stuck due to departmental delays, make a single-window clearance cell for smooth and fast approvals, and provide some relief to the developers who are already under a huge financial burden to set up the project. This is delaying revenue and job opportunities in the state also. This delay in getting the approvals has put most of the developers in a dire financial situation and on the brink of being declared non-performing assets by the financial institutions," Barara added.

Barara added that there are many developers like Greenyana Solar, Ray Power, and Amplus who have invested in solar projects in the state but have not been grant connectivity to the grid. While the situation on the ground is problematic, developers are still hopeful that a consensus between the three stakeholders - power utilities, state government, and developers, will be reached soon.

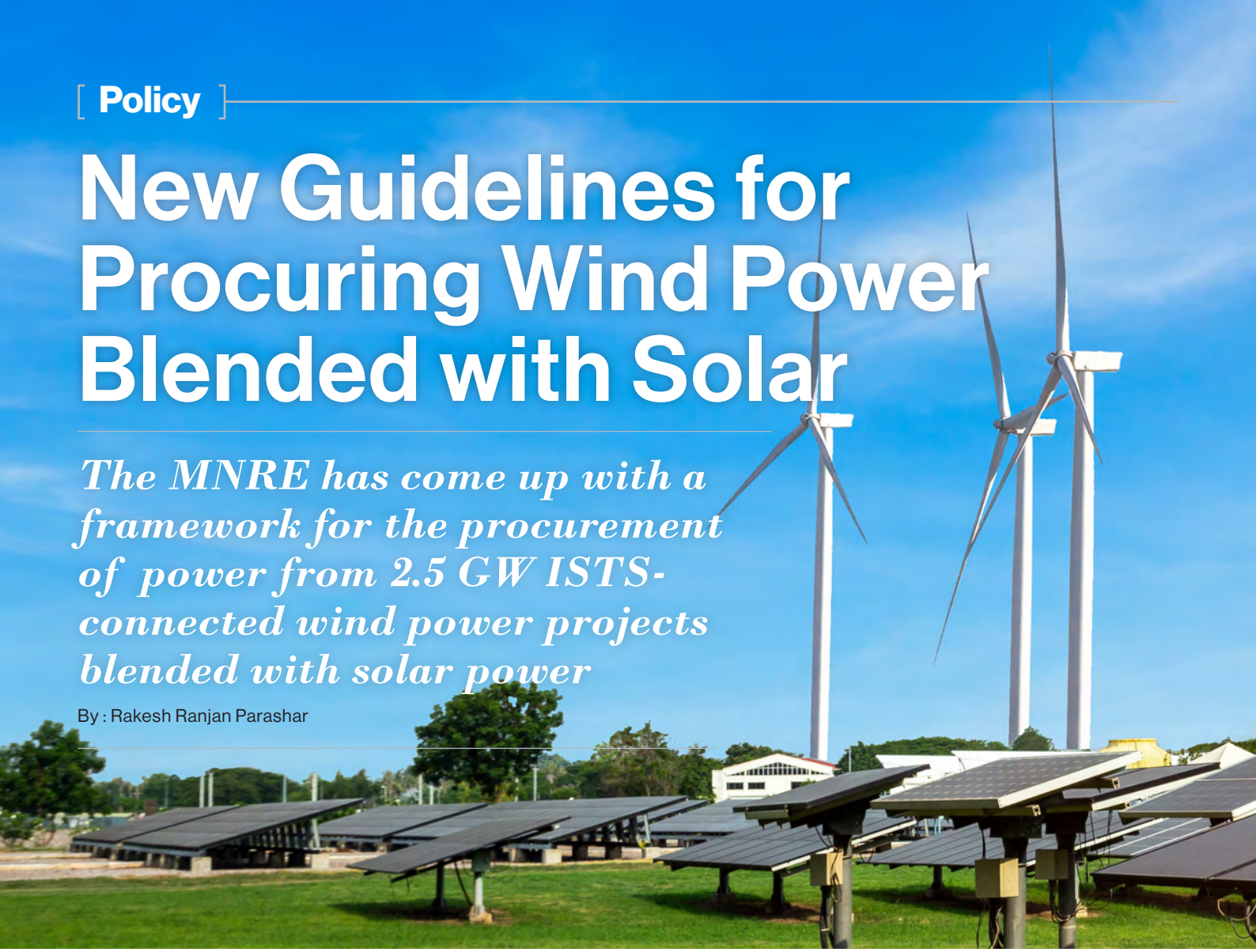
"There should be a platform where the state government, power utilities, and developers come on a common platform and discuss the concerns so that a common way forward can be developed. The current issue requires that the state government, in accordance with the Electricity Act and other applicable state policies, should grant long-term open access to applicants. The government should lead the discussions and instruct the utilities to follow the policies and the guidelines set by the utilities themselves," added Soora.

According to Mercom's India Solar Project Tracker, Haryana has a total of 83 MW of solar projects in operation and 427 MW of projects in the pipeline as of March 2020.

The future demands a synergy between state utilities and renewable generators in the state if the state wants to build a sustainable future and contribute to India's solar target effectively. More importantly

"At this time, attracting investment is already incredibly challenging. But now, we have states that are putting up hurdles, delaying approvals, and driving developers and investors to the brink. This cannot be a good sign to entice future investments, and it damages the reputation of the country as friendly to renewable energy," said Raj Prabhu, CEO of Mercom Capital Group.

# New Guidelines for Procuring Wind Power Blended with Solar



***The MNRE has come up with a framework for the procurement of power from 2.5 GW ISTS-connected wind power projects blended with solar power***

By : Rakesh Ranjan Parashar

The Ministry of New and Renewable Energy (MNRE) has issued guidelines for tariff-based competitive bidding process for procuring power from 2.5 GW of the interstate transmission system (ISTS) connected wind projects blended with solar power.

According to the document, the Solar Energy Corporation of India (SECI) will act as the nodal agency for the implementation of the program. The selection of projects under this program will be through a bidding process followed by an e-reverse auction. The wind and solar projects may be located at the same location or nearby, but the individual wind and solar components of the project will inject power into the grid at a single point. The tariff for the project will be determined by SECI through a transparent e-bidding process.

The main objective of the program is to provide a framework to procure electricity from 2.5 GW of wind power projects blended with solar power.

The total capacity to be awarded under the program is 2.5 GW, and the minimum capacity that a developer can bid for is 50 MW. Further, the rated power capacity of the wind project should not be less than 80% of the total contracted capacity blended with 20% of solar power.

According to the guidelines, the developers of these projects will be required to declare the annual capacity utilization factor (CUF) of the project at the time of bid submission. Calculation of CUF will be on a yearly basis, and the declared annual CUF should not be less than 30%. SECI, the nodal agency, will release other qualifications and eligibility criteria.

***SECI will charge a trading margin of ₹0.07 (~$0.0009)/kWh for the sale of blended power***

Procurers looking to buy electricity from these projects would be mandated to provide for adequate payment security measures to protect the interest of the generators. This would be done through a revolving letter of credit (LC), payment security fund, and state government guarantees.

Under the program, the developer of the blended wind power project will not be allowed to sell power to any other entity other than SECI. The power procured from the project can be used for the fulfillment of renewable purchase obligation (RPO) targets in the proportion of rated capacity of solar and wind power in the project.

Further, SECI will enter into a power purchase agreement (PPA) with the

blended wind power generator, and it will also enter into a power sale agreement (PSA) with the distribution licensees or bulk consumers. If SECI fails to enter the agreement within six months from the issuance of the letter of award (LOA), the project would be deemed to be canceled.

The ministry has determined the period of PPA as 25 years from the scheduled commissioning date (SCD), and SECI will charge a trading margin of ₹0.07 (~$0.0009)/kWh from the procurer for the sale of blended power. There will be no central financial assistance (CFA) available for the development of projects under this program.

According to the guidelines, the generator should attain financial closure within 12 months from the date of execution of the PPA. The document further states that the projects should be commissioned within 24 months from the date of execution of the PPA or PSA, whichever is later. Delay in commissioning beyond the SCD will involve penalties on the generator.

To ensure the quality of wind turbines installed, the certified wind turbine models listed in the Revised List of Models and Manufactures (RLMM) brought out by the MNRE will be allowed for the deployment.

***In case of curtailment apart from grid security, the generator will be eligible for a generation compensation***

Further, in case of any curtailment apart from grid security, the generator will be eligible for a generation compensation, the guidelines say. The curtailment of renewable power is a huge concern for developers across states, and this has been addressed in the guidelines.

Earlier, MNRE had issued its draft guidelines for the tariff-based competitive bidding process for the procurement of power from grid-connected wind-solar hybrid projects.

In January 2020, Greenko Group and ReNew Power won the auction conducted by SECI for 1.2 GW of solar, wind, and energy storage projects with guaranteed peak power supply. While Greenko has been awarded 900 MW, ReNew Power has won 300 MW of projects. Greenko Group won the bid at a peak power tariff rate of ₹6.12 (~$0.086)/ kWh, and ReNew Power won at ₹6.85 (~$0.096)/ kWh.

# India Sees Record-Low Solar Tariff of ₹2.36/kWh

*The lowest bid in SECI's 2 GW auction was quoted by Solarpack Corporacion, a Spain-based solar project construction, development, and management services company*

By : Nithin Thomas Prasad

The Solar Energy Corporation of India's (SECI) auction for 2 GW of the interstate transmission system (ISTS) connected solar projects (Tranche IX) saw a record-low bid of ₹2.36 (-$0.0313)/kWh, the lowest bid since July 2018.

The record-low bid was about 3.3% lower than the previous lowest quoted tariff of ₹2.44 (-$0.032)/kWh. ACME had quoted a tariff of ₹2.44 (-$0.032)/kWh in two of SECI's auctions; one for 3 GW and another for 2 GW of ISTS-connected solar projects back in July 2018.

The L1 (lowest) tariff was quoted by Solarpack Corporacion Tecnologica SA, Avikaran Surya India Private Limited (ENEL Green Power), AMP Energy Green Private Limited, EDEN Renewables, and ib vogt Singapore Private Limited quoted the second-lowest tariff of ₹2.37 (-$0.0314)/kWh.

AMP Energy won 100 MW of projects, while the other companies won 300 MW of projects each.

Meanwhile, ReNew Power Private Limited quoted ₹2.38 (-$0.0316)/kWh for 1.2 GW of projects but won only 400 MW under the bucket filling method.

A SECI official confirmed the auction results stating that "We are happy to note a few first-timers and a majority of the winners are foreign companies, which is encouraging. And of course, the tariff is low, which is very good."

The winning bidders were from seven different countries; Solarpack (Spain), Enel Green Power (Italy), Amp Energy (Canada), Eden Renewable

## SECI 2 GW ISTS Tranche IX Solar Tender: Auction Results

| Bidder/Developer | Country | Capacity | Quoted Bids/Tariff | | % Over Winning Bid |
|---|---|---|---|---|---|
| | | MW | (₹/kWh) | ($/kWh) | |
| Solarpack | Spain | 300 | 2.36 | 0.0313 | - |
| Avikiran Surya (ENEL Green Power) | Italy | 300 | 2.37 | 0.0314 | *0.42%* |
| Amp Energy Green | Canada | 100 | 2.37 | 0.0314 | *0.42%* |
| Eden Renewables | France | 300 | 2.37 | 0.0314 | *0.42%* |
| ib vogt Singapore | Germany | 300 | 2.37 | 0.0314 | *0.42%* |
| Ayana Renewable (CDC Group) | UK | 300 | 2.38 | 0.0316 | *0.85%* |
| ReNew Power | India | 400 (1,200)* | 2.38 | 0.0316 | *0.85%* |

**ReNew Power bid for 1,200 MW but won only 400 MW* *Note: $1 = ₹75.37*

*Source: Mercom India Research*

(United States), ib vogt (Germany), Ayana Renewable (United Kingdom) and ReNew Power (India).

Tata Power Renewable Energy quoted a tariff of ₹2.39 (-$0.0317)/kWh for 600 MW of projects, and O2 Power SG Private Limited quoted ₹2.46 (-$0.0327)/kWh for 400 MW but did not win any capacity.

### Low bid reasons

Mercom spoke to several developers to understand the reason behind the aggressive bids. Developers believe that the basic customs duty for these projects will be exempted or see a passthrough, and even the Approved List of Models and Manufacturers (ALMM) will not be applicable. The general belief is that the price of solar modules will see a steep fall, and forward contracts for the modules may bring down the price even further.

This could also be one of the last auctions where developers have clarity on the ISTS waiver. The government is yet to announce its decision on the waiver extension.

Compared to SECI's Tranche VIII auction for 1.2 GW of solar projects, tariffs were lower by around 5.6%.

"This low bid is an indication of where the market pricing is for the large-scale solar projects without duties on modules and ALMM. Government agencies cannot expect this level of pricing again once duties and other regulations are imposed," said Raj Prabhu, CEO of Mercom Capital Group. "We said in our last webinar that any auctions conducted before July 29th will have an advantage and can attract lower bids," he added.

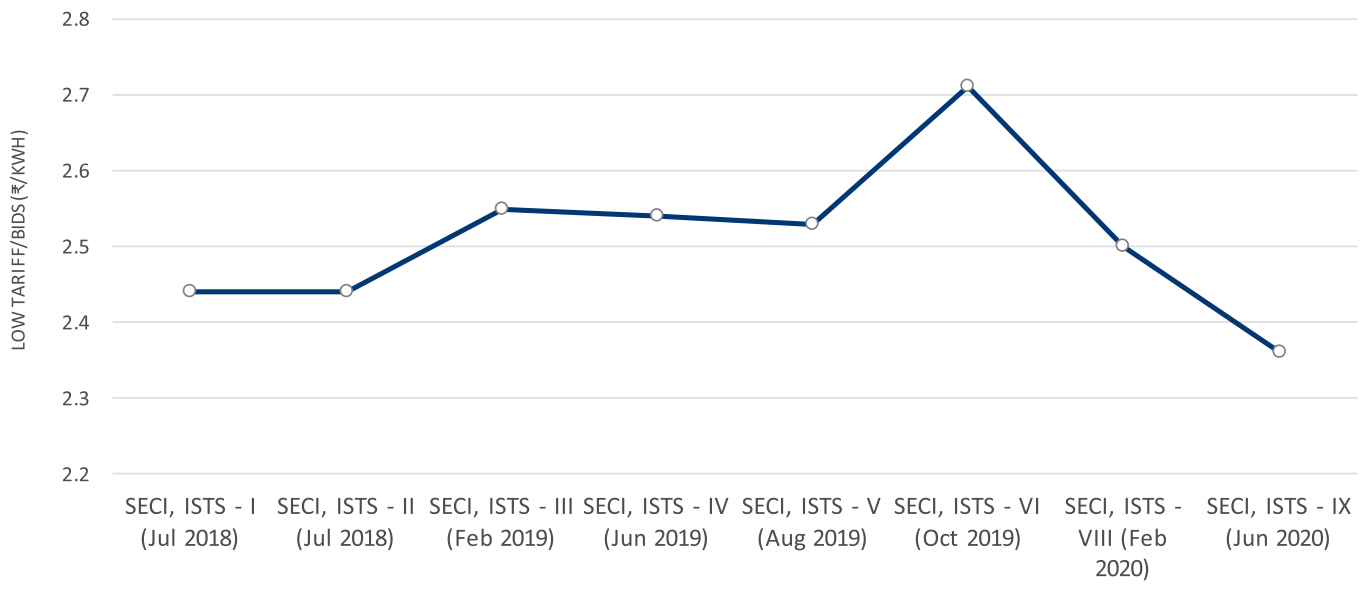
SECI had issued a request for selection for the projects in March 2020. According to the tender documents, applicants could submit a single bid for quantities between 50 MW and 2 GW in multiples of 10 MW. The minimum project capacity per project is 50 MW, and the maximum is 300 MW. The total capacity that can be allocated to a single bidder is 2 GW.

This tender garnered a lot of interest from developers. The tender was oversubscribed by 3.28 GW. ReNew Power placed bids for 1.2 GW, which was the highest bid capacity of the total 12 bidders on the list, followed closely by NTPC Limited, that quoted 1.18 GW. Tata Power Renewable Energy bid for 600 MW of projects, O2 Power for 400 MW, while Eden Renewables, Azure Power, SolarPack, ENEL Green Power, Ayana Renewables, and IB Vogt placed bids for 300 MW each. Meanwhile, AMP Solar placed bids for 100 MW.

According to Mercom India Research, SECI has so far tendered 16.7 GW of ISTS solar projects under tranche I to X; and auctioned around 8.84 GW under tranche I to Tranche VIII.

***The record-low bid was about 3.3% lower than the previous lowest quoted tariff of ₹2.44 (~$0.0328)/kWh***

**Lowest Solar Bids in SECI ISTS (Tranche I to IX) Solar Auctions in India (₹/kWh)**




*Note: In Jan 2020, SECI had auctioned 1.2 GW RE Peak Power Projects under ISTS Tranche-VII*

*Source: Mercom India Research (Jun 2020)*

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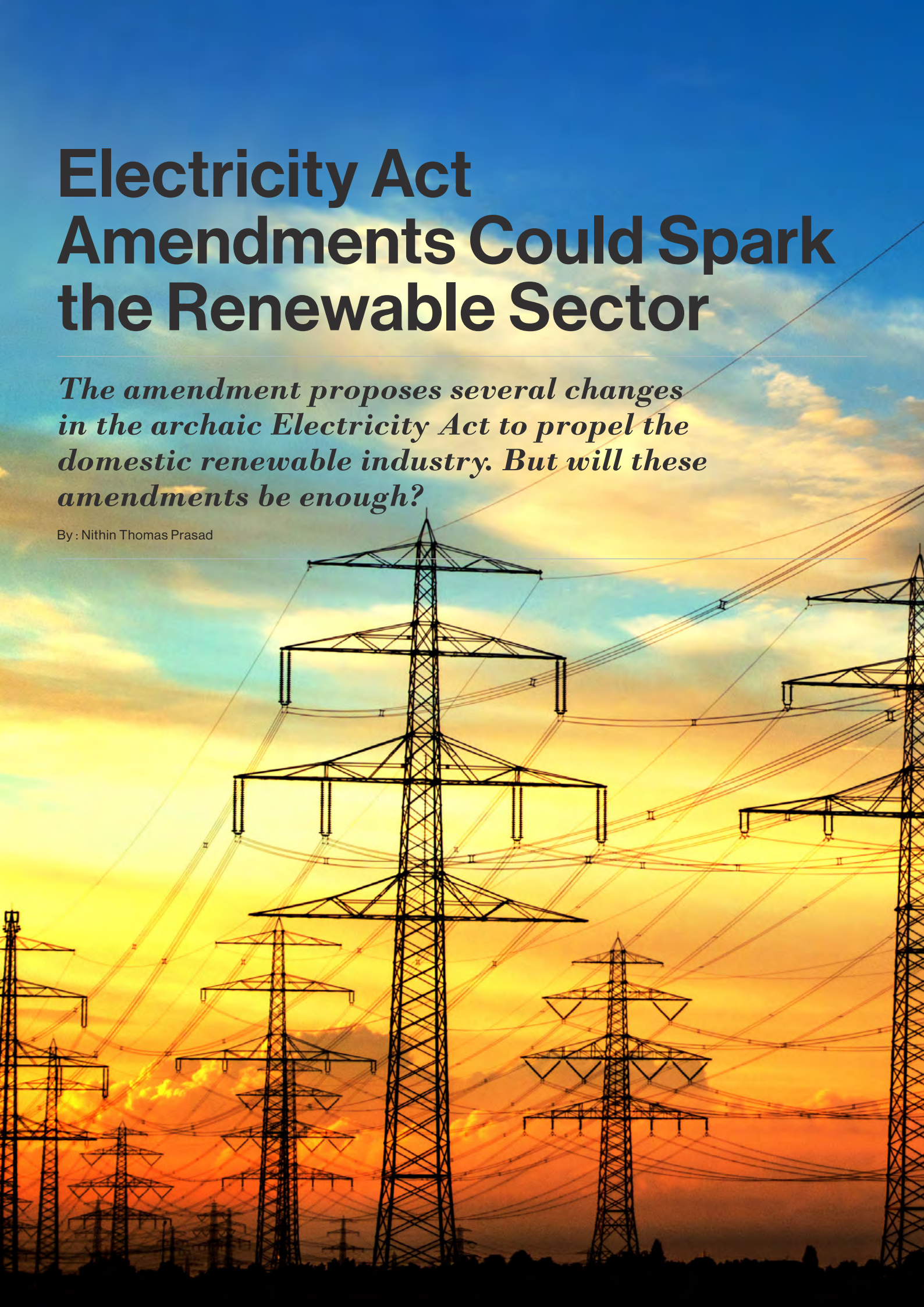
# Electricity Act Amendments Could Spark the Renewable Sector

***The amendment proposes several changes in the archaic Electricity Act to propel the domestic renewable industry. But will these amendments be enough?***

By : Nithin Thomas Prasad



The Electricity Act of 2003 was enacted by the Government of India to govern the country's power sector with the best interests of all its stakeholders in mind. The Act's provisions encompass the generation, distribution, transmission, trading, and consumption of electricity within the country at the state and national levels.

However, given the pace at which the Indian power sector has been transforming, the need for a revamp to the Act is overdue. The industry has been held back by the archaic policies and has had to suffer from patchy on-ground implementation over the years.

Power generation, especially renewable power generation capacity, has grown rapidly over the years, but transmission capacity has been struggling to catch up. At the same time, the distribution sector has been cash-strapped for several years now, and bailouts by the government at getting them back on their feet have been ineffective.

Now, the Ministry of Power (MoP) has issued a draft proposal for the amendment of the Electricity Act 2003. The Ministry has also given significant focus to the renewable energy sector in its proposed amendments.

Here is a look at three of the most significant amendments the Ministry of Power has proposed that will directly impact the renewable sector.

### National Renewable Energy Policy

The Ministry has proposed to issue a National Renewable Energy Policy periodically to promote renewable power generation in the country and to prescribe renewable purchase obligation (RPO) targets.

Generators and financial institutions have welcomed the idea and have provided their recommendations for the policy.

L&T Financial Services (LTFS), an Indian non-banking financial services company (NBFC), has recommended that the central government should notify the new policy within six months from the implementation of the Act and push out a revised version with any changes, if necessary, once every five years after that.

"The policy should aim to promote renewable energy by creating a conducive investment climate, set out emission reduction targets, foster research, innovation, and create enabling market mechanisms," LTFS said in its response to the MoP's request for feedback on the proposed amendments.

Adding to this, Subrahmanyam Pulipaka, Chief Executive at the National Solar Energy Federation of

***The objective is to establish a national-level precedent that can be adopted by states per their requirements***

India (NSEFI), said: "We also want the national renewable energy policy to cover the entire gambit of storage as well because today you're talking about renewable energy purely from the generation standpoint, but later, there will be a point where storage will also be an integral part of it."

"The main motive of this policy should be to establish a national-level precedent that can be adopted by states as per their requirements," Pulipaka added.

The National Renewable Policy would be helpful only if it promotes the renewable sector while addressing the shortcomings of existing policies, lack of investments in the industry, the slow pace of technological adoption, and compliance-related issues. At the same time, the policy must also take into consideration the individual requirements of states instead of prescribing a blanket policy.

### National Tariff Policy

The central government has also proposed a National Tariff Policy. Some of the issues this intends to address are cross-subsidies and tariff adoption by state commissions.

The provisions of this centralized tariff policy propose to reduce cross-subsidy surcharges based on a centralized mechanism. Currently, state electricity regulatory commissions are responsible for determining these charges.

This proposal has been met with criticism. Stakeholders have argued that a blanket reduction in cross-subsidy surcharges may not be appropriate owing to different factors and nuances at the state level. State commissions tailor these charges on an individual basis based on several factors that a centralized policy may fail to consider.

If implemented, state governments might have to resort to increasing other duties to make up for the revenue loss from the reduced cross-subsidy surcharges. State commissions sought to retain the responsibility of determining these charges based on the needs of individual states.

The center also proposed for commissions to set tariffs without accounting for subsidies, if any, in which case, it will be directly provided to the consumer by the government by way of direct benefit transfer (DBT).

Under the National Electricity Policy, electricity is subsidized for the agricultural sector and domestic consumers below the poverty line. This subsidy is partly recovered through higher tariffs paid by the industrial and commercial electricity consumers (cross-subsidy charges) and direct subsidies from state governments to the DISCOMs. Now, the government proposes that the subsidy to any category of consumers has to be provided through Direct Benefit Transfer.

The government introduced DBT in 2013 crediting subsidies on liquified petroleum gas (LPG) consumers, directly to their bank accounts, to reduce pilferage or delays. The subsidy is generally credited directly to consumers' bank accounts as soon as they book the first subsidized LPG cylinder before delivery, so they can purchase the next cylinder at a market rate until the cap of 12 cylinders per year is reached.

The DBT program, if efficiently implemented, could result in reducing the cross-subsidy charges, making open access projects more attractive.

State commissions have criticized this proposal by stating that DBT to consumers eligible for subsidies would be premature and might not have the same intended effects as in the case of consumers receiving subsidies on LPG cylinders. They also noted that implementing a centralized tariff policy would reduce state commissions to mere implementing agencies.

### Tariff adoption

One proposal that was welcomed under the tariff policy was setting a time limit for tariff adoption by state commissions. The amendment proposed for a 60-day window for commissions to adopt a tariff discovered through a transparent bidding process, failing which, the tariff will be deemed to have been adopted.

This was proposed in light of issues arising from delays from the state commissions in approving tariffs determined through competitive bidding. In the past, these delays have resulted in challenges when raising capital for projects and have dissuading developers from participating in tenders in certain states.

While some proposals under the centralized tariff policy have been met with criticism, the industry believes that the government is focusing on the right pain points. With the right tweaks, the national tariff policy has the potential to benefit the power sector significantly.

"The government is placing the right structural enablers with the new tariff policy, and the industry is sure to receive the much-needed momentum. A time-bound grant of open access and reduction of cross-subsidy surcharges will bring more investment to the sector. It also complements an essential objective of the Electricity Act, making consumers self-reliant in meeting their electricity demand. Along with this, Direct Benefit Transfer, if properly implemented, would be the game-changer for the sector" said, Sanjeev Aggarwal, Founder, and CEO of Amplus Solar, a distributed solar and energy solutions provider.

### Electricity Contract Enforcement Authority

The Ministry of Power also proposed to establish the Electricity Contract Enforcement Authority (ECEA) to decide on matters regarding the enforcement of contractual obligations on purchase or transmission of electricity.

***The government has also proposed a National Tariff Policy to address are cross-subsidies and tariff adoption***

The Ministry noted that the ECEA would not have any jurisdiction over regulation related matters, tariff determination, or any tariff-related disputes.

This proposal has also seen mixed reactions. On one side, the industry is skeptical of the need for this body. State commissions argue that contract resolution is one of their responsibilities

and that stripping them of this power would make them mere implementing agencies.

On the other hand, industry experts say that this is an excellent initiative, and this could be used to resolve disputes between distribution companies and power consumers. The ECEA could also play a vital role in reducing redundancies in dispute resolution because of the multiple bodies that the stakeholders have to deal with presently. Petitions have to pass through state commissions, the central commission, the appellate tribunal, Supreme Court, among others before a resolution is arrived at.

"We support this idea of an enforcement authority, but what we have asked for specifically is that establishing the ECEA should not lead to the multiplicity of petitions especially on issues that could impact tariffs," said Pulipaka, noting that "state commissions believe that the ECEA would take away their responsibilities, but the government should address these misconceptions."

Given that some of the biggest challenges faced by renewable project developers and power generators relate to violations or non-fulfillment of contracts and agreements, this would be a welcome addition. In the case of Andhra Pradesh reviewing the power purchase agreements signed between the state's DISCOMs and power generators to renegotiate tariffs, the central government was powerless in taking disciplinary measures or convincing the state to refrain from such action which adversely affected the sector in the whole country. The investments flowing into the sector saw a huge setback.

***Another crucial proposal is setting up of the Electricity Contract Enforcement Authority***

A dedicated enforcement authority with well-defined duties could go a long way in helping the sustained growth of the renewable industry.

Ideally, the Electricity Amendment Bill, 2020, should focus on not just adding renewable generation capacity, but fostering existing capacity and developing adequate infrastructure to support it.

Aside from this, the government should also aim to create a conducive investment environment to attract more domestic and foreign players into the market while also continually improving policy inconsistencies, redundancies, and operational issues by power establishments.

These proposed amendments from the central government became inevitable after several states created hurdles for the renewable energy industry and acted in ways that questioned the sanctity of contracts, harming investor confidence in the sector at a time when foreign investments are sorely needed as the industry recovers from the COVID crisis.

"There are some extremely important amendments proposed in the Electricity Act. If adopted, they could foster critical changes that are sorely needed to fix the structural issues that have frustrated the renewable industry for a long time. The amendments, if executed well, could propel the industry forward during these challenging times,"
said Raj Prabhu, CEO of Mercom Capital Group.

# Global Solar Corporate Funding Down in 1H 2020

*Mercom Capital Group's latest Funding and M&A Report said that even though there was a considerable fall in funding activity, things were not as bad as they could have been*

By : Nithin Thomas Prasad

Total corporate funding – including venture capital (VC) funding, public market, and debt financing – dipped 25% to $4.5 billion (~₹336.09 billion) in the first half of 2020 (1H 2020) from $6 billion (~₹448.13 billion) in the same period last year. The findings were revealed in Mercom Capital Group's recently released 1H and Q2 2020 Solar Funding and M&A Report.

The report explained that even though there was a considerable fall in funding activity, things were not as bad as it could have been given the ongoing coronavirus crisis, which has put the global economy in turmoil. The report covered 203 companies and investors from around the world.

"Financial activity in the first half of the year reflects the realities on the ground. Even though solar stocks have performed well, and corporate funding in Q2 looked slightly better because of several securitization deals, global economies and solar activity are still far from being back to where they should be. Project acquisition activity, typically a sign of health in the sector, declined significantly in Q2," said Raj Prabhu, CEO of Mercom Capital Group.

"In all, it could have been worse considering the severity of the crisis," Prabhu added.

In the first half of 2020, global venture capital funding – including venture capital, private equity (PE), and corporate venture capital – in the solar sector tumbled to $210 million (~₹15.68 billion), down about 74% from $799 million (~₹59.68 billion) in the same period in 2019. A total of 23 venture capital investors participated in solar funding in 1H 2020.

***During 1H 2020, there were 25 M&A deals, down from 37 in 1H 2019***

Some of the top VC/PE deals in 1H 2020 included $72 million (~$5.38 billion) raised by Sunseap Group, $50 million (~₹3.73 billion) raised by Zero Mass Water, $37 million (~₹2.76 billion) raised by Sunseap Group in a second deal, and $21 million (~₹1.57 billion) raised by Today's Power.

1H 2020 also saw four solar securitization deals totaling $1.06 billion (~₹79.17 billion), bringing up cumulative securitization deals to $6.3 billion (~₹470.53 billion) since 2013.

Debt financing activity stood at around $3.6 billion (~₹268.88 billion) through 15 different deals in the first half of 2020. This was 16% lower than the first half of 2019, which saw $4.2 billion (~₹313.69 billion) raised through 27 deals.

The report also showed that during 1H 2020, there were 25 mergers and acquisition (M&A) deals, down from 37 in 1H 2019. The biggest of these was the $100 million (~₹7.47 billion)

## Solar Top Announced Large-Scale Projects Funded by Dollar Amount in Q2 2020

| Company/Project Developer | Project Name | Country | Capacity (MW) | Amount ($M) | Investors |
|---|---|---|---|---|---|
| ENGIE North America | 2 GW US Renewables Portfolio | USA | 500 | 1,600 | Bank of America, HSBC |
| FSL Desarrollos Renovables | na | Spain | na | 353 | Pension Insurance Corporation (PIC), Banco de Sabadell, Banco Santander |
| sPower | Spotsylvania Solar Energy Center | USA | 620 | 350 | Wells Fargo's Renewable Energy & Environmental Finance Group |
| Longroad Energy | Little Bear Solar Project | USA | 215 | 333 | KeyBanc Capital Markets, Santander Corporate & Investment Banking, U.S. Bank |
| Cubico Sustainable Investments | Arenales Concentrated Solar Project | Spain | 50 | 281 | Societe Generale, Credit Agricole, CaixaBank, Export Development Canada, BNP Paribas |
| Chenya Energy | Changhua Coastal Industrial Park | Taiwan | 180 | 239 | KGI Bank, Bank Sinopac, E.Sun Commercial Bank, First Commercial Bank, DBS Bank, Sumitomo Mitsui Banking, Societe Generale |

Source: Mercom Capital Group

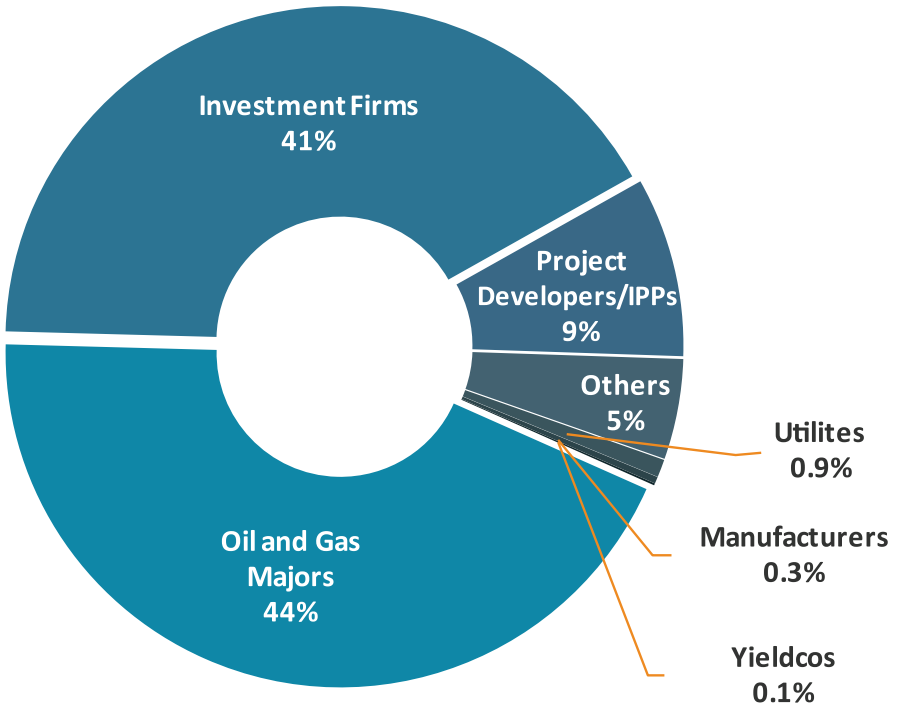
divestment of Brookfield Renewable Partners' Thailand-based solar energy business, which was sold to PTT Public Company's power and energy arm, Global Power Synergy Public Company.

During the quarter, however, there were 13 M&A transactions, a marginal improvement from the previous quarter's 12, but still lower than the same period last years, which saw 19. Of the 13 transactions in Q2 2020, 11 involved Solar Downstream companies.

***A total of 14.7 GW of projects were acquired, compared to 11.6 GW in the same period last year***

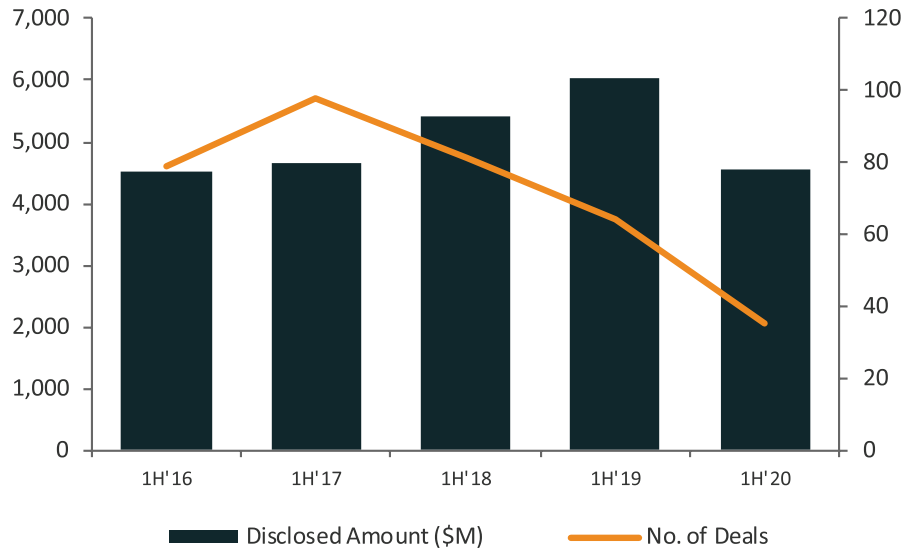
On the bright side, the report showed that solar project acquisition was up. A total of 14.7 GW of projects were acquired, compared to 11.6 GW in the same period last year. Of these, only 3 GW were acquired in Q2 2020 compared to 5.7 GW in Q2 2019. Oil and gas companies accounted for about 6.5 GW or 45% of these acquisitions during the half, followed by investment firms with 6.1 GW or 41% of acquisitions.

## Solar Project Acquirer Mix (%) 1H 2020




Source: Mercom Capital Group

## Solar Corporate Funding 1H 2016-1H 2020




Source: Mercom Capital Group

In April, Mercom Capital Group's data showed that total corporate funding in the solar sector plummeted by 31% to $1.9 billion (~₹143.4 billion) in Q1 2020 as compared to $2.8 billion (~₹211.35 billion) raised in Q1 of 2019. Total corporate funding stood at $2.7 billion (~₹203.79 billion) in Q4 2019. The report attributed this downturn in funding activity to lower venture capital, and public market financing as the COVID-19 pandemic has affected people and industries across the globe.

Funding activity in the solar sector increased by 20% in 2019, reaching $11.7 billion (~₹883.13 billion) in 117 deals, up from $9.7 billion (~₹732.17 billion) in 139 deals in 2018. The increase in corporate funding was mainly due to substantial debt financing activity in the first and last quarters of 2019 compared to 2018.

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### Economy

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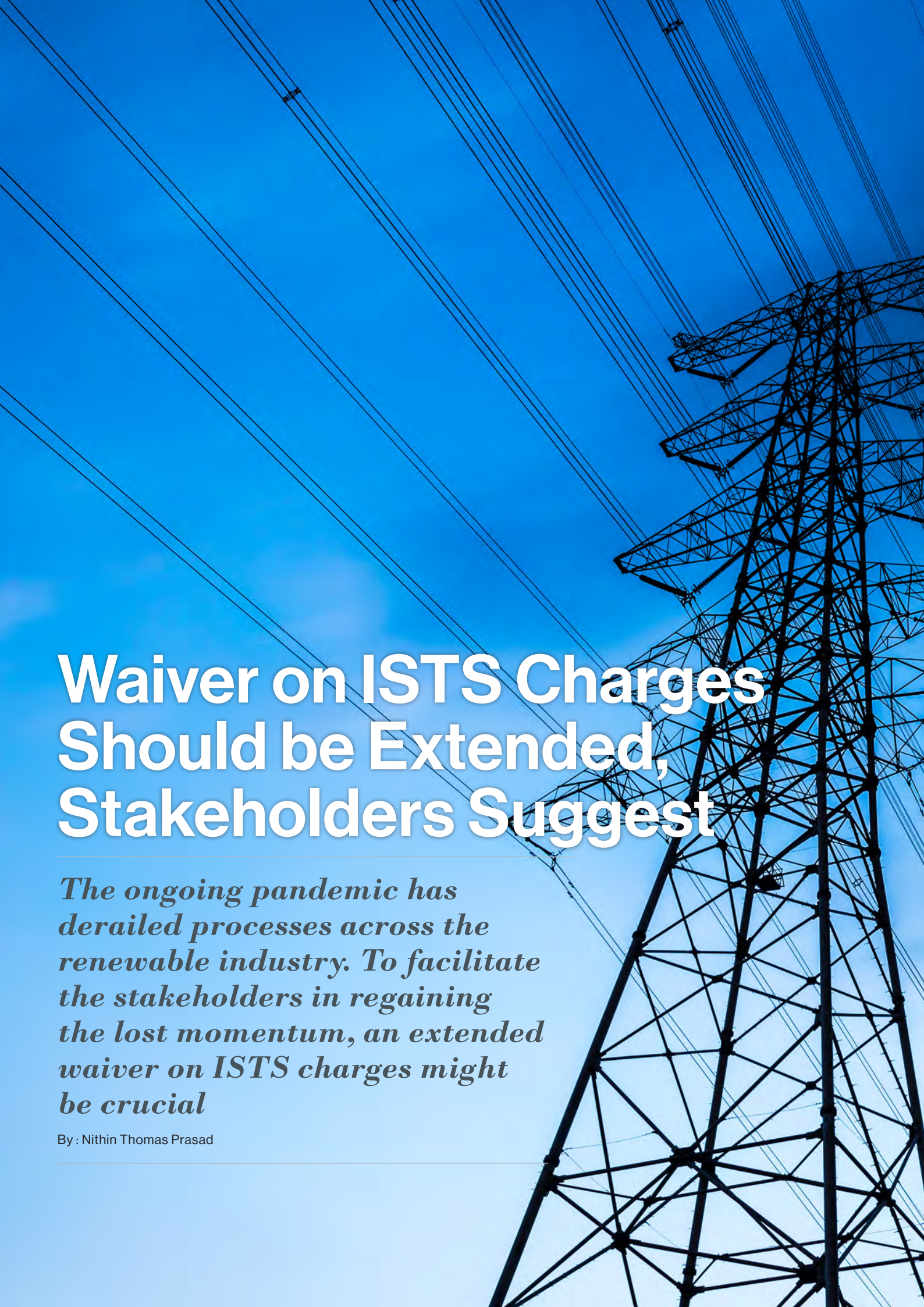

# Waiver on ISTS Charges Should be Extended, Stakeholders Suggest

***The ongoing pandemic has derailed processes across the renewable industry. To facilitate the stakeholders in regaining the lost momentum, an extended waiver on ISTS charges might be crucial***

By : Nithin Thomas Prasad

The coronavirus crisis has disrupted the momentum in all segments of the renewable industry. The Ministry of Power's (MoP) waiver on Interstate Transmission System (ISTS) charge is currently only applicable to projects commissioned before December 31, 2022, but transmission projects are expected to get delayed beyond this date due to the ongoing pandemic. The deadline was revised from March 31, 2022, set previously.

This may throw a wrench in the works of major power projects, causing tariffs to rise. The additional charges effective without the waiver will have to be invariably borne by the project developers. This will also be a cause of concern to the lenders, ultimately slowing down the progress of the country's progress towards achieving its goal of 175 GW of renewable energy by 2022.

The Ministry of New and Renewable Energy (MNRE) had addressed the issue of the time gap between the commissioning of the transmission system and renewable energy projects where the cost of transmission for the delay is to be borne by the generators even when they are not at fault.

Stakeholders Mercom spoke to unanimously agreed that the industry needs a longer deadline extension to give them some breathing room to get their projects back on track following the havoc caused by the global pandemic.

### Is the Extension Enough?

While the extension is essential, it is not is sufficient. Industry representatives said that even a six-month or a one-year extension might not help developers much as it would be of little use in cases where delays caused by the unprecedented crisis end up extending commissioning dates by more than a year.

"The waiver should be immediately extended by a few years or so in light of the ongoing COVID-19 pandemic. The lack of clarity about this would cause uncertainty for the current bid submissions in the market. This needs early confirmation so bids can be planned accordingly," said Samitla Subba, Vice President- Corporate Affairs (Policy and Communications) at Azure

***The current deadline for the waiver on ISTS charges is December 31, 2022***

**Here is a summary of the transmission projects dedicated to solar projects across the country:**

| Solar Energy Zones | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Region** | **State** | **District** | **Taluka/Tehsil** | **Phase-I (2020) in (GW)** | **Expected time of Commissioning** | **Phase-II (2021) in (GW)** | **Expected time of Commissioning** |
| Northern Region | Rajasthan | Jaisalmer | Ramgarh/Kuchri | - | Dec-20 | 1.9 | Mar-22 |
| | | | Fatehgarh | 3.5 | | 2.2 | |
| | | Jodhpur | Bhadla/Phalodi | 3.55 | | 1.05 | |
| | | Bikaner | Koyalat/Pugal | 1.85 | | 2.95 | |
| | | | **Total** | **8.9** | | **8.1** | |
| Southern Region | Andhra Pradesh | Kurnool | Gooty | 2.5 | Dec-20 | - | Dec-21 |
| | | Ananthapuram | Urvakonda | - | | 2.5 | |
| | Karnataka | Gadag | - | - | | 2.5 | |
| | | Bidar | - | - | | 2.5 | |
| | | Koppal | - | 2.5 | | - | |
| | | | **Total** | **5** | | **7.5** | |
| Western Region | Gujarat | Kutch | Rapar | 3 | Dec-20 | 2 | Dec-21 |
| | | Banaskantha | Vav/Tharad | - | | 2.5 | |
| | | Jamnagar | Lalpur | 1 | | 1.5 | |
| | Maharashtra | Solapur | | 1 | | 1.5 | |
| | | Wardha | | - | | 2.5 | |
| | Madhya Pradesh | Raigarh | | 2.5 | | - | |
| | | Khandwa | | - | | 2.5 | |
| | | | **Total** | **7.5** | | **12.5** | |

*Source: CERC, PGCIL, REC, PFC Consulting*

Mercom India Research

Power, an independent power producer.

Meanwhile, other industry stakeholders argued that waivers should be given based on bidding dates instead of scheduled commissioning dates. They said that providing waivers based on scheduled commissioning dates involves too much uncertainty and that using bid dates as the base would rule out this problem.

"Instead of extending by just six months, it is more effective if they let the developers know that bids up to a particular date will be granted waiver considering the fact that many projects are delayed due to reasons that are not in the control of the developers," said Gaurav Sood, Chief Executive Officer at Sprng Energy, a renewable energy platform set up in India by private equity fund manager Actis.

According to an executive from a solar power development firm, power sale agreements (PSA) for about 20 GW of solar projects have not been signed yet. "For these, the tariffs need to be adopted, and then power procurement approvals need to be obtained. We don't know when all these procedures are going to conclude," he added.

The executive further explained that in case the ISTS waiver is lifted, the cost impact will be around ₹1 (-$0.013)/kWh. So, if a developer quotes a tariff of ₹2.50 (-$0.033)/kWh, assuming the project is eligible for ISTS waiver, and for some unforeseen reason beyond the control of the developer, it gets delayed, the effective tariff will be ₹1.5 (-$0.019)/kWh. At this tariff, the projects will be totally unviable.

The National Solar Energy Federation (NSEFI) has also written to the Ministry of Power, stating that the industry needs a 12-month blanket extension for the ISTS waiver to help it recuperate from the COVID-19 crisis. The Federation also proposed that the waiver be linked to the bidding mechanism such that waivers are given based on the date bids are allocated by the implementing agencies.

### Major Projects at Stake:

According to Mercom's data, 49.5 GW of transmission projects (to evacuate both solar and wind) are under various stages of implementation across Rajasthan, Andhra Pradesh, Gujarat, Karnataka, Maharashtra, and Madhya Pradesh. Unless the waiver is extended, these projects are at risk of losing eligibility.

The PowerGrid Corporation of India Limited's (PGCIL) transmission projects in Rajasthan (8.9 GW) could face a delay. The projects include a tender for establishing transmission systems to evacuate 8.1 GW of solar power from special economic zones in the state. The initial deadline of December 2020 seems unlikely to be met due to the pandemic. The Central Electricity Regulatory Commission has also passed an order granting regulatory approval to the PGCIL for setting up these transmission systems.

Rajasthan's Fatehgarh, one of the most attractive locations in the country for solar projects with its high solar irradiation levels, currently does not have any available transmission infrastructure, according to the developers Mercom spoke to. The first and second phases of the projects were scheduled to be commissioned by December 2020, and March 2022, respectively. However, the second phase of the program might be delayed because of setbacks due to the COVID-19

crisis and potentially become ineligible for the ISTS waiver.

ISTS transmission projects of around 32.5 GW are expected to come up in the western and southern regions. Around 12.5 GW of projects in Phase-I are under construction, and 20 GW in Phase-II are yet to be tendered.

In April, REC Transmission Projects Company Limited announced that it would be calling for bids to develop seven transmission projects of 32.8 GW to evacuate renewable energy projects, especially solar. Following that, in May, PFC Consulting reported that it would issue tenders to build transmission systems for the evacuation of power from solar energy zones (34.9 GW). These tenders are yet to be issued.

Other locations in the state which do have sufficient transmission bandwidth have much lower solar irradiation. As a result, tariffs will be on average ₹0.05 (~$0.0007)/kWh higher since the power generation potential is lower.

### Facilitating Capacity Addition:

The problems belying India's transmission infrastructure will need more than a simple waiver to solve. More than commissioning delays, a more severe problem plaguing the power sector is the lack of transmission capacity.

Transmission charges are based on the distance between the power injection and withdrawal points. The longer the distance, the higher the charges. A more robust transmission network would go a long way in bringing down these charges, and consequently, tariffs.

It is understood that if the generated power cannot be evacuated efficiently, developing more capacity would be pointless.

***49.5 GW of transmission projects are currently under various stages of implementation***

An executive from an Indian renewable energy company explained that the sector would benefit much more from a three-year extension to ensure ISTS readiness for the large number of power projects lined up in the country and cited PGCIL's transmission projects in Rajasthan as an example.

"PGCIL has to immediately come up with a plan to expand the ISTS network in Rajasthan. It is critical that we move the ISTS readiness ahead of the solar projects because the normal timeline for PGCIL to complete any ISTS system is at least three years. This includes setting up transmission lines and substations. On the other hand, solar projects have a maximum timeline of about three months. If you want to have more generation capacity, you need to facilitate it," the executive added.

The lack of transmission infrastructure to support new renewable energy capacity additions has been a growing concern for solar and wind companies in the country. India's transmission and distribution system require significant expansion, considering the expected surge in power demand over the coming decade and the rapid installation of solar and wind projects.

Now, the Union Minister of Power, R.K. Singh, has hinted at the possibility of an extension on the waiver by at least six months during a session organized by the Federation of Indian Chambers of Commerce and Industry (FICCI). But would that be enough? This is the pressing question.

# The Pros and Cons of Imposing ALMM

*The list will hardly serve any purpose while creating new challenges for the manufacturers, stakeholders told Mercom*

By : Nithin Thomas Prasad

The Ministry of New and Renewable Energy's (MNRE) proposal to implement its 'Approved Lists of Models and Manufacturers' (ALMM) order has raised more questions than it has answered.

Why has the government decided to implement another process verification step at this time? What are its intended benefits? Is this what the solar sector needs right now? Mercom spoke to industry stakeholders about this and heard mixed responses.

While some players believed that ALMM listing would take the solar industry forward, others said that the process was redundant and would cause more harm than good.

In October 2018, the MNRE issued an order to enlist eligible models and manufacturers of solar modules and published a list called the 'Approved List of Models and Manufacturers' to monitor the quality and reliability of components being used in government-owned solar projects. According to the ALMM Order 2019, the List I will consist of models and manufacturers of solar PV modules, and List II will comprise models and manufacturers of solar cells.

## Arguments Against ALMM

Some industry stakeholders Mercom spoke to agreed that implementing ALMM would not help the industry much. They said that the exorbitant application fees of ₹5,000 (~$66)/MW on cells and modules might prove to be too expensive for smaller manufacturers, increase overall project cost, and ultimately result in higher power tariffs.

The expenses do not stop there as companies outside India are also expected to pay for "preliminary inspection" at each manufacturing unit as part of the listing process. The MNRE's guidelines state that it would inspect manufacturing units operating at locations outside the jurisdiction of Indian laws before enlisting a company. Applicants are required to pay for the charges involved in the inspection, including the cost of travel, accommodation, and other allowances for both the domestic and international officials deputed with the task of inspection. These fees start at ₹500,000 (~$6,583) and go all the way up to ₹3 million (~$39,500) per visit, depending on the capacity and location of the manufacturing site.

Considering the travel restrictions due to the COVID-19 situation, traveling within the country is not considered safe, let alone international site visits,

which again will be extremely unsafe, expensive, and impractical. There is a lack of visibility as to when these international travel restrictions could be lifted.

Stakeholders also said that the entire process of getting listed in the ALMM is time-consuming, and this would translate to project commissioning delays and supply chain disruptions. They believed the whole process was redundant since the Bureau of Indian Standards (BIS) certification has already been implemented for quality control. The industry believes that BIS certification itself is very similar to the International Electrotechnical Commission (IEC) standards.

"From the manufacturing side, we all think that ALMM is not helping in any way. It is of no use. It is not improving any process or product quality or anything. It takes a long time, is very expensive, and most importantly, they don't have a clear route as to how to proceed," said an executive from a major Chinese solar cell and module manufacturing company.

These fees might be prohibitively expensive, especially for Chinese manufacturers with high-capacity manufacturing units. For example, if a company has an installed capacity of 10 GW but only supplies 1 GW to India, they are still expected to pay for the entire 10 GW capacity, according to the rules.

Since BIS certification is a prerequisite for enlisting in ALMM, the industry could see an increase in lead times for companies to sell existing products or launch new ones in the Indian market. Mercom has previously written about the industry's concerns with the BIS certification process, which involved huge costs and long waiting times.

"The time involved in ALMM registration for foreign manufacturers for the first time is about one year. Also, BIS is a prerequisite for the ALMM application. This would substantially increase the time involved for a product to launch in India even after the initial ALMM registration by the manufacturer," said C Chaudhary, Chief Operating Officer at Amp Energy India.

Companies also said that it is very ambiguous as to why this process is needed in the first place and what is its intended benefits.

"There is no clarity from the MNRE about what happens once we pay the application fees. The BIS certification process is already around, and it is as good as the registry of certified manufacturers since only BIS certified modules can be sold in the Indian market. What is ALMM doing differently?" asked an executive from another international cell and module manufacturing company.

"BIS certifies the product, whereas ALMM is trying to certify the company. Certifying a company has no meaning because the supplier doesn't necessarily have to be a manufacturer of cells and modules," the executive added.

***The order is set to be implemented from September 30, 2020***

The ALMM order would also deter foreign players from entering the market for reasons other than high costs and the long lead times. The application for ALMM listing currently requires companies to share information regarding the manufacturing units' production, purchase of raw materials, sales, profit and loss account, statement of assets and liabilities, and balance sheet over the last three years.

An official from an Indian solar cell and module manufacturing company explained that some international players, particularly private Chinese companies, may be unwilling to disclose these details in the application, and this might deter them from getting enlisted. This might cause supply problems as well since the majority of cells and modules in India currently originate from China.

Talking about the ALMM, an executive at a large solar manufacturer said, "We need to ensure that the manufacturing ecosystem is developed in India and whatever it takes to develop needs to be implemented immediately. We have already missed the bus, and if we don't do it now, we shall be bombarded with dumped products in India with no one to take responsibility. That's what happened in the past. All the Chinese manufacturers who dumped their products in the past are no more, and getting the warranty invoked is not possible today. All those lower quality products with obsolete technology are dumped in India. India needs to rise and be self-dependent on the energy security front. Then only will the prices come down also for DCR products like what happened in telecom handset and small car segment".

### In Favor of ALMM

On the other hand, some players opined that implementing ALMM would be a good move for the solar industry. They believed that this would help increase the quality of photovoltaic products entering the Indian solar market, force companies to up their game in terms of production efficiency, and result in longer-lasting products that would help bring down tariffs.

"Stringent time-to-time audits are always welcome from the government's standpoint. ALMM could avoid incorrect qualification of manufacturers who do not have a robust process in place and help the emerging manufacturing industry set up effective controls to ensure quality," said Ramesh Nair, Chief Executive Officer, Adani Solar.

As a result, the industry might start to see increased performance and reduced degradation rates. This could also lead to a reduction in tariffs, with

***The application fees of ₹5,000/MW will be exorbitant for small manufacturers***

the industry considering a longer usable product lifecycle for their project. A minuscule cost increment to the end consumer would a worthwhile trade-off to avoid the risks of tariff losses due to degradation and other cost consequences of untested panels, Nair explained.

Many Indian companies have already applied and are waiting for approval.

"The ALMM guidelines are fairly simple, and RenewSys has applied for the same. We await the approval and are sure that as the COVID-19 situation improves and work begins, we will receive our approvals. ALMM will ensure competition among other approved players, making it fair play for developers, distribution companies, manufacturers, and other stakeholders by ensuring competitive tariffs through quality products," said Avinash Hiranandani, Global CEO and Managing Director, RenewSys.

### What the Industry Needs

While taking steps to ensure product quality would have its benefits in the long run, if not done correctly, it may end up harming the growth of the industry. According to Mercom Q1 2020 India Solar Market Update, Mercom is forecasting a decline in solar installations in 2020 to 5 GW due to the COVID-19 effect on the markets.

The ALMM order, in its current form, is expected to increase costs and lengthen lead times. In India, a notoriously cost-sensitive market that has been slow to adapt and accept newer products, another potential regulatory hurdle is the last thing that is needed.

"There is little manufacturing capacity in India. The government must incentivize this and help the local industry update their technology, among other things, instead of increasing complications arising due to bureaucracy. They can focus on supporting the local industry to adopt newer technology," the executive from the international cell and module manufacturing company added.

Chaudhary agreed, adding that "the real need of the hour would be to implement better technology and practices that help in capacity addition and reduce on-ground challenges related to land and approvals. Introducing additional prerequisite tests and compliances is impractical and doesn't help the sector tangibly."

The government must work on its ALMM guidelines to make it fairer towards all manufacturers. The government needs to revise the harsh fee structures, remove procedural redundancies, and in general, make amendments to the regulations that are impractical at this time.

The coronavirus pandemic has already dealt a blow to the financial health of the industry and disrupted the supply chain. Without issuing the necessary revisions to the guidelines based on industry feedback and practical difficulties, the policy faces the risk of non-adherence. If too many manufacturers decide to back out, the domestic market might see supply shortage issues that can slow down installations and affect job growth, forcing the government to hold back from implementing this policy.

"A Focus on safety should be the first priority, which means postponing the ALMM order in its current form for at least another year until the travel risk due to COVID decreases. Certifying over 75 manufacturers is not the most critical need right now. Instead, the focus should be on fixing the multitude of current challenges and removing hurdles so the industry can get back into growth mode again," said Raj Prabhu, CEO of Mercom Capital Group.

"It is crucial to ensure any new regulations do not disrupt or slow down solar additions anymore, considering the industry is already on pace to experience three consecutive years of negative growth in solar installations," added Prabhu.

The ALMM order is set to be implemented on September 30, 2020. The extension was granted due to the ongoing pandemic.

*Like BIS certification, ALMM is also going to be time-consuming and arduous*

**Fee Structure for Enlisting Under Approved List of Models and Manufacturers (ALMM)**

**Application Fees**

The Application fee for one model of module/cell is ₹5,000 (~$66)/MW of total installed module manufacturing capacity and ₹5,000 (~$66)/MW of total installed cell manufacturing

In case the application consist of multiple models, the application fees shall be as above for one model and additional 1% of this for every additional model

**Preliminary Inspection Fees For SAARC Countries**

Upto 100 MW - ₹5,00,000 (~$6,583)
100 - 250 MW - ₹1 million (~$13,166)
Above 250 MW - ₹30 million (~$39,500)

**Preliminary Inspection Fees For Non-SAARC Countries**

For All Capacities - ₹30 million (~$39,500)

*Source: MNRE* Mercom India Research

# Safeguard Duty Likely to See One-Year Extension

*The DGTR recommended a rate of 14.90% for the first six months and 14.50% for the subsequent six months on all solar cells and module imported from China, Thailand, and Vietnam*

By : Nithin Thomas Prasad

The Director-General of Trade Remedies (DGTR) has recommended the extension of the safeguard duty (SGD) on the import of solar cells and modules to India for another year starting July 30, 2020.

In its notice, the DGTR recommended a rate of 14.90% for the first six months and 14.50% for the subsequent six months on all solar cells and module imported from the China PR, Thailand, and Vietnam, noting that imports from all other developing nations will not attract the duty.

The safeguard duty will apply to solar cells whether or not assembled in modules or panels classifiable under the Tariff Headings 85414011 and or 85414012 of Chapter 85 of Schedule-I of the Customs Tariff Act 1975.

In its recommendation, the DGTR said that two years of protection has already been provided, and the domestic industry has improved its position. However, it still needs some time to adjust, so a one-year extension of the safeguard duty would be adequate.

In the report, the DGTR explained that the costs for solar power developers would increase because of the safeguard duty on solar cells and modules. However, the imposition of the duty would be in the public interest as it will prevent the erosion of the manufacturing base of the solar industry in the country, which has made substantial investments, he added.

*The DGTR said that after two years of protection the domestic industry had improved its position*

Early in July, the DGTR conducted an oral hearing where domestic and international industry representatives put forth their representations about the continued imposition of safeguard duty on the import of solar cells and modules to India.

**Background:**

The 25% safeguard duty, announced on July 30, 2018, was imposed on solar cell and module imports from China and Malaysia, to protect domestic cell and module manufacturers. The duty was set at 25% for the first year, followed by a phased down approach for the second year, with the rate reduced by 5% every six months until it ends on July 31, 2020.

The Directorate General of Trade Remedies initiated a review investigation in March 2020 to see if there was a need to extend the safeguard duty beyond its deadline following an application filed by the Indian Solar Manufacturers Association (ISMA). They sought for the duty to be extended by another four years. The domestic manufacturers

filing the petition had provided import data released by the Department of Commerce from 2014-15 to 2019-20 (up to September 2019) for this investigation.

### Industry Reactions

"We don't think safeguard duty has much relevance now. In various statements by the government officials, it has been made clear that the duty on modules will be 20-25% for the first year and a long-term rate of 40% post that. This 14.9-14.5% SGD might become part of the overall duty of 25% over the next one year, or the Ministry of Finance may reject this proposal of DGTR and impose 20-25% basic customs duty for the first year," said Parag Sharma, CEO of O2 Power.

"It is indeed commendable that the DGTR conducted an impartial hearing during this tough lockdown period. We were also part of the online hearing, and we are happy to accept the recommendation for the continuation of the safeguard duty for one year. It will indeed be helpful to the solar manufacturing industry in India," Avinash Hiranandani, Global CEO and Managing Director, RenewSys, told Mercom.

"Safeguard duty recommendation is welcome, but 14.9% and 14.5% will not help the Indian manufacturers. That is because, with this percentage of duty, Chinese prices would still be comparatively very low. In addition to the safeguard duty on modules, a basic customs duty of a minimum of 30% to 40% must be levied. Apart from the safeguard and basic customs duty on modules, the government should provide pass-through benefit to developers even if they buy the modules from Indian manufacturers. If it is not provided, then introducing these duties has no meaning. Without this benefit, India's forex outflow will continue at $50 billion in the next two years despite any kind of duty," said Manjunath D V, Founder and Managing Director at Emmvee.

***The current duty is set to expire on July 30, 2020***

Talking to Mercom, Dhruv Sharma, CEO of Jupiter Solar, said, "The government's intent is limited by the statute that the duty has to be lower than the previous duty (15%). So, we are happy with the direction, given the government's limitation. We are hoping that the slew of measures that they will announce soon will give a boost to domestic manufacturing."

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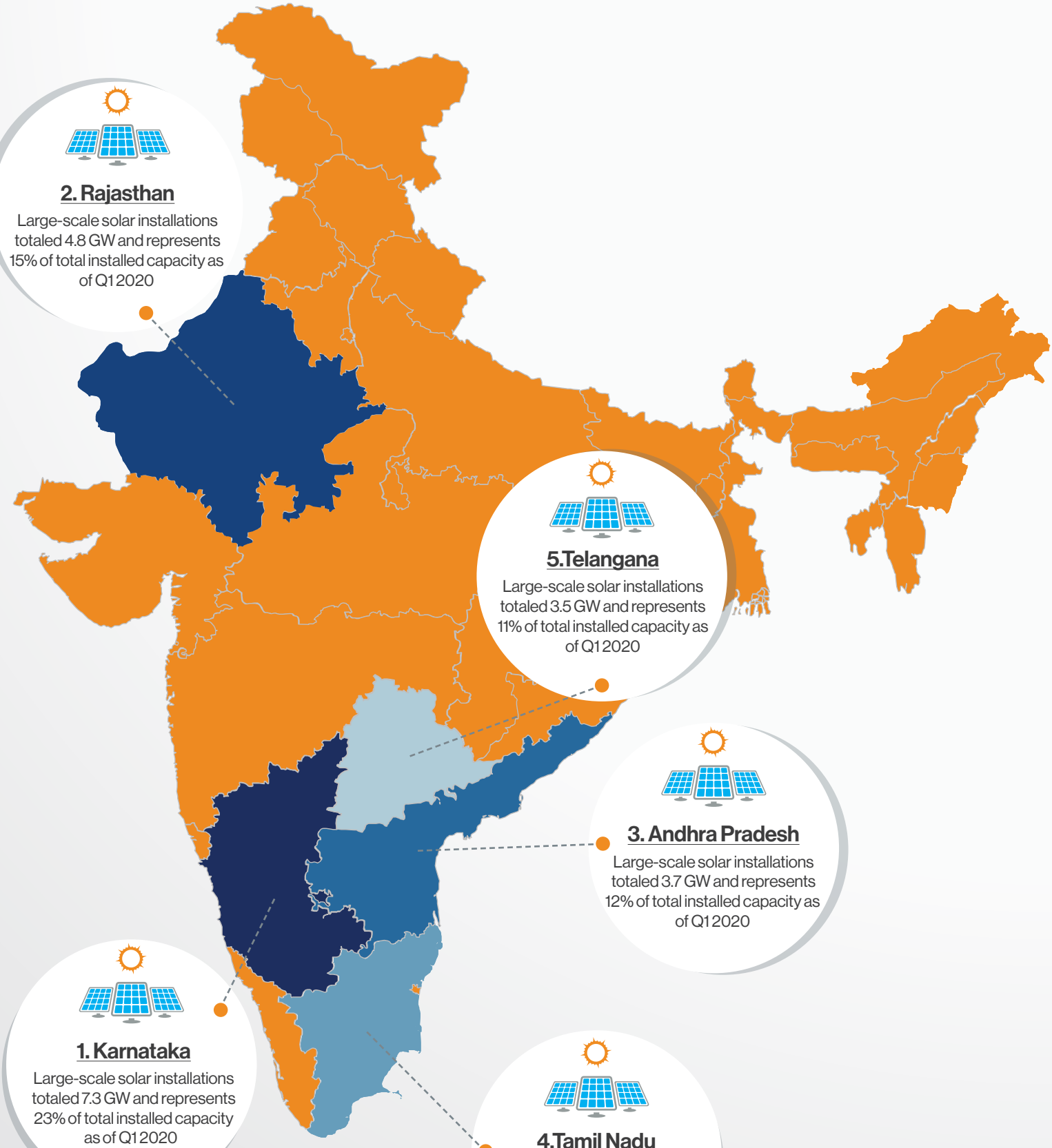


## 2. Rajasthan

Large-scale solar installations totaled 4.8 GW and represents 15% of total installed capacity as of Q1 2020

## 5.Telangana

Large-scale solar installations totaled 3.5 GW and represents 11% of total installed capacity as of Q1 2020

## 3. Andhra Pradesh

Large-scale solar installations totaled 3.7 GW and represents 12% of total installed capacity as of Q1 2020

## 1. Karnataka

Large-scale solar installations totaled 7.3 GW and represents 23% of total installed capacity as of Q1 2020

## 4.Tamil Nadu

Large-scale solar installations totaled 3.6 GW and represents 11% of total installed capacity as of Q1 2020

# Best States for Large-Scale Solar

*Karnataka topped the list with about 7 GW capacity, accounting for a 23% share of the total installed large-scale solar capacity in the country*

By : Nithin Thomas Prasad

During the first quarter of 2020, 886 MW of large-scale solar projects were installed in India, accounting for 82% of overall solar installations, according to Mercom India Research's Q1 2020 India Solar Market Update.

According to the report, cumulative solar installations in the country reached 36.8 GW at the end of the quarter, with large-scale solar projects accounting for 32.2 GW or 88% off overall solar capacity.

Here is a quick look at the top five markets for large-scale solar installations:

**Karnataka:**

Karnataka topped the list with cumulative large-scale installations at about 7 GW, a 23% share of total installed large-scale solar capacity in the country. The state has been at the top of the list from December 2018 (Q4 2018). One of the largest solar parks in the country with 2,050 MW of projects is in operation is in Karnataka, located at Pavagada.

**Rajasthan:**

Rajasthan overtook Telangana as the state with the second-largest installation of large-scale solar in Q2 2019 and has retained the spot ever since. Cumulative installations at the end of Q1 2020 stood at 4.8 GW, representing 15% of the total installed capacity in the country. The largest solar park in the world, with 2,245 MW of projects, is located at Bhadla district and contributes to almost 50% of the state's solar installations.

*Cumulative large-scale solar installations in the country stood at 32.2 GW at the end of Q1 2020*

**Andhra Pradesh:**

In Q1 2020, Andhra Pradesh moved to third on the list in terms of large-scale solar installations. Andhra Pradesh had 3.7 GW of cumulative large-scale solar installations at the end of the quarter, representing a 12% share of the overall capacity in the country. However, the state set a bad precedent by opting to review the power purchase agreements (PPAs) signed between the state's electricity distribution companies and power generators to renegotiate tariffs.

**Tamil Nadu:**

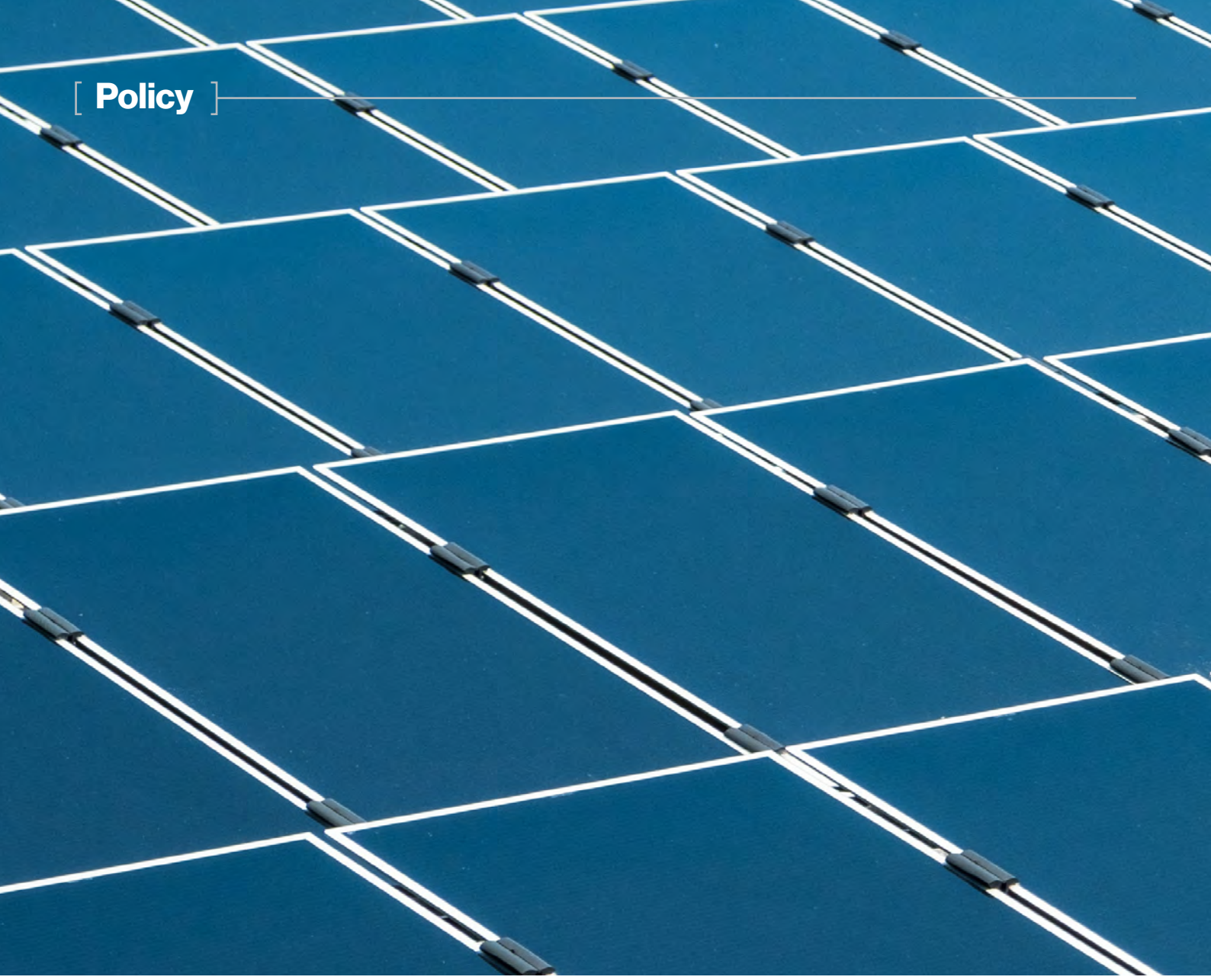
Tamil Nadu's large-scale solar installations stood at 3.6 GW at the end of the quarter, accounting for 11% of the country's overall large-scale project capacity. The state has been in the top five list for the last five quarters.

**Telangana:**

The state of Telangana, previously a part of Andhra Pradesh, moved down a position from the last two quarters to fifth on the list in terms of large-scale solar installations. The state's total installations stood at 3.5 GW or and 11% market share.

Currently, India's large-scale solar project development pipeline stands at 36.9 GW, along with 38.8 GW of projects tendered and pending auction at the end of Q1 2020.

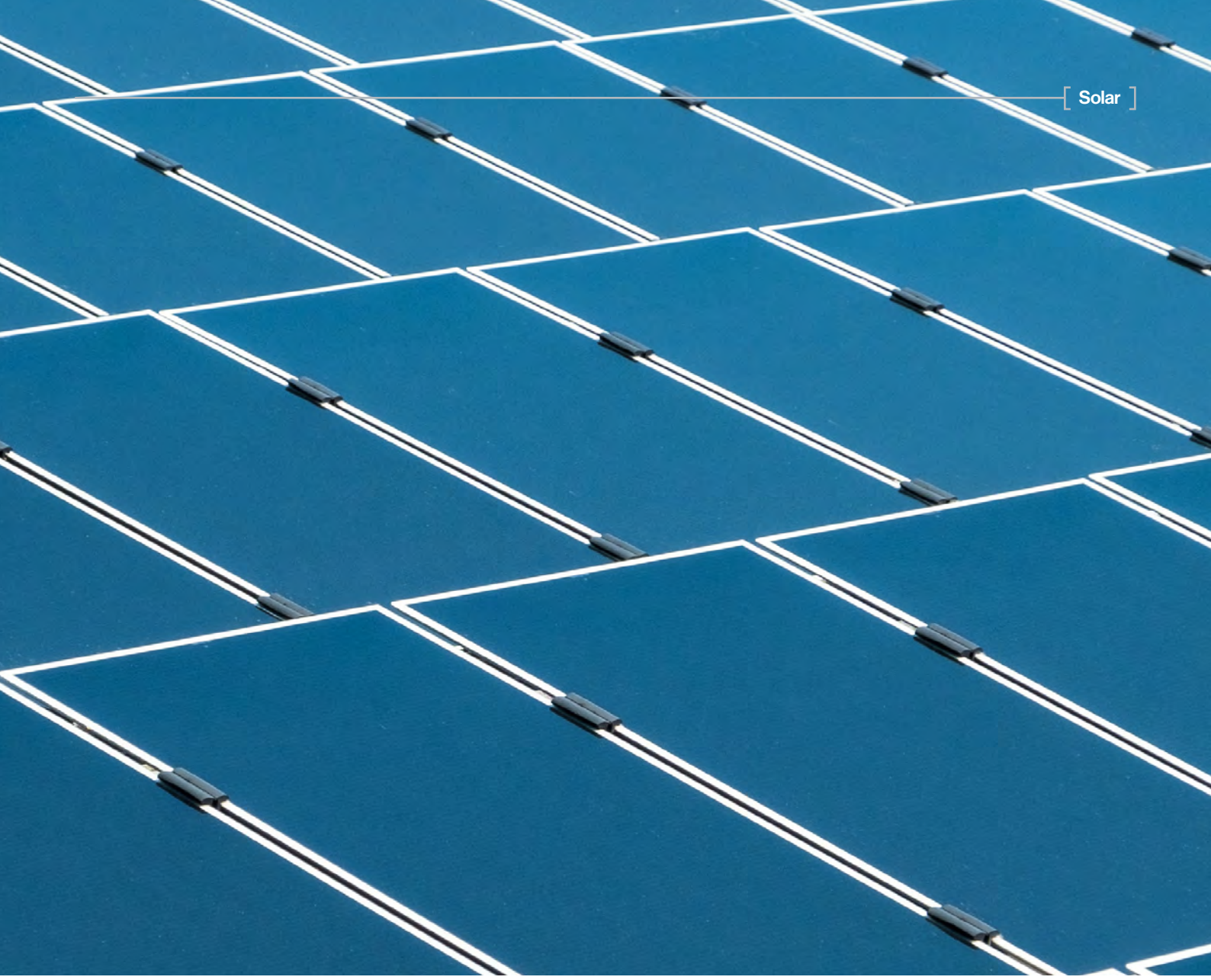
According to Mercom's report, the average large-scale solar system cost was approximately ₹35 million (~$0.46 million)/MW in Q1 2020, 12% lower compared to ₹40 million (~$0.53 million) /MW during Q1 of 2019. Costs were down by 3% compared to Q4 2019.



# ACME Solar to be Reimbursed for Bonds Against Safeguard Duty

*This is the first order in which the reimbursement of additional costs due to the implementation of safeguard duty has been allowed for bonds furnished by the developer*

By : Nithin Thomas Prasad



The Maharashtra Electricity Regulatory Commission (MERC) issued an order declaring that ACME Chittorgarh Solar Energy Private Limited (ACSEPL) was eligible for claiming compensation for additional expenses incurred due to the imposition of safeguard duty (SGD).

The Commission stated that this issue fell under the scope of the 'Change in Law' provision of the developer's power purchase agreement (PPA) with the Maharashtra State Electricity Distribution Company Limited (MSEDCL) for setting up solar projects in Rajasthan. The MSEDCL had issued a tender for the purchase of power on a long-term basis from 1,000 MW grid-connected solar photovoltaic power projects (Phase - II) in December 2018.

ACME Chittorgarh Solar, a wholly-owned subsidiary of ACME Solar Holdings Limited, had filed a petition with the Commission seeking the reimbursement of ₹1.05 billion (-$13.87 million) incurred as a result of the imposition of the safeguard duty. The safeguard duty was imposed by the government in July 2018 on the import of solar cells. The effective rate of duty then was 25%.

***The Commission declared that the imposition of safeguard duty constituted a change in law event***

ACME had submitted bonds to the customs department against the safeguard duty for the import of 319.16 MW of solar modules. ACME also sought the reimbursement of carrying costs incurred in the form of interest rates on these bonds. It said that these costs amounted to ₹58.19 million (-$769,122), based on its calculations using the MERC's tariff regulations.

The solar developer said it used the state's regulations to calculate the per-unit impact of these additional charges. It said that the annuity payment based on the model was ₹177 million (-$2.34 million) for 25 years or ₹0.4439 (-$0.00587)/kWh towards safeguard duty, which the MSEDCL claimed was not justifiable.

Instead, the MSEDCL stated that late payment surcharges at the rate of 1.25% in excess of the State Bank of India's marginal cost of fund-based lending rate (MCLR) were the only applicable compensation. To this, the ACME argued that this was not the same as additional costs incurred as a result of a change in law event.

In its analysis, the Commission declared that the imposition of safeguard duty constituted a change in law event and that the developer was eligible for reimbursement of ₹1.05 billion (-$13.87 million) in additional costs incurred.

The Commission also noted that the ACME's decision to execute the bonds with the customs department for the import of solar modules was its own decision and that this was still a financing cost that needs to be borne by them.

"Bonds were signed by ACSEPL as it chose to defer the payment of safeguard duty to get the solar panels released from customs. The procurer (MSEDCL) cannot be expected to cover the financing cost and the liabilities, if any, to the concerned authorities for the handling of imported panels at the port," the Commission said.

The MERC, however, rejected the ACME's request for the reimbursement of ₹58.19 million (-$769,122) in carrying costs and prescribed its methodology for calculating these costs.

The Commission directed for the carrying costs to be calculated as proposed by the MSEDCL, based on the deferred recovery part (average of opening and closing balance) of total compensation at the simple interest rate of 1.25% in excess of one-year MCLR of the State Bank of India, which was the prescribed rate for late payment charges under the PPA.

> ***Commission ruled that the ACME was eligible for compensation of the entire ₹1.05 billion***

In its order, the Commission ruled that the ACME was eligible for compensation for the entire amount of ₹1.05 billion (-$13.87 million) spent on the import of 319.16 MW of solar modules as a result of safeguard duty being implemented. It directed the developer to provide proof that all the modules were installed at the project sites for supplying power to the MSEDCL that were imported from countries subjected to the duty.

It also directed the MSEDCL to ascertain this compensation amount based on the change in law provisions provided in the PPA within 15 days from the date of its order.

Additionally, the ACME had proposed three options for the MSEDCL to reimburse its additional expenses - a lumpsum payment, payment at equal monthly installments, or a revision in tariff as per the tariff regulations. In its order, the Commission allowed for the MSEDCL to decide on the mode of payment based on its discretion.

This is the first order wherein the reimbursement has been allowed for a bond furnished by the developer.

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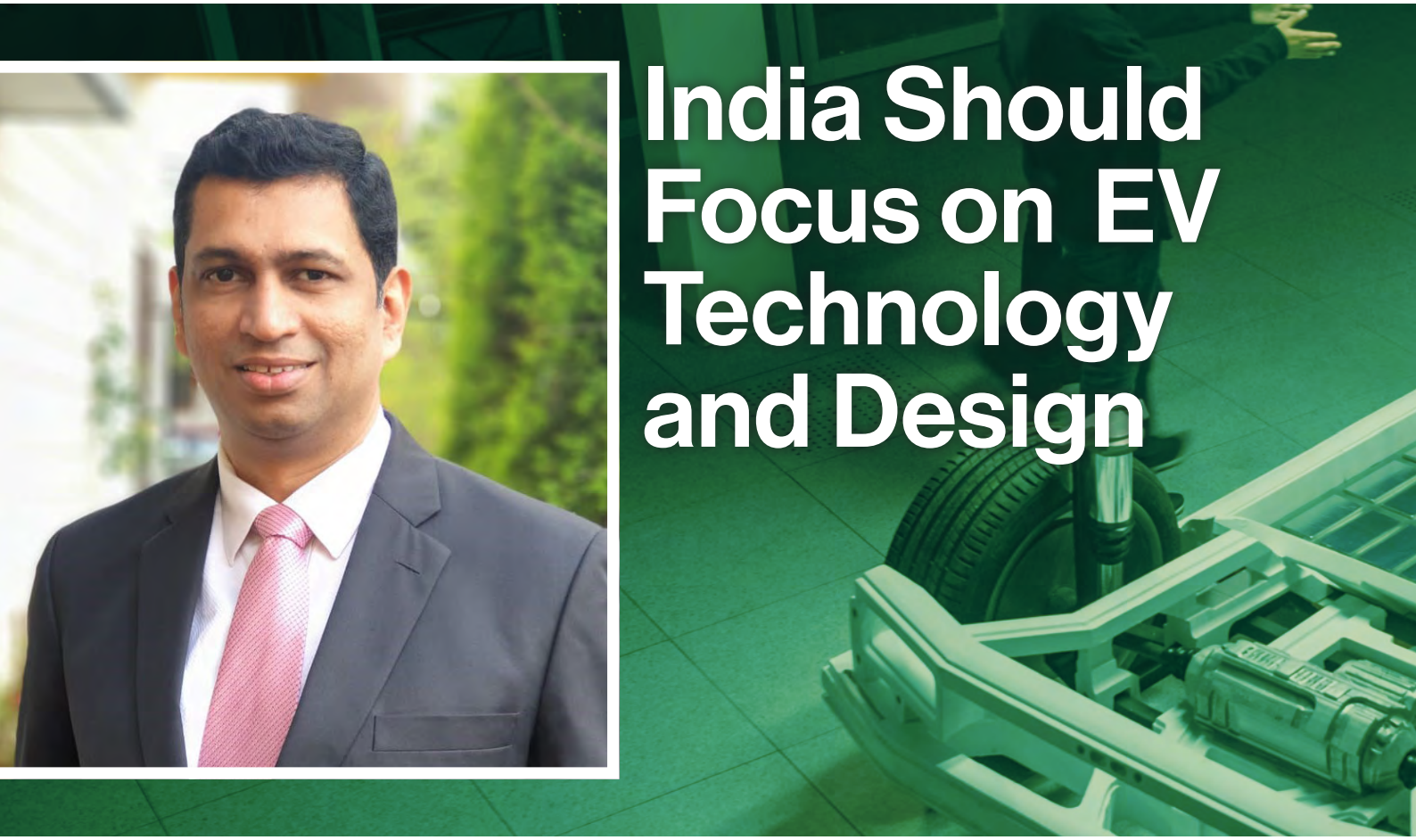


# India Should Focus on EV Technology and Design

The coronavirus outbreak has severely affected the Indian economy, which was already losing pace. The electric vehicle (EV) industry, like all others, is reeling under the unprecedented challenges posed by this crisis.

However, as the world deals with the pandemic, one factor that may work in favor of EVs, especially two-wheelers, would be the commuters' choice to switch over to safer EVs.

The EV industry sold 156,000 EVs in the financial year (FY) 2019-20. According to the Society of Manufacturers of EVs (SMEV), the sale of EVs in India increased by 20% in 2019-20, mainly driven by rising sales of two-wheelers.

Mercom interacted with Maxson Lewis, the managing director of Magenta Power, to talk about what's going on in the EV industry during these testing times and where does the Indian market currently stand. Here are the edited excerpts from the interview:

**Can you give us an overview of where the Indian EV industry is compared to other countries?**

As compared with countries in Europe or North America, we are a few years behind in terms of adoption, infrastructure, and regulations. Also, as compared to countries like Sri Lanka or Bhutan, the per capita adoption of an EV is lower in India. While these numbers are not a direct reflection, they give a sense of how in India, we may be slipping on the opportunity to move towards cleaner mobility.

In 2018, there were a lot of discussions and focus on moving towards EV, but we seem to have lost the plot. On a positive note, however, the adoption of EV in the two-wheeler segment had been the highlight in 2019-20, which was expected.

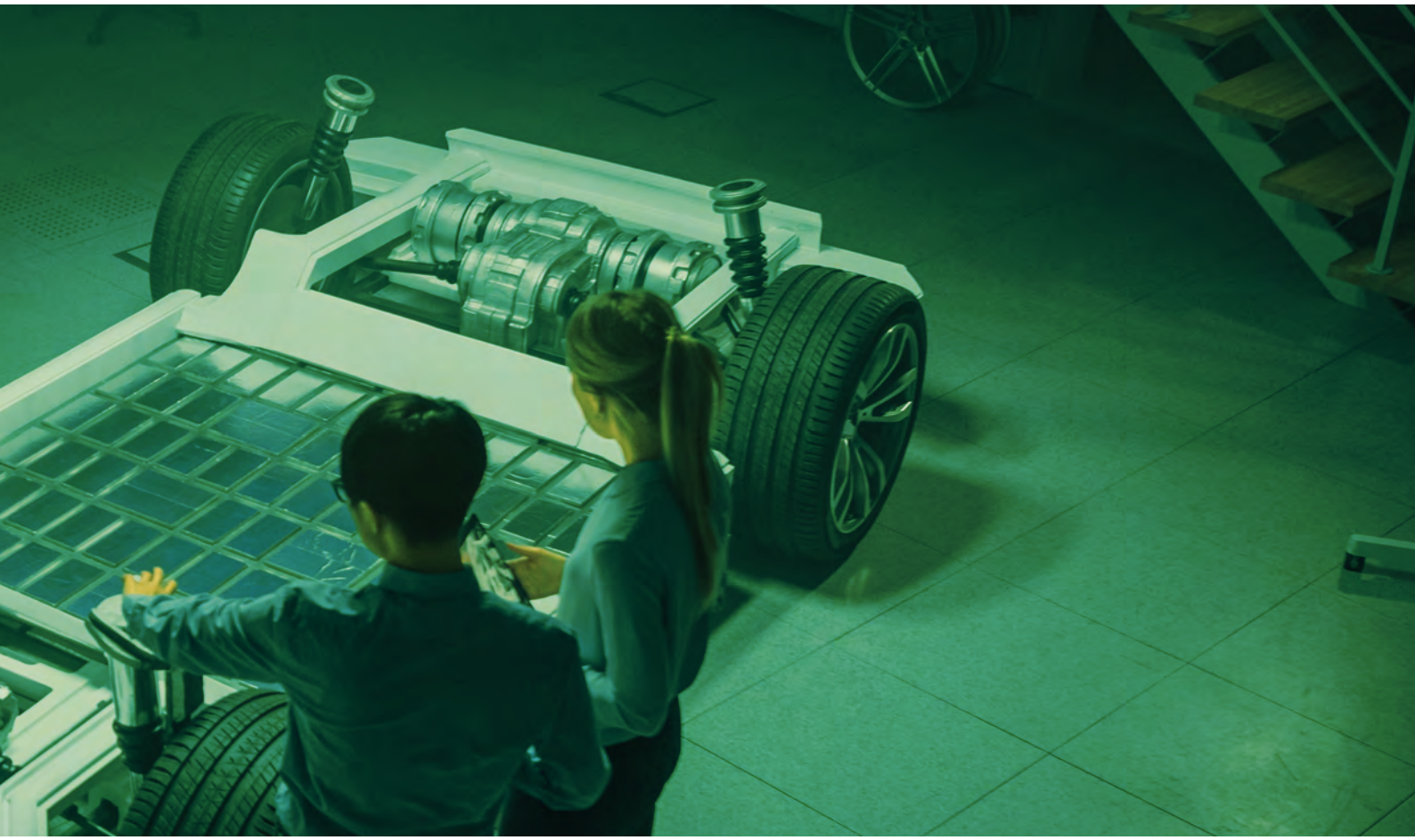
**How has the pandemic changed the dynamics of the Indian EV market?**

The EV is a subset of the overall automotive industry, which has been hit extremely hard, and the EV industry is not isolated from that impact. However, the automotive recovery numbers in Europe and America are indicating that the percentage share of EV in the automotive numbers is increasing significantly.

In India, we see a positive impact where EV has become a part of the buyers' consideration set. This is also obvious from the inquiries we get on our toll-free number about which EVs to buy.

**Where should the government's focus be right now to promote the domestic EV segment?**

EV is a technology-intensive industry and is a long-term game. Hence, research and development supporting EV and component manufacturing should be the key focus of the government. The recent announcements made by various ministries to make India the EV capital of the world must be followed up with on the ground changes to make it possible.



**What are the challenges of upscaling EV battery manufacturing units in the country?**

Battery manufacturing is a game of scale - "giga-factories"- in battery parlance, which makes it a capital-intensive endeavor, which at this time may come in short. The second and more critical point is mineral security. Scale requires a strong supply chain for the raw materials which go into a battery, which as a country, we are short of and need to start developing. After China, we are best placed to move in. But this cannot be pushed by just private entities but requires government support at the geopolitical level.

**India is now talking about becoming self-reliant. How long do you think it will take India's fledgling EV segment to become completely self-reliant?**

Self-reliance needs to be carefully defined. In a global economy, there is nothing called 100% self-reliance. Only natural products like food that get produced and consumed locally can be considered in the fully self-reliant space. In the case of EV, 100% self-reliance is not possible since we do not have all the raw materials that we require, or even if we do, that cannot be extracted economically yet. So, we can move towards self-reliance step-by-step and component by component.

To start with the EV technology and design is something we can start with immediately. I see that we are seven years away from saying that we are more than 60% self-reliant on the components.

**How do you see the current crisis affecting the industry this year? What are your projections about the segment for 2021?**

Like I said earlier, EV as a subset of the auto industry that has been adversely impacted purely because the purchase capability has reduced, and there is overall uncertainty towards spending, which is non-essential. If the pandemic were not to happen, we were betting that Dussehra 2020 would be the inflection point for EV with many new launches. However, the current situation is what it is, and we believe that EV projections like any industry must be moved out by a year.

**Any final remarks on the current shape of things in the EV segment and where it is headed?**

It is proven already in matured markets that for EV in India, it is not a question of will. It is a question of when. The Indian adoption of clean mobility will follow the same trend which happened in telecommunications - we will start slow, but when it does, we will leave other countries behind.

Notably, the Union Budget 2020 left the stakeholders of the EV industry disappointed with little to no push given to this segment to thrust it forward. Due to the government's plan to increase customs duty on various kinds of such vehicles, people fear that imported EVs are going to be expensive. This move was proposed to encourage the manufacturing of local products.

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# Industry News and Policy Briefs

The **Ministry of New and Renewable Energy** (MNRE) has announced that the period of nationwide lockdown due to **COVID-19** will be considered from March 25, 2020, to May 31, 2020. This is in continuation of the Ministry's earlier notice, which was issued on April 17, 2020. It had directed that the renewable energy implementing agencies be granted an extension of time for projects amounting to the total period of the lockdown plus 30 days for normalization. The industry needed clarification on what would be the dates that would be considered as lockdown as the lockdown has been lifted in phases in various states.

The **Renewable Energy Association of Rajasthan** wrote to the MNRE, asking for it to start conducting online **pre-dispatch inspections** (PDI) of the domestic content requirement certified solar modules. The request was made to the government in light of the ongoing coronavirus pandemic. The association, on behalf of all empaneled vendors under phase-II of the grid-connected rooftop solar program, wrote that while the PDI process is vital to ensure the quality of the components used in the program, it was not a good idea to conduct physical inspections in these times.

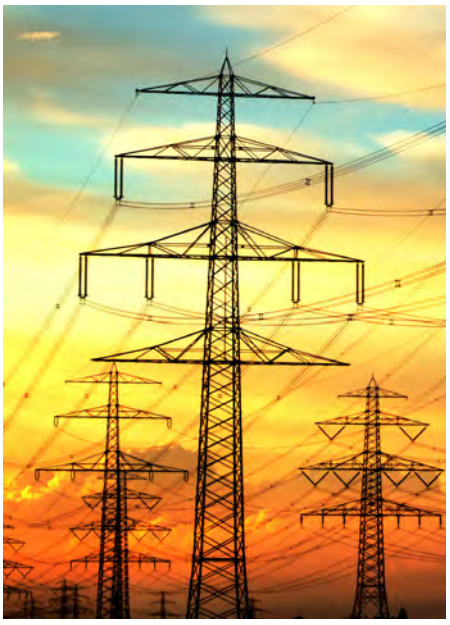
**Tata Power** announced that its board of directors had given its in-principle approval for setting up an infrastructure investment fund (InvIT) for the company's renewable business. The Mumbai-based power electric utility's **InvIT** was set up to help restructure some of its businesses to unlock value and simplify the structure of the company and its subsidiaries, according to the press statement. This is part of the company's long-term strategic plan to reduce debt, strengthen its balance sheets, and improve overall return metrics, it added.

Robotic solar cleaning solutions provider **Ecoppia** announced that it secured a $40 million credit facility from a U.S.-based **CIM Group**. CIM is a community-focused real estate and infrastructure owner, operator, lender, and developer. Ecoppia is a U.S.-based company providing automation and robotics solutions for large-scale solar projects. The investment would help Ecoppia reduce its cost of debt, stimulate technological developments, and expand geographically.

**ReNew Power,** an Indian independent power producer, announced its plans to invest between ₹15-₹20 billion (-$200-266.7 million) to set up a **2 GW solar cell and module** manufacturing facility in the country. The company said that it was in talks with different states to set up this unit. ReNew expects domestic demand for solar cells and modules to grow to 15 GW next year. Its new manufacturing facility will not only cater to its own generation business' needs but also the needs of other renewable companies in the country.

At a recent virtual conference held by the Confederation of Indian Industry (CII), Union Power Minister **R.K. Singh** said that the government was planning to develop **3 GW** (each) of solar module and cell manufacturing capacity in the country. Singh also said that the government was thinking of coming up with a plan to invite bids for an innovative program that would involve generating solar power, which would then be used to generate hydrogen. The hydrogen produced would then power a city's public transport. He noted that the only requirement of the bid would be that the per kilometer cost of the transportation should be less than diesel-driven buses.

United Kingdom-based oil giant **BP** announced its plans to invest **$70 million** (-₹5.22 billion) in India's **Green Growth Equity Fund** (GGEF), which aims at promoting zero carbon and low carbon energy solutions in the country. Once the transaction is completed later this year, bp will become a limited partner in the GGEF and would be a representative in its advisory committee.



Following the escalated border tension between India and China, the security checks at the ports are going on in full swing. Many stakeholders say that the checks and delays are acting as impediments in the smooth functioning of the solar supply chain, though consignments are being released. The **Ministry of Power** earlier issued a notice mandating all power supply system equipment, components, and parts imported into the country must pass through a check for harmful embedded software. The Ministry explained that the power sector is a "strategic and critical sector" and that threats to the country's power supply system could have catastrophic effects and potentially cripple the entire country.

The **Appellate Tribunal for Electricity** (APTEL) asked three solar power developers to verbally negotiate their disputes with the **Uttar Pradesh Electricity Regulatory Commission** regarding the adoption of tariffs. The petitions were filed as the tariffs decided by the Commission in these three cases were lower than what was discovered through competitive bidding. In all three cases, the petitioners contested against the Uttar Pradesh Electricity Regulatory Commission's decision to adopt a tariff that was lower than the rate discovered through competitive bidding for solar projects in the state. They alleged that the UPERC had reduced the tariff "arbitrarily."

Italian renewable energy company **Enel Green Power** announced that it has entered into a long-term, joint investment partnership with Norwegian private equity fund **Norfund** to set up renewable energy projects in India. Enel said it would jointly finance, build, and operate new renewable projects in India with Norfund through its Indian subsidiary - **Enel Green Power India.**

The **Indian Energy Exchange** (IEX) announced that its new **real-time electricity trading platform** had enabled a trading volume of 515.46 million units (MUs) of power in June 2020, its first month of operation. In its press statement, the IEX also said that it accomplished a single-day trading volume of 36.09 MUs on June 30, 2020, the highest during the month. It added that 110 customers participated in the auction sessions held that day. Real-time market (RTM) trading platforms are used widely across the world. RTMs are designed as half-hourly markets comprising 48 auction sessions of 15 minutes each. Auction sessions are conducted at even time blocks on the hour, and delivery commences one hour after the trade session is closed.

In the largest rooftop solar acquisition to date, **Sunrun** has entered into an agreement to acquire **Vivint Solar** in an all-stock transaction for **$3.2 billion**. Vivint Solar serves as a full-service residential solar services provider in the United States, while Sunrun is a home solar, battery storage, and energy services company. Each share of Vivint Solar will be exchanged for 0.55 shares of Sunrun common stock accounting for a total enterprise value of $9.2 billion. Vivint stockholders will own 36% of the fully diluted shares of the combined company, and Sunrun will own nearly 64% of the shares. The exchange ratio implies a 10% premium for Vivint Solar based on the closing price on Monday.

# Policy Updates

## Center

The **Central Electricity Regulatory Commission** (CERC) released **new tariff regulations** for renewable energy projects. These regulations will come into force from July 01, 2020, and will be valid until March 31, 2023. The project-specific tariff will apply to solar projects, floating solar projects, solar thermal, wind, and biogas power projects. It will also apply to municipal solid waste projects, renewable hybrid, and renewable projects with storage.

The **MNRE** announced new **benchmark costs** for various categories of grid-connected rooftop solar projects for the financial year (FY) 2020-21. The benchmark costs will be applicable for all letters of award to be issued or for the vendors to be empaneled after July 31, 2020. The benchmark costs are inclusive of the total project costs, which include solar modules, inverters, the balance of systems, cost of civil works, installation, commissioning, transportation, and comprehensive maintenance for five years. The benchmark costs do not include net metering costs and battery back-up costs.

The **MNRE** issued guidelines for the tariff-based competitive bidding process for procuring power from 2.5 GW of the **interstate transmission system** (ISTS) connected wind projects blended with solar power. The main objective of the program is to provide a framework to procure electricity from 2.5 GW of wind power projects blended with solar power. According to the document, the Solar Energy Corporation of India (SECI) will act as the nodal agency for the implementation of the program. The total capacity to be awarded under the program is 2.5 GW, and the minimum capacity that a developer can bid for is 50 MW. Further, the rated power capacity of the wind project should not be less than 80% of the total contracted capacity blended with 20% of solar power.

## States

The **Punjab State Electricity Regulatory Commission** (PSERC) approved the carry forward of the shortfall in the compliance of **renewable purchase obligation** (RPO) in FY 2019-20 to FY 2020-21. The Commission said that the procurement of **renewable energy certificates** (RECs) to comply with this shortfall would put a considerable financial burden on the Punjab State Power Corporation Limited (PSPCL) and, consequently, on the consumers. The Commission allowed 3.5% (both for solar and non-solar combined) reduction in the RPO target for FY 2020-21.

Several states like **Maharashtra, Tamil Nadu, and Andhra Pradesh** wrote to the Ministry of Power expressing their disagreements with the proposed amendments to the Electricity Act. In April, Mercom reported that the **Ministry of Power** issued a draft proposal for the amendment of the Electricity Act 2003 to address contract enforcement, renewable purchase obligation, among other vital issues. It had invited comments, suggestions, and objections from stakeholders.

The Government of **Andhra Pradesh** announced its **Renewable Energy Export Policy 2020** for solar, wind, and wind-solar hybrid projects. The policy aims to promote the export of renewable energy outside the state without any obligation of power procurement by state distribution companies. The policy will remain in force for five years from its date of issue, and all registered companies in the private and public sectors are eligible to participate in project development. The power generated from these projects will be exported outside the state.

The Chief Minister of Gujarat, Vijay Rupani, has decided to extend the validity of **'Gujarat Solar Policy-2015'** up to December 31, 2020. The policy was previously effective until March 31, 2020. The state's energy minister Saurabh Patel added that due to the current situation because of the COVID-19 pandemic, the state government has also announced ₹140 billion (-$1.87 billion) 'Gujarat Aatma Nirbhar' package under which the timelines of many policies have been extended.

The **Eastern Power Distribution Company of India Limited** (APEPDCL) has refused to rescind its open access amendments in the face of objections raised by renewable developers. The developers had opposed the withdrawal of several incentives given to renewable generation in the state. The **DISCOM** argued that if factors like backing down cost, grid support charges, transmission and wheeling charges, are taken into account, the cost of non-conventional power procurement is "abnormally high," which would make it difficult for DISCOMs to survive while their financials are already in a rut.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# Major Tender and Auction Announcements in June

*This is a list of major tenders and auctions from June. A comprehensive list can be found on Mercom's Tender and Auction Tracker and Alerts. Please contact info@mercomindia.com for more information*

## Top Large-Scale Solar Tenders

The Railway Energy Management Company Limited **(REMCL)**, a joint venture of the Indian Railways and RITES Limited, invited bids for two tenders
-For setting up **1 GW** of solar projects along the railways' tracks in various states.The tender has been floated under the domestic content requirement (DCR) category
-For the development of up to **400 MW** of grid-connected solar power projects on vacant lands of the Indian Railways. The solar project will be developed under the capital expenditure (CAPEX) model.

Tata Power has issued a request for selection (RFS) to procure power on a long-term basis for 225 MW of grid-connected wind-solar hybrid power projects.

Solar Energy Corporation of India Limited **(SECI)** issued a request for selection (RfS) for setting up **10 MW** of grid-connected solar power projects at Bagru in Jaipur district of Rajasthan

## Other Tenders

The **Central Electronics Limited** (CEL) floated a tender for the supply of **2 million multicrystalline** passivated emitter and rear contact **(PERC) solar cells**. The tender is open to domestic as well as international suppliers.

**CEL** also floated another tender for the supply of **300,000** domestically manufactured **multicrystalline solar cells** with a wattage of 4.52 Wp.

**NTPC** also invited applications globally to enlist vendors to procure solar photovoltaic (PV) modules. The tentative capacity for the procurement of solar PV modules in the current financial year has been set at **1 GW**, while 2-2.5 GW has been planned for the subsequent years.

Bharat Heavy Electricals Limited **(BHEL)** issued a request for quotation (RfQ) for the supply of **module mounting structures** for Gujarat State Electricity Corporation Limited's (GSECL) solar projects in the state. The quotations have been invited for the supply of 720 metric tons of superstructures for module mounting for a 75 MW solar PV project at Dhuvaran in Gujarat.

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# Auctions

**SECI's** auction for **2 GW** of the interstate transmission system (ISTS) connected solar projects (Tranche IX) saw a record low bid of **₹2.36 (~$0.0313)/kWh**. The lowest tariff was quoted by Solarpack Corporacion Tecnologica SA, Avikaran Surya India Private Limited (Enel Green Power), Amp Energy Green Private Limited, Eden Renewables, and ib vogt Singapore Private Limited quoted the second-lowest tariff of ₹2.37 (~$0.0314)/kWh. AMP Energy won 100 MW of projects, while the other companies won 300 MW of projects each. ReNew Power Private Limited quoted ₹2.38 (~$0.0316)/kWh for 1.2 GW of projects but won only 400 MW under the bucket filling method.

The Rajasthan Electronics and Instruments Limited **(REIL)** released a list of the lowest bidders (L1) for its tender to develop **50 MW** of rooftop solar projects across the country. REIL received bids from five bidders for the entire tendered capacity of rooftop solar projects. Ashlyn (Parent company: Green Affiliates) Solar Infra Private Limited, Broil Solar Energy Limited, DD Project Services Private Limited, Suryam International Private Limited, and Synergy Engineers Group Private Limited placed bids ranging from ₹3.64 (~$0.048)/kWh to ₹5.08 (~$0.067)/kWh

# Top Rooftop Solar Tenders and Updates

The Haryana Renewable Energy Development Agency **(HAREDA)** invited bids for **30 MW** of rooftop solar systems on government buildings in the state.

The Chhattisgarh State Renewable Energy Development Agency **(CREDA)** has issued a tender to empanel rooftop solar installers. These grid-connected rooftop solar projects ranging between **1 kW to 500 kW** will be set up at various locations in the state. The contract will be valid for five years under the capital expenditure (CAPEX) model.

The Madhya Pradesh Urja Vikas Nigam Limited **(MPUVNL)** has reduced the capacity of its earlier tender floated for the installation of **25 MW** of grid-connected and off-grid rooftop solar projects. The capacity has now been cut down to **15 MW**. Another modification in the tender is the removal of the domestic content requirement.

The **Rajasthan State Agricultural Marketing Board** floated a tender for about **1.6 MW** of grid-tied rooftop solar systems to be set up at various locations in the state.

The Rajasthan Electronics and Instruments Limited **(REIL)** invited bids for the empanelment of bidders to install approximately **1 MW** of grid-connected rooftop solar projects in the residential sector across various locations in Bihar. The solar PV modules and inverters will be supplied by REIL at the site.

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