The recently concluded REI Expo 2017 witnessed a mixed bag of sentiments from the participants. And, there are some obvious reasons: low tariffs, financing challenges, Chinese imports, dark clouds of anti-dumping duty, manufacturing constraints and, lastly, GST.

Solar Conundrum!

Amidst all the chaos surrounding lowest competitive bid tariff, GST confusion, Chinese imports etc., the Indian solar sector has stood its ground. The industry continued its recording-breaking year with a cumulative 7,149 MW installed at the end of Q3 2017. A total of 2,247 MW was installed during the period, with 300 MW up from the 1,947 MW installed in Q2 2017. In the third quarter, large-scale solar projects accounted for 1,982 MW and made up 88 per cent of installations, while rooftop installations totalled 265 MW and accounted for the remaining 12 per cent. Large-scale installations doubled year-over-year and rose by 15 per cent in the third quarter from that of the second quarter. The pipeline of utility-scale projects currently stands at 11.5 GW with another 5.6 GW of tenders awaiting auction.

Growth in the large-scale solar market in Q3 2017 was underpinned by more than 1 GW of combined project installations in Telangana and Karnataka, followed by more modest installation totals in Maharashtra, Uttar Pradesh and Rajasthan. Telangana was the only state that installed more than 500 MW. In all, eight states accounted for 96 per cent of large-scale installations during the quarter.

With approximately 612 MW of solar installations during the period, Telangana surpassed Andhra Pradesh for having most solar installations with a cumulative total of ~2.5 GW installed. Telangana was closely followed by Andhra Pradesh and Rajasthan, each of which has cumulative installed capacities slightly greater than 2 GW. These three states together represent approximately 43 per cent of the country's total installed large-scale solar capacity. It is expected that total solar installations in India will range from 9.5 GW to 10 GW in the full calendar year 2017 and approximately 7 GW in 2018.

The above figures look impressive; however, overall conditions in the Indian solar market became more challenging during Q3 2017 due to a

14 per cent increase in Chinese module prices, pending anti-dumping case, power purchase agreement (PPA) renegotiations in some states, incomplete infrastructure, evacuation issues, port customs duty and lack of clarity surrounding the Goods and Services Taxes (GST). All of these factors led to an overall slowdown in installations and a slowdown in tenders and auctions, resulting in a reduction in the installation forecasts for 2017 and 2018.

Meanwhile, a recent shockwave in the form of lowest competitive bid tariff at Rs 2.44/kWh for 500 MW Bhadla phase-III solar project shook the sector. Most utilities now want a similar low tariff, which has led to delays in PPA signings, tenders and auctions.

This may look like a challenge for others, but for **Ashish Khanna, Executive Director and CEO, Tata Power Solar** it is an opportunity. He says, “The good part about lowering tariff is that the solar industry is now being acclaimed as being competitive. I firmly believe that no business house ever takes commitment of a project, that too for 25 years, unless it is profitable in their model.” However, as for the success of these projects, “We will know in the next 12 months as to which assumption is likely to come true,” he adds.

COMPETITIVE BIDDING

As for the Bhadla projects, it is likely that this tender submission will get delayed again and the reverse auction will take place early next year. Whether tariff bids will be as competitive as in the previous Bhadla auction is debatable. Developers such as Acme, who won 200 MW at a tariff of Rs 2.44/kWh (4¢) in the auction, has recently expressed “regret” as Chinese module suppliers have increased pricing over the last three months, lowering return expectations. Other costs have also gone up on account of GST implementation. If there were to be an auction today, Bridge to India would expect tariffs to move up to Rs 2.80/ kWh. But rising tariffs will create another problem: the DISCOMs may walk away creating even more problems for the sector.

To this, **Uday Bhende, Managing Director, Kirloskar Solar Technologies Pvt Ltd** says, “Frankly, we have tried the entire math and just cannot get this PPA rate to work. I have asked almost everyone from the industry that I have met, and investors too, but have not received a satisfactory answer yet. Therefore, I would continue my search for a justification of such a price point.”

“Most projects under construction will not be affected, but new tender and auction activity is stalled and most developers are taking a pessimistic view of the recent developments,” said **Priya Sanjay, Managing Director, Mercom Communications India**.

Ivan Saha, President and Chief Technology Officer, Vikram Solar was in for a rude shock and is yet to recover. “We are fortunate as we did not bid for this project,” he says. “I am surprised how a player can take the risk, despite the anti-dumping duty (ADD) looming large over us.”

Here, **Manish Narula, Senior Director, Business Development, Jinko Solar**, cautioned the developers from bidding for such low price. “Since the developer has to bear the cost for 25 years at least, there are equipment which will take money out of your pocket if you do not plan and design properly,” he says.

Large-scale installations doubled year-over-year and rose by 15 per cent in the third quarter.

Moreover, he suggested that the module contains 60 per cent of the first parameter (project cost) only. For the rest of their modules, one has to be careful about choosing the right type of company by observing if it is bankable and is making profit.

In the end, in the whole process, it is the vendors who are always at the receiving end. **Sachin Upadhye, Marketing Manager, Kynar PVDF** opines that the recent low tariffs are not good for India. To support his claim, he mentioned that his company, due to price pressure from all quarters has reduced the price of backsheet that they manufactured and is running into losses.

Large-scale solar projects accounted for 1,982 MW in the third quarter.

SLOW TENDERING PROCESS

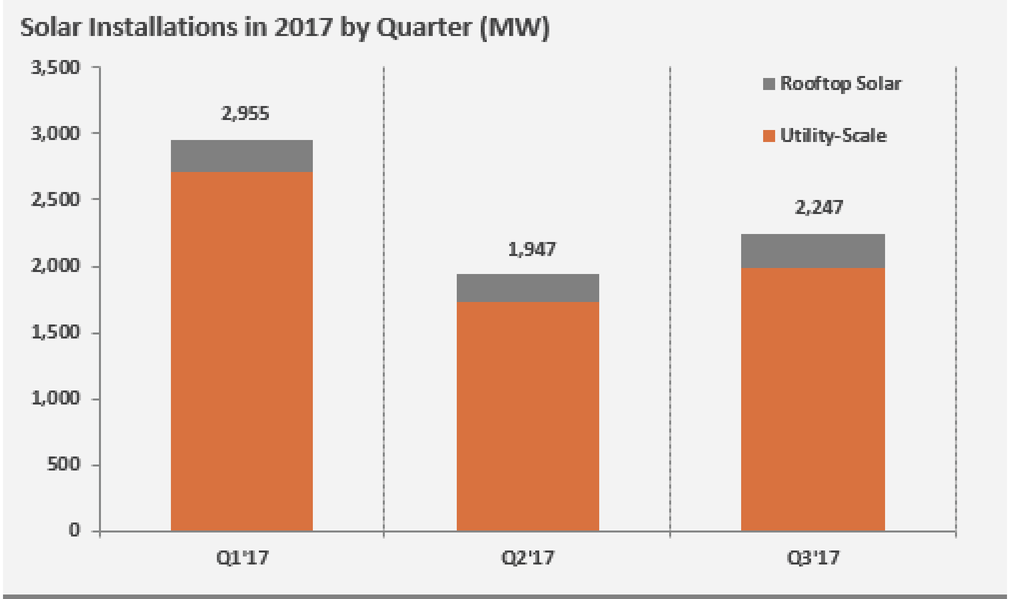
According to Bridge to India, there has been a significant lull in the announcement of utility scale solar tenders from the Solar Energy Corporation of India (SECI). It has announced only one tender – Bhadla 750 MW – this year in comparison to around 5 GW of new tenders in 2016. There have been expectations of new tenders totalling in Odisha, Chhattisgarh, Delhi, Karnataka, Andhra Pradesh and Bihar, but none of these have materialised until now.

Tendering delays have been caused by multiple factors. The new competitive auction guidelines announced in August 2017, which require use of standard bidding documents have impacted the timelines. But the developers are getting restless. Many of them have raised funding and are waiting on the sidelines for an opportunity to bid for new projects. They have been left high and dry due to reduction of solar power procurement. Due to the vacuum created in the project development landscape, there is a pent-up demand forcing auction tariffs to go down. They are also concerned about the ADD imposition looming large on solar modules and how it may affect bidding behaviour.

ANTI-DUMPING CLOUD

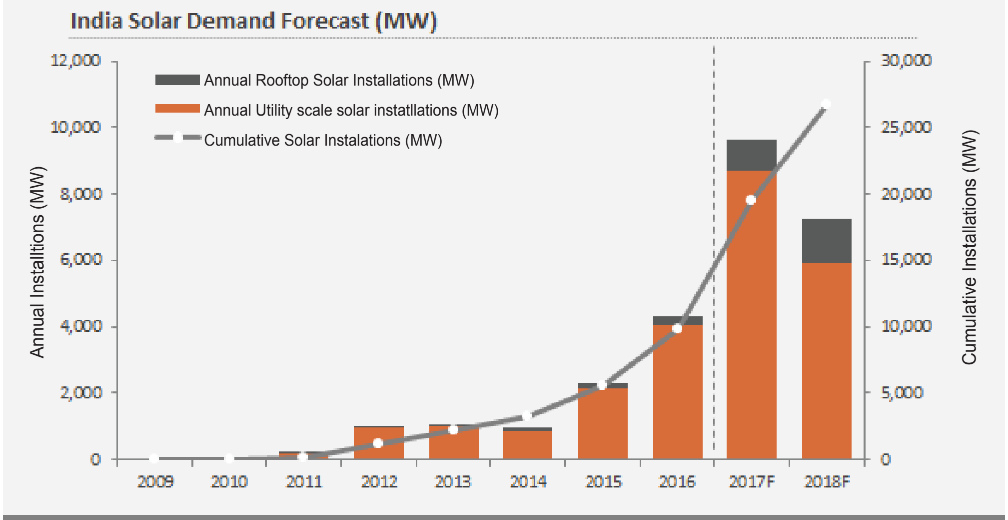
While DISCOMs are looking for the lowest tariff, the anti-dumping petition filed by domestic manufacturers against solar imports from China, Taiwan and Malaysia with the Directorate General of Anti-Dumping (DGAD) has been accepted. DGAD has officially initiated the investigation with the possibility of preliminary findings in as early as two months.

The operational and financial impact of ADD on pipeline projects needs to be observed. As on September 30, 2017, India's total utility scale solar project pipeline, comprising projects allocated to developers and EPC contractors, stood at 10,842 MW. All these projects face threat of provisional or ADD depending on when the decision is announced. While the domestic content



Sources: Mercom India Research (Sep 2017) requirement (DCR) pipeline should not be directly affected by ADD, industry expect these projects to also face cost increases, as domestic module manufacturers would hike prices immediately in the event of any duty imposition.

Modules contribute to approximately 60 per cent of the total cost of solar projects. At the current price of US$ 0.36/Wp, a duty of 30 per cent would increase project cost by 18 per cent, or Rs 895 million (US$ 14 million) for a 100 MW project. Project returns are expected to fall significantly in such a scenario.



Sources: Mercom India Research (Sep 2017)

As the negative impact of duties is significant – about 3 per cent fall in returns at a duty level of 30 per cent – the petition filed by India Solar Manufacturers' Association (ISMA) is a major risk to the viability of all pipeline projects, where modules have not yet arrived on site. The immediate impact for these projects is significant completion delays as the developers are anxiously waiting in anticipation of a decision. More critically, if a provisional or ADD exceeding 10 per cent is imposed and no recourse is provided to the developers, the pipeline projects face the risk of abandonment, except where material capital has already been committed to the projects. This would be a grave scenario for the sector and for all concerned stakeholders.

The optimistic scenario for the sector is that projects auctioned before the date of petition (July 2017) are grandfathered, or that the central or state governments compensate them for extra costs. However, industry experts are not aware of any such precedence across different sectors and believe that the probability of such an outcome is at best only 50 per cent. Some developers have argued that they would seek change-in-law protection if a provisional or ADD is imposed. Our analysis shows that if 30 per cent duty is imposed and the module cost is USD 0.36/Wp, tariff will need to go up by about Rs 0.48/kWh (17 per cent) to restore pre-duty financial returns of the solar project. Bridge to India believes that the probability of getting change-in-law compensation is minuscule, as such provisions in most PPAs are rather weak and the DISCOMs would fiercely resist any cost pass through.

The ADD petition has created huge uncertainty for the entire solar sector. It comes at a very inopportune time with the sector already reeling from slowdown in new project procurement, extra costs due to GST, import duties and increase in module prices. It affects all stakeholders and projects in pipeline as well as those awaiting auction. The Indian government has a tough decision to make as it needs to strike a balance between demands in manufacturing and project development activities. If developers are not compensated for extra cost, many of the under-construction projects face risk of abandonment as they have little financial cushion. Besides, announcement of duties alone is unlikely to have any enduring benefits for domestic manufacturing beyond throwing a financial lifeline to the existing manufacturers.

- RAHUL KAMAT

Rooftop accounted totalled 265 MW in Q3 2017.