MINIMUM QUALITY BENCHMARK MUST FOR THE INDIAN SOLAR INDUSTRY
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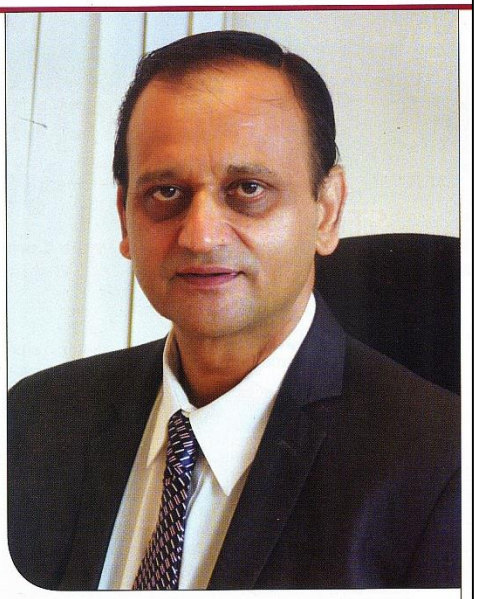
Million dollars business opportunity in solar the O&M field **ASHISH KHANNA**, CEO & Executive Director, Tata Power Solar Systems Ltd.



Tata Power Solar has received awards for rooftop solar power projects, the recent being MNRE Award, what are the challenges and opportunities rooftop solar power projects offers?

India has immense opportunities, especially in the rooftop solar industry. The country has reportedly around 300 million people without any source of power, and another 400 million people with access to erratic sources of power. Considering that in most parts of the country, we are blessed with abundant sunlight, rooftop solar can be very sustainable and economical source of power. Everything is in favour of rooftop solar power. However, there are a few aspects which are critical but not helping towards the explosive growth of rooftop solar viz-a-viz what is being witnessed in the utility sector projects. The foremost challenge is a high upfront initial cost on this source of power. The current model of utilities power is "pay as you use" and compared to the current capex models for captive power, the user has to invest in the initial cost. Various solutions are being utilized all over the world to address challenges like this including models where the user pays as and when power is consumed. However, till the time this model becomes prevalent one has to bear the high initial capital cost for rooftops.

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Another challenge which is not currently being faced, but will emerge as the market grows, is the lack of quality and standardization. One of the important consideration in solar power is that it is a very sustainable source of power and various companies including Tata Power Solar, guarantee their modules for 25 years. However, our concern is in the absence of any standardization, quality can be compromised by many in this industry. It is very critical that the minimum quality benchmarks needs to be created for the industry. The current challenge is low price and low quality products which are coming into the markets; this may seem to be lucrative today but may hurt the overall market in the future.

India has committed that 40 percent of its total power capacity by 2022 will be based on renewable sources. Do you think the government has over committed and if no, then what would be the way forward in terms of policies and reforms?

The Government has set a target of 100 gigawatt of renewable energy by 2022. This is definitely an ambitious target, but the industry is pleased with the way large scale projects have been progressing on the utility side. What is critical is that the focus is shifting towards solar as a sustainable, cost effective source of power for India and this is already visible where large utility scale projects are concerned. Considering the progress in the last one or two years, with respect to rooftop, we think that the 40 gigawatt by 2022 is a challenge. However, having said that, there is lot of work which has already been done from the policy standpoint. The main issue is non availability of low cost financing options, particularly for rooftop. Currently, the banks are seen to be acting hesitantly towards funding rooftop projects.

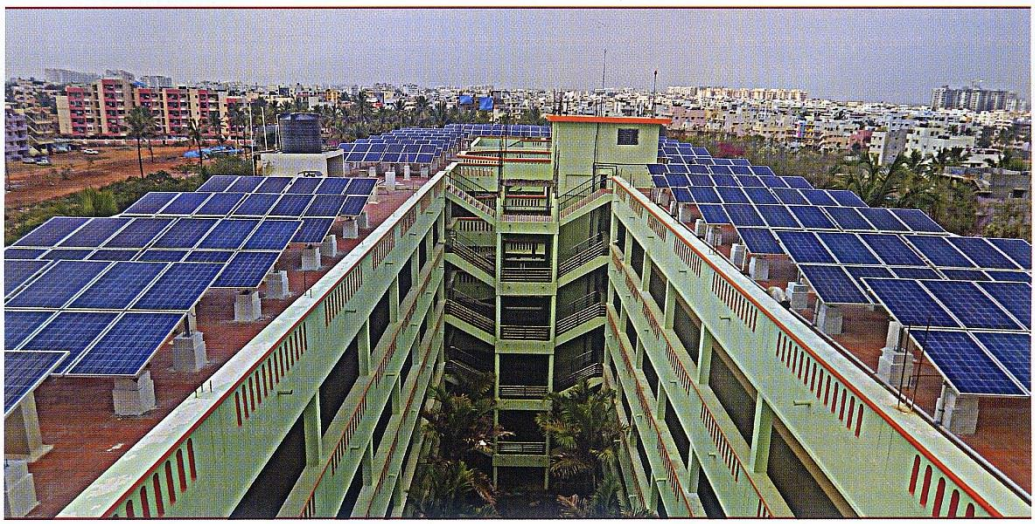
The solar power prices have seen a considerable drop in the Power Purchase Agreements. What would be the pros and cons of this on the overall renewable energy scenario in the country?

The fact remains that most of the reduction in the prices which we have witnessed in the last one year of Power Purchase Agreements (PPA) have not come from the technology advancement in the same period. It has primarily been emanated from assumptions been made while the developers are deciding on a tariff of these PPAs. The good part is that there are many organizations which are committed and are going to go ahead and implement these projects. Then there are others who are taking certain risks and exposures and seem to have overcommitted themselves on this, but this happens in all industries. So, we foresee certain consolidations happening in the coming months or years.

Operation and Maintenance (O&M) have become a critical factor for the smooth operation of solar power, what are the challenges faced and what are the services you offer in O&M?

Operation and Maintenance has now become exceedingly critical. If India is looking for a 100 gigawatt market, there exists a business opportunity of many million dollars in the O&M field. It is a critical area of focus for Tata Power Solar. This is where the advantages of having a quality project being managed by quality resource will help the developer.

There are a lot of developments taking place in technology with respect to O&M for rooftop as well as large projects. We are mapping the actual power which is being generated to maximize energy generation and optimize maintenance. There are advancements in technology currently in O&M, like robotics which will soon play a very critical role in the maintenance of these projects. Tools are available in the market for offsite evaluation as well as carrying studies for optimized maintenance. Tata Power Solar has been investing in the development of these technologies.



India is known to be the place for heat and dust. And I think these are the factors which are the searching keys of power production in the ongoing projects? So how do you look at it?

The factor of heat and dust is taken into consideration when we are developing solar energy projects. The

major factor is our investment on the O&M. Other factors which are also very critical is the degradation occurring because of sub optimize operations & maintenance or inferior quality of solar modules been deployed.

Solar power is still one of the safest bet financially for the next 25 years. Why are banks and financial institutions skeptical when it comes to financing solar projects? How is Tata Power Solar taking care of this?

There are many financial institutes who are more than eager to finance, but they are cautious on the risks of return and aggressive assumptions on generation and quality of technology being deployed.

Can you please share with the readers the latest technology advancements in rooftop solar?

One thing exciting about solar is the way the technology is changing and advancements are happening in this power source. There are enough technology advancements happening to increase the energy generation and efficiency levels. We are making investments in technologies which will considerably reduce the space required for the rooftop while providing a similar output. The space and weight reduction initiatives are not only on the panel part but it also on the inverter side. There are technological advancements taking place in solar panel where solar material can be coated on the top of normal steel sheets. So it will be integrated along with the roof itself rather than fixing separate panels

You have been associated with government projects even in remote locations. What are the logistical problems you face?

In the current scenario, whether it's a government project or it's a private developer, most of the places where solar projects are developed are not very well connected with mainstream locations. The infrastructure is generally poor, however a good part about this is that being a part of the group that lays a great emphasis on the development of the local community even though we are an EPC contractor, a great amount of emphasis is imparted on the care of the community around us. At our sites, we take utmost care of the workers. The opportunity to work for the community around our projects offer a much better proposition, than the initial impediments we face in view of deficiencies in infrastructure.

As the CEO of a Tata Company, how difficult is it to live up to the benchmark set by the Tata Group?

It is a proud moment when your organization has laudable values which when inculcated in oneself makes an impeccable alignment and helps the organization as well as individual growth. Certain things which personally impressed me most is the way the Tata Group cares for their employees, stakeholders and communities by adherence to the highest standards of ethical conduct and values which become an integral part of one's life.

You have been very active in the global market too. Which are some of the landmark projects that you have been involved with and how do you plan to increase your global market share?

We have executed some remarkable international projects. The good part about these places where we have done our projects, is with respect to their focus on the quality of the product as well as the timelines and the schedules by which they would like to have those products executed. Being able to consistently match high benchmarks and global standards of quality is our clear competitive edge. EPC World