

Interview with Arun Mehta,

**Director,
Refex Energy Ltd.**



EQ : Please enlighten us on the history of your Group, Group Strengths, Vision, Strategy for India etc...

AM : Refex Energy Limited was incorporated in year 2008 with focus on Solar Energy. Prior to this the group was involved in refrigerant gases. The foray into solar was made looking at the wide scope this sector had and the need for dedicated solar EPC's in India.

We have positioned ourselves to address this growing sector, offering optimal Engineering, Procurement and Construction (EPC) solutions, quality products and high efficiencies, every year. In addition to the core business segment of EPC of grid connected and off-grid power plants, we also maximize revenue for our clients by offering O&M services, technical audit of existing solar PV power plants.

As an EPC, we have been an early mover in the solar domain. We started at the inception of solar policy in Rajasthan and have grown from strength to strength from there onwards. Starting from zero, today having more than 50 MW installed and under installation, we have had a steady growth which has been supported by the plant performances.

Our mission is to be an Innovative Engineering Enterprise committed for Cleaner World. We aim to provide the world Cleaner Infrastructure by tapping solar energy through strong technology research, better designing skills and higher delivery performances. We have a strong and dedicated team of individuals who come from diverse backgrounds. Using teamwork and our several partnerships, we aim to keep offering ground breaking solutions to our clients.

EQ : Your Group has made significant footstep by winning several EPC contracts in India. What is the role of your group in India and the roadmap, challenges in executing this project? What was the differentiating factor which led the your co win this project.

AM : Committed and qualified man-power has been our biggest strength. This has helped us achieve execution of six projects during 2011-12 totaling 21 MWp. These projects are located in Rajasthan, Maharashtra and Gujarat. We are one of the few companies that has experience in varied terrains. All our projects came with significant challenges in the civil and execution department and they were overcome with proper planning and coordinated execution. We aim to use this experience of the last few years to help guide our current projects and clients. The sector needs companies that can work in any kind of terrain and this has been a major challenge for most EPC companies. Our past experience helps build confidence in our prospective clients and makes it easier for them to decide. Apart from this we have always used the best components in our projects. Be it modules, inverters, cables or even the AC system. This investment in quality products has now started reaping rewards for our customers through very high generation numbers. This has also been one of the major factors in pulling new customers and helping us grow. Our aim this year is to install 50 MW and then keep growing at 100% YoY. The country already has set its target for 20 GW by 2022 and we aim to be one of the top few companies helping reach this target.

EQ : How India has to evolve in terms on financing of grid connected solar projects and the lessons India must learn from Germany & Europe and other advanced & matured PV Markets.

AM : The success of Solar mission entirely depends on self sustainability over the long period of 25 years. The Developers are signing Power Purchase Agreements (PPAs) with the State Utilities, which are in bad financial health. The Lenders are concerned over the continuous flow of revenue and withdrawal of government support before long. The government must enforce strict discipline on meeting the Renewable energy Obligations (RPO) by utilities, for success of projects, which are coming up under the Renewable Energy Certificate (REC) scheme. Unless this is enforced there will always be a risk factor to these projects and will find it difficult to attract financing.

The Indian solar market is evolving and the path to growth is unlike what we have seen in the European market. The European market grew from rooftops. A few countries had sporadic growths of ground based grid connected systems but most of these countries could not sustain the huge subsidy for solar PV and faltered with focus coming back to rooftops. India has started with a different view and has focused more on ground-mounted systems. Our market is different and so our financing has to be adjusted accordingly. The RPO and REC mechanisms are perfect for our model

of growth. But implementation is the key factor here.

EQ : Please enlighten us on the experience of working with different technologies (c-si vs. Thin Film, Fixed vs. Tracking, String v/s Central Inverter etc...) What's the ideal solution for India and why.

AM : Today, a variety of solar modules of good quality are available in the market. The price levels are technology neutral and source neutral and are not much different. While the C-Si cells and modules have proven track records of over three decades, the thin film modules of Cd-Te, CIGS, Micro-Morph technologies have logged in barely 2-5 years. The hot climate in most parts of India is theoretically suitable for TF products because of its lower temperature coefficient compared to c-Si modules. But we have seen a lot of thin film products having various issues on the ground. Comparatively all our plants set up with C-Si have been performing very well and very consistently. Another issue is with frameless modules and we have seen a lot of breakage in thin film modules due to transportation, road conditions, unloading on remote sites and even poor handling by lower skilled installation teams available. As for us being an EPC we are technology neutral, and give suggestions to our clients based on our experience. Whichever the technology, we offer only the best and highest quality products.

The single axis manual and automated trackers are supposed to provide up to 5-15% better yield respectively, compared to the fixed structure with a certain cost increase. However, it is necessary that the Developers choose trackers with good operational history and the ones that are able to survive in dusty Indian conditions. There are very few such trackers available in the market and with the reduction in cost of panels most customers look for a higher DC capacity than trackers. We personally do not have a lot of positive data for trackers that have so far been installed in India.

With respect to Inverters, we have installed both string and central inverters in our operating plants. Both have their advantages and disadvantages and it's really a cost/benefit that our clients look at before selection. String inverters tend to be a bit costly compared to centrals and with stifling

low tariffs they are usually overlooked.

There is no ideal solution for Indian conditions. The solution has to be tailor made using the highest quality equipment and best engineering practices.

EQ : What's your view on the Indian Policy Framework and one piece of advice you would like to give to the government and regulators

AM : There is positive policy frame work for growth of solar power projects in India. However, more is needed towards i) funding at competitive rates and ii) growth of quality indigenous manufacturing base and the related R&D. We believe the government is aware of this fact and is already working with a positive mindset. They only need to keep in mind that their policies need to pave the way to make this industry self sustainable.

EQ : How has falling modules prices affected the EPC Business in positive and negative manner. As Industry is expecting further drop in module prices...what impact is it likely to have on the solar industry and your business.

AM : There has been steep fall in international prices of modules during 2011, on a/c of i) fall in prices of the poly silicon and supply exceeding the demand. We do not expect similar correction in near future. However, 3-5% reduction may not be ruled out in next year 2013.

The Developers have secured the projects at competitive tariff. So, the Indian Solar market is highly price-sensitive. Our Company has always offered optimal engineering solutions to our customers with quality products/services and maintained best price levels. We do not believe in cutting price levels at the cost of quality. The gradual reduction in prices will push the solar towards grid parity and when that happens the industry will grow at a very high rate. Our growth will also be linked to the industry and we will look to achieve higher quality installations.

EQ : Module Prices have been significantly dropping while the BOS of a solar project has not seen much change....What change or breakthrough do you

foresee in the BOS in terms of price and technology in the BOS.

AM : The BOS prices in India are at maturity level. The AC side equipment, steel fabrication, AC cables, civil works prices will be linked to new developments and the volume of the business. The only way to lower the pricing of BOS will be through innovations at equipment and ground level. We have introduced several such measures in our projects, which have been able to bring the overall project costs lower without compromising on the quality and thus making the projects viable for our customers as well.

EQ : Can you please enlighten us on the way you implement a project and what specific or unique things are followed which makes you different from other EPC Players. What are the unique parameters which differentiates projects executed by your company?

AM : I think the foremost is project engineering efforts which are essential to maintain the minimum energy loss and higher output throughout the life of the plant. The time available for the execution work is getting compressed in each project. So, the focus is on the shortlisting of the suppliers during the pre-award stage and avoids losing time. The work force with us is qualified and highly committed for the cause. We are always working with the highest quality equipment and that is definitely one of the main distinguishing factor.

EQ : Please tell us about the team strengths and resources developed in order to offer your EPC Services.

AM : We have a smart ground installation team that has now experience in varied locations and have worked on all sizes on projects. Along with that we have mix of in house engineering talent and association of consultants and advisors who contribute to the overall working. We prefer to remain lean looking at the seasonal nature of the industry.