

## WAAREEA AND GTAT TIE-UP HIGHLIGHTS SCOPE FOR FURTHER COST CUT IN SOLAR POWER NOVEMBER 19, 2014

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Business Line reported that the recent technology tie-up between Waaree Energies and the US company, GT Advanced Technologies, highlights the scope for further cost reduction in solar power.

GTAT, a company that has filed for bankruptcy under Chapter 11 had announced in March its new technology for connecting photo voltaic cells into a module.

The cell metallisation and interconnect technology, dubbed 'Merlin', has been claimed to practically eliminate the use of expensive silver paste to string up cells. The result is 80% reduction in silver paste consumption and a 10% overall reduction in the cost of producing the module.

Waaree has announced a few days ago that it would incorporate the Merlin technology into its production process. No financial details were given but the announcement said that Waaree would aggressively participate in India's solar market.

Solar power costs have been coming down, as is evident from the recent results of the tariff-based bidding for projects in Andhra Pradesh, Telangana and Karnataka. The results show that solar power companies trust that they will be able to make profit selling solar power at prices between INR 6.5 and INR 7 a kWhr.

The question now is whether there is scope for prices to come down further. The Waaree-GTAT tie-up is to be seen in this context.

Every company is doing its own bit in bringing down the costs and the totality of all that is a promise of significant cost reduction.

Last month, polysilicon manufacturer, SunEdison, had announced that it could produce the basic solar raw material with a lot less energy.

Mr Pashupathy Gopalan, who heads the Asia-Pacific operations of the company, said that the impact of it would be chipping of a full INR 1 from the cost of producing 1 KWhr of solar power.

Other companies such as DuPont are working in the area of material science to bring down the costs.

Mr Rahul Bhudwar, VP of Strategy and Business Development, TATA Power Solar, said that "60% of the cost of a solar PV plant is of the modules and 70% of the cost of the module is of materials."

The GTAT technology is an example of reduction in material cost. Solar manufacturers are coming up with thinner glass and frameless modules.

A big chunk of cost reduction will come from how much of sun's energy is converted into electrical energy. The norm today is about 17% but companies are coming up with higher numbers. The US solar major, First Solar, recently announced that it had achieved efficiency level of 21% and expects 22% in 2017.

Numbers of this order are for commercial scale plants but much higher figures are reported in labs.

The Fraunhofer Institute for Solar Energy Systems announced an efficiency level of 44.7% by using 'fresnel - concentrator photo voltaic' technology, where lenses concentrate sunlight onto the cells. When such technologies come to the market, solar power could cost half of what it is today.

Source – Business Line