

## **5 MW Solar PV Power Project of Maharashtra Seamless Limited**

1. Maharashtra Seamless Limited (MSL) has been allotted a 5 MW Solar Photo Voltaic Power plant in the village Pokaran, tehsil Pokaran, District Jaisalmer, Rajasthan by NTPC Vidyut Vyapar Nigam (NVVN) under JNNSM phase 1. NVVN and MSL have signed a PPA for sale of power for 25 years to NVVN from this plant.
2. The plant composition consist of arrays of panels of solar cells connected in series to convert solar insolation to DC power which is converted into AC power in inverters before it is stepped up to 33 kV voltage in transformers. This 33 kV power is then fed to the grid.
3. Plant load factor is around 21% depending upon the technology selected.
4. As per PPA, the plant is to be commissioned by 9<sup>th</sup> January 2012.
5. Estimated cost of the project will be around Rs. 70 Crores out of which approximately 60-70% will be imported component.
6. Presently two main technologies for Solar cells are being used. They are Crystalline silicon and Thin film. Crystalline silicon is older, proven and more efficient but produces lesser power due to higher losses. They require lesser area hence preferable where area is a constraint. Thin film is relatively newer technology, is lesser efficient but produces more power due to lower losses. Because of lesser efficiency they need more area. Thin film is a cheaper technology. PLF of plant with thin film is higher.
7. Solar PV plant is having very low operating cost as there is no rotating equipment and there is no consumable and very little utility requirement. Estimated annual operating cost is Rs. 45 – 55 lakhs for the 5 MW plant.