

SMILING SUN

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World needs urgent solutions to address the imminent crisis of climate change. Leading from the front, India has raised the bar by announcing a target of setting up 100 GW (1,00,000 MW) of solar energy generation capacity by 2030. However, merely mandating in the rules that out of the total energy to be bought by an electricity distribution company a certain proportion has to be solar energy would not have been effective enough as long as the cost of solar energy continued to be significantly more expensive than power from coal fired plants. High differential costs discourage electricity distribution companies, most of them already in the red from procuring solar energy. Getting out of this straight jacket needed fresh and out-of-the-box thinking, new collaborations and innovation at multiple levels to unlock the full potential of solar energy. Mega Solar Power Projects were then an assumed domain only of large Central Public Sector Undertakings (CPSUs). Breaking this mould, Rewa Ultra Mega Solar Limited (RUMSL), Rewa as the implementing agency for the solar power park at Rewa as a joint venture between the Madhya Pradesh Ujja Vikash Nigam Limited (MPUVNL) and the Solar Energy Corporation of India (SECI). RUMSL is a remarkable story of collaboration and innovation that made solar power in India cheaper than coal-based power and gave the country its first institutional customer to benefit from solar power. As a newly set up company, RUMSL, neither had the commercial capacity nor any prior experience to handle a project of this scale on its own, in its entirety. Beating heavy odds, a team of officers of RUMSL, successfully pulled through not only the intricate and complex tasks of conceptualization, market consultations, financial and legal structuring and bid process management (activities normally undertaken by CPSUs), but also the development of land and associated infrastructure (activities undertaken at state level).

A ride across the 1,590 hectares of land in Gugh Tehsil of district Rewa in MP on a normal day in 2017 would have felt like any regular one on a subleaked patch of land, with many construction workers in sight and substation towers raising their heads in clusters, away and disconnected from each other. Come 2019, and an ocean of glistening flat PV panels had replaced this ordinary and almost noisome scene with a colossal solar park with world class infrastructure.

The park has registered its place in history for making solar energy an economically viable option in the country without depending on the crutches of subsidy and regulatory directions. It broke all records and attained the lowest tariff in history through an intense bidding

OBJECTIVES

- ENHANCING PRODUCTION OF RENEWABLE ENERGY.
- MAKING SOLAR POWER COST COMPETITIVE WITH CONVENTIONAL POWER SOURCES.

exercise. Compared to normal coal-based power tariff of about Rs. 4.25 per unit for the first year, the 33-hour non-stop bidding in Rewa led to a first year tariff of just Rs 2.97 per unit.

The power from Rewa Solar Park is supplied to DISCOMS of Madhya Pradesh and also to Delhi Metro. The supply to Delhi Metro has opened up an entirely new chapter in utilization of renewable energy in the country where large institutional open access consumers can now start directly procuring inexpensive renewable energy. The solar energy harnessed through the Rewa project is expected to meet approximately 60% of DMRC's day-time energy requirements. This is the first time in India that solar energy has been used for railway traction. This can potentially pave the way for the country to achieve its renewable energy targets by expanding the procurement of solar power by large institutional purchasers, without the need to depend on regulatory directions and DISCOMS for the same.

The Rewa Solar project is an important step in the direction of meeting clean energy targets of the country. The 750 MW project would lead to avoidance of CO₂ generation of 1.54 MMT per year. This environmentally positive impact would have required planting as many as 2.6 Cr. trees.

Today, the internal sub stations built by RUMSL for all the three units of the 750 MW park are working in tandem. The Power Grid Corporate of India Ltd. (PGCIL) substation is also ready and is evacuating power to the Central Transmission Utility (CTU) of the country. The unending rows of solar panels look like an ocean. The power flow has commenced in July 2018. Delhi's lifeline Delhi Metro is running on the power from this solar park. The project, which proved to be the inflection point in the history of solar energy in the country, has set a fine example of policy facilitation, a world class standard transaction structure leading to a rock solid Public Private Partnership. The sun is indeed smiling, not only on Rewa, but on all of Madhya Pradesh, and even on Delhi. ●

