

Solar microgrids addressing rural power shortages

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Sitapur: Despite govt assertions of achieving comprehensive electrification, many rural areas still face insufficient power supply, adversely impacting daily life and small-scale enterprises in towns and remote villages. To address this issue, private entities like Tata Power Renewable Microgrid Limited (TPRML) are playing a vital role, not only bridging the power deficit but also adopting environmentally sustainable technologies to light up households and small commercial establishments.

Mohammad Aklim, a jaggery plant proprietor in Reusa village of Sitapur, located approximately 100 kilometres from Lucknow used to operate through diesel-powered grinding machine for over two decades, as the area's power supply remained unreliable, with average daily availability falling well below 18 hours. "The jaggery manufacturing business operates viably for four to five months annually, and without a steady power supply, diesel generators were the sole alternative to sustain operations throughout the season. However, circumstances have improved in the past two years following the solar power microgrid installation in the area. Presently, I use less diesel for sugarcane grinding and receive an uninterrupted power supply for the plant," said Aklim, whose daily jaggery production is now 20 quintals from 220 quintals of sugarcane — significantly higher than before.

TPRML, in collaboration with Crompton Greaves, has provided energy-efficient motors for jaggery plants and LED lights and fans to its do-



A jaggery plant that runs on solar power microgrid in Reusa village

mestic consumers in Reusa.

Operating solar power microgrids since 2019, TPRML currently serves approximately 150 villages in Uttar Pradesh, including Gonda, Lakhimpur Kheri, and Sitapur. In Sitapur, TPRML manages two power microgrids, including a 40 kW grid in Reusa and a 30 kW grid in Talgaon.

In Reusa, TPRML supplies power to over 100 consumers, including two jaggery plants, a flour mill, local eatery, and plans to increase the microgrid capacity to 70kW in the coming weeks to accommodate new commercial consumers like saw mill and other small-scale enterprises.

Noor Mohammad, a local eatery proprietor in Reusa, said, "An increasing number of villagers are opting for solar microgrid power supply, as regular power supply from the discom has been unreliable for ages. No enterprise can flourish without power in our region."

Manoj Gupta, CEO of TPRML, said, "With an emphasis on harnessing solar power through microgrids, we are committed to providing clean, affordable, reliable, quality, and sustainable energy to communities nationwide."

"In Uttar Pradesh, we are serving approximately 20,000 consumers residing in remote villages," he added.