

Renewable energy mini-grids, powered by solar, wind or hydro, are emerging as the superstars of energy access in villages, becoming a viable option for providing electricity to rural population

MICRO GRIDS BRING MACRO CHANGE IN QUALITY OF LIFE IN RURAL UP

Shalinee.Sharda@timesgroup.com

Monthly earnings from her flour mill made the life of Rani Singh worthwhile but rising cost of diesel over the past few years escalated the input cost while diminishing profits. In November 2021, she took a transformative decision that made her business profitable again. Rani (67), a native of Lalpur Jaswantpur village, ditched the fossil fuel technology and embrace green energy to run her flour mill and recharge her small business.

Rani is the face of the transformation that solar energy is making in the quality of life in rural areas. In her case, 'Solar Mini Grid Scheme' rolled out under HCL Foundation's Samuday project, has been the agent of change. A mini-grid (or micro grids) is a set of small-scale electricity generators interconnected to a distribution network that supplies electricity to a small, localized group of customers. They usually operate independently from the national transmission grid.

According to the United National Industrial Development Organisation, "Renewable energy mini-grids, powered by solar, wind or hydro, are emerging as the superstars of energy access, particularly in rural areas, where they have become a viable option for providing reliable and high-quality electricity to rural populations and businesses." The stories of change are not unique to Hardoi. Similar happy faces voicing change can be seen in Kushinagar, Rae Bareilly, Lakhimpur Kheri, Shravasti, Unnao and Siddharthnagar districts too.

Women in Akbarpur Talhu village are happy with their government primary school as it has facilities that most lack. While their children have lights and fans, students in grades 1-3 even have access to smart classes. Under-ramped power supply in the

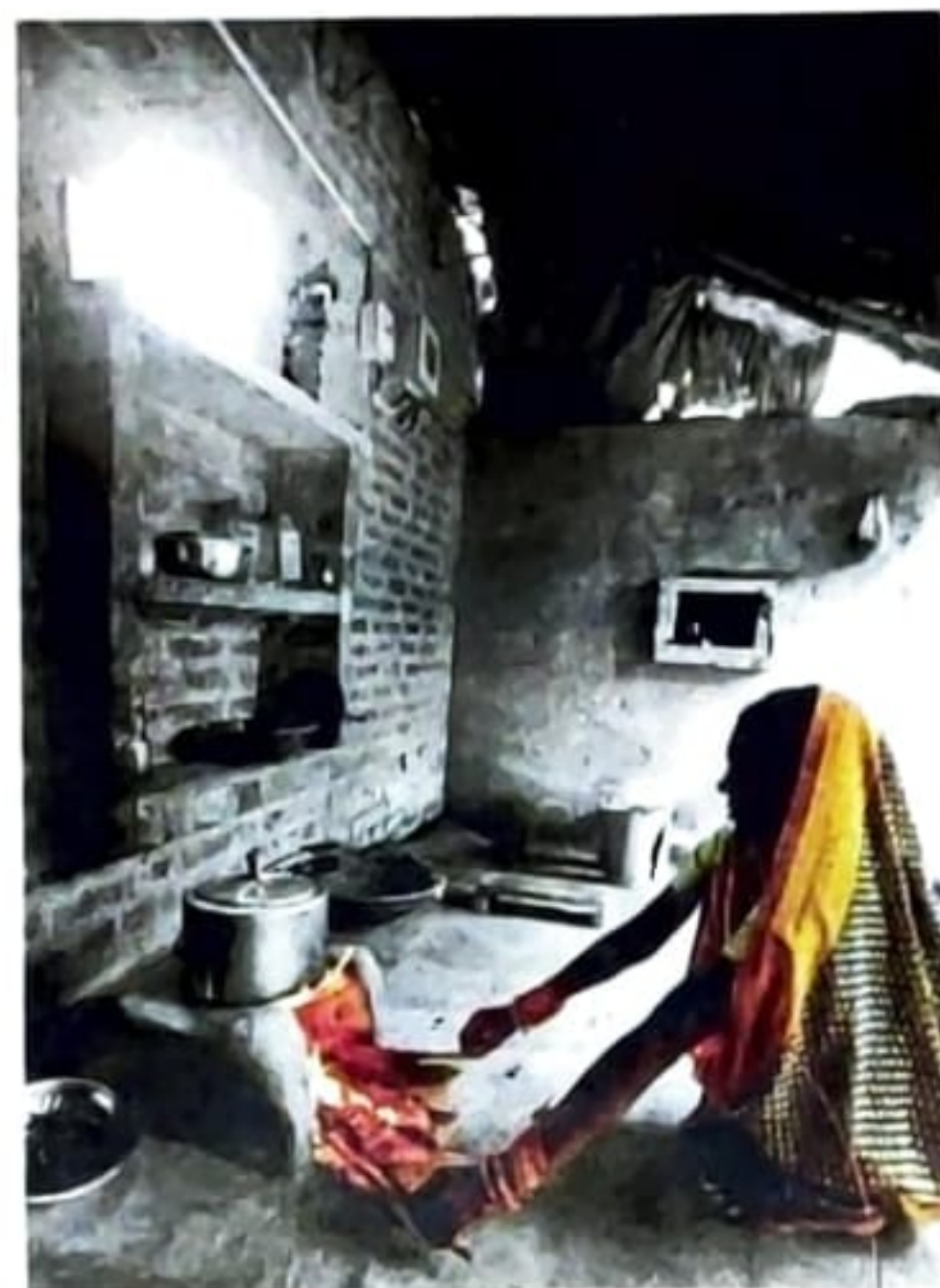
school ensures that interactive classes are regularly available to all.

"Children in the school are also blessed by solar power," says Vinay Kumar Sharma, a school teacher in charge. He recalled that in most summer months, children of government primary schools study in the veranda to beat the heat which was not the case in his school. "Thanks to solar energy powered set up," he said.

Shalini and Anuradha of the same village are contributing financially to help their fathers - both of whom are small farmers. The girls work in the village's skill development centre that teaches stitching and 'chikankari' embroidery to native women. Most organisations, which have entered the realm of solar mini-grids in UP, are moved by the realisation that energy infrastructure serves as the foundation for advancing social and economic progress by ensuring the provision of necessities, ultimately elevating the quality of life in households, and fostering increased income generation.

Research has demonstrated a positive link between electricity consumption and the Human Development Index. It has been observed that the developed countries have high per capita energy consumption in comparison to developing countries. The dividends are way more than the investment especially if the source of energy is clean, safe, and affordable. On the contrary, the absence of electricity profoundly impacts the well-being, health, and income of rural inhabitants, particularly during their most productive hours. The absence of electricity in health centres jeopardizes maternal and child health, while lack of electricity inhibits safe drinking water, ultimately contributing to outbreak of diseases like cholera and dysentery.

Students also face significant challenges, as school equipment remains idle due to the absence of electricity.



SOLAR SMILES WHERE UJWALA IS YET TO REACH

In Pipri village, the life of Ramrani Devi is now free from darkness that was deepened by sooty grime that layered the walls of her kitchen every single day. Though the happiness of Ujjwala yojana is yet to reach her kitchen, the power of solar energy has made her life easy. "I can at least relax under the fan after the sweltering heat in summers and humid evenings of the monsoon months," she says.



Girls in a sewing school in Pipri (above) and Rani Singh (right) uses green energy to run her flour mill



Government has incentivised use of solar power in rural areas besides launching initiatives like Har Ghar Solar

ANUPAM SHUKLA
DIRECTOR, UP NEDA



THE GRID OF SELF-RELIANCE

Life offered little respect to Jaitoon Bano for the first 30 years of existence. To this resident of Tutiyara village, household chores and a second-class status seemed to her like her destiny, till one day, sun god smiled on her. She walked into a changed world when she was offered the job of an operator-cum-cleaning staff (after initial training) at the nearby solar mini-grid. "The best thing is that I have a say in my family of nine. The village has also benefitted from better power supply, and I get some credit for it," says the 33-year-old woman who also got a suitable match after becoming financially reliant

