

THE RAYS OF A VILLAGE

By Niranjan Kaggere, Bangalore Mirror Bureau | Updated: Mar 20, 2017, 12.12 AM IST

Let there be light, so they say. But not without a fight, feel Belagavadi residents. After suffering darkness for years, they are now self-reliant through solar tech, all courtesy IIT-M and Sasken



The village now has streetlighting. Also seen are youths installing solar panels and power cables, and villagers carrying equipment across their river

'Light' is something that eluded the Belagavadi village on the outskirts of Bengaluru. Eponymous with light, the 1,500 population of the village literally had a tough time to get two-hours of power every day. The government's claim of electrifying villages through its ambitious Nirantara Jyothi scheme never reached this village even as the

project reached its end stage! Unable to get through anybody for years to resolve their power problems, villagers decided to tap into solar energy. As a result, the 250-household village is not only lit all through the day but has also become the first village of Karnataka to be powered by Solar DC technology!

Struggling with power for several years, Belagavadi is helped by Sasken Technologies and Indian Institute of Technology, Madras. While IIT-Madras has helped the village through its Inverterless Solar Technology, Sasken Technologies has supported the electrification project under its CSR initiative. Almost all houses of the village are powered by 125 Wp solar unit on top of their houses. The power generated throughout the day is enough for every household to switch on three bulbs, a tubelight and a fan for an entire day, besides allowing them to charge mobiles and other gadgets effortlessly.

Ecstatic over the facility, BK Thimmaiah, prominent leader of the village, said, “Contrary to the government’s claim of supplying 5-hours of three phase power, we were getting only 2 hours. For lighting the lane (single phase), it was more of a gamble. During the rainy season, it was not possible even to charge the batteries of our mobile phones. Even the Nirantara Jyothi cables are laid now and still there is no supply of power. But now we do not have to struggle that much. At the click of a remote, we can switch on lights and also beat the scorching heat with a noiseless ceiling fan. Kids are happier as they can prepare for exams well.”

Unlike the regular solar systems, Belagavadi is powered with Solar DC technology. Aditya Lolla, Project Officer, IIT-M, who is supervising the project at the village, said, “Normally, solar power is DC in nature and requires an inverter to convert it into usable energy at all households. But our inverterless solution not only replaces the inverter but helps run appliances using the same DC current. The system is connected to a 1Kwh battery. If the power is not used it will directly recharge the battery.

If there is no sunlight and power is used judiciously, then the power will last for 3-4 days.” The system can easily be managed through any android phone that uses Bluetooth connectivity.

According to the officials, DC technology is not only affordable but also requires less space and maintenance compared to AC technology. “Fan is the only appliance that consumes more load here. While the usual fans require 70 watts, these fans would give you the same effect by consuming just 30 watts. Bulbs and tubelights too consume only 18 watts as against the normal 40 watts. The entire unit with cables and installation charges would cost about Rs 25,000,” said Aditya. Interestingly, all appliances are remote-controlled and users can control the luminosity and speed of the fan using remotes.

Though all systems work in off-grid mode, the facility has also been made to charge the batteries by drawing grid power in case of absolute sunless days, which according to engineers is very rare. Rangaswamy, member of the local panchayat said, “Our village is on no man’s land as it is located at the end of the border. For all the 4 taluks that surround us, we are the last village and are always looked down for any development work. But now not anymore as we too have enough power to carry on with our daily chores.”

Rajiv Mody, Chairman and CEO of Sasken Technologies, said, “We had always experimented using technology for betterment of society. In the case of Belagavadi too, we supported IIT-M, Bescom, and REC in implementing the solar DC Inverterless technology in 215 homes. Belagavadi now stands as an example of how India can pro-actively choose to use roof-top solar panels to draw clean and reliable power.”

