

## The Challenge

Far away from the grid in the Gumla district, Jharkand, India, lies the village Pasanga. As the transmission line for the national grid is far away, an off-grid solar system was the answer for powering the village's rice hullers (agricultural machines that remove the outer coat of the rice) as well as irrigation pumps and household lighting.



Play solar

## System components

- Solar modules:** Vikram Solar 24.3kW Solar Panels
- Batteries:** HBL Power Systems, 600Ah
- Inverter/Chargers:** Studer Innotec, 3 inverter/chargers Xtender, XTH 8000-48, 115Vac / 60Hz (-01)
- Solar charge controller:** Studer Innotec, 5 MPPT solar charge controllers, VarioTrack VT-80 and 1 MPPT Solar charge controller, VT-65.
- Other:** Studer Innotec, 1 remote control RCC-02, 1 BTS and 1 Xcom-232i

Each energy unit has a fixed price and the consumers pay in advance, on a monthly basis their estimated energy consumption.

Other village houses may also join the local network once they pay the minimum charge fee.

## Why Studer

For this installation, it was vital to find inverter/chargers that could provide uninterrupted power with high surge handling capacity and high efficiency. As our XTH 8000-48 in the Xtender series with a surge capacity of 21kVA.

## The Solution

Commissioned in 2016, this off-grid system of 24.3kW supplies 30 of the village houses with electricity as well as the irrigation pumps and agricultural machines.

The power is distributed through transmission cables without any loss. All connected houses has an individual smart meter that registers their energy consumption.

## Project outcome

The village enjoys access to energy through a stand-alone system that provides them with power whenever they need it.

The smooth operating system is free from pollution and provides the village independent energy.

## The Company

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