

## Kurani (Lucknow), Uttar Pradesh

Uttar Pradesh is one of the major states contributing to Indian Agriculture Economy. The Irrigation and Water Resource Department had initiated for installation of solar pumps for Community tube wells used for irrigation. The Department has installed number of tube wells across the state for 50 -100 ha blocks but due to power availability and quality issues most of the tube wells are not utilised fully. Jain Irrigation Systems Ltd. had provided end-to-end solutions to overcome the following challenges and made the project successful.

### Challenges / Obstacles

- 1) Farmers could not irrigate their fields through community based tube wells due to severe power cut.
- 2) Department could not operate community tube wells due to poor power quality
- 3) Monthly electricity bill for irrigation department

### Technical specifications

Sr.	Particular	Value
1	Pump capacity	9.3 kW (12.5 hp) to 18.5 kW (25 hp)(13 Nos)
2	Discharge	102 m <sup>3</sup> / hr
3	Head	21-35 m
4	Pump type	Submersible pump
5	Motor Type	AC motor
6	Solar Array capacity	13.5 -25.5 kWp
7	Type of controller	AC solar pump inverter with AC / DC dual supply
8	Remote monitoring	GSM based
9	No. of farmers	5000 Nos.
10	Energy saved = Energy Generated (units / year)	3,68,577

### Features

- High efficiency high capacity solar modules
- Stand alone system completely works on solar during day time
- AC / DC dual supply input
- Maintenance free sensor less dry run protection
- Foolproof inbuilt electrical protections
- GSM based Remote monitoring and data logging
- 25 years of solar module life
- Easy to operate and maintain
- Micro irrigation systems can be easily integrated

### Benefits

- Assured Irrigation - No hardship
- Independent of availability of grid and power quality
- Inbuilt protections ensures higher pump life
- Same pump can be operated on grid during night time if required
- Higher utilisation of tube well which provides water to farmers
- More value for money
- High system uptime and availability

**Solar pumping system was conceived to address poor power availability, quality and high cost of same. The solution offered by Jain assured reliable & timely irrigation round the year.**

# Solar Operated Community Tube Wells



Community Tube Well Pump House



Community Well-Water Discharge



Fixed Type Solar Structure for Community Tube Wells