

Case Study - 7

C.R.I. 5 HP Solar Pumping System



C.R.I. PUMPS
Pumping trust. Worldwide.



Location

Geo location: Uludanga, Near Barasat, West Bengal
Latitude: 22.84 ° N
Longitude: 88.51 ° E



System Components

- 190Wp x 36 Nos. (6840 Wp) Multi-Crystalline Solar PV Modules
- 5HP ABB Solar Pump Control Unit
- 1-Axis Manually Tracked Ground Mounted Module Mounting Structures, North to South (Solar PV module Top to Bottom)
- 5 HP 6" Submersible Pumpset 3 Phase, 380 V, 50 Hz
- Area occupied: 31 Sq. meters of shadow free area
- Tilt Degree: 22° as per the Geo location of the installation



1 Axis Manually Tracked Module Mounting Structure



Analog Flow Meter



Results

- 41,000 LPH / 2,25,500 LPD* at 50 m* Total Dynamic Head
- Per year Running Cost by EB Grid Supply :
Rs. 45,375/* Payback period 14.3 Years*
- Per year Running Cost by Diesel Genset / Diesel Pumpset:
Rs. 1,48,500/* Payback period 4-5 Years*
- Investment for a 5 HP Solar Pumping System Rs. 6,50,000/=* [Excluding Pumpset]

* Conditions apply

September 2014

Application

Paddy & Jute

Impact

This project has been initiated by West Bengal Micro Irrigation Department and funded by the World Bank. This prestigious order was taken by M/s. Balaji Udyog, Kolkata through a tender, after C.R.I.'s successful demonstration of 5 HP Solar Pump in the presence of group of farmers, EB officials, World Bank Officials, Secretary (IAS officer).



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