

Garhi Energy Project

Balaghat District
Madhya Pradesh

19 Locations, 38 Institutes
39kWp Installed, 2682 Children
Date of Commissioning 18th Oct 2017

Garhi

- Locations
- Alna Hostel MS
 - Bhalapuri
 - Community Resource Centre
 - Dheeri PS MS AGW
 - Garhi Girls hostel
 - Garhi boys hostel
 - Govt HSS Garhi
 - Jaitpuri PS MS HS
 - Jaitpuri hostel
 - Kadla MS AGW
 - Khirsadi PS MS AGW
 - Koyalikhapa PS MS
 - Kukarra
 - Mana PS MS
 - Mohrai PS MS
 - Parsamau Hostel
 - Samariya PS MS
 - Semarkhero PS MS
 - Semarkhero girls hostel



PS- Primary School

MS- Middle School

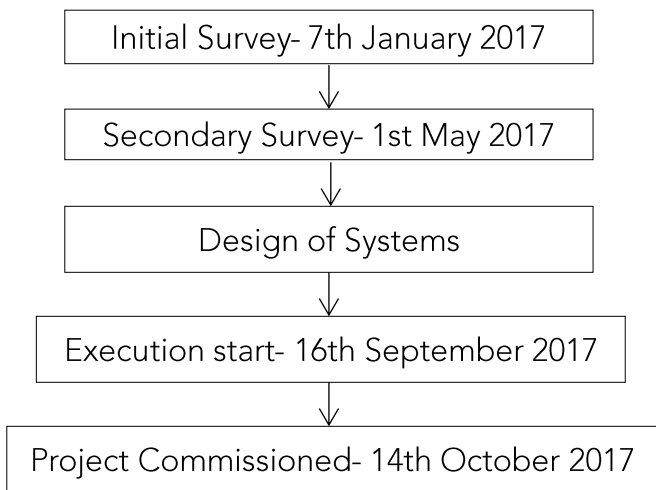
HS- High School

AGW- Anganwadi

The Garhi Energy Project focused on Electrification of Government run anganwadis, middle- high schools and hostels around Garhi (Balaghat District, MP) using Solar PV based systems.

A large number of these institutes did not have any sort of grid connectivity, or were supported by a weak and unreliable grid. Complementing this system, efficient and well supported lights and fans were also provided to the institutes

Timeline of Project



Based on information and support from Aide et Action an Initial Survey was conducted to shortlist potential sites. Sites were selected based on energy-requirement and impact. Priority was given to hostels, where the impact created was

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much more. Paying attention to the learnings from the initial site visit, systems were designed and cost estimates were created. Detailed discussions with the supporting partners led to a second survey which finalized on 19 sites including one Community resource Centre. A 15+ member team of experienced engineers, electricians, solar-installation specialists assembled in Garhi on 16th September to start a 28 day long journey to complete 19 installations. It is a mentionable fact that many of these team members belong to tribal communities who Gram Oorja has executed projects with before. All throughout the execution, Aide et Action played a vital role in supporting the team in terms of, mobilizing teachers and principals.

Project Sustainability

Gram Oorja used a combination of community involvement and design for aspiration to develop a sustainable project. It is the key for these factors to exist to provide a system that lasts.

During the process of installation, importance was given to involving the students, teachers and management in understanding every aspect.

Students were taught about solar energy for electrification. Concepts like DC, AC, inverters and panels were shared, as well as safety precautions. Ownership was promoted among the students.

Teachers were provided with training on handling the system. They were made to document this in their local language. Foreseen situations were provided to them and necessary actions were explained.



Project Impact

Schools were provided with high quality lights and fans. Provision for an addition of a computer/projector was also made available to them. The presence of technology in these locations will definitely reinforce students' trust in education apart from of course providing them a comfortable environment to study in.

Hostels earlier had a very depressing energy. The rooms were dimly lit, and an unreliable grid further created a constant block in the minds of the kids. Additionally hostels were provided with street lights and a provision for addition of a pump which will further increase the impact created by the solar installation.



Above images depicting sites pre-installation



Above images depicting sites post-installation

Technical Specifications

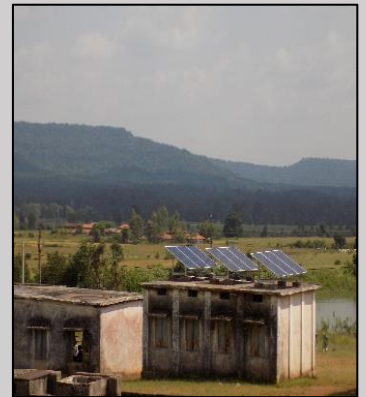
Solar Modules – Anchor by Panasonic, Inverter-Studer and Luminous (1kW System)

Charge Controller: Studer and Schneider

Battery Bank – Amara Raja

Lights: Havells 9W LED, Fans: Havells 50W

- 1kW- 10 Systems
- 2kW- 1 System
- 3kW- 6 Systems
- 4kW- 1 system
- 5kW- 1 system



Moving Ahead

The Garhi Energy Project has managed to create a tremendous positive impact in lives of many students. We believe that enabling hostels and schools in areas where grid-connection is nonexistent or weak, can create a better foundation for them.

We would love to take our learnings from Garhi project and move ahead and enable more hostels and schools.

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