

## **Gram Oorja Solutions Private Limited**

Gram Oorja provides sustainable and community driven energy solutions in remote regions to fulfil electricity, cooking fuel and water needs.

After reaching over 1000 villages and understanding their energy needs, we have now touched over 50,000 lives with 200+ community level projects.





# 'Gram Oorja' works in all aspects of providing energy access to rural communities.

We at 'Gram Oorja' -

- Identify sites based on partner requirements and community needs.
- Conduct comprehensive surveys and community engagement exercises to design systems based on needs and aspirations.
- Help attract appropriate financial support and install systems using high quality products.
- Support in maintenance of installed systems.

#### **Community Interaction**

We carry out surveys to understand community socio-economic conditions, determine immediate energy needs and also assess a village's ability and willingness to adopt new technology and devise mechanisms. A local village committee is established to whom the system is entrusted upon completion.

#### **Design for Aspirations**

We design all of our systems keeping local aspirations and needs in mind, with the aim of supporting long term economic growth and livelihood generation within the communities. Microgrids accommodate productive loads and 24×7 lighting. Biogas cooking grids ensure an experience similar to LPG. Solar water pumps make water available at a reasonable distance from home. In health centers and schools, quality of lighting and fans is similar to that of cities and includes powering computers.

## **Metering and Tariff Structure**

Intense community interactions result in a clear understanding of a community's ability and willingness to pay metered bills. For Biogas and Solar Microgrids, metering of each household is carried out to discourage wastage and develop accountability. Tariff structures are developed to ensure long term sustainability of the system and pay for operation and maintenance costs.

## Ownership Transfer

We have seen that community ownership is essential to deliver inclusive, sustainable and scalable energy projects in remote communities and can help in adoption, continued utilization and maintenance. This committee manages operational and maintenance activities and resolves disputes.







#### Micro grids

Several rural communities reside in extremely remote locations where grid extension doesn't appear to be a reliable long-term solution. The Microgrid is typically designed for larger loads that enable productive applications in addition to basic energy needs.

#### **Solar Water Pumps**

In rough terrains, accessibility to water is challenged by complex geographies. In many cases a second crop could have been possible if water for agricultural activities could be made available at the farm. Solar water pumps can help solve the problem of accessibility and provide regular water supply for domestic and agricultural usage.

## **Biogas Cooking Grid**

Rural women are often compelled to use firewood and agri-residue as their major cooking fuel. Biogas cooking grids using locally available resources can provide a clean and sustainable source of cooking fuel across diverse regions.

## **Energy Systems for Rural Institutes**

We provide energy access to support institutions like public health centers and schools in remote locations thereby improving the condition of basic necessities.

## Consulting

With more than ten years of expertise in overcoming obstacles in the path of energy access for rural communities, we are well equipped to help organizations solve a variety of problems in this area.

#### **Sustainability Development Goals**

#### **Gram Oorja focus**



#### **Gram Oorja impact**













#### Impacts - Technical, Economic, Institutional and Social

- 100% Households Electrified for each microgrid village with a provision of lighting for all public spaces street lights, schools and healthcare centers with 24 x 7 electricity supply.
- Water source distance reduced to within 2 minutes.
- Enabled utilization of productive appliances flour mills, rice huller, refrigerators, irrigation water pumps, computers and drilling tools.
- Over 2 hours extra time available for productive uses according to respondents.
- Households felt they owned the system; Decentralized ownership enabled systems to adapt quickly to local requirements.
- Extra minutes available daily for children to use for studying or playing.
- Extra minutes available daily for women; women felt more empowered.
- An improvement in water quality, improved sanitation and hygiene.
- Households in solar micro grid sites felt safer outdoors; accidents due to kerosene usage have decreased indoors.
- In addition to encouraging green energy practices and helping reduce carbon emissions, our projects showcased measurable impact on the environment.

#### Contact

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