

Green Energy for Drinking Water

THE PROGRAMME

Regular access to safe drinking water remains inadequate in India despite several efforts by the Government to ensure that every citizen has access to clean water. There is evidence that more than 70 percent of drinking water tanks and wells dry up in summers, increasing the time taken by the women to fetch water. Even villages which use electric or diesel pumps to supply water through taps in the villages cannot guarantee regular supply of water owing to poor grid connectivity and expensive fuel.

The programme **Green Energy for Drinking Water** through Solar Pumps ensures access to the basic need of water consistently in an environmentally benign manner. The intervention aims to set up solar based drinking water systems and promote behaviour change among communities related to water use and consumption for the reduction of incidence of poverty and water scarcity related problems for overall well-being of the communities.



THE COMPONENTS

Following are the components of the programme:

- **Set up of a community owned & managed model** for regular access to safe drinking water through solar water pumping systems
- **Positively influence behaviour change** among communities for safe water use and consumption – awareness campaigns

EXPECTED OUTCOMES

- Sustainable access to drinking water for the people
- Increased awareness amongst people around safe drinking water and sanitation
- Reduction in drudgery amongst women
- Improvement in productive capacities and reduction in incidence of health problems



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– Success Stories

Background

Govind Nagar village in Datia is one of the eight villages where watershed development is being undertaken by DA. The village has 100% tribal population and used to be characterised by poor development indicators. In 2012, when DA initiated a baseline survey in these villages, we found that drinking water scarcity was a severe problem in Govind Nagar village. The main source of water was a well situated at a distance of 2-3 km from the village and every day the women had to walk long distances to fetch water.

The Intervention

As a solution to the severe drinking water stress observed in Govind Nagar, Development Alternatives proposed the installation of a solar energy based drinking water system. The proposal was welcomed by the village community and they committed their support in ensuring the proper maintenance of the system once it was installed. To promote ownership, the village community was engaged in every aspect of the initiative starting from the planning to the installation and management of the system.

The requirement of drinking water in the village was estimated to be about 10,000 litres per day based on the assumption that about 150 litres is the average daily household requirement of the 84 households

The distribution strategy finalised was that of providing household level connections as well as some public stand posts. 54 connections and about 1000 metres of distribution lines were installed, the complete infrastructure representing a capital investment of 4.5 lakhs of which the solar pump cost 2 lakhs. The community too contributed, in the form of *shramdaan* (labour) and for the purchase of the taps for their private connections. The supply schedule was planned in accordance with the water consumption pattern to supply for 4 hours in the morning and 2 hours in the early evening hours.

Impact & Significance

The Govind Nagar initiative represents a sustainable model for ensuring access to safe drinking water through renewable energy sources that is suitable even for areas that are not connected to the grid, a situation that is still true for about 40,000 villages across the country. The initiative is an example of how emerging technology can be harnessed to meet the basic needs of people and improve their quality of life even in the most unreachable parts of the country.

