

Exploratory Telephonic interviews with SKY farmers in Gujarat yields insights into the functioning of the SKY scheme

The state of Gujarat in India has rolled out *Suryashakti Kisan Yojana (SKY)*- a grid-connected solar pilot program in agriculture supported by the state government of Gujarat and implemented by Gujarat Urja Vikas Nigam Ltd (GUVNL) in 2018. The program aims to provide uninterrupted daytime electricity, reduce electricity loss, reduce the electricity subsidy burden on the state, and provide a source of income to grid-connected farmers through the sale of electricity to the grid. Although the program started in Nov 2018, the implementation continued till early 2021. So far, 91 feeders have been solarized, and 4171 farmers have converted their electric pumps to solar pumps under the project.

Given the COVID-19 situation, IWMI researchers could not visit the field and decided to call few SKY farmers to understand the ground situation. We found that most farmers have a good understanding of the scheme and its benefits. Overall, they were satisfied with the net returns generated and the uninterrupted supply of 12 hours of daytime power. Those who could not enrol in the scheme could not do so due to a lack of land documents in their name. Another technical problem that the farmer commonly faced was that specific plots were unsuitable for installing solar panels and were hence rejected by the implementing authority. However, one farmer from the Tapi district in the south of Gujarat also mentioned that financial constraints prevented him from enrolling in the program. All the SKY consumers have been net-metered to account for solar energy injected and drawn from the grid. SKY consumers currently receive bills once a year (mainly in March-April), while the non-enrolled consumers receive the bills once every two months. Depending on the units of energy evacuated to the grid, consumers can either be net exporters (earn a positive income) or net importers (charged a bill at the end of one cycle). We also learned that a few farmers have received income, and it is quite substantial for farmers from Uttar Gujarat area.

However, we did not find any changes in groundwater use and cropping patterns of the farmers. Finally, we found that most SKY consumers maintain their panels to maximize efficiency and energy generation. Farmers reported they clean the panel on their own, and in few cases, they can hire a service to clean the panel.

The purpose of this exploratory telephonic survey was to better understand the field situation and design a larger study to measure the impact of the SKY scheme on farmers' income and groundwater use patterns. This larger survey covering roughly 1000 households is scheduled to be launched in August 2021.