

Case study: Women as solar power entrepreneurs

Mousuni is an island with 4500-5000 households and with around 20,000 voters. Two power plants (one of 55 kWp, and other of 110kWp) based on solar PV technology have been installed in two villages of Mousuni. In 2001, a 55kWp power plant was installed in village Bagdanga whereas village Baliara was electrified with 110kWp power plant in 2003. In both of these villages, 5 and 10kWp is dedicated for water pumping. Both the villages come under the administrative jurisdiction of Namkhana block. The contract for plant installation in those two villages was awarded to Bharat Heavy Electricals Limited along with annual maintenance contract (AMC) for 5 years. Total installation cost of 110kWp power plant inclusive of all (except O&M cost) is Rs 330,00,000. There are provisions of two types of energy supply to the households, namely, one with 3 CFLs and other with 3 CFLs, one fan point and one TV point.

For regularizing operation, maintenance and revenue collection, a village energy committee (VEC) was formed. All consumers, Sarpanch, official of WBREDA (West Bengal Renewable Energy Development Agency), other influential persons of that area are members of that committee. One member of VEC was elected for collecting the revenue. His salary comes from the committee. For O&M, one operator has been appointed for the plant who stays there round the clock. All these components are added in 5 years AMC. The AMC cost (for 5 years) is Rs 6,00,000. Another service man is responsible for the maintenance of the lines. As far as consumers are concerned, Rs 80/month are collected from them for 3 light connection (initial charge Rs 500), and Rs 130/month for 3 light, one TV and one fan connection (initial charge Rs 1000). It is estimated that the revenue collected is sufficient to run the system even after 5 years, including the battery replacement.

Since there is a high demand for education, coaching centre is a way of earning money. Now one coaching centre is run at night, paying Rs 130 /month for light connection. In turn, it earns Rs 600/month. Since the villages are remote, it was difficult for villagers to cross the river everyday for their day-to-day purchase. So, there was a huge demand of small market. Initially those shops had DG Set based lighting but the shopkeepers found solar option cheaper and flexible. (Rs150 per month with 3 points and 4 hours of operation for diesel, where as for solar it is Rs 120/month with 5 hours of supply). In medicine shop one doctor is available who runs his shop at night, earning around Rs 3000/month. Moreover, there is a demand for video show as there is no other source of entertainment. Some video parlours are now run through solar plant. Similarly, one jewellery shop is using electricity to run his buffing machine.