

Sandwip 100 kW Solar Mini Grid

Nation's first solar mini grid is now fully operational in the remote island of Sandwip, Bangladesh, to serve 400 consumers that include the small shops, school, health center and residences surrounding Enam Nahar Market. Along with the most successful national solar home systems program of Bangladesh, this plant opens a new dimension to solar application in the country. This is the first solar mini grid of this technology and capacity in the region.



100 kWp Solar power generation plant in Sandwip island is largest in Bangladesh. Purobi Green Energy Limited started operation on September 29, 2010.

The power plant constitutes of the 100 kW solar park connected to the inverter system that allows direct use of 220V AC power at day time from the three phase line of the mini grid. Part of the energy is stored in the battery for reliable power supply for night time consumption mainly for the shops in the market. Although preliminary feeding is through a local mini grid, the plan is to distribute power through the dormant grid line of PDB that was never energized in the past 20 years.

On September 29, 2010 the power plant came into operation and the first consumers include local cooperative bank followed by the local police station, hotels and commercial shops. High quality and reliable grid power supply is being used for computers, lights, fans and other appliances instead of polluting Diesel generators.



Engr. Asma Huque, Chairperson of Purobi Green Energy Limited handing over the meter to the first mini grid consumer, manager of Rupali Credit Cooperative bank.

Some demand side management has helped in improving the power consumption pattern for the consumers, who will pay through electric meter readings. The users are pleased with the energy efficient appliances and stable power supply that is available on demand. Once the existing grid line is used, local households can also get service from this plant. Similar units of this capacity and features could be installed in other remote locations of Bangladesh.



State of the art control and communication allows all these systems to be remotely monitored during normal operation that can prevent failure of critical components in advance. With an intelligent control technique the plant will maximize solar power conversion and battery life while minimizing system losses.

There are several actors in this pioneering solar power plant. PUROBI Green Energy Limited (PGEL) being the owner has received financial support from Infrastructure Development Company (IDCOL). Energy Systems (ES) of Bangladesh and Asantys Systems of Germany made turnkey installation of this plant, with complete technical assistance from Prokaushali Sangsad Limited (PSL). We are proud to note that heads of these related private organizations are women engineers.