Abstract

A large proportion of the world’s population lives in remote rural areas that are geographically isolated and sparsely populated. This paper discussed the efficient system of sustainable renewable energy for domestic use and its total cost for the off-grid area; taking Sandip-para as model which is in Raujan upzila of Chittagong district. Method of this paper is collecting the basic data of solar radiation, wind speed and other required input data, and then hybrid optimization. Simulation model was developed using the HOMER energy modeling software. Simulation model has been used to find out the best technically viable renewable based energy efficient system for different numbers of household. Results have been presented as the most efficient economic way for electrifying the area.
Index Terms

Computer Science

Power Systems
Keywords
Hybrid optimization model of renewable energy (Homer)  Sandip-para  Domestic and agricultural power consumption

Cost analysis

Payback