World Academy of Science, Engineering and Technology
International Journal of Energy and Environmental Engineering
Vol:9, No:07, 2015

Economic and Technical Study for Hybrid (PV/Wind) Power System in the North East of Algeria

Authors : Nabila Louai, Fouad Khaldi, Houria Benharchache

Abstract : In this paper, the case of meeting a household's electrical energy demand with hybrid systems has been examined. The objective is to study technological feasibility and economic viability of the electrification project by a hybrid system (PV/wind) of a residential home located in Batna-Algeria and to reduce the emissions from traditional power by using renewable energy. An autonomous hybrid wind/photovoltaic (PV)/battery power system and a PV/Wind grid connected system, has been carried out using Hybrid Optimization Model for Electric Renewable (HOMER) simulation software. As a result, it has been found that electricity from the grid can be supplied at a lower price than electricity from renewable energy at this moment.

Keywords : batna, household, hybrid system, renewable energy, techno-economy
Conference Title : ICEER 2015 : International Conference on Energy and Environment Research
Conference Location : Istanbul, Türkiye
Conference Dates : July 29-30, 2015