

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

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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

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