

Techno-economic feasibility study of hybrid wind/solar/battery system and environ-economic comparison with diesel generator for a household in Korea

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In this study, a techno-economic feasibility study of an autonomous hybrid wind/solar power system with battery storage bank was carried out for a household in South Korea. The Hybrid Optimization Model for Electric Renewable (HOMER) simulation software was used to analysis and optimization of the system. The optimal hybrid wind/PV/battery power system was compared to a diesel generator in viewpoint of economic and environmental. The results showed that the cost rate of the generated power by renewable hybrid system is 6.5% lower than the cost rate of generated power by diesel generator for the case study in Korea.

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