

Feasibility Study of PV, Wind and PV-Wind Hybrid System for Al Al-Bayt University, Jordan

Authors : Mohammad Al-Smairan

Abstract : Jordan has no fossil fuel resources like coal, oil, or natural gas but has plenty of renewable energy resources like solar and wind energy. The potential of solar energy is very good where Jordan is located in the sunbelt area that possesses the highest solar radiation in the world, especially in the Northern hemisphere, while the potential of wind energy is good in the southern part of the country where wind projects are installed. Al al-Bayt University is located in the northern part of the country, where solar energy potential is high and wind energy potential is low. This research was carried out to investigate the best option for renewable energy systems to meet the load demand of the University. By using the SAM simulation model and HOMER Pro simulation model and depending on the results obtained, the stand-alone photovoltaic (PV) system is the best option, which completely matches the renewable energy resources available in the area.

Keywords : PV, wind, hybrid, Al al-Bayt University, Jordan

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