

عنوان مقاله:

Evaluation of Photovoltaic System Performance: A Case Study in East Azerbaijan, Iran

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خلاصه مقاله:

Solar energy is a feasible and efficient way to reduce environmental pollution which, in turn, can decrease the production of greenhouse gases. Iran with over 300 sunny days has a high potential for producing energy, including electricity through photovoltaic (PV) systems. Regarding this fact that Iran has the enormous resources of fossil fuels such as oil and gas, the government tends to expand its energy production by renewable systems, including photovoltaics. This paper is to evaluate the efficiency of photovoltaic system in one of the major provinces of Iran. In this study, a 4.8 kW photovoltaic power station in East Azerbaijan province was investigated. First, a simulation-analysis is carried out. Then the verification of the study is done using extracted experimental data. According to the results, the photovoltaic power plant generates 8334 kWh annually. Finally, the station is economically investigated. This economic analysis is carried out in accordance with the existing tariffs and policies in Iran.

کلمات کلیدی:

Economic Parameter, performance, Photovoltaic system, Renewable Energy

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