Feasibility of renewable energy systems in buildings without energy consumption, (Case Study: city Bafgh)

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Abstract

Due to the energy crisis in recent years and the increasing use of fossil fuels as sources of energy and limit its impact on Environment, have prompted countries with different issues relating to their collision energy, efficient use of renewable energy is therefore deemed necessary. Solar energy is increasing day by day. It is obvious that desert areas in Iran have a large area and due to being located in the solar radiation belt, have a high radiation potential. The present article examines the possibility of using renewable solar energy in buildings without energy consumption in Bafgh. Initial calculations necessary to estimate the solar power station on statistical data measured by the Renewable Energy Organization of Iran has been done. Initially, the cloudiness data, the number of days with zero to two times the amount of cloud in the eighth, throw counted as days and the average was calculated monthly and yearly. The intensity of solar radiation is investigated. The results show that Bafgh has a clear sky for more than half of the year, which indicates that the city has a high potential and ability to use solar renewable energy.

Keywords: renewable energy, solar energy, zero energy buildings, Bafgh