

Abstract

Nowadays, with the increasing urban population, the consumption of energy carriers and, above all, urban electricity is increasing, which in the long run can cause problems in providing this kind of urban infrastructure. Solar power is one of the options facing major areas of Iran such as Sistan. Sistan region has favorable conditions for investment due to its geographical situation such as high sunshine and high temperature and due to its border location for exporting electricity to neighboring countries. The purpose of this study is to compare the seven major cities of Sistan in terms of the desirability of solar panel deployment and the amount of electricity produced. For this purpose, Metenorm7.2 software was used to collect climatic data and 4.6.3.PVSYST software was used to simulate the final generation energy from solar panels and to estimate its revenue. The findings show that in terms of solar panels (assuming 1 kW power plants), Mohammadabad has an annual energy production of 1644 kW / h in an area of 6.5 m², which is more favorable for inflation. Fixed 1.1 and guaranteed purchase rate of 9317 rials per kWh by the Ministry of Energy generates revenue of 15 million riyals per unit, among the influential components in the revenue generation of solar panels, the economic aspect (0.851) and social (0.520) were ranked first and second, respectively, by applying strategy and implementation strategies including Training and providing banking facilities can contribute to a sustainable urban household economy because without it, migration and stabilization of the urban population cannot be prevented.

Keywords: Assessment , Solar energy potential, Photovoltaic systems , Sistan region



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