

Techno-economic evaluation of a grid-connected hybrid PV-wind power generation system in San Luis Potosi, Mexico

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Abstract

This paper presents a study of the installation of a hybrid PV-Wind power generation system for social interest houses in the city of San Luis Potosi, Mexico. To assess the benefits of the implementation of this type of systems, a technological, economic and environmental evaluation is carried out based on the available renewable energy resources and considering a typical load profile of consumers. The obtained results show the feasibility of installation of small capacity hybrid generation systems in the city, however governmental incentives must be implemented to make more attractive and affordable the proposed systems for medium/low income users.

Keywords

Hybrid energy system, load profile, photovoltaic energy, techno-economic analysis, wind energy