

عنوان مقاله:

Modeling And Energetic Assessment Of A Single-Axis Rotary Awning Equipped With Photovoltaic Cells For Office Buildings In Iran

محل انتشار:

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خلاصه مقاله:

The ventilation and air conditioning systems are among the major energy consumers in commercial and office buildings in warm season of the year. A considerable portion of this energy is cooling load imposed by sun radiation from windows of the building. In this work, in order to reduce building cooling load, a rotary single-axis awning with ability to supply its own power demand via a solar cell installed on it, is designed and modeled. For achieving maximum electrical power generation and maximum cooling energy conservation simultaneously, an appropriate algorithm for awning rotation is obtained. Afterwards, a case study on Sharif Energy Research Institute (SERI) building located in Tehran, Iran is accomplished for five warm months of year and Simulation results including .electrical energy generation and cooling energy conservation during this period are assessed and discussed

کلمات کلیدی:

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