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Patent Search

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Abstract:

Tracking the Maximum Power Point of Photovoltaic Grids Using Machine Learning and IoT ABSTRACT The goal of this paper is to examine several str maximum power point in regions with variable weather. It has been proved that solar panels convert just 30 to 40 percent of the energy they receive Therefore, if you want the solar panel to operate optimally, you will need an algorithm capable of determining the highest power point. Maximum po system designed to boost the efficiency of solar arrays. The intended research will investigate this. To maximise the performance of your PV system, algorithm. In order to achieve this, all algorithms are compared in the discussion and conclusion.

Complete Specification

Description:DESCRIPTIONS
The photovoltaic (PV) system is gaining popularity due to its ability to generate an infinite amount of clean energy without harming the environmer durable and low-maintenance because it provides electricity without the use of a motor. As a result, it is currently the superior choice. However, PV vulnerable to climatic variables and inefficient energy converters. In addition, the photovoltaic (PV) system can only generate electricity when the su properties change in a nonlinear fashion based on its usage. Both heat and light can affect photovoltaic (PV) systems. Radiation influences the qua system, whereas temperature influences the voltage. The power output of a PV system varies nonlinearly in response to changes in temperature ai point at which power is at its maximum under specified conditions. The strategy for managing the photovoltaic (PV) system so that it always operat if the objective is to increase the PV system's efficiency and output. The method must be "temperature and radiation sensitive," "low vibration in st tracking speed in transient," and "easy to implement." Several methods have been studied to boost the maximum power point tracking output of a 25%. As existing energy sources degrade at an alarming rate, the relevance of solar photovoltaic energy as a renewable energy source has increase photovoltaic power generating systems has attracted a great deal of interest, particularly in a vast array of terrestrial applications. This is due to th is ecologically beneficial and may be generated in nearly infinite numbers. Most typically, PV systems are used to pump water, light homes and str vehicles, power military and space applications, and connect to the power grid (hybrid systems, power plants). Photovoltaic (PV) generation system flaws: they are not highly efficient at converting light into energy (9-17%), particularly when there is little light, and the amount of power generated fluctuates. In addition, the V-I characteristic of solar cells is nonlinear and fluctuates as a function of light and temperature. Typically, the Maximum

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TITLE OF INVENTION	Tracking the Maximum Power Point of Photovoltaic Grids Using Machine Learning and IoT
FIELD OF INVENTION	ELECTRICAL
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APPLICATION STATUS	**Awaiting Request for Examination**

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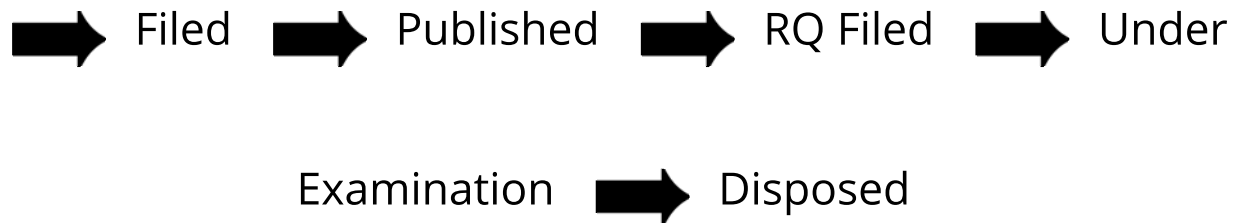
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