Evaluation of economic performance of solar power generation

Are there studies on solar PV power efficiency at the national level?
(1) There are few studieson solar PV power efficiency at the national level. Although solar PV generation is widespread and can provide electricity to meet the energy needs of economic development,few analyses have been conducted to assess solar PV power efficiency.

What are the indicators of solar PV power efficiency?
Solar PV installed capacity and solar PV generationare the most basic indicators of solar PV power efficiency. Therefore,we selected solar PV installed capacity,the cumulative number of solar PV patents,gross capital formation,and labor as input variables and solar PV generation as the output variable.

What is the importance of assessing solar PV power efficiency?
The importance of assessing solar PV power efficiency is of interest to the vast majority of economies. A country should measure solar PV power efficiency and keep related records. Therefore,this study used economic dimensions in its analysis. The remainder of the paper is organized as follows.

How does government policy affect solar PV power efficiency?
They also have relatively greater expectations of non-fossil-fuel energy generation, which will also increase the level of attention given to solar PV generation; furthermore, more government policies and researcher input will influence solar PV power efficiency , , . 3. Results and discussion

How does GDP per capita affect solar PV power efficiency?
GDP per capita is used to measure the level of economic development of different countries; the level of economic growth determines the country's ability to invest in solar PV generation infrastructure development, which can affect solar PV power efficiency , , .

How is solar PV power efficiency measured?
A three-stage data envelopment analysis model assessed solar PV power efficiency. Solar PV power efficiency was measured for 26 countries from 2000 to 2020. The measurement of solar PV power efficiency was based on economic dimensions. Most of the countries with high average solar PV power efficiency are high-income.

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This paper presents the evaluation of certain performance parameters and economic feasibility analysis of a site specific grid connected solar PV plant using a widely used solar PV ...

Shagdar et al. have analyzed the techno-economic and ecological indices of the small-scale power generation system under four different cases and recommended solar-assisted power ...

The results show the impact of climate change on solar energy generation potential is geographically different. Based on the historical data, the estimated electricity generation potential from conventional PV, PV/PCM, and ...

4.2 Technical performance evaluation. The technical performance of all four SPV system configurations is analysed using simulated and experimentally measured data from June-2017 to May-2018. The annual ...

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