

This paper proposes a model called X-LSTM-EO, which integrates explainable artificial intelligence (XAI), long short-term memory (LSTM), and equilibrium optimizer (EO) to reliably forecast solar power ...

temperature has a great influence on the power generation efficiency, the solar panel is cooled while ensuring the maximum efficiency of the solar panel to ensure that it operates in an ...

Where η_1 is the power generation efficiency of the PV panel at a temperature of T_{cell} , η_1 is the combined transmittance of the PV glass and surface soiling, and η_{clean} is ...

efficiency [4]. The implementation of Optimal Solar Panel Tilt Angle in various country has been implemented by some researchers for China, Pakistan, and also United Arab Emirates such ...

A hybrid renewable energy source (HRES) consists of two or more renewable energy sources, such as wind turbines and photovoltaic systems, utilized together to provide increased system efficiency ...

1 Introduction. Solar energy is inexhaustible and one of the cleanest renewable sources of energy. The solar power in the form of irradiance trapped by the earth is 1.8×10^{17} ...

This algorithm was successful in identifying the most important features that affected solar power generation, including weather conditions, time of day, and solar panel tilt ...

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The characteristic analysis of the solar energy photovoltaic power generation system B Liu¹, K Li¹, D D Niu^{2,3}, Y A Jin² and Y Liu² 1Jilin Province Electric Research Institute Co. LTD, ...

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