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Patent Search

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Abstract:

Optimization cost of Solar power plant for EV charging station by using ML The optimization of cost in solar power plant is an emerging research area that has gained attention in recent years. With the increasing demand for electric vehicles (EVs), the establishment of EV charging stations has become a priority for governments and alike. However, the high initial cost of setting up such stations, coupled with the recurring energy costs, poses a significant challenge. To overcome this obstacle, the machine learning (ML) techniques in the design and operation of solar power plants for EV charging stations has been proposed. ML algorithms can provide valuable the complex and dynamic nature of solar power plants, helping to optimize their performance and minimize costs. These algorithms use historical data, such as weather forecasts, energy demand and supply patterns, and plant efficiency, to predict the optimal operating parameters. They also continuously learn and adapt, making them suited for the constantly changing environmental and energy conditions of solar power plants. The use of ML in optimizing cost for solar power plants for EV charging several advantages. Firstly, it enables the identification of the most efficient and cost-effective design of the solar power plant. ML algorithms can analyze and evaluate parameters, such as the size of the panels, orientation, and location, to determine the most optimal setup. Secondly, it assists in forecasting energy demand, which is maximizing the utilization of available solar energy. By accurately predicting energy demand, the plant can generate enough power to meet the charging needs of EVs: excess energy generation that could result in wastage. This, in turn, reduces the overall energy costs. Furthermore, ML can also improve the maintenance and operation power plants through predictive maintenance techniques. By analyzing data from various sensors, ML algorithms can predict equipment maintenance needs and prevent potential failures. This helps in reducing downtime and maintenance costs, which can be expensive for solar power plants. In conclusion, the integration of ML in the of cost for solar power plants for EV charging stations has the potential to significantly reduce the high initial setup and recurring energy costs. It not only improves the and reliability of the solar power plant but also contributes to the widespread adoption of electric vehicles, ultimately leading to a more sustainable future.

Complete Specification

Description:FORM 2

THE PATENTS ACT,1970

(39 of 1970)

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THE PATENT RULES, 2003

Complete Specification

(See section10 and rule13)

1. Title of the Invention: Optimization cost of Solar power plant for EV charging station by using ML

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