

Bidirectional charging of photovoltaic containers for wastewater treatment plants





Overview

What is the PV potential of a wastewater treatment plant (WWTP)?

The PV potential of a WWTP is correlated with its planned wastewater treatment capacity. The number of wastewater treatment plants (WWTPs) in China is fast growing as the country's urbanization accelerates. WWTPs, part of the high-energy-consumption industry, must use a lot of energy in wastewater treatment.

Can photovoltaic conversion of solar energy be used in wastewater treatment?

The application of photovoltaic conversion of solar energy in wastewater treatment is described^[1] and the research progress of photovoltaic conversion in electrooxidation system^[2] reverse osmosis process^[3] electrocoagulation process^[4] aeration equipment^[5] electroflocculation technology and fenton technology is reviewed.

Can solar PV be used in wastewater treatment plants?

Strazzabosco et al. assessed the status of solar PV in WWTPs of various sizes in California, USA, and determined the potential of solar PV in the wastewater industry . Colacicco et al. proposed a solar PV design method for WWTPs to optimize the energy consumption of oxidation tanks in WWTPs .

How can bidirectional charging/discharging a battery achieve maximum PV power utilization?

In addition, with the proposed strategies, the bidirectional charging/discharging capability of the battery is able to achieve the maximum PV power utilization. All the proposed strategies can be realized by the digital signal processor without adding any additional circuit, component, and communication mechanism.



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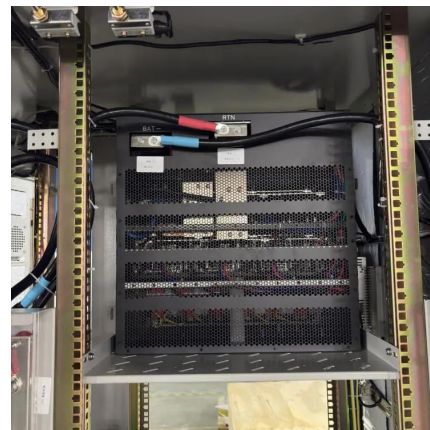


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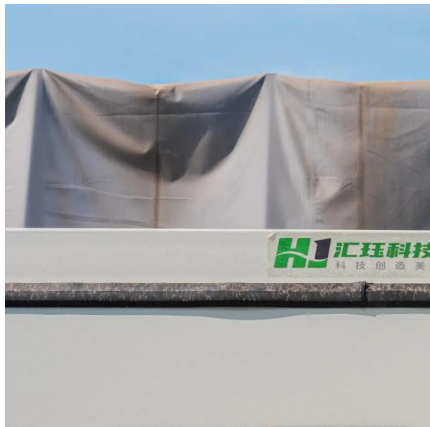
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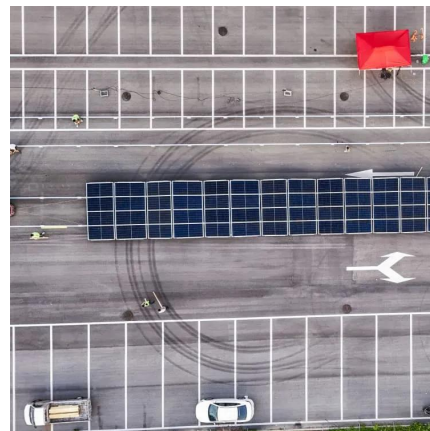
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