

350kW Photovoltaic Container Terminal for Port Terminals





Overview

What happens if the number of PV panels exceeds a threshold?

However, once the number of PV panels exceeds a certain threshold, the excess renewable energy cannot be utilized by the port, increasing the cost of power abandonment and causing the ROI to decline gradually.

How many energy storage devices can a port configure?

Energy storage devices are limited in the amount of power they can store and charging power cannot exceed their maximum storage capacity. In this paper, it is assumed that if the port chooses to configure its energy storage devices, it can only select one type of energy storage device and will not choose more than that.

How to meet stochastic energy demand from dynamic operational processes at ports?

To meet the stochastic energy demand resulting from dynamic operational processes at ports, a simulation-based model was developed to obtain hourly energy demand and, based on the obtained energy demand, the required capacity for the PRES was planned (Li et al., 2019; Wang et al., 2019).

How does port throughput affect energy supply?

Generally, the port throughput is assumed to increase year by year, with the highest port load demand observed in the last year of the planning period. If the planned PRES can meet the reliability requirements of energy supply in the final year, it is expected to be sufficient for the other years as well.



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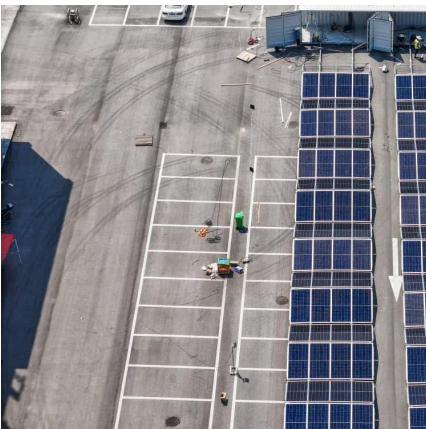


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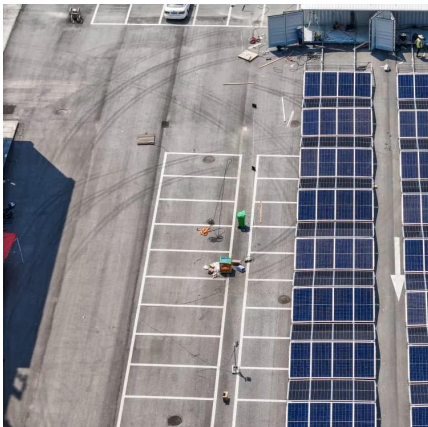


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