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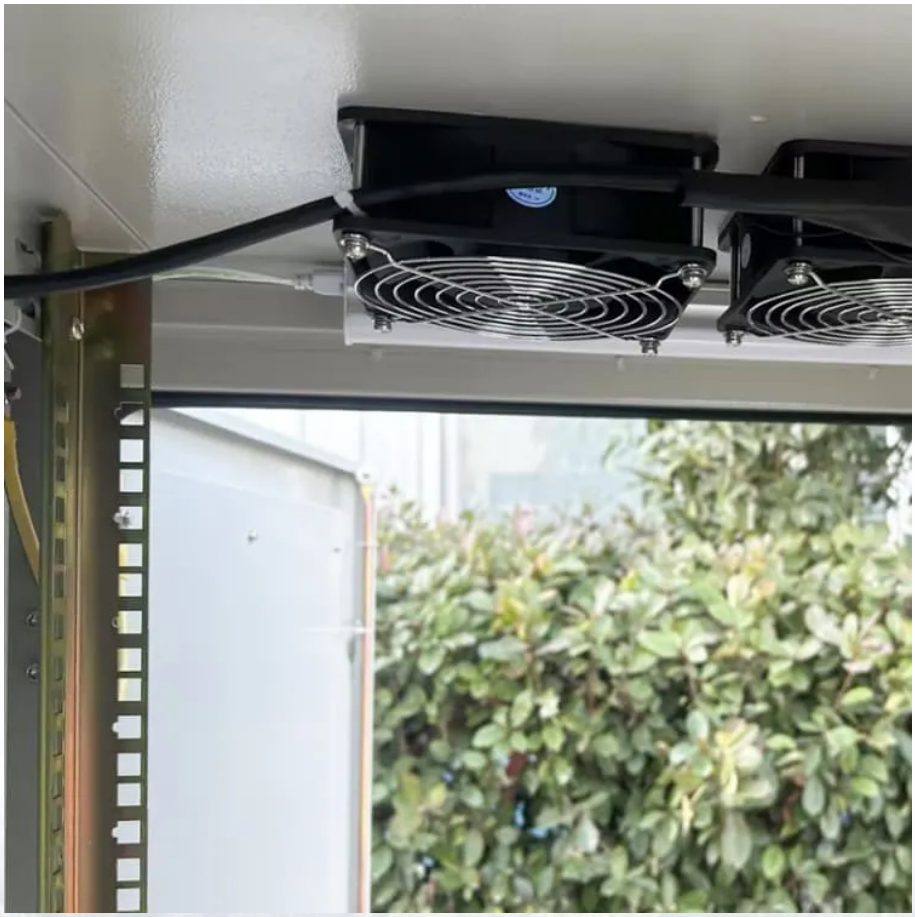
Solar-powered container high-voltage investment for port terminals



Overview

Technology: 7.2 MW ground- and canopy-mounted solar PV across 7.8 acres of container terminal.^1 Key Metrics: Supplies ~50 % of terminal’s annual electricity; excess fed to grid; immediate reduction in CO_2 and criteria pollutants; supports 2050 net-zero goal.^1 Stakeholders & Funding: Port Authority of NY & NJ; PNCT; City of Newark; financed via PANYNJ capital budget and green bonds.^1 Lessons & Scalability: Demonstrates dual-use canopy design; public–private collaboration essential; readily replicable at large terminals globally.^1 Technology: 9.65 MWp rooftop solar PV on warehouses (11 football fields); leased and operated by Sunseap under a 25-year PPA.^2 Key Metrics: Offsets > 60 % of port’s electricity; ~5,200 t CO_2 avoided annually; immediate savings via fixed discounted tariff; positive lifecycle ROI.^2 Stakeholders & Funding: Jurong Port (state-owned); Sunseap; support via Singapore’s Renewable Energy Certificates and tax incentives.^2 Lessons & Scalability: Leasing model overcomes CAPEX barriers; effective use of roof space in dense ports; finance structure replicable in other constrained markets.^2Why should ports use solar energy?

Lastly, solar energy provides increased energy independence and resilience. Ports and ships equipped with solar power systems have a more reliable and stable energy supply, ensuring uninterrupted operations. Solar energy can be seamlessly integrated into various aspects of port infrastructure.

Is solar energy a future for shipping and ports?

Similarly, shipping companies like Maersk Line have invested in solar power systems for vessel power, reducing their environmental impact and operating costs. Recent trends in the adoption of solar energy in sustainable shipping and ports indicate a promising future.

How can solar energy improve port infrastructure?

Solar energy can be seamlessly integrated into various aspects of port infrastructure. Installing solar panels on rooftops and parking structures not only generates clean energy but also optimizes the use of available space. Furthermore, solar-powered lighting and navigation systems enhance safety

and reduce energy consumption.

How can shipping companies adopt solar energy?

The adoption of solar energy requires collaboration between shipping companies, port authorities, and renewable energy providers. By working together, these stakeholders can develop and implement sustainable energy solutions tailored to their specific needs. Government incentives and policies play a crucial role in promoting solar energy adoption.

Solar-powered container high-voltage investment for port terminals

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