

High-efficiency solar-powered container terminals used at Lisbon Airport





Overview

Are container terminals sustainable?

Sustainable development of container terminals is based on energy efficiency and reduction in CO₂ emissions. This study estimated the energy consumption and CO₂ emissions in container terminals according to their layouts.

Why are maritime container terminals important?

Maritime container terminals play an important role in global supply chains. In addition to the rapid handling of containers, the reduction of CO₂ emissions is also increasingly crucial for terminal operators. This can be achieved by integrating renewable sources.

How can terminals improve energy management?

Terminals increasingly incorporate microgrids, integrating renewable energy sources (e.g., wind and solar). Looking ahead, the agenda should involve exploiting this direction while deepening the integration of the terminal's energy management with operations planning to dynamically and intelligently balance supply and demand.

What is a green port?

Currently, the construction of modern container terminals adopts the green port perspective. A green port refers to a port having a sustainable environment, a fair use of resources, low energy usage and low emissions ^{10, 11}. Several container terminals have carried out plans of action for emission mitigation and energy efficiency.



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