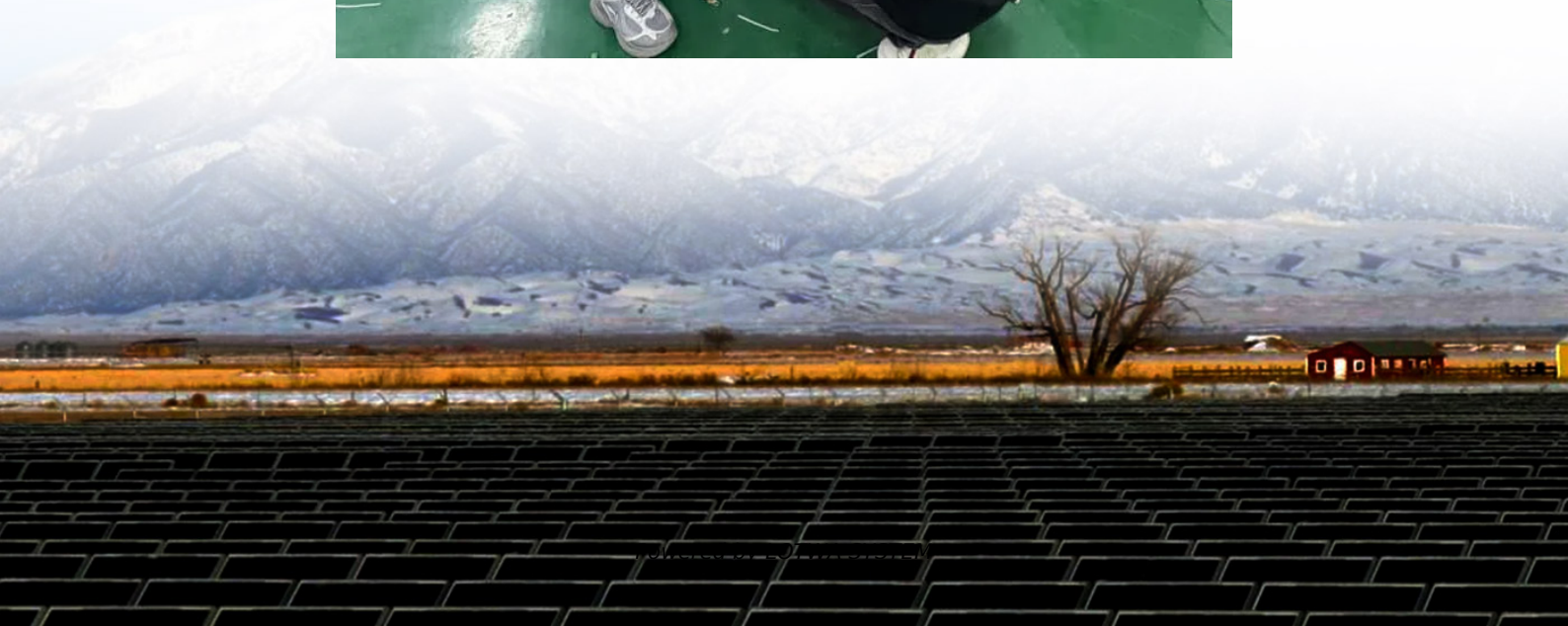


Cost of using 250kW collapsible containers at port terminals





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.

How much CO₂ does a container terminal emit?

The CO₂ emissions calculated using movement modality over 1 year of operations in terminals A and B were found to be 13,121 and 9645 tonnes, respectively. The total CO₂ emissions in a container terminal depend on the total of containers managed by each container-handling equipment.

How is energy consumption calculated in a container terminal?

Energy consumption was calculated based on utility data as well as fuel and electricity consumptions for each container-handling equipment in the container terminal. CO₂ emissions were estimated using movement modality based on the number of movements of and distance travelled by each container-handling equipment.

Does a U-shaped container layout require the highest energy consumption?

The U-shaped layout requires the highest energy consumption to complete a container task, but it has the lowest non-value-added energy consumption. From a sustainability perspective, operators need to make balanced decisions between profit and energy consumption according to their own development needs. Fig. 10.



Cost of using 250kW collapsible containers at port terminals

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