IMK CONTAINERS

Investment of 100kW for Foldable Containers at Port Terminals

Overview

China has vowed to peak its carbon dioxide emissions by 2030 and achieve carbon neutrality by 2060. The emissions generated by the shipping industry cannot be ignored. Shore power or cold ironing i.

How to electrify container handling equipment?

For electrification of container handling equipment and other port equipment, it is important to not only look at the investment costs and total costs of ownership, but it is also important to regard the electricity grid capacity within port areas. If this is not possible, contact with the electricity network operator is necessary on forehand.

How many types of berths are there at a container terminal?

Suppose a port authority plans to invest in shore power infrastructures for a container terminal. The authority can build a transformer substation on the traditional berths to provide shore power service for the berthing vessels. Therefore, there are two kinds of berths at the terminal: SPBs and TBs.

Why did NREL work with a container port?

NREL also collaborated with a container port, Port of Honolulu, that provided data for an electric ship-to-shore crane, personnel vehicles, and reach stackers. The container port also provided crucial operational data of the port, including container throughput and shift hours. NREL calculated the hourly energy consumption for each equipment type.

How much energy does a port use per year?

We then applied these adoption rates to the annual energy consumption calculated for the top-25 U.S. ports. In a 100% electrification scenario in 2035, the annual energy consumption for all top-25 ports ranges from 1.61 to 2.03 TWh.

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, MANAGING ENERGY AT PORTS

Recognizing that no one port is the same, this white paper sets out to demystify paths towards both net zero and energy surety. Through practical considerations for ports' ...

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Electrification: Bringing Ports into a Cleaner, More ...

In concert with electrification, there is a push for greater automation in the ports industry. Most automated equipment by nature is electrified, making the two trends closely ...

Four Questions When Considering an Electric Future for Your Port

With a growing global focus on sustainability, the port and terminal industry faces significant pressure to pursue decarbonisation. The electrification of container handling ...

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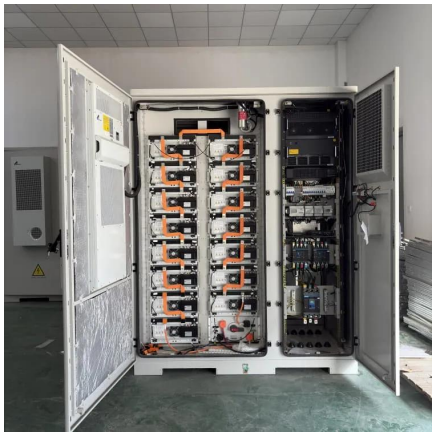

Capacity Planning and Investment for Electrification of ...

Container ports face the decision of investment into a variety of emerging technologies, including electric vehicles, autonomous equipment, and hydrogen-based power. ...

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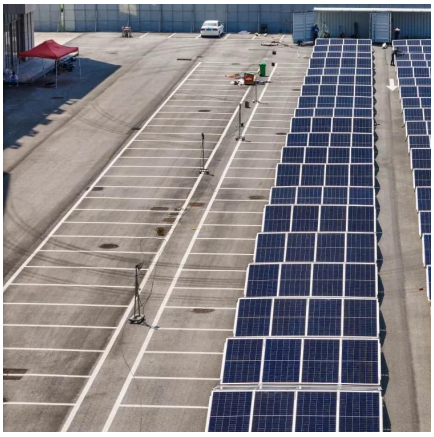

Capacity investment of shore power berths for a container port

The over-investment of the power capacity causes lower utilization and capital waste, while the under-investment results in service congestion and reduces the enthusiasm ...

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FOUR QUESTIONS WHEN CONSIDERING AN ELECTRIC ...

For instance, terminals can pilot a single electric container handler or trial electric alternatives for some of their lower-capacity equipment before transitioning additional units. ...

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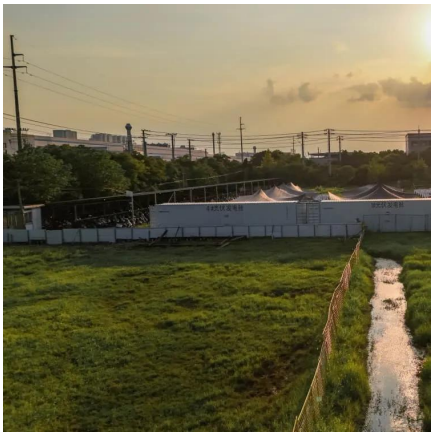

Electrification for container terminals

Conclusion and Looking Ahead We select these four challenges of electrification for container terminals in this blog to highlight what we often hear from ports and terminals. To address ...

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In concert with electrification, there is a push for greater automation in the ports industry. Most automated equipment by nature is electrified, making the two trends closely intertwined. This creates more ...

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Conclusion and Looking Ahead We select these four challenges of electrification for container terminals in this blog to highlight what we often hear from ports and terminals. To address these challenges with proper ...

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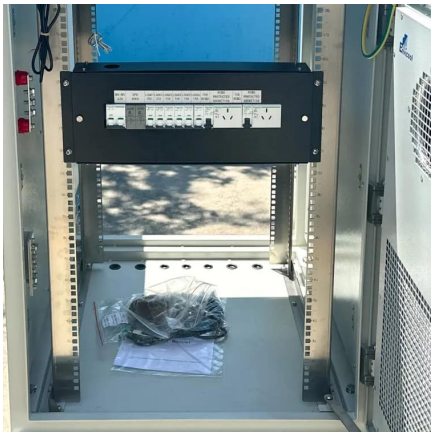

Electrification Analysis: Container Ports' Cargo Handling ...

Finally, we scaled the overall kWh/TEU for all equipment based on annual container throughput for the top-25 U.S. container ports to estimate the annual energy ...

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Good Practices

Description Electrical power is essential in the shift to a more modern, efficient and sustainable shipping industry. More recently, port electrification has involved container ...

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Analyses of port infrastructure investment and shore power ...

This study optimises port infrastructure investment and shore-power subsidies considering the congestion at the bottlenecks and CO2 emission reduction targets in inland ...

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