Comparison of the economic benefits of mobile energy storage containers used in ports

Through a comparative analysis of different energy storage technologies in various time scale scenarios, we identify diverse economically viable options. Sensitivity analysis reveals the possible impact on ...

The strategy combines the energy time-shifting characteristics of AGVs and ships with the peak-shaving and valley-filling capabilities of energy storage stations, promoting wind power ...

Based on a case study WSP (2023), a container terminal with 80% of its equipment operating on diesel can reduce over 30% of its GHG emissions if it switches to a full electric operation.

This research addresses this gap by developing an optimization-driven approach that assesses the techno-economic feasibility of port energy systems while incorporating real-time data ...

The paper investigates the concept of green ports and explores the feasibility of integrating RETs into these facilities.

Ports are strategically important locations in the collection, storage, transformation, and distribution of energy. Many have undertaken a transition toward their electrification and the use of alternative ...

Discover how energy storage systems drive terminal decarbonisation by managing power demands, balancing loads, and integrating renewables while maintaining operational efficiency and reducing ...

For ports interested in electricity storage (for example, to reduce the peak load on their local distribution network) it is important to assess the different storage technologies available against their through ...

As global trade volumes hit record highs (18.4 billion tons in 2023), ports are turning storage containers into secret weapons for energy resilience. Let"s dive into how these steel giants ...

This project developed a model to understand energy demand at each EV equipment level that is easily scalable to container demand and EV adoption rate projections.

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