



LOTWA SYSTEM

# Two-way charging for folding containers used in oil refineries





## Overview

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How does a crude oil refinery work?

A conventional refinery processes various types of crude oil with variable compositions to produce various products, such as liquified petroleum gas, gasoline, jet fuel, diesel, and paraffins. As seen in Figure 1, the refinery operations begin with an atmospheric crude distillation unit, which separates the raw crude into different streams.

Can optimization improve the decarbonization of oil refineries?

Optimization-based approaches have also been used to study the decarbonization of oil refineries. de Maigret et al. (11) employ EnergyPLAN, an energy system simulation software coupled with a Multi-Objective Evolutionary Algorithm (MOEA) to balance the dual goals of minimizing CO<sub>2</sub> emissions and annual cost on an Italian refinery.

What is a generic oil refinery?

Illustration of a Generic Oil Refinery A conventional refinery processes various types of crude oil with variable compositions to produce various products, such as liquified petroleum gas, gasoline, jet fuel, diesel, and paraffins.

Do refineries need a diverse technology mix to meet climate targets?

Sachs et al. (10) analyze global refinery decarbonization pathways, emphasizing the need for a diverse technology mix to meet 2 and 2.5 °C climate targets, and highlight that only the most efficient conventional refineries or those with CCS will stay competitive.



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### The technologies opening new opportunities for refineries: ...

Nov 18, 2024 · Refineries are particularly notable due to their substantial carbon footprint. According to the IEA, oil and gas operations contribute approximately 15% of global energy ...

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## Full article: Smart charging with demand response and ...

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