

What is intelligent cold chain logistics?

Intelligent cold chain logistics differs from traditional cold chain logistics in that it uses less energy and has higher quality and efficiency. It can achieve automation, operation intelligence, information exchange and visualization of the cold chain.

Why is logistics cold storage important?

As an important link in the cold chain, logistics cold storage consumes a large amount of energy while ensuring food quality. Reducing carbon emissions from logistics cold storage is an important way for the cold chain industry to achieve carbon neutrality.

How is cold chain logistics transforming the social logistics industry?

Against this backdrop, cold chain logistics enterprises have also entered a rapid development phase. Business revenue has increased significantly, and the share of cold chain logistics in total social logistics will increase continuously from 1.3 % in 2015 to 2.4 % in 2022, reaching 8.5 trillion yuan .

How does cold storage affect energy consumption?

The rapid global expansion of logistics cold storage facilities has resulted in a substantial surge in energy consumption. It is predicted that over the next four decades, more than 85% of the total carbon emissions in cold chains will come from electricity consumption during cold storage operations .

What are logistics cold storage envelope structures?

Logistics cold storage envelope structures play a pivotal role in maintaining internal temperature stability, minimizing heat transfer, reducing energy consumption, and ensuring structural stability. These factors have a direct impact on the energy efficiency, operating costs, and quality of the stored goods within the refrigeration system.

What is the development of cold storage industry in China?

Currently, the development of the cold storage industry in China has the following characteristics: 1. With the proliferation of e-commerce development, there has been a surge in investment in cold chains, and cold storage facilities have proliferated across the country.

The development of Energy Internet promotes the transformation of cold chain logistics to renewable and distributed green transport with new distributed energy

EEP Africa's Cold Chain Storage Market Assessment delves into cold chain infrastructure, shedding light on the dynamics of supply and demand in Eastern and Southern Africa. A well-designed and developed cold chain is ...

Integrating TES in automated cold storage can cut energy consumption by up to 30 percent, which is crucial

for the cost-sensitive Indian market. Automation will also support innovative OPEX-based business models ...

With the dual-carbon strategy and residents' consumption upgrading the cold chain industry faces opportunities as well as challenges, in which the phase change cold ...

In this study, an innovative high-performance phase-change cold energy storage sol has been successfully developed, which not only lays a solid theoretical foundation and ...

If fresh products are stored on the cold storage for a long time, the freshness of the products will be greatly reduced, hence the traffic congestion have a significant impact on it. ...

Industrial cold storage facilities could become more efficient and be transformed into cost-saving energy storage facilities that contribute to grid stability, the German Federal Environmental Foundation (DBU) has said.

A cold chain is a temperature-controlled supply chain comprising refrigerated production, storage and distribution facilities supported by equipment that can constantly maintain the required low-temperature range. ... artificial ...

2.1.1 Perishable products. A cold chain is an essential part of the food products supply chain and more especially when the products are perishable. Perishable foods like cooked, ready to eat, ...

As illustrated in Fig. 1, the traditional LNG supply chain includes gas production, liquefaction, shipping, storage, and regasification. Natural gas is exploited in the gas fields and ...

Improving various aspects of cold chain logistics--including refrigeration, cold storage, cold release, and management--can solve the problem of chain breakage. Due to ...

This article will focus on the top 10 industrial and commercial energy storage manufacturers in China including BYD, JD Energy, Great Power, SERMATEC, NR Electric, HOENERGY, Robestec, AlphaESS, TMR ...

A cold-chain has cold-storage warehouse facilities, cooling operation, and logistics services to maintain the quality of local and imported chilled and frozen food and its products ...

1 Introduction; 2 Energy Use in Capture Fisheries; 3 Energy Use in Aquaculture; 4 Energy Use in Post-Harvest Activities; 5 Energy Use in Distribution, Sales, and Consumption; 6 Case Studies. 6.1 Solar Cooling Technologies in the Fresh ...

Comparing the cold storage transportation with the mechanical refrigerated transportation, the transportation time is less than 87 h (1.5tons) and 98 h (10tons), that is the ...

The ICCEE (Improving Cold Chain Energy Efficiency) project will facilitate Small and Medium Enterprises (SMEs) in the cold chains of the food and beverage sector to ...

Cold chain logistics refers to the logistics processes of handling, storing, and transporting perishable goods under temperature-controlled conditions aimed to preserve the ...

Energy saving and consumption reduction of cold chain logistics has become a common concern. Based on the basic connotation of cold chain logistics, this paper puts ...

With the continuous improvement of people's income level and consumption level, the demand for fresh products is driven by the strong demand, and at the same time, low-carbon and green development puts forward new ...

Guides on further promoting the healthy development of cold chain transportation logistics enterprises: Further enhance the level of development of the cold chain transport ...

Stem pairs artificial intelligence with energy storage to help organizations automate energy cost savings and protect against changing rates. ... ClimaCell that is the perfect ...

After 500 phase change cycles, the latent heat of the nano-capsules exhibits negligible changes, demonstrating robust thermal reliability. Low-temperature nano ...

Cold chain logistics (CCL) of fresh agricultural products refers to the food supply logistics chain that uses refrigeration technology to continuously maintain a suitable ...

Introduction and Background: While post-harvest loss in Kenya, estimated at more than 40%, is predominantly seen as a food security and livelihoods issue, it is also a substantial greenhouse gas (GHG) emissions ...

Yuhu Cold Chain is the supply chain service enterprise under Yuhu Group that pioneers with proprietary state-of-the-art cold chain industrial parks across the nation and offers E2E cold ...

This chapter presents the development of cold chain logistics in China in four sections. Section 12.1 introduces the operating subjects, the linkages, processes and features of cold chain logistics. Section 12.2 reports ...

However, carbon emissions from logistics cold storage are significant. Reducing these emissions is critical for the sustainable development of the cold chain industry in the ...

(Data source: Distribution of national cold chain logistics enterprises in the China Cold Storage Alliance).

Cold storage refrigeration requires a significant amount of energy. ...

Energy consumption is one of the largest expenses in cold storage operations. With rising energy costs and a growing emphasis on sustainability, integrating solar power with ...

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An employee checks imported foodstuffs at a cold storage facility in Haikou, Hainan province. [Photo/Xinhua] China is looking to foster green, smart and high-quality development ...

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