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Energy Storage Power Station Cooperation Model

Overview

This paper proposes an option game model that is applicable to multi-agent cooperation investment in energy storage projects. A power grid enterprise and power generation enterprise are assumed to act.

How do you design a cooperative energy storage system?

Design a cooperation mode of new energy power stations and shared energy storage. Divid the shared energy storage into physical energy storage and virtual energy storage. Propose a two-stage robust optimization model with improved uncertainty interval. Construct an entropy weight modified Shapley value-based benefit allocation strategy.

What is the operation model of pumped storage power stations?

In the operation strategy of pumped storage power stations, the operation model of pumped storage power stations in different countries is also different. The operation model of Japan’s pumped storage power station mainly includes a leasing system and an internal accounting system.

How can energy storage power stations achieve a favorable return on investment?

Energy storage power stations can explore a multi-channel income approach and achieve a favorable return on investment by combining “peak-valley price difference”, “capacity price”, “peak-shaving price” and “rental fee”.

Can shared energy storage be shared between power stations?

At present, there have been some research results on shared energy storage (SES), but the main research scenario is sharing between prosumers in communities [7, 8], and few studies have discussed energy storage sharing between power stations.

What are the future cooperation modes of NEPs & energy storage?

It is worth pointing out that according to the latest policy requirements of China, the future cooperation modes of NEPSs and energy storage mainly

include three types: co-construction by crowdfunding (also known as cluster sharing), leasing and self-construction.

What factors affect the economic benefits of pumped storage power stations?

In addition, under the three development models, the three factors of capacity electricity price, capacity ratio covered by approved electricity price, and energy conversion efficiency also impact the economic benefits of pumped storage power stations. pumped storageprice mechanismdevelopment modelsoperating strategy 1. Introduction

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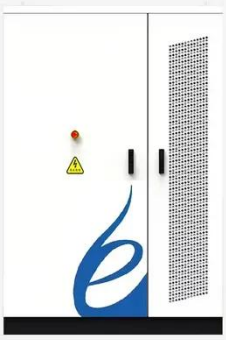

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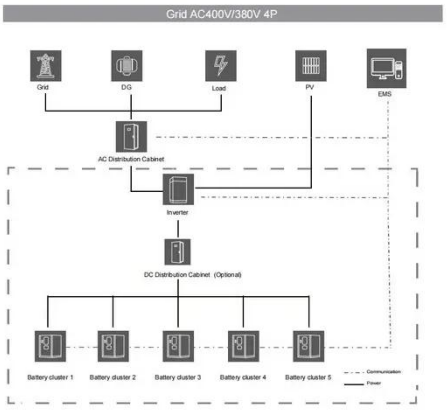

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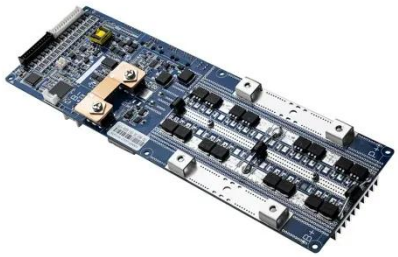

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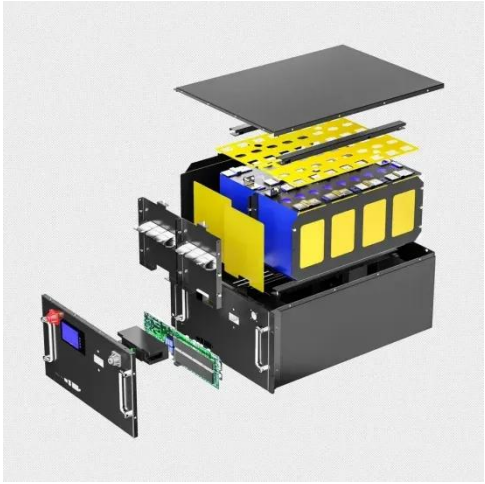

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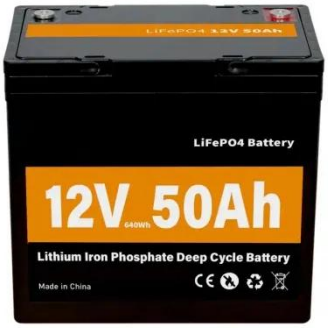

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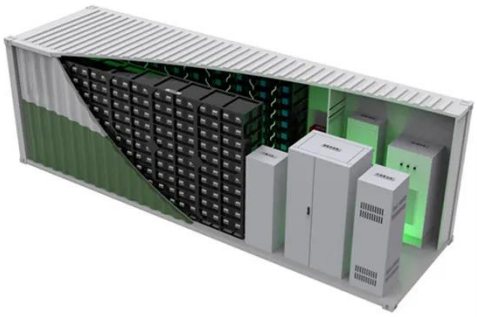

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