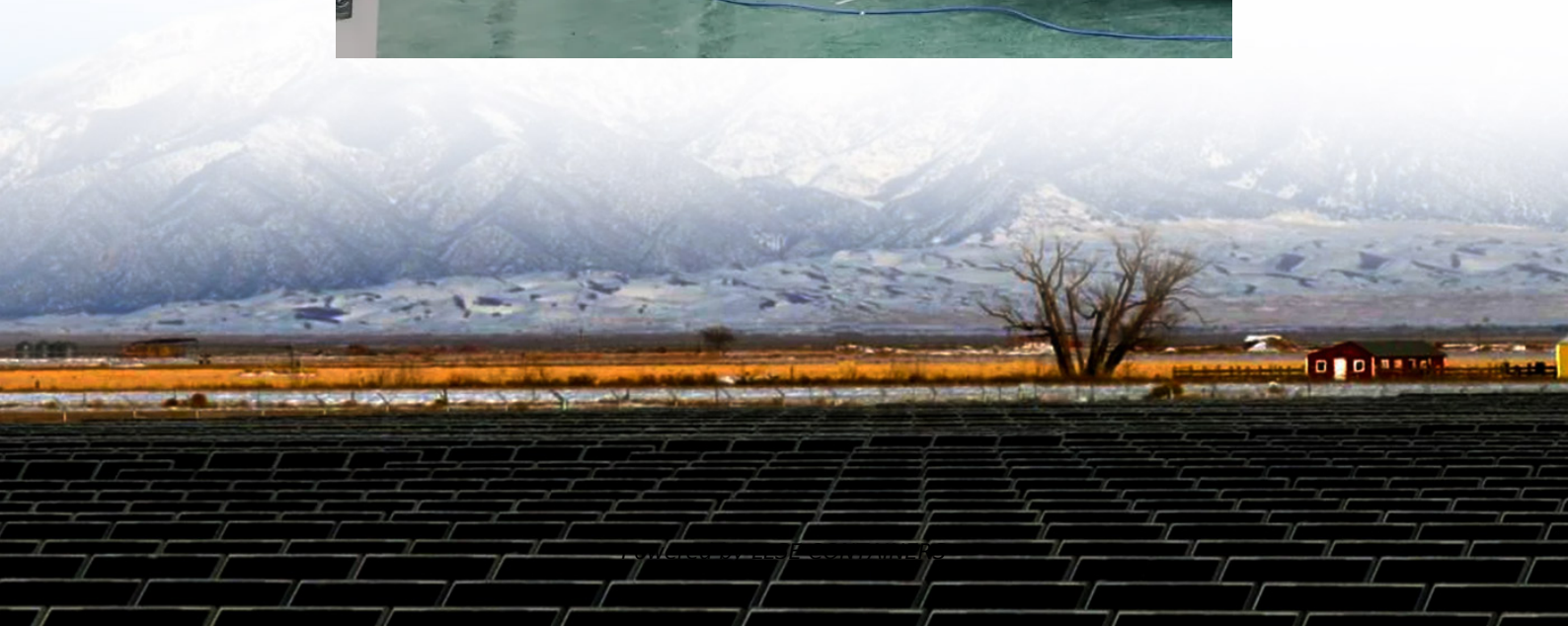


Supercapacitor and flywheel energy storage





Overview

Why is a supercapacitor better than a flywheel?

This explains its popularity in applications that require high energy capacities and are weight-sensitive, such as automotive and consumer electronics. Comparing to batteries, both flywheel and super-capacitor have high power density and lower cost per power capacity. The drawback of supercapacitors is that it has a narrower discharge.

Are flywheels and supercapacitors a good alternative to battery storage?

When it comes to energy storage solutions, it's essential to find one that is efficient, reliable, safe, and environmentally friendly. Luckily, two new technologies - flywheels and supercapacitors - offer a promising alternative to traditional battery storage. But which one is better?

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What is the difference between flywheel ESS and supercapacitor ESS?

Power and energy characteristics of flywheel ESS and supercapacitor ESS. A supercapacitor has less kW and Wh per unit weight. Supercapacitors may have a smaller MW per unit volume. However, a flywheel may have a smaller energy density per unit volume.

What are the applications of supercapacitor energy storage?

Supercapacitor applications range from large scale grid applications to electric vehicles and small-scale applications, and are commonly used in electric rail transit systems. Examples of its application in electric rail transit systems are presented in Table 2. Table 2. Application of supercapacitor energy storage (SESS) in rail transit systems.



Supercapacitor and flywheel energy storage

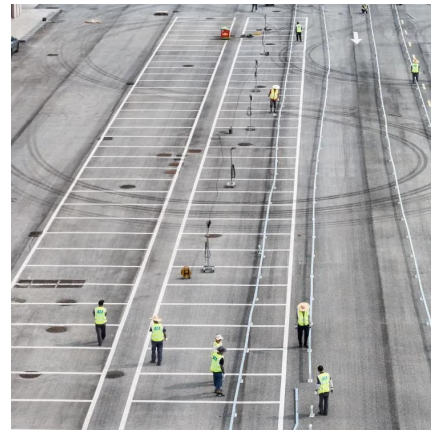


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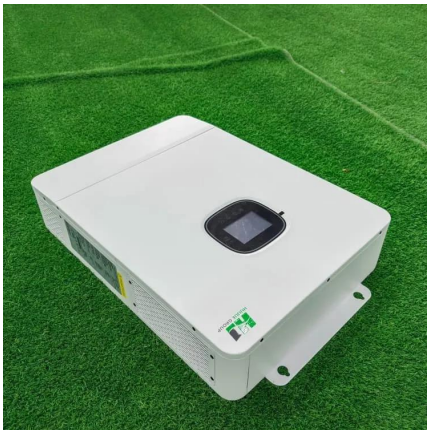
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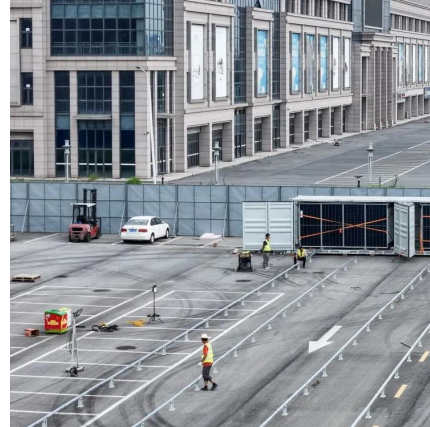
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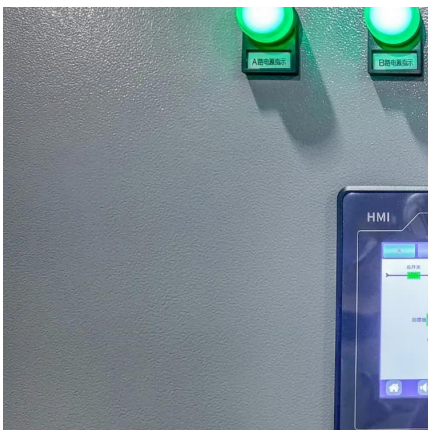
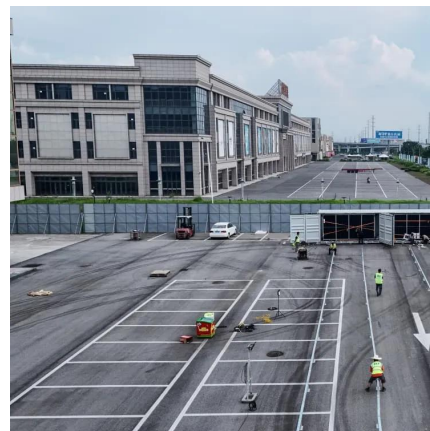


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