

# Capacitor energy storage system for light rail vehicles

Can ultracapacitors revolutionize the rail industry?

Ultracapacitors have the potential to revolutionize the rail industry. Our technology can significantly improve train efficiency - reduce costs and CO2 emissions, increase energy savings and dynamics of the train.

What is a capacitor electric vehicle?

A capacitor electric vehicle is a vehicle that uses supercapacitors (also called ultracapacitors) to store electricity. As of 2010 [needs update], the best ultracapacitors can only store about 5% of the energy that lithium-ion rechargeable batteries can, limiting them to a couple of miles per charge.

How can ultracapacitor technology improve train efficiency?

The implementation of ultracapacitor technology provides effective voltage stabilization for rail systems, greatly improves the performance of propulsion for light rail vehicles and significantly advances the locomotive engine starting technologies. At Skeleton Technologies, we offer four different solutions to improve train efficiency.

What is a sustainable ultracapacitor E-bus?

First sustainable ultracapacitor (UC) e-bus was represented by Chariot Motors Company in EU and Sofia, Bulgaria in 2014. The 18-month pilot project was successful and had a great public response. The UC bus was tested by the Reputable German laboratory Belicon GmbH and was defined as one of the lowest energy consumption effective vehicles.

Are supercapacitors better than lithium-ion batteries?

Conversely, supercapacitors and Lithium-ion batteries are viable options for on board applications, and the first are preferred for their higher efficiency and cost-effectiveness. Based on their established operational maturity and performance, supercapacitors and flywheels are recommended for wayside energy storage systems.

How do energy storage systems help reduce railway energy consumption?

Energy storage systems help reduce railway energy consumption by utilising regenerative energy generated from braking trains. With various energy storage technologies available, analysing their features is essential for finding the best applications.



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