

Flow Batteries and Liquid Sunlight





Overview

What is a solar flow battery?

A solar flow battery is a device that generates, stores, and redelivers renewable electricity from the sun in one device. Chemists at the University of Wisconsin-Madison and their collaborators have created a highly efficient and long-lasting version of this technology.

Are flow batteries already in use?

Flow batteries are already a reality. Fort Carson, a US military base, has contracted Lockheed Martin to build a 10 MWh redox flow battery to store its solar farm's energy. Unlike other new battery technologies that are still in development, flow batteries are already being implemented.

What is a liquid flow battery?

A liquid flow battery is a type of energy storage system that rely on fluids, called nanoelectrofuels (NEF), to generate electricity. They have been researched for many years and typically involve two chemical liquids that flow over the opposite sides of an ion-exchange membrane to create a flow of electric current. Unlike Li-Ion batteries, they do not rely on solid electrodes.

Are flow batteries better than traditional lithium-ion batteries?

Flow batteries, which store energy in liquid electrolytes housed in separate tanks, offer several advantages over traditional lithium-ion batteries.



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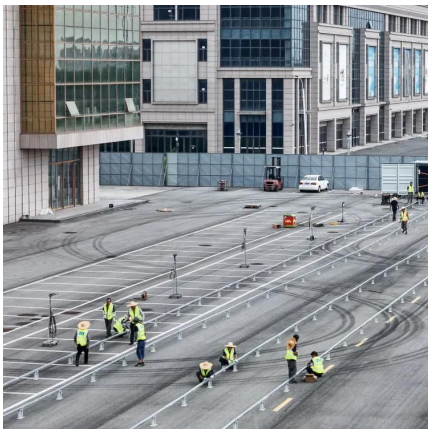
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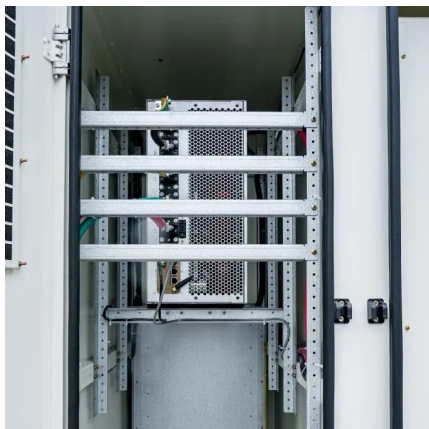
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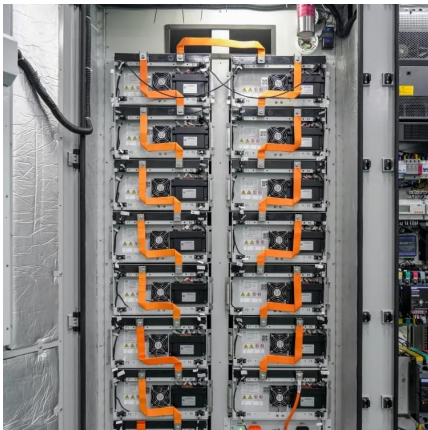
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