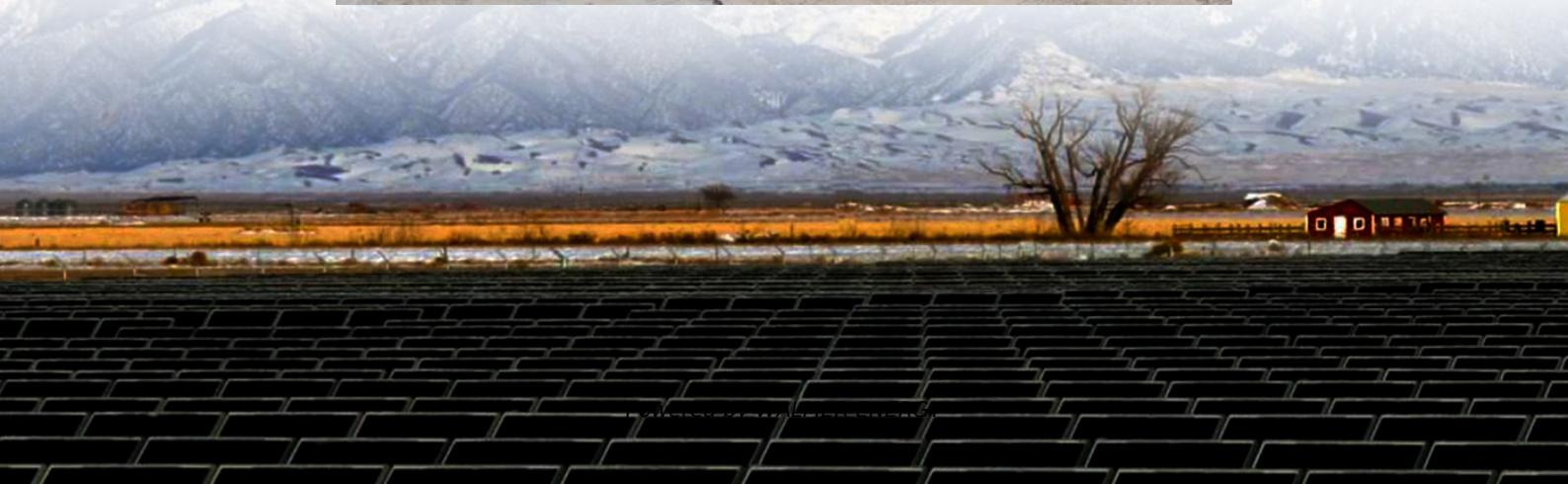




WALMER ENERGY

Berlin aluminum alloy energy-saving energy storage equipment





Overview

Can aluminum be used as energy storage?

Extremely important is also the exploitation of aluminum as energy storage and carrier medium directly in primary batteries, which would result in even higher energy efficiencies. In addition, the stored metal could be integrated in district heating and cooling, using, e.g., water-ammonia heat pumps.

Can aluminum be used as energy storage and carrier medium?

To this regard, this study focuses on the use of aluminum as energy storage and carrier medium, offering high volumetric energy density (23.5 kWh L^{-1}), ease to transport and stock (e.g., as ingots), and is neither toxic nor dangerous when stored. In addition, mature production and recycling technologies exist for aluminum.

Are metals a viable alternative to hydrogen-based energy carriers?

As an alternative to widely discussed hydrogen-based energy carriers, some metals have been proposed as promising candidates, since they store energy in a compact and stable form. 5-8 These metals, such as iron, aluminum, magnesium, or zinc, are safe and can be easily handled and shipped to end-users.



Berlin aluminum alloy energy-saving energy storage equipment

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