

Flow battery discharge speed





Overview

How long does a flow battery last?

Flow batteries can release energy continuously at a high rate of discharge for up to 10 h. Three different electrolytes form the basis of existing designs of flow batteries currently in demonstration or in large-scale project development.

What determines the energy storage capacity of a flow battery?

Volume of electrolyte in external tanks determines energy storage capacity
Flow batteries can be tailored for an particular application
Very fast response times- < 1 msec
Time to switch between full-power charge and full-power discharge
Typically limited by controls and power electronics
Potentially very long discharge times.

What are the characteristics and benefits of flow batteries?

The major characteristic and benefit flow batteries is the decoupling by design of power and energy. Power is determined by the size and number of cells, energy by the amount of electrolyte. Their low energy density makes flow batteries unsuited for mobile or residential applications, but attractive on industrial and utility scale.

How do flow batteries work?

Charging and discharging are realized by means of a reversible electrochemical reaction between two liquid electrolyte reservoirs. Flow batteries are often called redox flow batteries, based on the redox (reduction-oxidation) reaction between the two electrolytes in the system. Fig. 9. Flow battery system .



Flow battery discharge speed



Discharge profile of a zinc-air flow battery at various electrolyte

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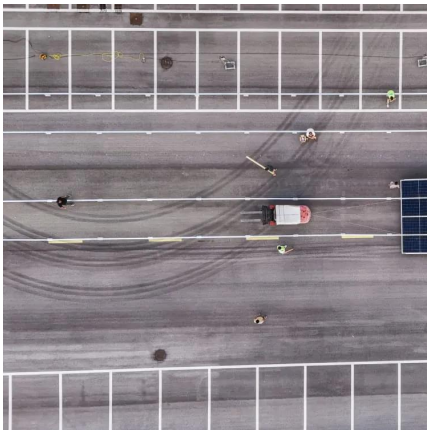
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Technology: Flow Battery

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Discharge profile of a zinc-air flow battery at various ...

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SECTION 5: FLOW BATTERIES

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Flow Battery

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