

Product features of flow batteries





Overview

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.

Are flow batteries a good choice for large-scale energy storage applications?

The primary innovation in flow batteries is their ability to store large amounts of energy for long periods, making them an ideal candidate for large-scale energy storage applications, especially in the context of renewable energy.

What are flow batteries used for?

Renewable Energy Source Integration: Flow batteries help the grid during periods of low generation, making it easier to integrate intermittent renewable energy sources like wind and solar. For example, flow batteries are used at the Sempra Energy and SDG&E plant to store excess solar energy, which is then released during times of high demand.

How does a flow battery differ from a conventional battery?

In contrast with conventional batteries, flow batteries store energy in the electrolyte solutions. Therefore, the power and energy ratings are independent, the storage capacity being determined by the quantity of electrolyte used and the power rating determined by the active area of the cell stack.



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Flow Battery

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