ContainerPower Energy Solutions

The current status of flow batteries

Overview

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This technology strategy assessment on flow batteries, released as part of the Long-Duration Storage Shot, contains the findings from the Storage Innovations (SI) 2030 strategic initiative. The objective of SI 2030 is to develop specific and quantifiable research, development, and deployment (RD&D).

The global flow battery energy storage market size was estimated at approximately USD 38.34 million in 2024 and is projected to reach USD 338.87 million by 2033, growing at a CAGR of 27.05% from 2025 to 2033. The increasing need for large-scale, long-duration storage solutions to stabilize.

Lithium-ion batteries have already achieved the kind of speed, scale, and cost-reduction trajectory that makes market entry increasingly difficult for alternatives. Gigafactories are springing up across the globe, and the cost curve continues to bend downward. Against this backdrop, flow batteries.

The recent report by the U.S. Department of Energy highlights the potential of flow battery technology in making low-cost, long-duration energy storage a reality. Flow batteries are positioned as a key competitor in the evolving energy storage landscape, offering unique advantages such as.

The global flow battery market, is projected to rise from USD 0.59 billion in 2025 to USD 4.59 billion by 2035, representing a CAGR of 22.67% during the forecast period. The new research study consists of global flow battery analysis, mega trends, patent analysis, porter five forces, SWOT analysis.

“Flow batteries are gaining momentum as the energy transition fuels demand for innovative battery technologies and government support for long-term

storage.” January 31, 2025 Boston: According to the latest study from BCC Research, “ Flow Batteries: Global Markets ” is expected to grow from $416.3.

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