

## A-Core Container

# New Energy Redox Flow Battery



## 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).

Among them, iron-based aqueous redox flow batteries (ARFBs) are a compelling choice for future energy storage systems due to their excellent safety, cost-effectiveness and scalability. However, the advancement of various types of iron-based ARFBs is hindered by several critical challenges.

Sumitomo Electric participated in Flow Batteries North America 2025 in Chicago, where we shared the latest updates on our Vanadium Redox Flow Battery (VRFB) projects in California. Download the presentation materials to learn how VRFB technology is enabling long-duration, safe, and reliable energy.

Redox flow batteries (RFBs) are an emerging class of large-scale energy storage devices, yet the commercial benchmark—vanadium redox flow batteries (VRFBs)—is highly constrained by a modest open-circuit potential (1.26 V) while posing an expensive and volatile material procurement costs. This.

Associate Professor Fikile Brushett (left) and Kara Rodby PhD '22 have demonstrated a modeling framework that can help guide the development of flow batteries for large-scale, long-duration electricity storage on a future grid dominated by intermittent solar and wind power generators. Sample.

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