ŁOTWA SYSTEM

Environmental Assessment of Flow Batteries for Georgetown Telecommunications Base Station

Overview

What is a Technology Strategy assessment on flow batteries?

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.

What is a redox flow battery?

Redox flow batteries (RFBs) or flow batteries (FBs)—the two names are interchangeable in most cases—are an innovative technology that offers a bidirectional energy storage system by using redox active energy carriers dissolved in liquid electrolytes.

Why do different flow batteries have different environmental performance?

The differences in environmental performance among different flow batteries can be attributed to two factors: the use of different materials, and variations in specific energy.

Do redox flow batteries have tempo-based electrolytes?

This study conducts a comprehensive environmental assessment of two redox flow batteries with TEMPO-based electrolytes using life cycle assessment (LCA). We developed a battery design model based on industrial equations and a performance model that accounts for electrolyte degradation during the use phase.

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