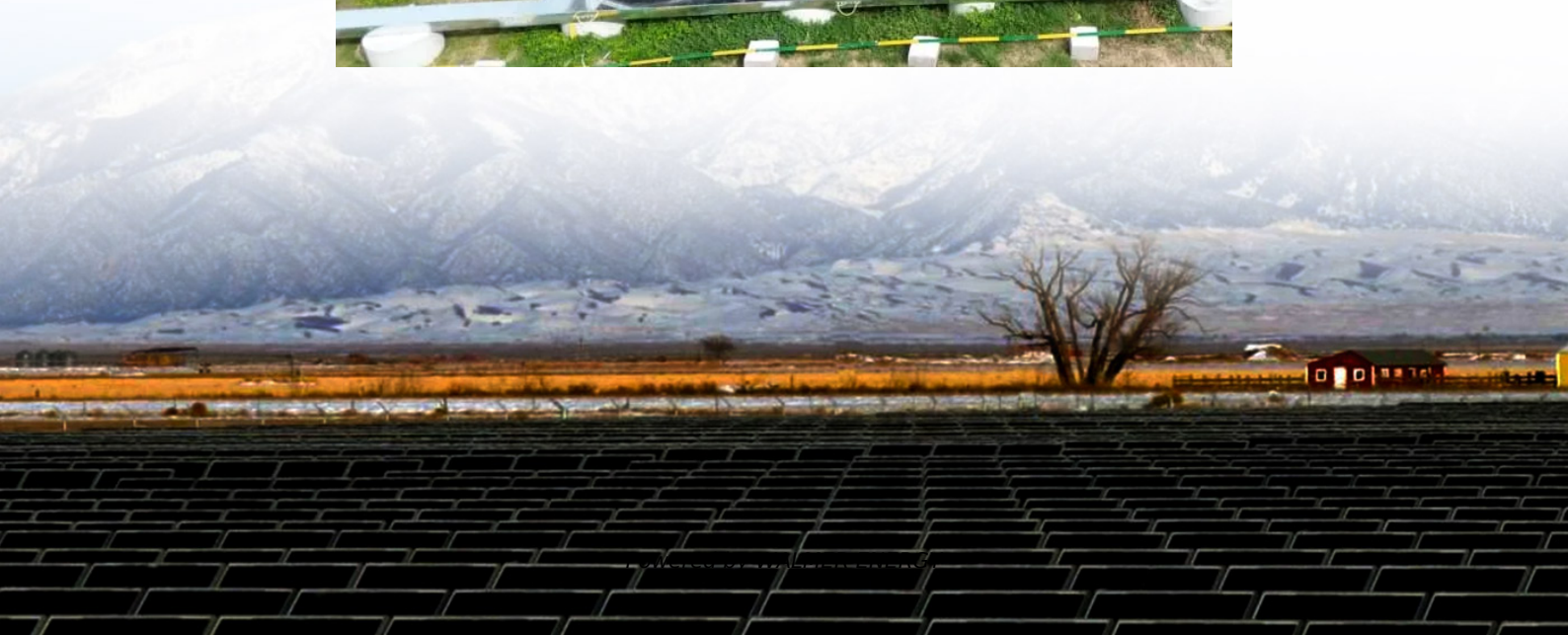


Recycling of all-vanadium liquid flow batteries





Overview

Are vanadium flow batteries recyclable?

Composed mainly of recyclable alloys, plastics and generic, off-the-shelf electronics, the vast majority of vanadium flow battery components can be readily recycled. Invinity's vanadium flow batteries also don't use so-called 'conflict' elements as cathode materials such as cobalt, a major drawback to certain Li-ion battery chemistries.

What is a vanadium redox flow battery?

Vanadium Redox Flow Batteries (VRFBs) have emerged as a promising long-duration energy storage solution, offering exceptional recyclability and serving as an environmentally friendly battery alternative in the clean energy transition. VRFBs stand out in the energy storage sector due to their unique design and use of vanadium electrolyte.

What is a vanadium flow battery?

Invinity's vanadium flow batteries also don't use so-called 'conflict' elements as cathode materials such as cobalt, a major drawback to certain Li-ion battery chemistries. Fundamental to the key benefits of a VFB is the vanadium electrolyte, which typically makes up around 1/3 of the total system (although this varies from project to project).

Can vanadium be recovered from an invinity flow battery?

Having taken electrolyte that had been cycled many times in an Invinity flow battery, the US Vanadium team were successful in recovering approximately 97% of vanadium from that solution as part of a process which has been documented as part of the study.



Recycling of all-vanadium liquid flow batteries

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