

Starting point

Vanadium Flow Batteries (VFBs) offer real technical advantages, but over the years has **faced significant marketing and branding challenges** when compared to more dominant energy storage technologies — particularly lithium-ion batteries.

Market Visibility & Awareness

- Low consumer awareness, only B2B marketing
- Still perceived as a "niche" or emerging technology.
- Often misunderstood or confused with lithium or hydrogen.
- Seemed to have a limited number of manufacturers.

Value Proposition Messaging

- Clear long-duration storage benefits.
- Compelling total cost of ownership over 20–25 years.
- Safety, non-degradability, and recyclability are key strengths.

Challenge: These benefits are complex and long-term. They require education and data-backed comparisons — harder to market quickly.





Situation

VFB Weakness: Not yet a household name. Most endusers (including and especially utility buyers) are more familiar with lithiumion.

VFB Opportunity: With the rise of long-duration storage mandates (e.g., >4–8 hour systems), the VFB value story is becoming more and more relevant.

VFB Challenge: It needed and still needs more storytelling and end-user exposure — VFB projects are often hidden behind industrial fences.

VFB Branding Gap: VFBs needed a stronger visual identity and simplified messaging to rival the sleek, high-tech perception of Liion.

To compete with lithium-ion's dominance, the vanadium industry must shift from *technical* excellence to audience-focused communication. That means simplification, storytelling, visual identity, and investment in brand-building.

Vanitec is helping bridging this by centralizing messaging, producing content and media, and advocacy.





Our approach

Marketing the VFB solution under the umbrella of Vanitec and in alignment with its goals involved a strategic approach that highlights the unique value proposition of vanadium and positions the technology as vital to the future of energy storage.

1. Defined Our Value Proposition with focus on sustainability

- Longer lifespan (20+ years without degradation)
- Scalability (energy and power independently scalable)
- **Safety** (non-flammable electrolytes)
- 100% depth of discharge without performance loss
- Sustainability (vanadium can be reused indefinitely)

2. Leveraged Vanitec's Authority and Network

- Collaborate/publish white papers and case studies.
- Participate technical and promotional forums.
- Vanitec supports global trade shows, policy discussions, and renewable energy conferences like the IFBF.

3. Engage Policymakers and Regulators

- Vanitec works to promote vanadium in standards and regulations.
- Submitting **policy briefs** on vanadium's strategic value.
- Promoting VFBs as key to national energy security and net-zero targets.

4. Partnerships and Pilots

- Partnerships with universities.
- Demonstrate viability by highlighting successful deployments from various other markets (e.g., China, Australia).



Our tactics

Content Marketing

- Published **technical comparisons** of VFB vs Li-ion.
- Created infographics about vanadium's circular economy.
- Shared case studies and project outcomes.
- Highlight total cost of ownership (TCO) advantages over 20+ years.

Thought Leadership

- Host webinars and panel discussions featuring Vanitec experts.
- Submit articles to energy journals or sites like Greentech Media or PV Tech.
- Interview videos with leading topic experts.

Digital Marketing

- Hashtags and keywords like vanadium flow battery, #VFB, long-duration storage, etc.
- Create and post LinkedIn posts targeting energy professionals.
- Develop explainer videos showcasing how VFBs work.





Our tactics



Terminology Shift:

Vanitec transitioned from using the acronym "VRFB" (Vanadium Redox Flow Battery) to the more accessible term "Vanadium Flow Battery." This change was intended to simplify communication and improve recognition among broader audiences.

Design and Branding:

We created an icon for the battery to be used in all promotional materials by Vanitec and its members to reflect a more contemporary and cohesive visual identity.

Communication Strategy:

The branding emphasized the unique advantages of the VFB technology, such as long-duration storage capabilities, safety, and sustainability. The goal was to position VFBs as a viable and attractive option in the renewable energy sector.

In 2024, Vanitec unveiled a visual identity for Vanadium Flow Batteries (VFBs) during its 14th Energy Storage Committee (ESC) webinar. This initiative aimed to launch the branding of VFBs and enhance their appeal in the competitive energy storage market.





The VFB icon – we encourage all industry players to use it







Some examples of the tactics

1. Yunnan Province's Large-Scale VFB Projects

In February 2025, Vanitec highlighted two significant energy storage projects in Yongren County, Yunnan Province, China. With a combined investment of approximately USD \$510 million, these initiatives represent the largest VFB deployments in China, aiming to enhance renewable energy integration and grid stability.

3. Publication of a Comprehensive

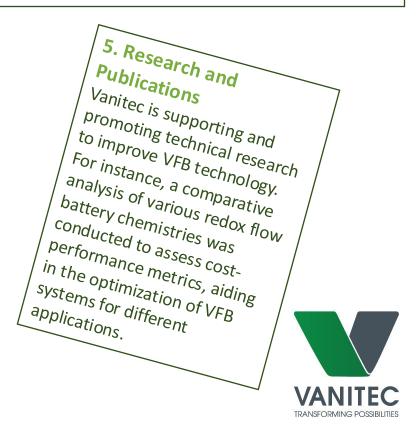
In 2022, Vanitec commissioned a white paper White Paper on VFBs titled "Vanadium Redox Flow Batteries: Identifying Market Opportunities and Enablers." This document provides an in-depth analysis of the VFB market, including case studies, technological advantages, and recommendations for stakeholders to Overcome commercial challenges and promote adoption.

4. Highlighting Major VFB **Projects in China**

Vanitec reported on the signing of three major VFB projects in China, totalling nearly 2 GWh of energy storage capacity. These projects involve collaborations between various energy companies and local governments, focusing on manufacturing high-end VFB equipment and constructing largescale energy storage stations.

2. Development of Global Standards for VFB **Electrolyte**

Vanitec is collaborating with stakeholders to establish unified global standards for vanadium electrolyte used in VFBs. This effort aims to ensure consistency in quality, improve performance, and facilitate the scalability of VFB technology worldwide.





Social Media Content



IN CASE YOU MISSED IT

In December, Largo Inc. and Stryten Energy announced their plans to establish a vanadium electrolyte manufacturing JV in the US.

Read more: https://lnkd.in/dGRDUe7f

Keep an eye out on Vanitec's website (vanitec.org) and social media for the latest news on the vanadium market.

#GreenVanadium #VanadiumFlowBattery #BatteryEnergyStorage #US #Decarbonization #RenewableEnergy





IN CASE YOU MISSED IT!

Japan's Sumitomo Electric launched a Vanadium Flow Battery with 30-year lifespan at Energy Storage North America in February. Read more about the battery here: https://lnkd.in/g9PBwiD2

#GreenVanadium #BatteryEnergyStorage #Decarbonization #RenewableEnergy





Energy storage is revolutionising the way we power our world! According to Bloomberg, the global energy storage market is set to grow six-fold to over 2 TWh by 2030. And 90% of new deployments between 2015 and 2024 were batteries!

Vanadium plays a critical role in this transition through vanadium flow batteries. Offering longer cycles, greater scalability, and enhanced safety, these batteries are a reliable, long-term solution to meet our growing energy demands.

#vanadium #vanitec #vanadiumflowbattery #energystorage #renewableenergy







Social Media Design

















Social Media Newsflashes



















Interview video







Press Release

Global standards for vanadium flow batteries underway to support long-duration energy storage growth



Reputation: More niche and regional, focused on mining and industrial development **Audience:** Mining professionals, suppliers, regional investors, tech providers.

Monthly Traffic Estimate: ~5,000 to 20,000 visitors/month

Global electrolyte standard 'crucial for scalability and viability of vanadium flow batteries

By Andy Colthorpe

March 11, 2025

riche Europe, Asia & Oceania, Central & East Asia, Southeast Asia & Oceania

Materials & Production, Market Analysis, Technology



Reputation: High-authority, industry-specific news outlet focused on energy storage. **Audience:** Industry professionals, researchers, investors, and policymakers. **Monthly Traffic Estimate:** ~150,000 to 300,000 visitors/month

Liquid electrolyte enables decoupling of power and energy

However, industry participants and advocates argue that because of factors including the ability of VRFBs to undergo heavy cycling over projected 25-year lifetimes or more without degradation or capacity fade, their total cost of ownership can be competitive.

Unlike lithium, where thermal runaway in individual cells can cause fires or even explosions, flow batteries instead rely on tanks of liquid electrolyte which the industry says carries no fire risk.

Furthermore, the energy storage capacity of flow batteries can be increased by scaling up the size of electrolyte tanks, whereas Li-ion battery energy storage systems (BESS) require additional cell stacks, along with associated power electronics and other balance of plant (BOP) equipment such as thermal management systems.

The decoupling of energy from power means the cost of adding more capacity to a flow battery is incremental instead of requiring a doubling of equipment costs.

BNEF's May 2024 survey highlighted that flow batteries become more cost-competitive at longer durations, particularly up to around a 12-hour discharge duration at full-rated power

A debate is currently ongoing in the industry as to whether lithium-ion can perform the LDES applications that flow batteries and other technologies, such as liquid air energy storage (LAES), are positioning themselves for.

Two experts from Li-ion BESS provider Envision made this case in a Guest Blog for Energy-Storage.news published last week. Wins in state government tenders in California, US, and New South Wales, Australia, for long-duration storage contracts have so far been dominated by lithium-ion project hids

As the demand for long-duration energy storage (LDES) solutions grows, the development of global

standards and specifications for vanadium flow batteries is gaining momentum. The International Electrotechnical Commission (IEC), with input from the Fraunhofer Society and key industry stakeholders, is working to establish a unified standard for vanadium electrolyte. This initiative is crucial for ensuring the commercial viability and scalability of vanadium flow battery technology, which is emerging as a leading solution for energy storage needs beyond four hours.

The need for standardisation

● 0 6 164 ■ 3 minutes read

Currently, the vanadium electrolyte industry lacks a consistent global standard, leading to disparities in quality, inefficiencies in production, and potential performance issues. In response, a working group comprising battery producers and vanadium producers is actively contributing to the IEC's effort to define electrolyte specifications that align with battery performance requirements. This will enhance reliability, safety, and cost-effectiveness, paving the way for broader adoption of vanadium flow batteries in energy storage markets.

Chinese standards vs. global efforts

China has introduced its own vanadium electrolyte standards, but they allow for a wider range of electrolyte purity levels. This approach may compromise long-term battery performance. Impurities in vanadium electrolyte can impact energy capacity, block electrolyte flow, and catalyse unwanted chemical reactions, ultimately reducing battery lifespan and efficiency. The IEC standard aims to mitigate these risks by implementing more rigorous technical requirements to ensure durability and optimal battery operation.

The articles were also shared on LinkedIn

More social media



Vanitec - Vanadium

3,484 followers

As the demand for long-duration energy storage grows, the development of global standards and specifications for Vanadium Flow Batteries is becoming increasingly important. ...more



Global Standards for Vanadium Flow Batteries Underway to Support Long-Duration Energy Storage Growth

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