

# **Cape Town Vanadium Redox Flow Battery Project**





## Overview

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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 redox flow battery (VRB)?

The vanadium redox battery (VRB), also known as the vanadium flow battery (VFB) or vanadium redox flow battery (VRFB), is a type of rechargeable flow battery. It employs vanadium ions as charge carriers. Redox flow battery system rendering. Image credit: Invinity Energy Systems.

How much does vanadium (V<sub>2</sub>O<sub>5</sub>) cost in South Africa?

h different performance attributes, in both BTM and FTM applications.<sup>7</sup> The price of vanadium (V<sub>2</sub>O<sub>5</sub>) peaked at US\$28.8 a pound (/lb) in 2018 and went to US\$12/lb in M h 2022 to US\$10/lb in February 2023, and US\$7.7/lb in August 2023. <sup>8</sup> This is the price at which a commodity would be sold in South Africa if it were imported and includes.

Should South Africa Invest in VRFB batteries?

the market for VRFBs is supported by locally manufactured batteries. It is reasonable to assume that a similar strategy could demonstrate possibilities for South Africa, offering the potential to stimulate economic growth, create employment



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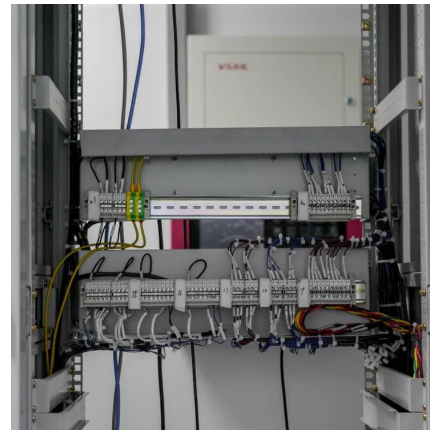


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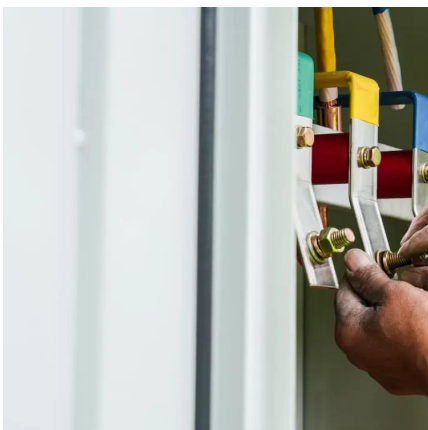
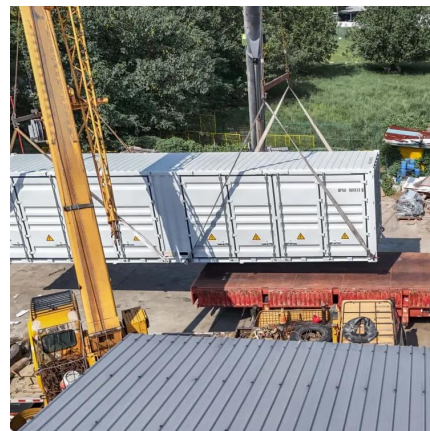


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