

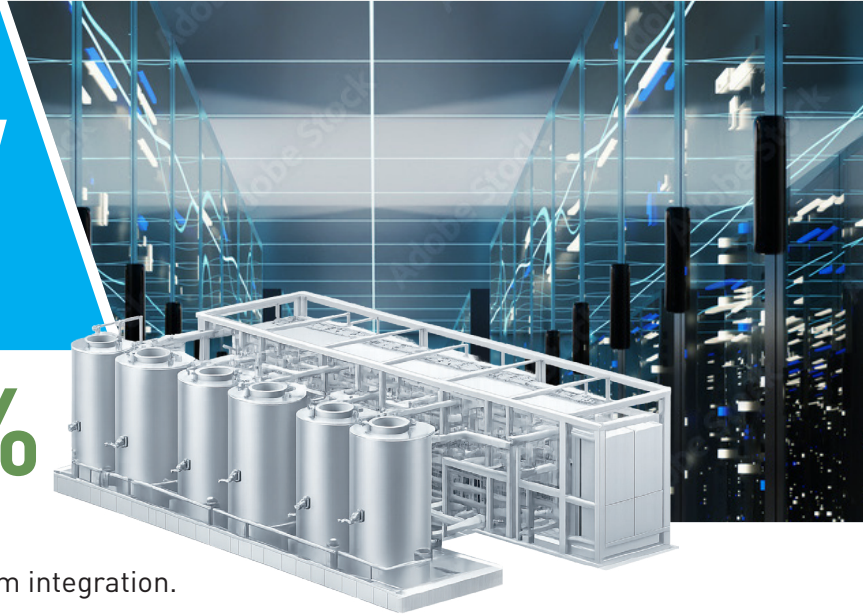
Vanadium Redox Flow Battery System with Utility-Grade PCS

Super Stack Architecture **100 kW**

Stack-level efficiency exceeding **83%**

Optimized for MW-scale deployment-
fewer stacks, higher reliability, and simplified system integration.

Why 100 kW matters: reduced system complexity at MW scale.



High Safety

- Water-based electrolyte
- Non-flammable design

Long Lifespan

- Up to 25 years of service life
- Over 20,000 deep cycles
- Designed for daily cycling

Long-Duration Energy Storage

- Stable, long-duration energy output

Flexible System Design

- Independent power and energy scaling

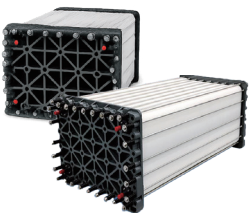
Electrolyte Recycling & Reuse

- Low degradation, high residual value

Abundant Vanadium Resources

- Stable supply with ample global reserves

Vanadium Redox Flow Battery 100 kW Super Stack Architecture



- Higher power per stack reduces the total number of stacks required in MW-scale systems
- Fewer stacks simplify piping, electrical interfaces, and control architecture
- Lower component count improves overall system reliability and reduces O&M effort



EEI
Utility-Grade PCS (100 kW-1 MW)

Smart Energy & Monitoring Platform

Plant & System Monitoring

Real-time monitoring of plant equipment, production status, energy consumption, and carbon emissions—providing a unified view of overall operations.

Operational Efficiency

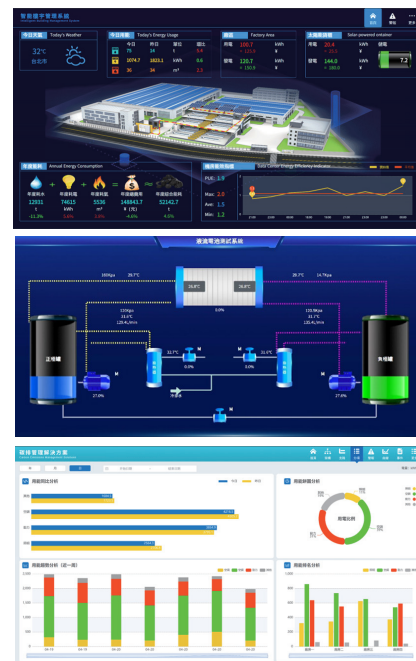
Digital monitoring of production and energy systems enables accurate, real-time data collection for supporting secure, reliable, and efficient operations.

Energy Storage & Carbon Management

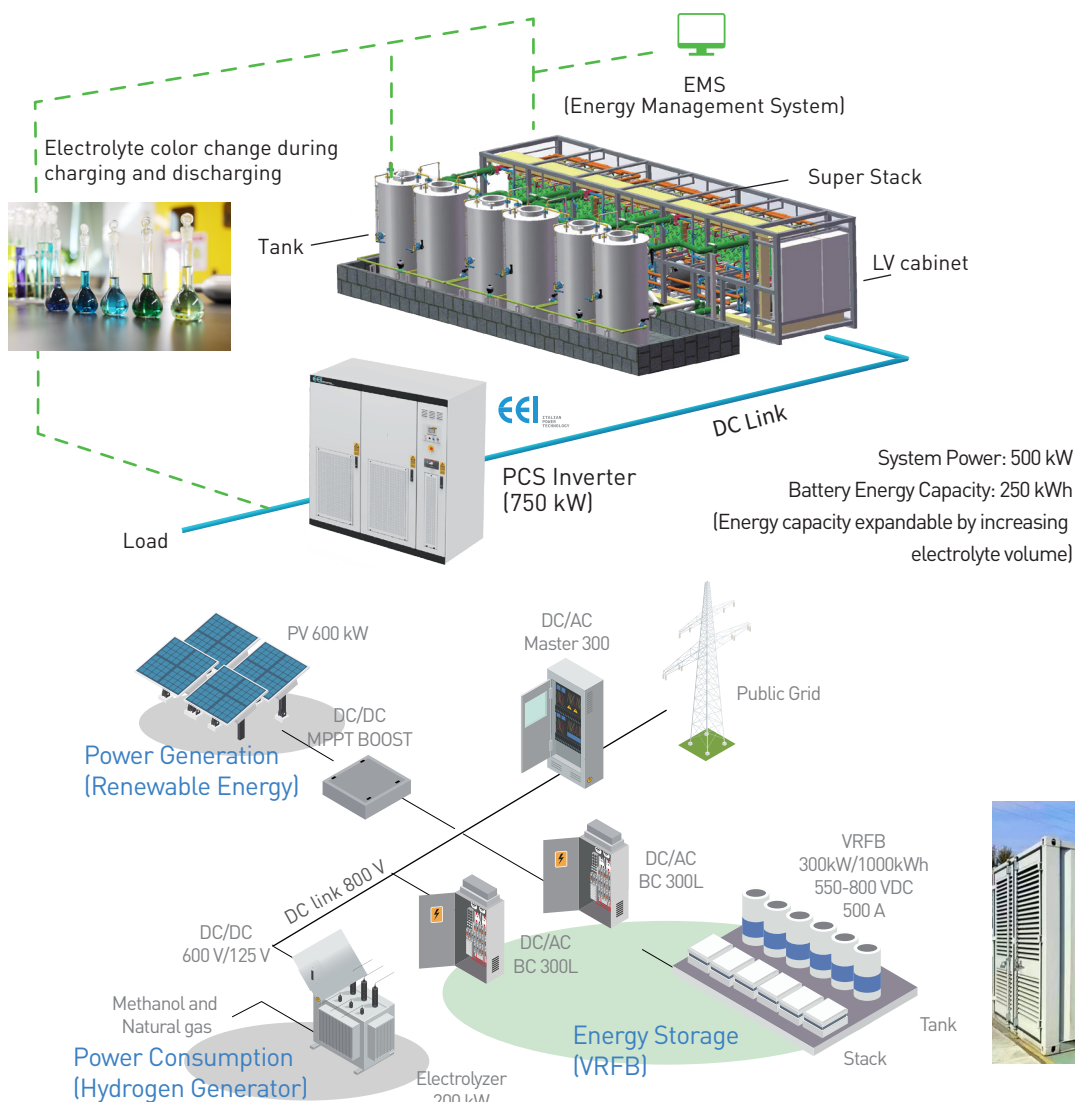
Integrated monitoring of energy usage, energy storage performance, and carbon emissions, enabling better energy optimization and faster, data-driven decision-making.

ERP & System Integration

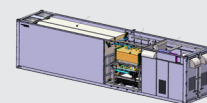
Seamless integration with ERP systems allows production tasks to be assigned to specific equipment, with operational and energy data made available for export and analysis.



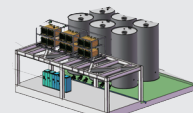
Turnkey VRFB Energy Storage System



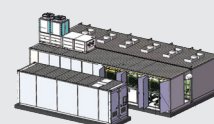
VRFB System Configurations



Container-Based System



Modular Skid-Based System



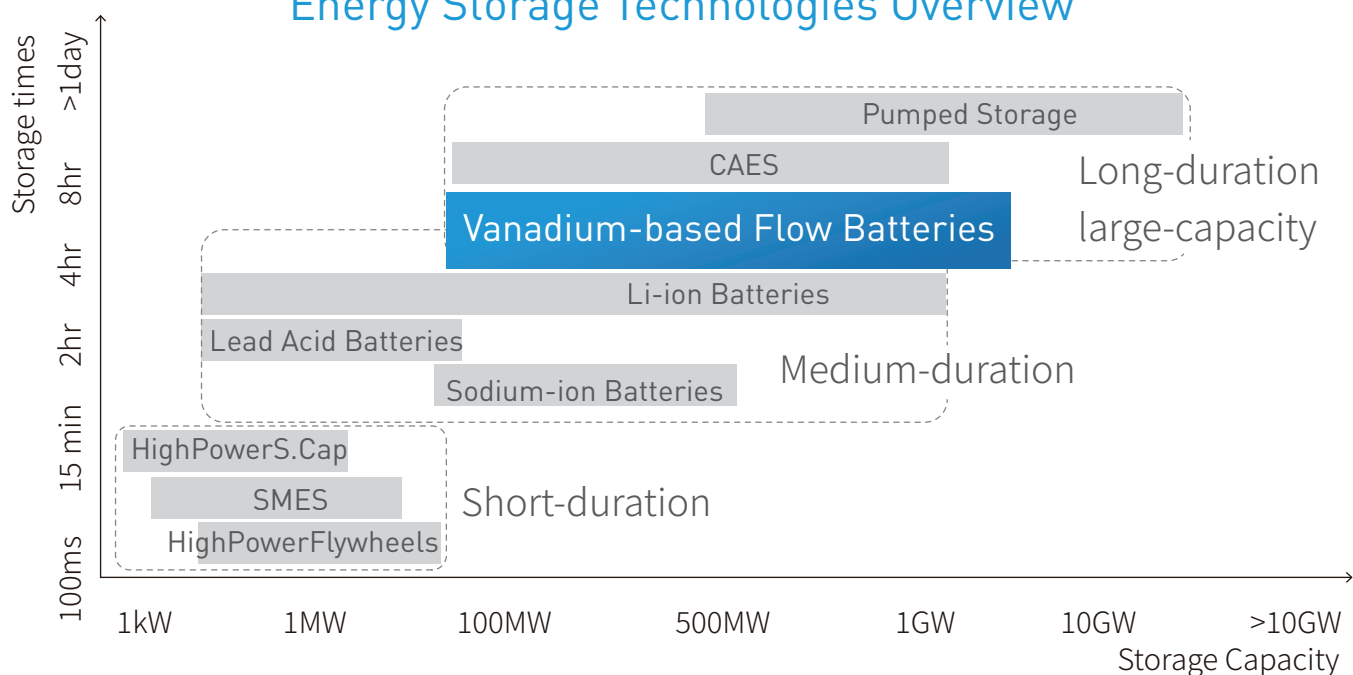
Large-Scale Tank-Based System

Flexible System Design

Optimized for MW-scale deployment—fewer stacks, higher reliability, and simplified system integration.



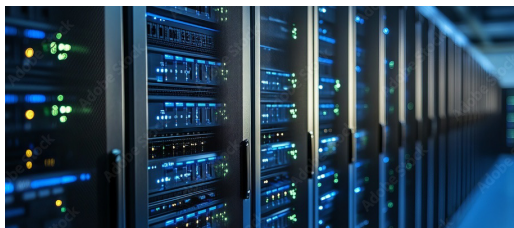
Energy Storage Technologies Overview

**Industrial Parks and Science Parks**

Peak shaving, tariff optimization, and backup power for MW-scale industrial applications.

**Power Generation Developers**

Extended dispatchable duration of generation assets and enhanced system flexibility.

**Commercial Facilities / Server Rooms / AI Data Centers / Cloud Service Providers**

High-reliability, non-flammable, long-life energy storage for UPS applications and peak-shaving applications.

**Microgrids / Schools / Hospitals / Government Shelters**

Long-duration backup power for off-grid or weak-grid environments, including microgrid applications.

**Hybrid Energy Systems with DC Bus Architecture**

High-efficiency, zero-carbon integration of power generation, energy storage, and consumption enabled by PCS DC bus architecture.

