VANADIUM FLOW BATTERY

RICHMOND VANADIUM TECHNOLOGY

POWERING THE FUTURE

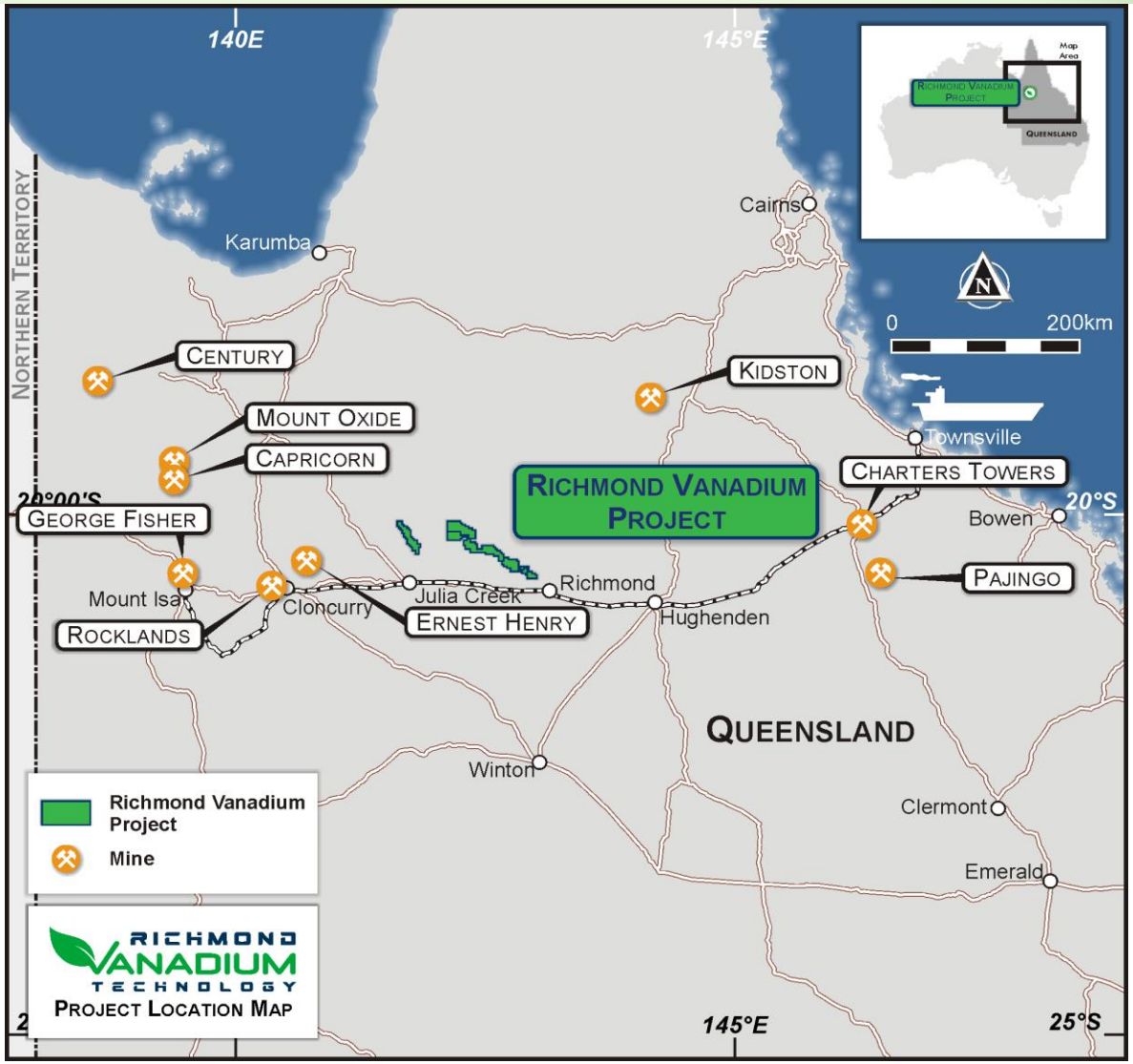
ASX : RVT

CORPORATE PRESENTATION

October 2025

RICHMOND VANADIUM PROJECT OVERVIEW[1]

- Mining friendly jurisdiction within the North-West Minerals Province of Queensland (Australia)
- Close to major infrastructure and services
- PFS completed in 2019, updated in 2021
- Declared a Co-ordinated Project in 2022
- BFS underway for completion in 2026
- Statutory approvals well advanced
- EIS Draft submitted to QLD Government's OCG
- Targeting development decision in 2026



[1] Refer Prospectus dated 14 October 2022 and Supplementary Prospectus dated 21 October 2022 released to ASX on 9 December 2022, Appendix 2 "Summary of key PFS Outcomes" attached to this presentation, and ASX announcements entitled "Epic appointed to deliver EIS" dated 9 Mar 2023, "DRA Global appointed as engineering services consultant for Richmond Vanadium Bankable Feasibility Study", dated 21 June 2023, "BFS Update, dated 16 January 2024 and "Draft Environmental Impact Statement Submitted", dated 6 August 2024.

MULTIPLE PROCESSING PATHWAYS

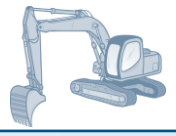
Concentrating

Recovery

RVT PFS Flow Sheet

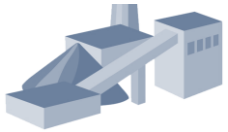
No Drill & Blast

Mining



No Milling

Concentrating



1.83% vanadium concentrate[1]

No Roasting

Leaching

Purifying

+98.6% vanadium flake[1]

Vanadium Pentoxide V_2O_5

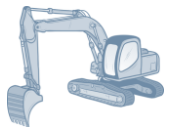
Concentrating

Electrolyte

Direct Concentrate to Electrolyte Flow Sheet

No Drill & Blast

Mining

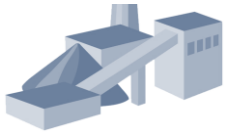


Dry Screen / Wet screen

No Milling

Flotation

Concentrating



vanadium concentrate to meet electrolyte grade[1]

Leaching/ Purifying

Confidential Process

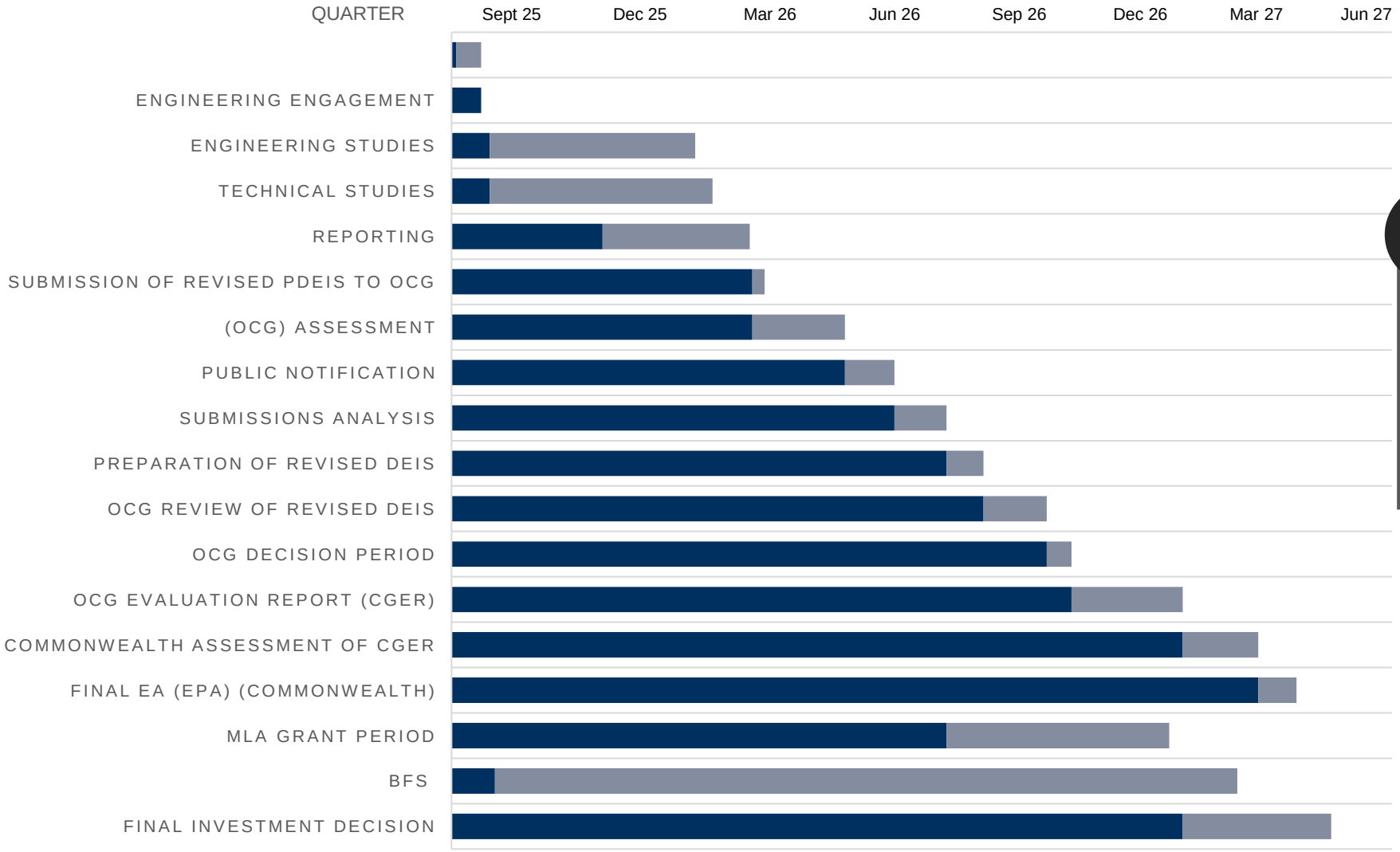
Vanadium Electrolyte

Improved stability and additives, increase energy density and lifespan

[1] Refer Prospectus dated 14 October 2022 and Supplementary Prospectus dated 21 October 2022 released to ASX on 9 December 2022

RICHMOND JULIA CREEK PROJECT – ENVIRONMENTAL & MINING APPROVALS

RVT TIMELINE: CRITICAL PATH 2025 TO 2027



Successful completion of
Environmental Impact Statement (EIS)
Mining Lease Application (MLA)
Steps RVT closer to BFS Finalisation

RVT AND RKP STRATEGIC PARTNERSHIP

The project will bring global renewable energy capability to Australia

Partner	Capability and role in project
Dalian Rongke Power (RKP)	• RVT wish to investigate the development of flow sheet innovation to establish a new refining process from Vanadium Ore Concentrate to Vanadium Pentoxide (V_2O_5) to reduce acid consumption and improve refining costs • RKP has metallurgy expertise and laboratory capacity to investigate the innovative V_2O_5 refining process • RKP & RVT have signed a joint collaboration agreement and detailed test work is underway in Dalian China with representative samples of RVT Richmond/Julia Creek Project ore to investigate this process • RKP is interested in participating in the Australian Long Duration Energy Storage (LDES) sector and the establishment of 'localized' manufacturing, where suitable in Australia – RKP will present at Australian Institute of Metallurgy (AusIMM) and meet with the WA Government to discuss the 50MW/500MW/h Western Australian Government Kalgoorlie Battery Commitment
WA Government / Kalgoorlie VFB Project	• Western Australian government committed to 50MW/500MWh battery • Western Australian Government committed to incentivise the establishment of local battery manufacturing capability • 500-600KWH this is a AUD$250m battery commitment • Electrolyte leasing can reduce this to 300-400kw/h and meet the government funding commitment of AUD$150m
Deloitte/Model	• RVT/RKP working with Deloitte to finalise economic model for LDES with electrolyte leasing as basis for Cap-Ex reduction (45% cost reduction) • Opportunity for RVT Energy Pty Ltd, a subsidiary of RVT to raise capital to participate in Electrolyte leasing with WA Government as offtake partner – existing shareholder prioritised • Leasing model also being briefed to QLD Government, Energy Market Operators (Horizon Energy, Western Power, Stanwell) and Major Energy Transition Operations (RTIO, BHP, Fortescue)

(L-R) ZiXiang (John) Zhong – Country Manager Trina Solar, Jon Price – Managing Director RVT, Phillip Krause – Senior Vice President Rongke Power and Brendon Grylls – Chair RVT

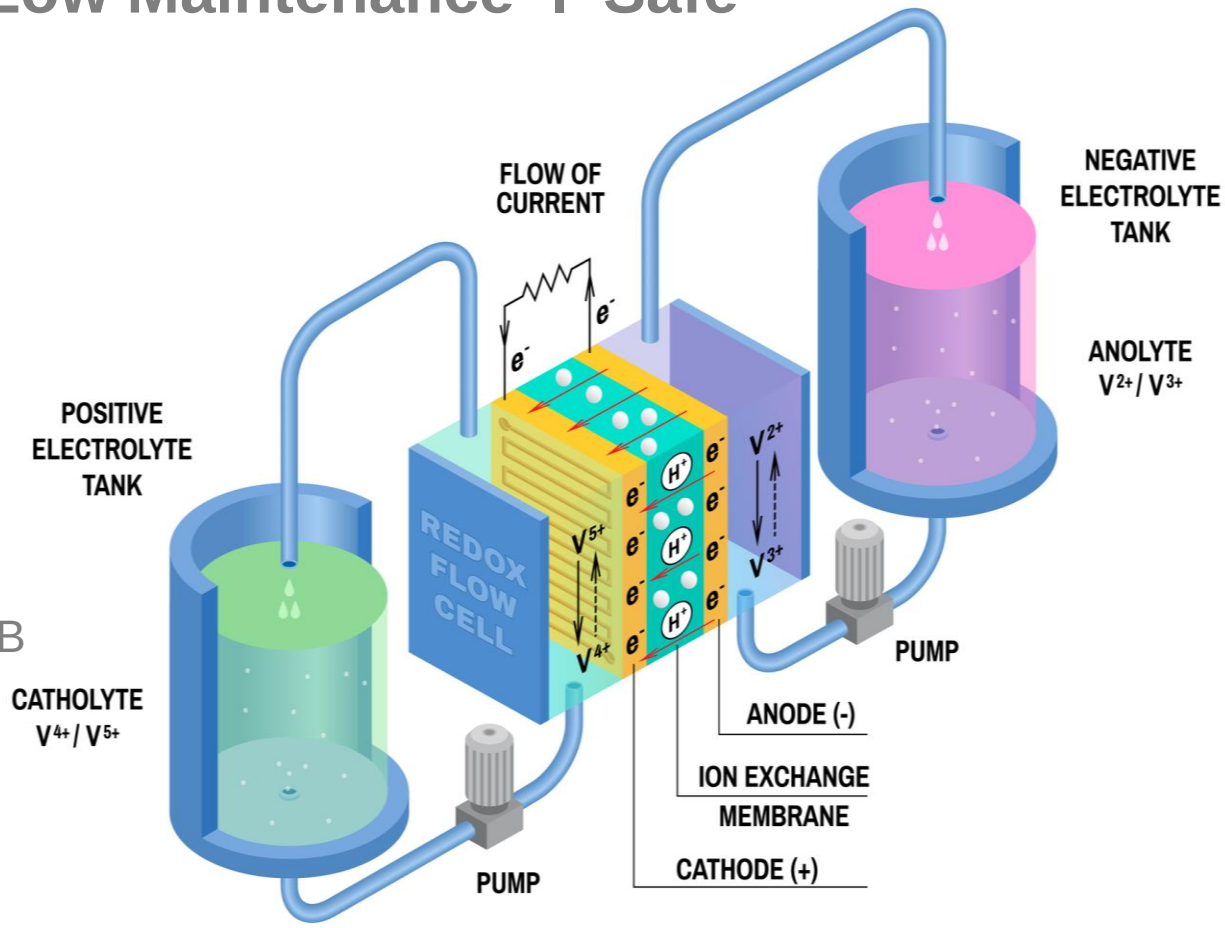
Total **project investment** in the Kalgoorlie VFB Project is **~$150M** with **future investment** of **~$350M** anticipated through development of onshore VFB manufacturing.

The **opportunity** is to establish **Vanadium lease agreements** that will provide stable, long-term **revenue** streams and benefits to **Investor Groups** (fully funded)

THE VANADIUM FLOW BATTERY (VFB) LONG DURATION ENERGY STORAGE (LDES)

Infinite Life I High Output I Low Maintenance I Safe

- **PERFORMANCE:** consistent output, long battery life with low electrolyte degradation & infinite life cycle.
- **DESIGN:** efficient, scalable, stackable, virtually unlimited storage capacity with low maintenance requirements.
- **SAFETY:** no thermal runaway & electrolyte is non-flammable.
- **SUSTAINABILITY:** stackable cells, high recyclability of VFB components and electrolyte & reduced carbon emissions results in a smaller overall physical/environmental footprint
- **ECONOMICS:** initial investment < long term advantages



1 Refer Prospectus dated 14 October 2022, Section 4 and Supplementary Prospectus dated 21 October 2022 released to ASX on 9 December 2022

2 Everbright Securities, "Shared Energy Storage and VRFB Development", 18 August 2022

VANADIUM FLOW BATTERIES v LITHIUM-ION BATTERIES

The Electrolyte Leasing Opportunity

VFB electrolyte is **32%** of total **VFB system cost**

The **opportunity** is to establish **Vanadium lease agreements** that will provide stable, long-term **revenue** streams and benefits to **Investors**

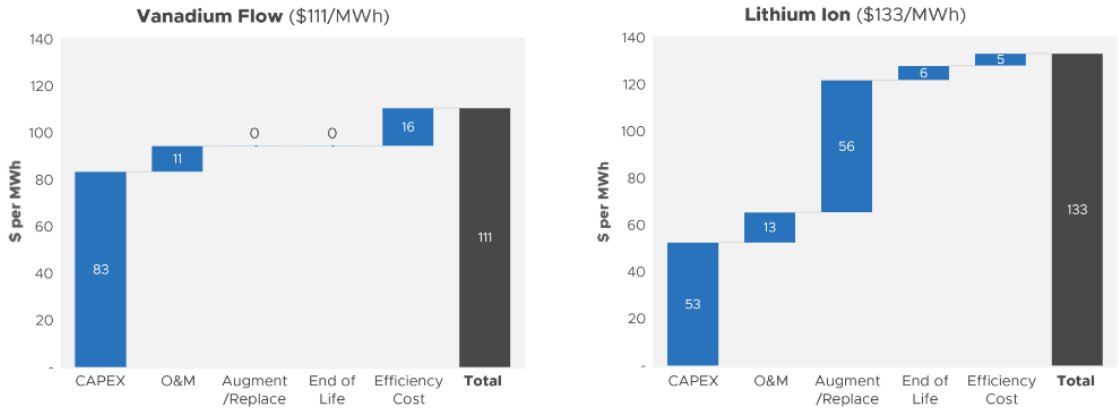
Making **Vanadium Flow Batteries**, **price competitive** with **Lithium-ion batteries**

By leasing the vanadium electrolyte, clients can access the benefits of vanadium flow batteries

Attribute	Lithium-Ion	Vanadium Flow Battery (VFB)
Duration	Short (<2h)	Long (6–8h+)
CAPEX	Lower upfront	Higher – but leasing model achieves parity
LCOS (Global Avg.)	~$131/MWh	~$111/MWh
Battery Life	7–10 yrs (3–7k cycles)	20+ yrs (12–20k+ cycles)
Recyclability	Poor	Excellent (99% electrolyte recovery)
Fire Risk	High (thermal runaway)	Zero (non-flammable electrolyte)

Comparing LCOS Components

High throughput / 40 year modelled scenario



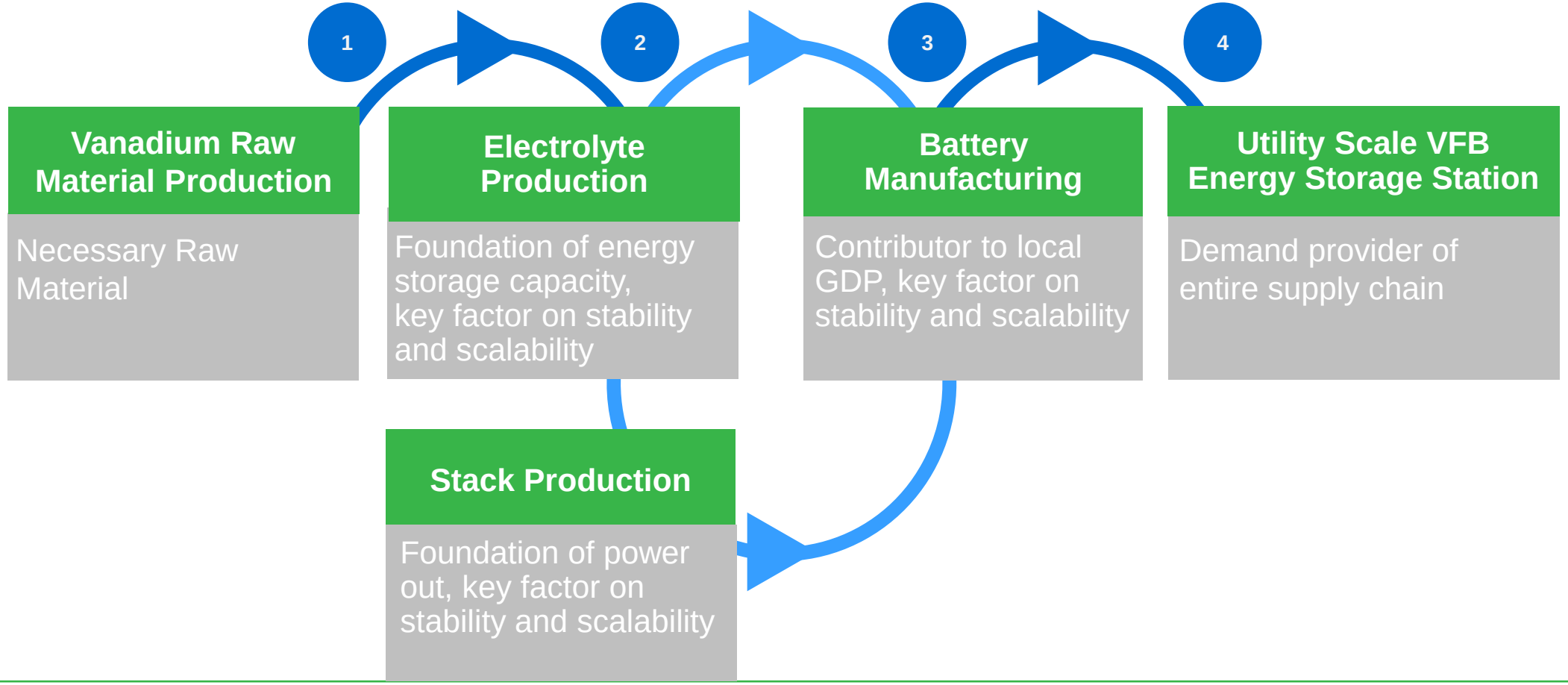
How does it work?

Electrolyte Ownership & Leasing: A vanadium company, owns the vanadium electrolyte and leases it to the battery operator or developer.
Predictable Costs: Converts a large upfront cost into predictable operational expenses for battery owners.
Circularity and Sustainability: Maximizes the value of the vanadium electrolyte, which is a non-degrading and recyclable asset, promoting a more sustainable energy storage ecosystem.
Market Growth: Facilitates the widespread adoption of VFBs, supporting the transition to a renewable energy future.

The Five Components of Levelized Cost of Storage (LCOS)

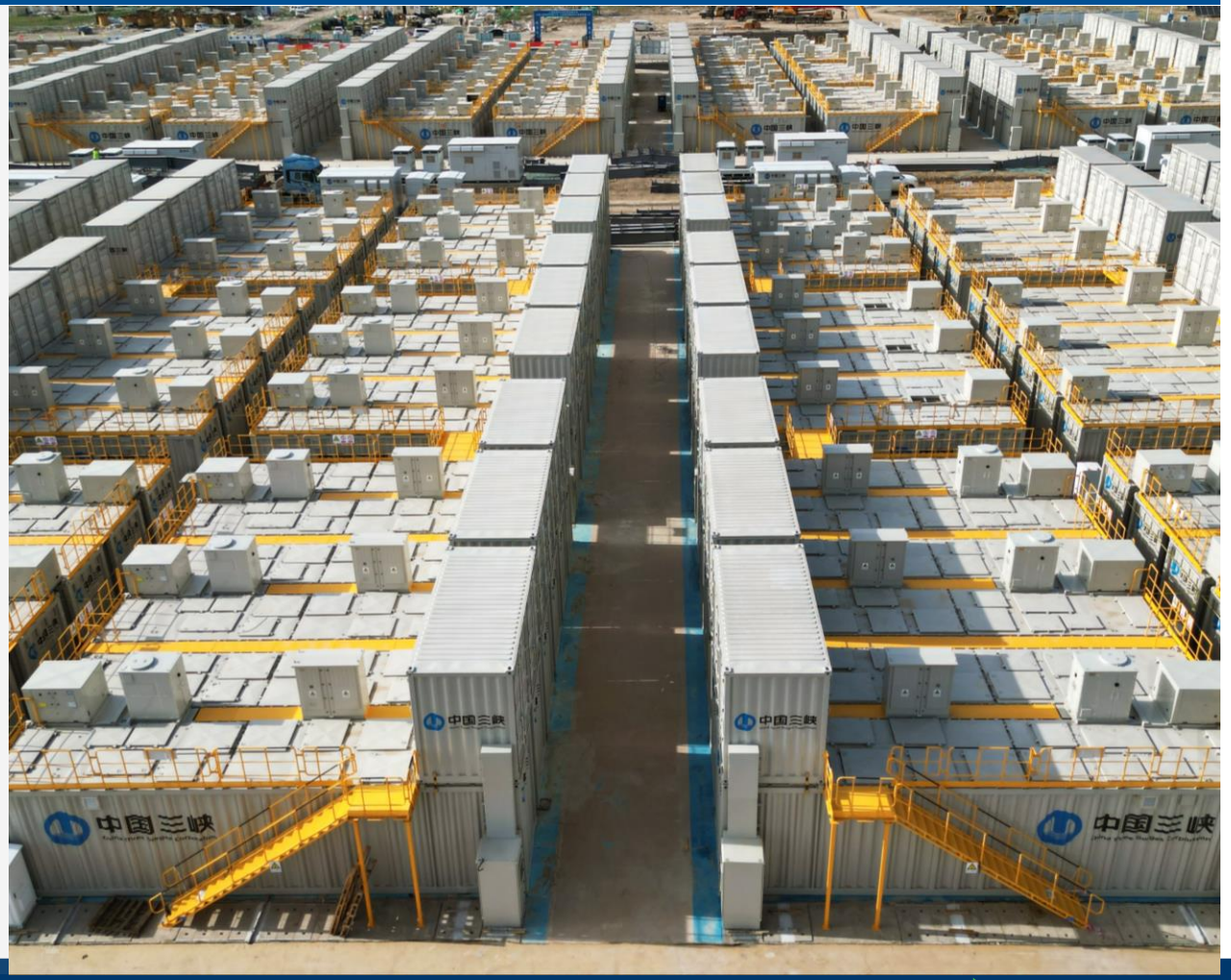
CAPEX	O&M	AUGMENTATION / REPLACEMENT	END OF LIFE	EFFICIENCY
Including battery costs, permitting, construction, installation and fire safety.	Including scheduled & unscheduled maintenance, and performance data monitoring & retention.	Includes ongoing costs to recover battery capacity lost to degradation.	Includes recycling, disposal and remediation costs, but also any residual value.	The cost of energy lost to charging & discharging inefficiencies.

VANADIUM SUPPLY CHAIN



UTILITY SCALE VFB PROJECT – TRIGGER TO START IN AUSTRALIA

- Possible benefits includes grid forming, peak shaving, ancillary services, gird level black start, smoothing output for renewable generation, off grid power supply, and power quality improvement
- Assumed total scale 1 GWh, suggested 100MWh or above for single station, first pilot should be 20MWh or above
- Investment Required: ~USD 400m – USD 800m
- Footprint:90-180 ㎡ / MWh
- Suggested Development Timeline: 2-3 years after completion of pilot project
- Trigger demand at industrial level and enable supply chain localization



VANADIUM RAW MATERIAL PRODUCTION

- 1 GWh of VFB needs 8000 tonnes of V_2O_5 equivalent
- Output could be vanadium concentrate, AMV, or V_2O_5 depends on technology used in coupling electrolyte production
- Development Timeline (without considering permitting): 3-5 years
- Economic Output: ≈ USD 100m per every 10,000 tonnes of V_2O_5 equivalent

Local Vanadium Supply
is the KEY to attract
Electrolyte Manufacturing Investment

ELECTROLYTE PRODUCTION

- Assumed Capacity: 1 GWh/year
- At the same scale, production costs can vary by more than 40% depending on the technology route， electrolyte produced from high purity V2O5 has the highest production cost among all.
- Minimum 100MWh annual production capacity is suggested for economy of scale
- Investment Required: USD 20M – USD 90M (land cost excluded)
- Footprint: ≈ 120,000 ㎡ per 1 GWh production capacity
- Development timeline without considering permitting : 3-5 years
- Jobs created: 150 – 300 positions / 1 GWh production capacity
- Expected Revenue: ~ USD 230m / GWh

STACK PRODUCTION

- Assumed Capacity: 1 GW/year
- Automated production is required for product stability
- Minimum 100MW annual production capacity is suggested for economy of scale
- Investment Required: USD 45M – USD 90M (land cost excluded)
- Footprint: ≈ 50,000 ㎡ per 1 GW production capacity
- Development timeline without considering permitting : 2-3 years
- Jobs created: 100 – 200 positions / 1 GW production capacity
- Expected Revenue: ~ USD800m / GW

BATTERY MANUFACTURING

- Assumed Capacity: 1 GW per year
- DC Battery module manufacturing based on modular design
- Minimum 50MW annual production capacity is suggested for economy of scale
- Investment Required: USD 25M – USD 60M (land cost excluded)
- Footprint: ≈ 50,000 ㎡ per 1 GW production capacity
- Development timeline without considering permitting : 2-3 years
- Jobs created: 200 – 400 positions / 1 GW production capacity
- Expected Revenue: ≥ USD 2.2b/GW

CORPORATE SNAPSHOT

CAPITAL STRUCTURE

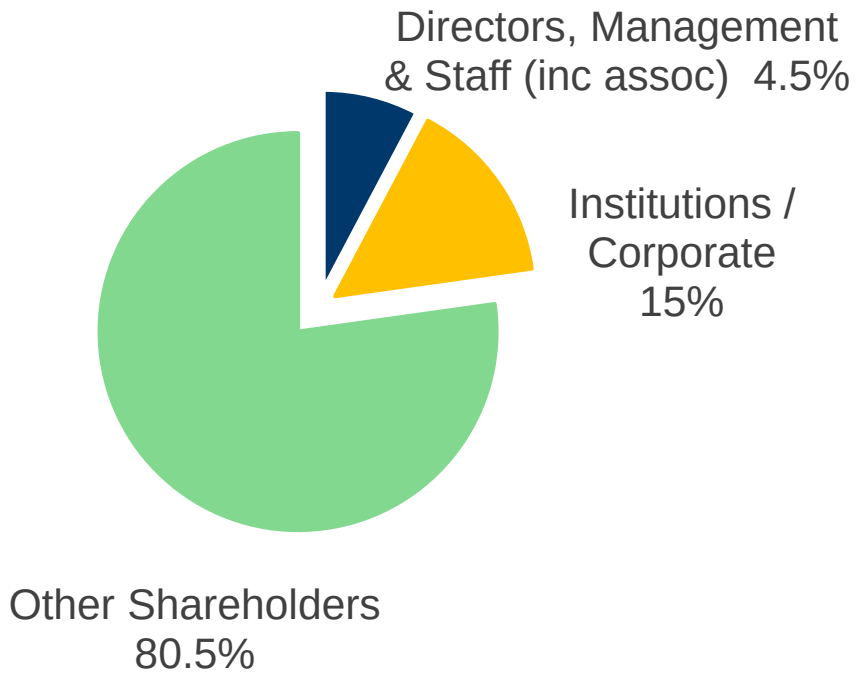
RVT	$8m	$17.14m	221.8m
ASX Code	Cash (as at 30/9/2025)	Market Cap (as at 7/10/2025)	Shares on Issue

PROJECT PORTFOLIO

Richmond – Julia Creek Vanadium Project

The Richmond – Julia Creek Vanadium Project in North Queensland is the world's largest non-titanomagnetite vanadium deposit. RVT's vanadium product is highly suitable for direct electrolyte production, with testing for this currently underway. MLA 100408

KEY SHAREHOLDERS



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This presentation has been authorised for release by the Board of Richmond Vanadium Technology Limited