

Australian
VANADIUM
LIMITED



An Australian Vanadium Leader

March 2024

ASX:AVL

Compliance & Cautionary Forward-looking Statements

The views expressed in this Presentation contain information derived from publicly available sources that have not been independently verified. No representation or warranty is made as to the accuracy, completeness or reliability of the information.

ASX Listing Rules 5.19 and 5.23

ASX Listing Rule 5.19

The information in this Presentation relating to production targets, or forecast financial information derived from a production target, is extracted from the announcement titled "Bankable Feasibility Study for the Australian Vanadium Project" released to the ASX on 6 April 2022 which is available on the Company's website www.avl.au.

The Company confirms that all material assumptions underpinning the production target, or the forecast financial information derived from a production target, in the original market announcement continue to apply and have not materially changed.

ASX Listing Rule 5.23

The information in this Presentation relating to exploration results and mineral resource and ore reserve estimates for the Australian Vanadium Project is extracted from the announcement titled "Bankable Feasibility Study for the Australian Vanadium Project" released to the ASX on 6 April 2022 which is available on the Company's website www.avl.au and Technology Metals Australia (formerly ASX: TMT) announcements of 5 August 2022 and 7 November 2022 which are available on TMT's website www.tmtlimited.com.au.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements, and that all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the competent person's findings are presented have not been materially modified from the original market announcements.

Forward Looking Statements

This Presentation may contain certain forward-looking statements with respect to matters including but not limited to the financial condition, results of operations and business of AVL and certain of the plans and objectives of AVL with respect to these items. These forward-looking statements are not historical facts but rather are based on AVL's current expectations, estimates and projections about the industry in which AVL operates and its beliefs and assumptions.

Words such as "anticipates," "considers," "expects," "intends," "plans," "believes," "seeks," "estimates," "guidance" and similar expressions are intended to identify forward looking statements and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the industry in which AVL operates.

These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and other factors, some of which are beyond the control of AVL, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements. Such risks include, but are not limited to resource risk, metal price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the countries and states in which we sell our product to, and government regulation and judicial outcomes. For more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Company's other filings.

AVL cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which relate only to events as of the date on which the statements are made.



Australian Vanadium Limited (AVL) – An Australian Vanadium Leader



A leading Australian vanadium company with a world class asset located in Western Australia, a Tier-1 mining jurisdiction



AVL has a major vanadium resource in a market dominated by Russia, China and South Africa



Recent merger consolidates two adjoining projects across one orebody, providing opportunity to realise significant synergies



Optimised Feasibility Study (OFS) underway, aimed at creating one project, with superior economics



Demand for vanadium predicted to grow, driven by need for long duration energy storage to enable decarbonisation



Installation of vanadium flow battery (VFB) technology accelerating. Chinese VFB vanadium demand in 2025 is anticipated to be more than 11 times AVL's annual production





The Australian Vanadium Project



Australian Vanadium Project

Project Overview



Vanadium, titanium, magnetite orebody located on tenements wholly owned by AVL, providing a significant, scalable project



Simple open pit mining with standard magnetite concentrator process



Potential for processing plant close to major port, providing opportunity for lower cost energy, water, labour and services



Known processing technology capable of reducing project risk



Post merger: Delivering synergies



Aim: To deliver the same volume of 6,270 MTV* per year, whilst optimising capital and operating costs, in addition to maximising project value



Areas of project integration focus

- Optimise orebody utilisation
- Improve concentrate quality
- Enhance processing steps
- Confirm most economic vanadium, titanium and magnetite products



Other project activities

- Finalise project debt, grant and equity finance
- Confirm best offtake strategy
- Conclude approvals
- Deepen our relationships and develop partnerships with Traditional Owners and the local communities



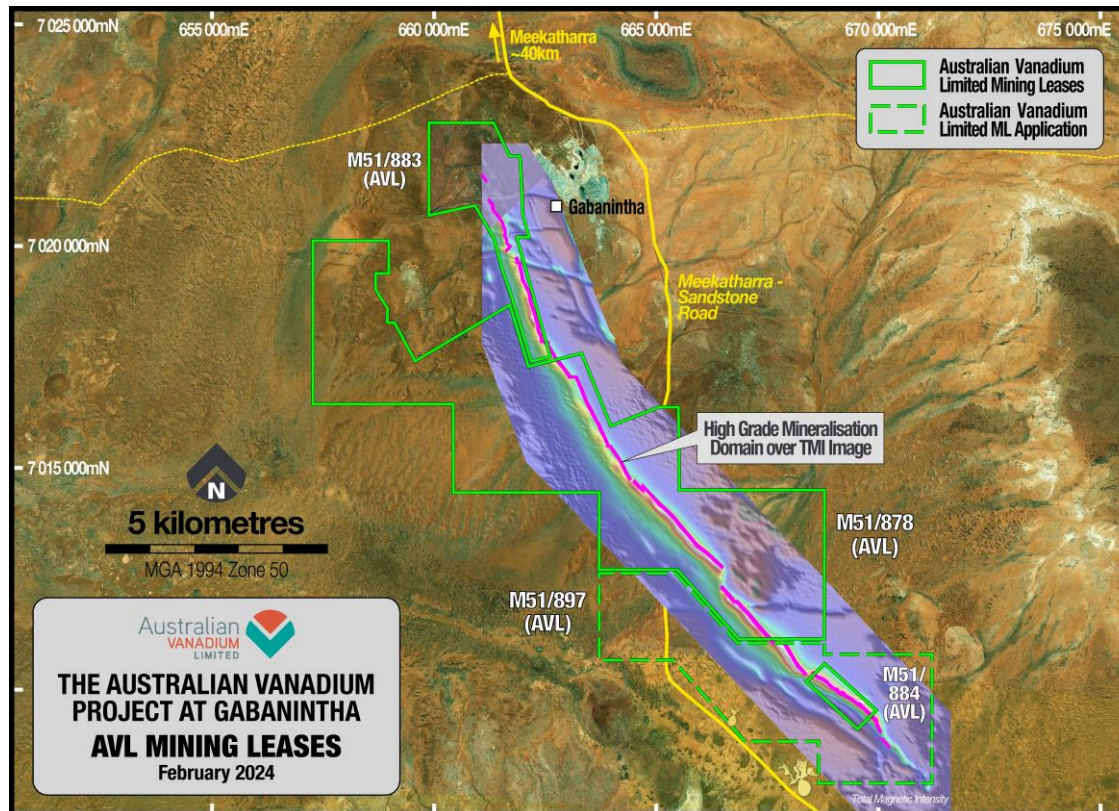
Deliverables

- Resolve preferred project pathway
- Complete combined Mineral Resource
- Publish integrated OFS
- Deliver final investment decision

* MTV is Metric Tonnes of Vanadium – 6,270 MTV is equivalent to 11,200 tonnes of V₂O₅

Merger unlocks the orebody

Opportunity to maximise economic return through access to high-grade areas of the orebody, which previously straddled the two projects



Contiguous orebody

- Prior to the merger, TMT owned tenements at the northern end of the orebody and a significant, small block at the southern end of the orebody, which was surrounded by AVL's tenements, constraining development
- Merger delivered 17km of strike for high-grade massive magnetite domain
- Allows for efficient mine infrastructure layout design

Grade benefits

- Potential higher vanadium, titanium and iron grades in southern part of the orebody, now unconstrained, offers opportunity to improve economics
- Shallower depth of weathering in unconstrained southern part of the orebody delivers potential for simpler, cost-effective concentrator design
- OFS can now test all scenarios over the unconstrained orebody to best optimise economics

Optimised Feasibility Study focuses on realising economic benefits



Concept: Unrestrained use of orebody delivers opportunity to improve concentrate, delivering improved capital expenditure (CapEx) and operating expenditure (OpEx) for better project economics

CapEx	OpEx
<ul style="list-style-type: none"> • Processing: Potential for smaller concentrator and processing plant with similar vanadium output • Infrastructure: Potential to reduce scale of power and water infrastructure • Simplification: Low silica ore offers opportunity to further simplify flowsheet 	<ul style="list-style-type: none"> • Mining: Mine schedule optimisation may reduce material movement and mining costs • Grade & Recovery: Higher vanadium and lower silica grade in concentrate has potential to reduce operating costs via lower reagent, energy, power and water consumption • Coproducts: Opportunity to increase iron grade above 60% and opportunity to improve ilmenite grade has the potential to increase coproduct credit contributions



Bankable Feasibility Study (BFS) metrics (prior to merger and optimisation): AVL conducted a BFS in April 2022¹ with the following metrics:

Annual Production
11,200t V₂O₅

Pre-production CapEx
US\$435M

C1 OpEx
US\$4.43/lb V₂O₅

Mine life
25 years

The aim for the OFS is to improve on these metrics

1: Information within this slide as detailed in ASX Announcement "Bankable Feasibility Study for Australian Vanadium Project" dated 6 April 2022. All material assumptions underpinning the production target and forecast financial information derived from a production target continue to apply and have not materially changed

Progressing the project to production

Delivered



- ☒ BFS completed (pre-merger basis)
- ☒ Mining Leases approved
- ☒ Completion of large-scale process plant pilot programs
- ☒ Board and management team established for project execution
- ☒ Australian government grant agreement for up to \$49 million executed
- ☒ 1.2GL pa water licence for proposed processing plant granted
- ☒ Merger to deliver project synergies

Next steps



Project Integration

- ☐ Combined Mineral Resource update (April target)
- ☐ Project development strategy update (CY24Q2 target)
- ☐ Publish integrated Optimised Feasibility Study (OFS)

Approvals

- ☐ Progress approvals including EPA and Traditional Owner agreement
- ☐ Finalise permitting of proposed Tenindewa processing hub site

Offtake

- ☐ Secure bankable vanadium offtake including option for project finance
- ☐ Secure iron titanium coproduct offtake agreements
- ☐ Secure ilmenite offtake agreements

Finance

- ☐ Progress discussions with Government debt and export finance agencies
- ☐ Additional grant milestone payments
- ☐ Deliver final investment decision



Vanadium Market

Strong vanadium market fundamentals



85% of vanadium supply sourced from China, Russia and South Africa



Acceleration in demand growth of vanadium flow batteries (VFBs)



Long-term average price for commodity grade V_2O_5 of US\$12/lb⁴

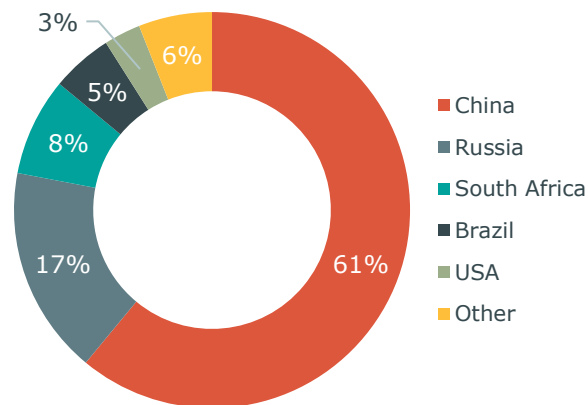


Vanadium classified as critical mineral in US, EU, Japan, China & Australia



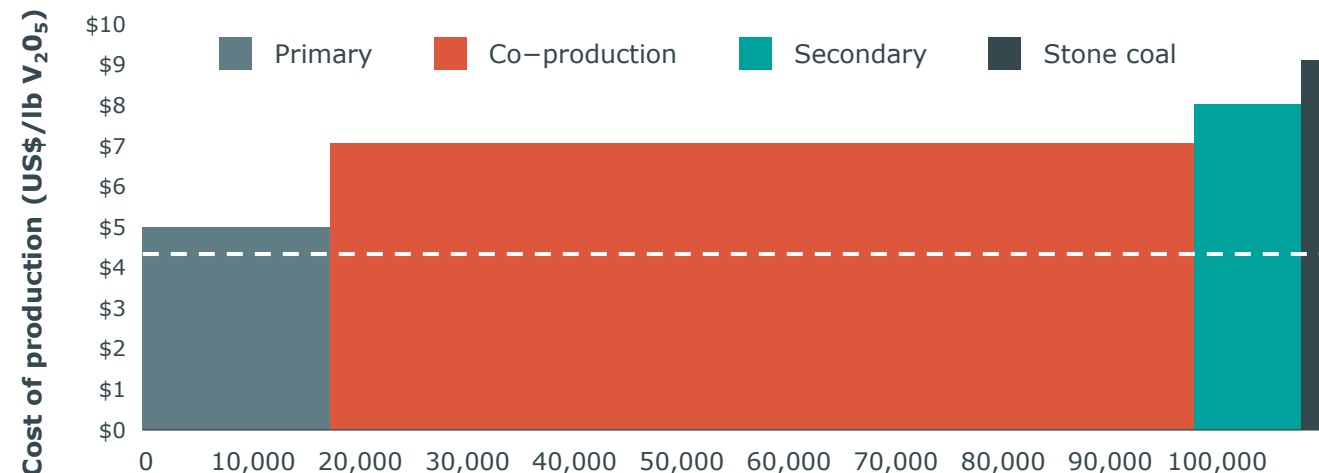
Steep cost curve driven by multiple production routes

Market Supply¹



Total global supply ~120MTV per annum

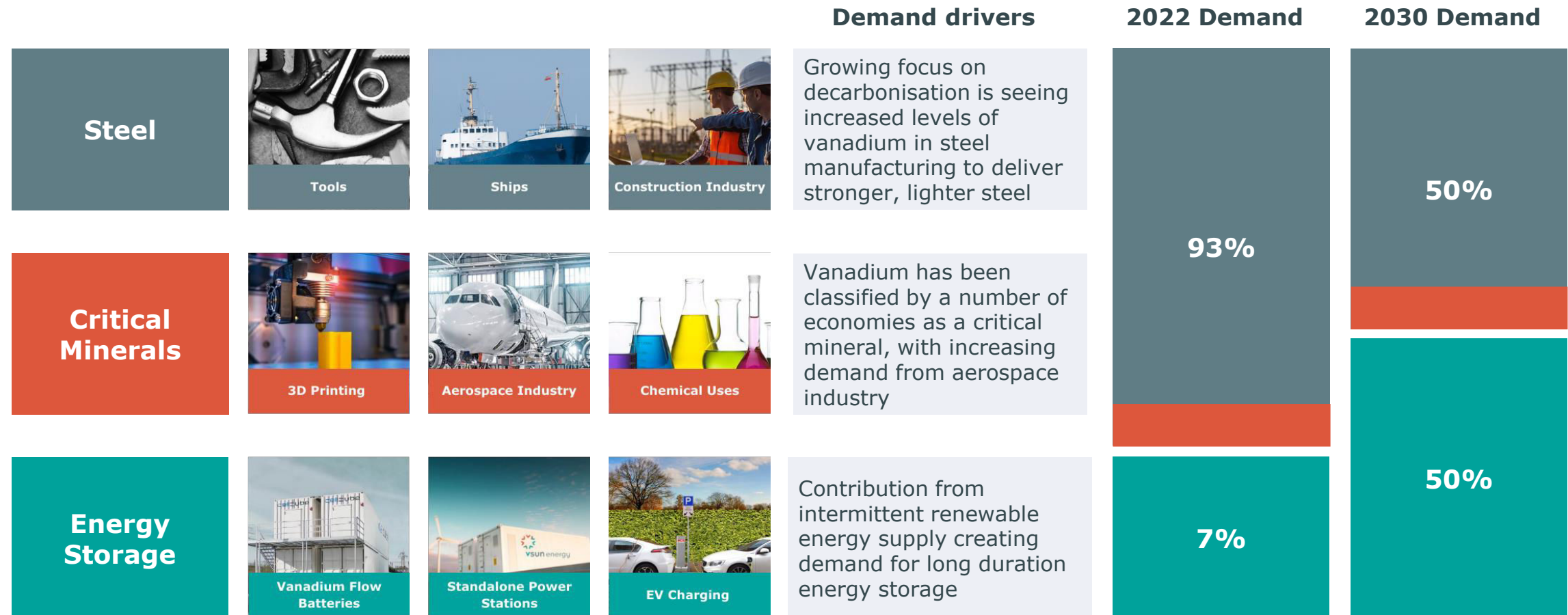
Vanadium Pentoxide Production Costs (US\$/lb) ^{1, 2, 3}



Notes: 1. Source – US based vanadium specialist: TTP Squared, Inc. 2. Source - Project Blue, June 2023. 3. AVL predicted price from BFS ASX announcement dated 6 April 2022. 4. TTP Squared, Inc (inflated to 2023\$)

Vanadium demand

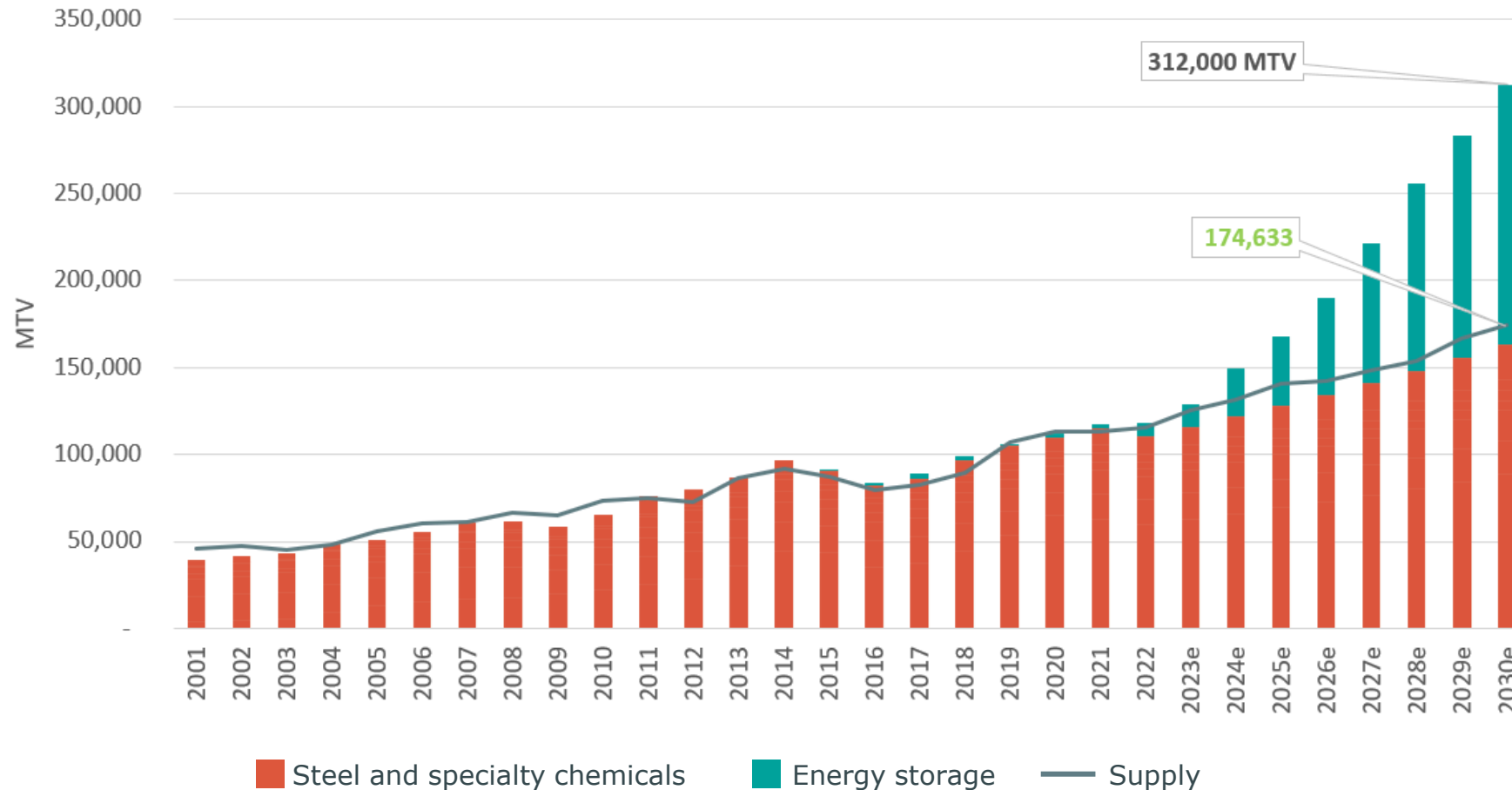
Global emission reduction is driving increased demand for vanadium across a range of end markets



Source: Vanitec and Wood Mackenzie

Vanadium production and consumption forecast

Supply deficit predicted to grow from 2024 onwards



01

Supply forecast includes growth from existing primary and secondary sources

02

Increased supply almost covers steel demand only

03

Predicted growth in VFB market demand requires 90% more vanadium supply than steel market in 2030

Source: 1. US based vanadium specialist: TTP Squared, Inc.

Growing need for long duration energy storage (LDES) of 4 to 12 hour+

LDES provides greater flexibility of storage and aids the growth in delivery of variable renewable energy (VRE)



Growing requirement for energy storage with long lifespan and limited degradation in performance



Vanadium flow batteries (VFB) are currently the most technologically advanced LDES technology



LDES market will be valued at US\$223B in 2044¹



US\$30bn of LDES capacity in construction or operation²



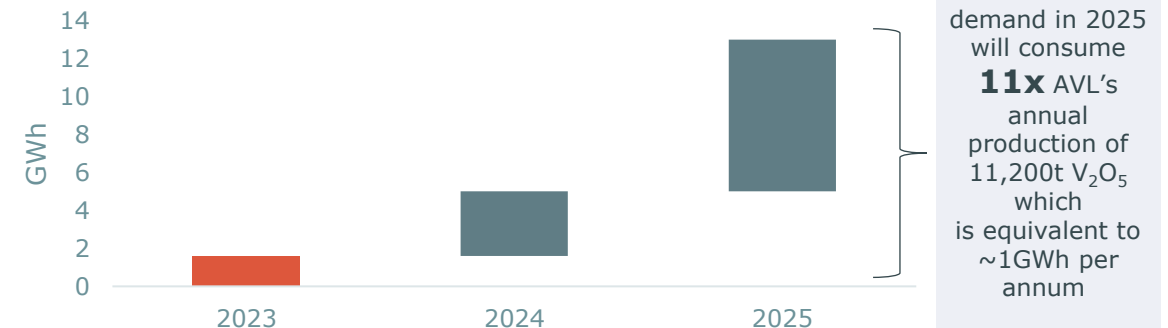
From 2024-2044, the annual installation of LDES technologies is forecast to increase at a CAGR of 48%¹

Source: 1: IDTechEx 2: <https://www.energy-storage.news/wood-mackenzie-investment-pours-in-for-long-duration-energy-storage-but-scale-remains-challenge/>

%VRE in electricity generation¹

Region	2023	2035	CAGR
Germany	27%	75%	8%
California	25%	63%	7%
Texas	26%	51%	5%
China	13% ²	25% ³	8%

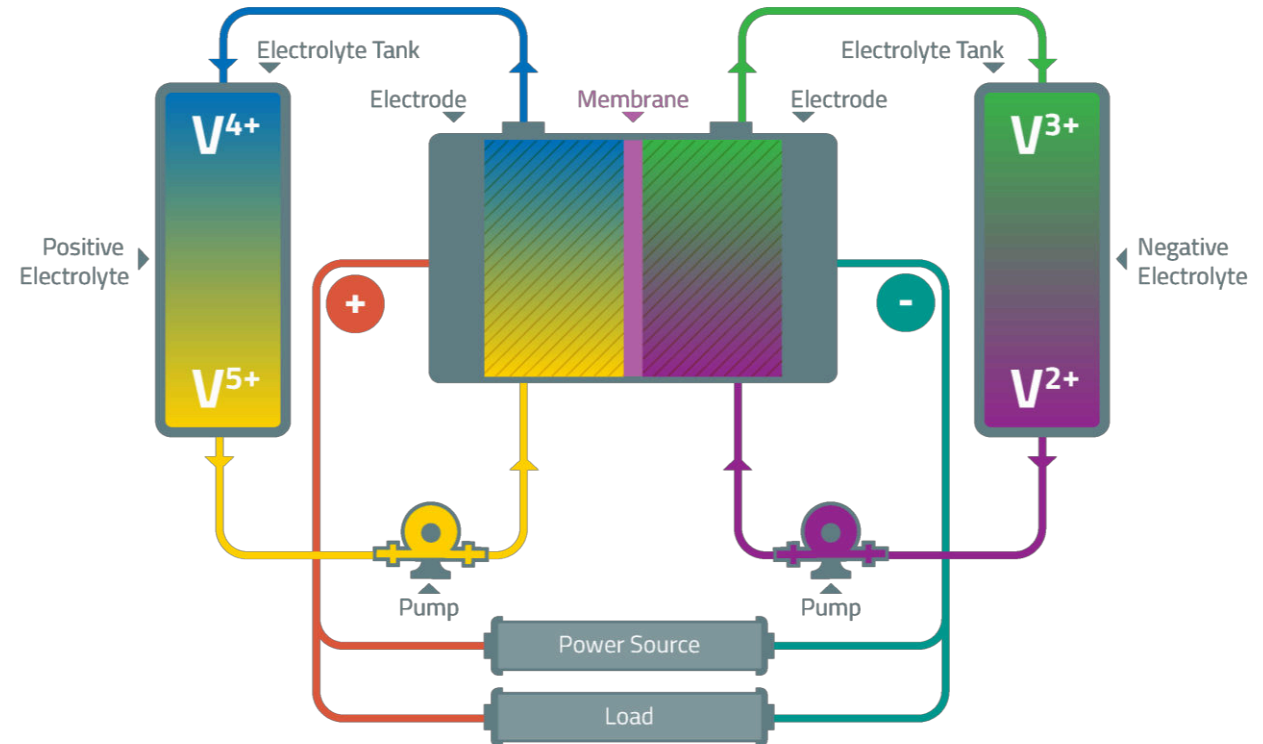
Chinese VFB growth⁴



Source: 1: IDTechEx 2: Climate Energy Finance 3: <https://www.reuters.com/sustainability/climate-energy/numbers-behind-chinas-renewable-energy-boom-2023-11-15/>. Target is for 2030. 4: FerroAlloyNet

What is a vanadium flow battery (VFB)?

- A **VFB** is made up of two tanks filled with **vanadium electrolyte** fluid
- The electrolyte acts as cathode and anode, tank size determines capacity
- Vanadium electrolyte contains **145g** of high-purity V_2O_5 per litre
- Invented over 40 years ago and commercialised at very large scale
- Economic: offers compelling cost of storage for applications where greater than 4 hours of storage is required



Vanadium flow batteries – technical and economic merit

Improving VFB technology driving an increase from MWh to GWh scale projects

Megawatt (MW) or Gigawatt (GW) describes the power output of the battery. MWh or GWh are the energy capacity, described in hours, or how long the power can be delivered for.



Long duration
competitive techno-
economics >4h



Non-flammable
making it one of the
most stable battery
chemistries



**100% depth of
discharge** with
multiple daily cycles



Lifespan over 25
years with little to
**no degradation in
performance** over
time



Easy to scale
power and energy
separately



Well proven at MWh
scale and moving
towards **GWh scale**



Select VFB manufacturers and installed capacity

 SUMITOMO ELECTRIC	130 MWh
 INVINITY ENERGY SYSTEMS	75 MWh
cellcube	75 MWh
 融科储能 RONGKE POWER	559 MWh

Pictured: Invinity Energy Systems 200kW/800kWh VFB, Perth, UK. Installation data in table taken from company websites.

Global VFB roll-out led by China – increasing in scale to GWh

VFB proven technology with over 200 operational batteries globally

At least 45 countries have VFBs operating or under construction

China accelerating roll out with over 52 VFBs under construction or approved

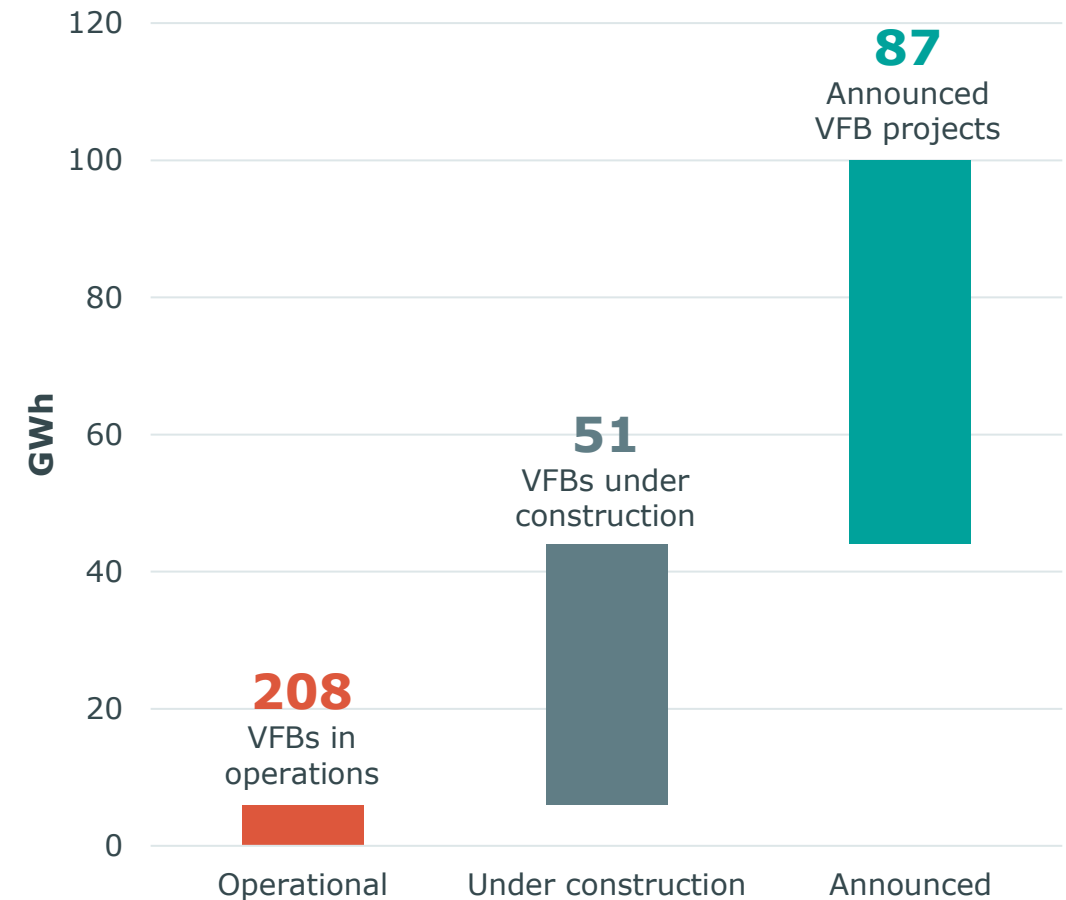
600MWh average battery size in Chinese VFB pipeline

China launching grid scale rollout with VFBs forecast to reach 15-20% of installed battery storage by 2025

Recent announcements from China indicate the potential for 180 GWh of VFB deployment by 2030, requiring 1.4 million tonnes of V_2O_5

Source: FerroAlloyNet

Global VFB projects



Source: Vanitec

VFB gigafactories being built in China

Manufacturing of VFBs and electrolyte at scale

- China is building gigawatt capacity in manufacture of VFBs and vanadium electrolyte
- Development of vanadium gigafactory industry in China to support roll out of VFB storage
- The strategy is similar to lithium-ion battery gigafactories in the early 2020s
- Gigafactory demand will drive demand for vanadium
- In 2023 over 25GWh per annum of manufacturing capacity was added, equating to 207,690t of annual vanadium demand
- AVL's project to deliver 11,200t per annum, roughly 5% of the gigafactory demand added in 2023

Date	Company	Gigafactory manufacturing capacity per year	Total tonnes of V ₂ O ₅ required per year
January 2023	Shanghai Electric Energy Storage Technology	1GWh	9,890t
February 2023	Beijing Xingchen New Energy	12GWh	118,680t
February 2023	Linyuan Group	4GWh	39,560t
March 2023	Chengde Xinxin Energy Storage Technology	1GWh	9,890t
April 2023	China Vanadium Energy Storage (Hubei) and Shanghai Electric	4GWh	39,560t
September 2023	CNC Huineng and CRRC Zhuzhou Electric	2GWh	19,780t
November 2023	Shaanxi Jutai	1GWh	9,890t
Total		25GWh	207,690t

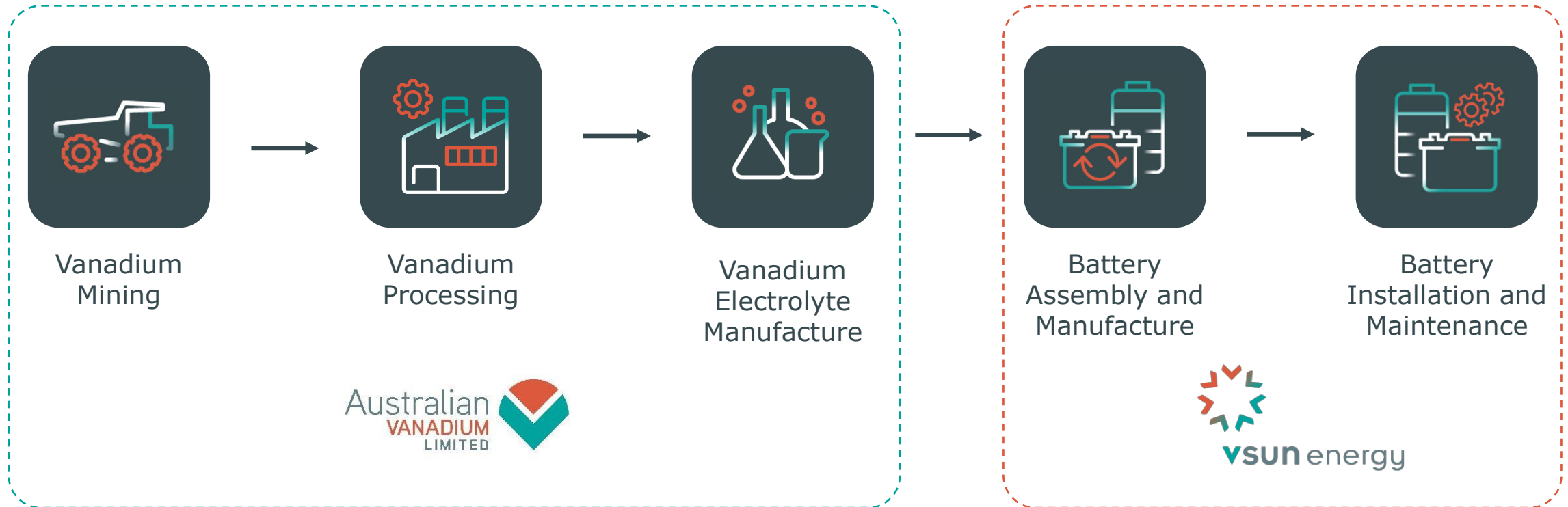
Source: Vanitec



Future Optionality



Vertical integration – pit to battery



Vanadium electrolyte manufacture

AVL has completed the construction of a vanadium electrolyte manufacturing facility in Perth, Western Australia

- Co-funded with Australian Government grant funding
- 33MWh per annum energy storage equivalent of vanadium electrolyte production
- First production completed in 2024
- Samples to be tested by VFB manufacturers
- Demonstrates AVL's technical capabilities
- Delivers product into a growing demand market and allows for an extended qualification period for our material
- Ensures AVL remains relevant and engaged with all downstream aspects of the vanadium and VFB markets through its 'pit to battery' strategy



Pictured: AVL's Vanadium Electrolyte Facility official opening by Australian Government Minister for Resources and Northern Australia Hon. Madeleine King MP alongside Non-Executive Director Anna Sudlow, Chair Cliff Lawrenson, CEO Graham Arvidson and Non-Executive Director Miriam Stanborough AM

VSUN Energy



VSUN Energy was launched by AVL in 2016 to grow the VFB market in Australia

Facilitating the developing Australian VFB market

- VSUN Energy utilises VFB technology from a wide variety of global OEMs including Invinity Energy Systems, CellCube, Sumitomo and VFlow Tech.
- VSUN Energy is actively engaged in the sale and delivery of VFB storage technology in Australia.
- The development of a local Australian VFB market will deliver domestic demand for the potential vanadium supply from the Australian Vanadium Project and vanadium electrolyte supply from AVL's manufacturing facility

Current projects

- Horizon Power - 78kW/220kWh pilot project in Kununurra, WA
- IGO - supply and installation of an 80kW/300kWh VFB at Nova Nickel Operation
- Water Corporation – successful completion of trial of a 5kW/30kWh VFB
- Victoria – supply and installation of a 20kW/80kWh VFB
- Manufacture of a prototype residential 5kW/15kWh VFB
- Tender applications up to 50MWh





Investment Summary

Investment thesis



Australian Vanadium Project

Advanced project, 25+ year mine life with OFS to drive enhanced project economics



Growing vanadium fundamentals

VFB demand growth accelerating to support increasing renewable energy generation



Advancing funding strategies

Project proposed to be funded by debt, grants, equity and offtake, with discussions well progressed

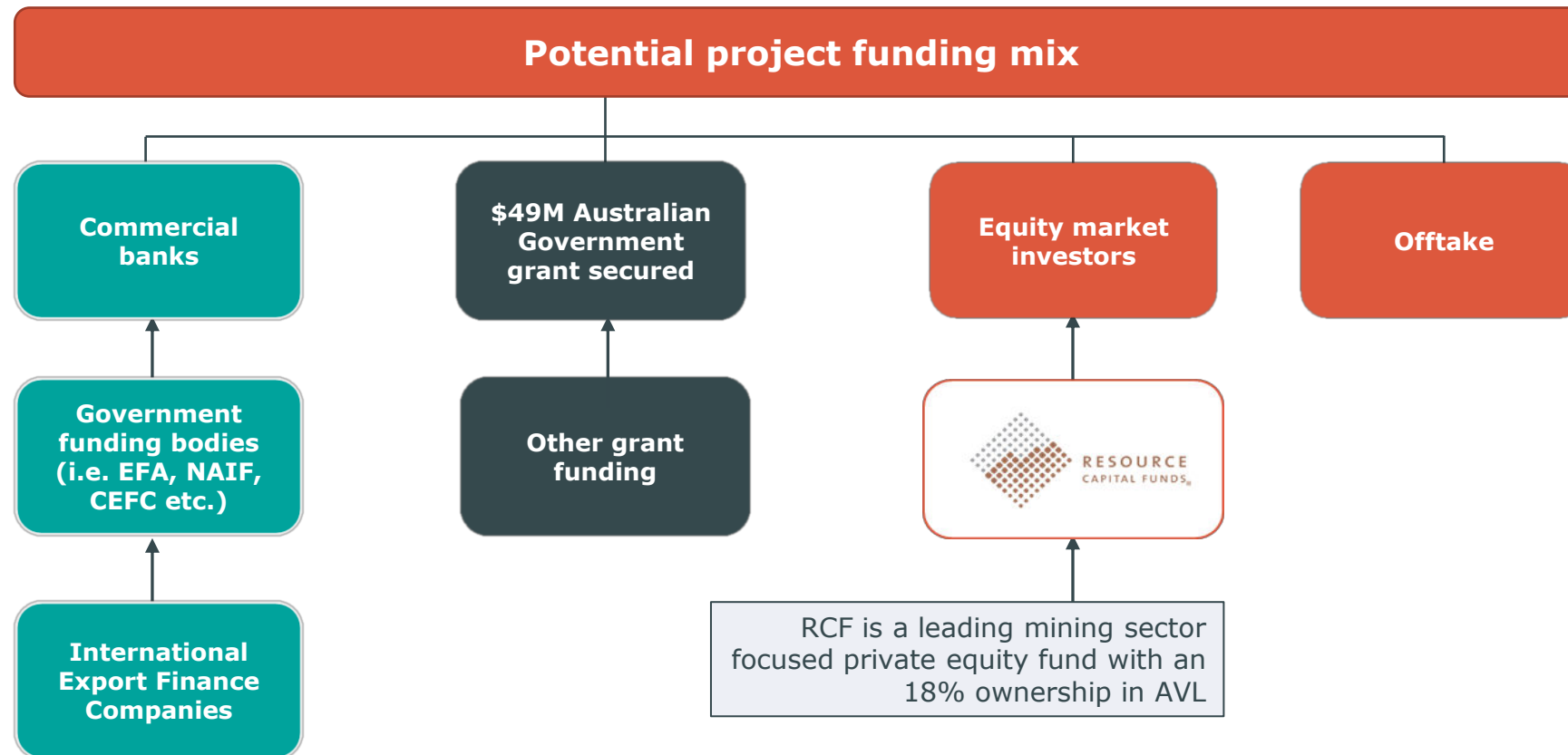


Long-term optionality

Vanadium electrolyte manufacturing capacity and VSUN Energy battery capabilities to leverage and support VFB market growth

Appendices

Improved funding capability



Sustainable and reusable

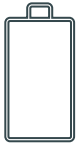
VFB electrolyte liquid **does not degrade, a significant advantage of the technology**

- Like in many battery types, a "cross-over" effect occurs within VFB cells over their lifetime
- "Cross-over" effect involves material from one pole (anode) moving to the other pole (cathode)
- Although electrolyte still crosses over, as the materials are the same on both sides there's no blockage or coverage issue like other battery technologies
- Electrolyte that crosses over is reused on the other side, preventing degradation of the electrolyte in VFB technology

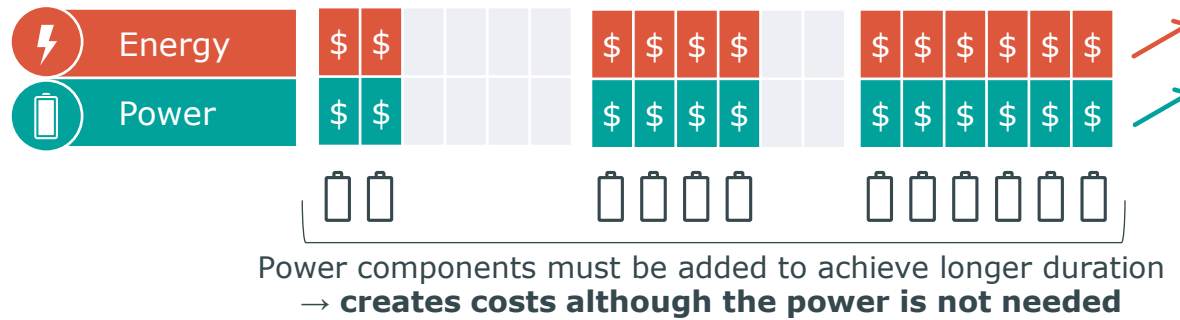
Source: CellCube



VFB has lowest costs for long discharge times



**Li-ion
closed
architecture**

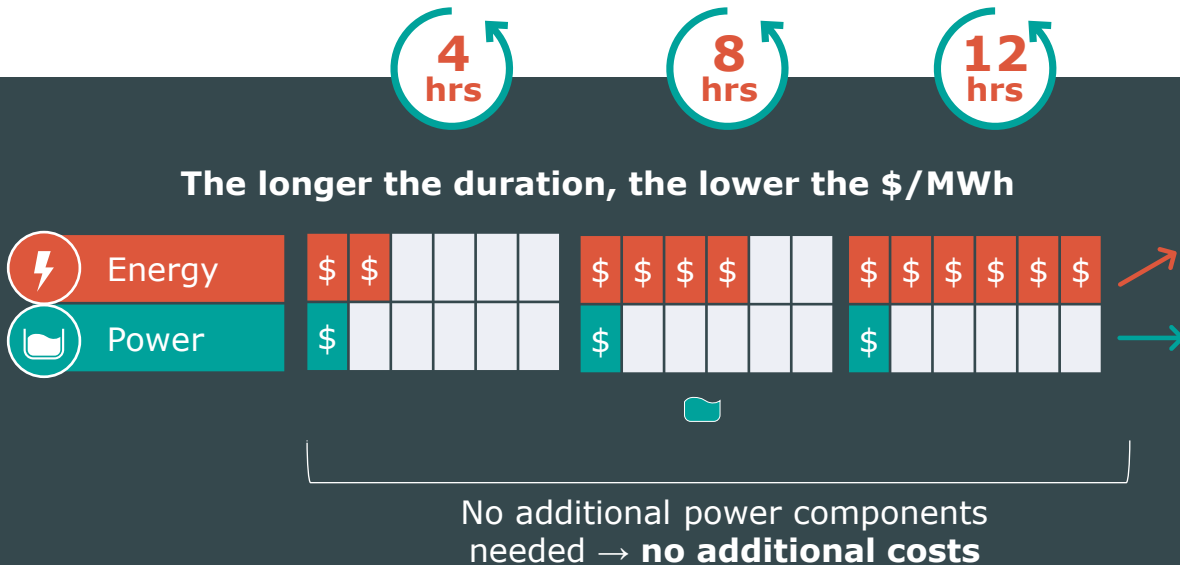


Limited scalability

- Power and energy in fixed ratio - longer duration costs become relatively high
- Duration increased by adding power and energy



**VFB
Scalable
architecture**



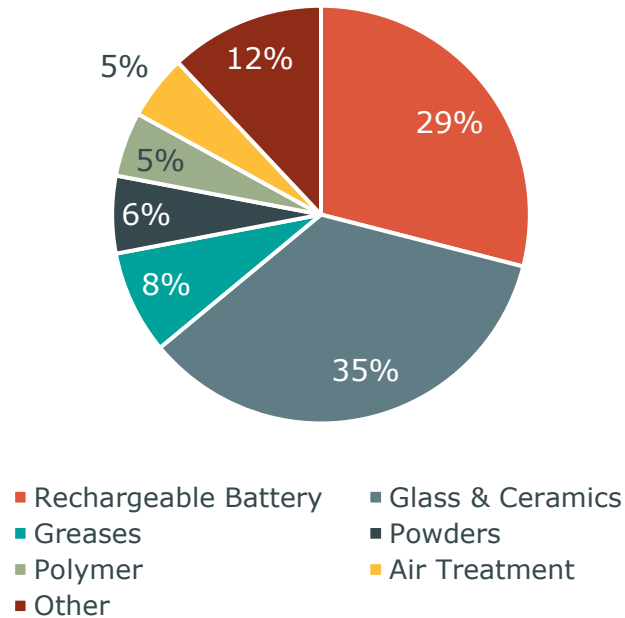
Scalable system

- Power and energy are independent from each other - so, longer discharge times become cheaper with vanadium flow batteries
- Discharge duration increased by adding vanadium electrolyte

Source: CellCube

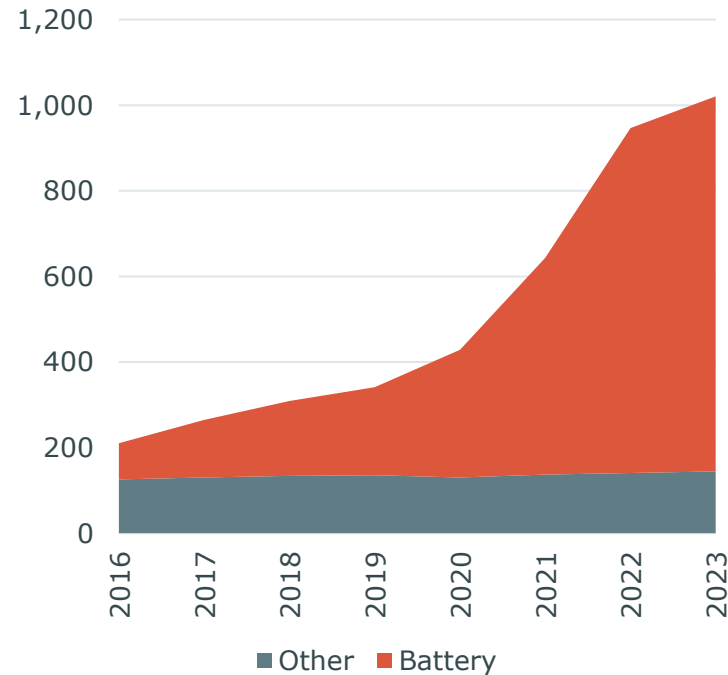
Lithium – case study

Lithium demand 2015



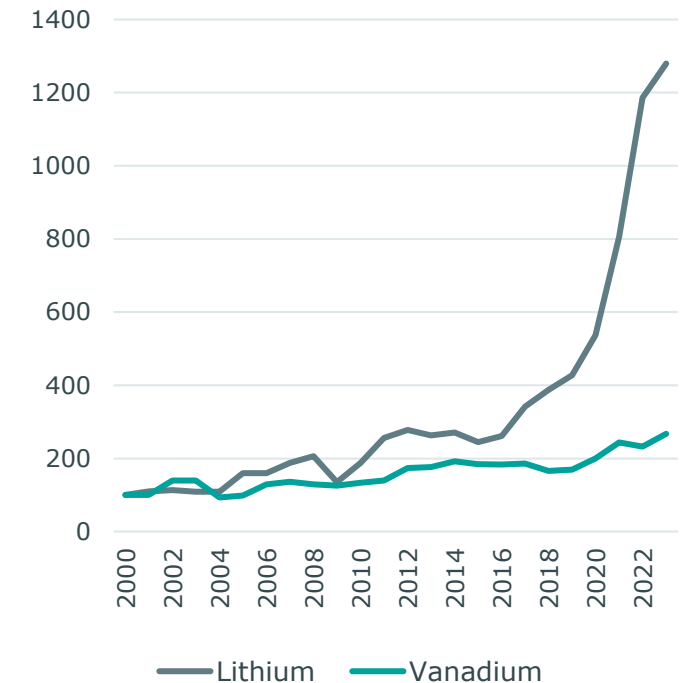
Pre electrification, batteries were a small part of global lithium demand

Lithium demand



Since 2016, lithium battery demand has grown at a CAGR of ~40%

Relative mine production



Lithium and vanadium displayed similar supply fundamentals until battery thematic emerged in 2016

Source: Wood Mackenzie

ESG in action



Renewable energy strategy

- Ability to produce ethical, low carbon vanadium product, expecting to be 50% lower carbon intensity per unit of vanadium than existing co-production vanadium producers¹
- Use of solar and/or wind generation
- Use of VFBs for energy storage



Community relationships

- Workforce participation and business opportunities for Yugunga-Nya People Traditional Owners
- Regional Engagement Manager based in Geraldton
- Sponsorship of awards and scholarships at Central Regional TAFE
- Mullewa and Meekatharra community sponsorships



Governance

- Developing ESG reporting structure aligned to the developing ISSB framework through application of SASB, TCFD and GRI reporting structures
- Experienced and competent Board of Directors
- Long term engagement with Environmental Protection Agency



Board



Cliff Lawrenson
Chair

Experienced Chair and extensive executive career in resources, energy, infrastructure and investment banking



Daniel Harris
Non-Executive Director

Over 40 years of global vanadium experience, including processing and operation



Miriam Stanborough
Non-Executive Director

Over 20 years of experience in the mineral processing industry across a range of commodities



Peter Watson
Non-Executive Director

Chemical engineer, with 40 years of experience in senior technical, project and management roles, in addition to corporate experience running ASX-listed companies



Anna Sudlow
Non-Executive Director

Corporate finance executive with experience in the mining and resources sectors across a range of commodities and jurisdictions



Jo Gaines
Non-Executive Director

Stakeholder engagement and corporate affairs experience across State and Federal Government. Policy development and a focus on People and Culture.

Executive Team

International vanadium expertise – track record in project execution and operations



Graham Arvidson
Chief Executive
Officer

18 years of experience in the mineral sector experience spans vanadium and lithium project development and operations



Todd Richardson
Chief Operating
Officer

Over 20 years of experience in the vanadium sector and an expert in vanadium process design, commissioning and operations



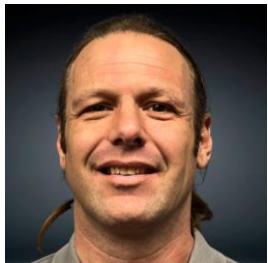
Louis Mostert
Chief Legal and
Commercial Officer

20 years of experience in project contracting and finance, corporate advisory, mergers and acquisitions



Tom Plant
Chief Financial
Officer

30 years of experience in various corporate and commercial roles. Strong background in debt and equity funding solutions, investment evaluation and corporate transactions



Ross Jennings
Chief Safety and People
Officer

Over 18 years of experience in the mining industry and has worked in leadership roles across operations, health, safety and emergency response



Flormirza Cabalteja
Executive General Manager
Project Delivery –
Downstream

16 years of experience in operations and design/commissioning in the minerals sector for nickel, cobalt, vanadium and ammonium phosphate-based fertilizers



Ian Prentice
Executive Integration

Over 30 years of experience in the global mining industry, spanning exploration, development and open cut and underground mining.

Gabanintha North Mineral Resource Estimate (original TMT Resource)

Gabanintha Mineral Resource as at 7th November 2022

Classification	Material	Mt	V ₂ O ₅ %	Fe %	Al ₂ O ₃ %	SiO ₂ %	TiO ₂ %	LOI %	P %	S %
Measured	Massive	5.1	1.1	46.9	5.7	8.4	12.1	-0.2	0.01	0.3
Measured	Disseminated	1.1	0.8	36.4	7.9	19.6	9.0	0.5	0.01	0.2
Measured	Massive + disseminated	6.2	1.0	45.0	6.1	10.4	11.6	-0.1	0.01	0.3
Indicated	Massive	19.5	1.1	48.9	5.2	6.2	12.8	-0.1	0.01	0.2
Indicated	Disseminated	16.7	0.6	27.3	13.3	26.7	7.0	3.0	0.03	0.2
Indicated	Massive + disseminated	36.2	0.9	38.9	8.9	15.7	10.1	1.3	0.02	0.2
Inferred	Massive	36.5	1.1	46.7	6.0	8.3	12.3	0.4	0.01	0.2
Inferred	Disseminated	36.9	0.5	26.6	12.9	27.6	6.9	3.4	0.03	0.3
Inferred	Massive + disseminated	73.4	0.8	36.6	9.5	18.0	9.6	1.9	0.02	0.3
Total	Massive + disseminated	115.8	0.8	37.8	9.1	16.9	9.9	1.6	0.02	0.2

Notes: The Mineral Resource was estimated within constraining wireframe solids using a nominal 0.9% V₂O₅ lower cut-off grade for the massive magnetite zone and using a nominal 0.4% V₂O₅ lower cut-off grade for the banded and disseminated magnetite mineralisation zones. The Mineral Resource is quoted from all classified blocks within these wireframe solids above a lower cut-off grade of 0.4% V₂O₅. Differences may occur due to rounding.

Source: TMT ASX Announcement dated 7 November 2022 'MTMP Global Mineral Resource Upgrade Delivers 26% Increase to Measured and Indicated Resource'

Gabanintha North Ore Reserve (original TMT Reserve)

Gabanintha Ore Reserve at August 2022

Reserve Category	Tonnes (Mt)	V ₂ O ₅ (%)	Rec. V ₂ O ₅ (M lb)
Proven	1.1	0.95	18.1
Probable	27.5	0.89	369.4
Total	28.6	0.91	387.5

Note: Quantities have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding

Gabanintha Mineral Resource of Base Metals as at 26th March 2019

Classification	Tonnage (Mt)	Co (ppm)	Ni (ppm)	Cu (ppm)
Inferred	15.7	230	830	200

Source: TMT ASX Announcement dated 5 August 2022 'MTMP Mine Life Increased to 25 Years – Maiden Ilmenite Reserve and Production Profile'

Geology & Mining: Gabanintha South Resource Table (original AVL Resource)

Domains	Category	Mt	V ₂ O ₅ %	Fe %	TiO ₂ %	SiO ₂ %	Al ₂ O ₃ %	LOI %
HG 10	Measured	11.3	1.14	43.8	13.0	9.2	7.5	3.7
	Indicated	27.5	1.10	45.4	12.5	8.5	6.5	2.9
	Inferred	56.8	1.04	44.6	11.9	9.4	6.9	3.3
	Subtotal	95.6	1.07	44.7	12.2	9.1	6.8	3.2
LG 2-5	Measured	-	-	-	-	-	-	-
	Indicated	54.9	0.50	24.9	6.8	27.6	17.1	7.9
	Inferred	73.6	0.48	25.0	6.4	28.7	15.4	6.6
	Subtotal	128.5	0.49	24.9	6.6	28.2	16.1	7.2
Trans 6-8	Measured	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-
	Inferred	14.9	0.66	29.0	7.8	24.5	15.1	7.8
	Subtotal	14.9	0.66	29.0	7.8	24.5	15.1	7.8
Total	Measured	11.3	1.14	43.8	13.0	9.2	7.5	3.7
	Indicated	82.4	0.70	31.7	8.7	21.2	13.5	6.2
	Inferred	145.3	0.71	33.0	8.7	20.7	12.0	5.4
	Subtotal	239.0	0.73	33.1	8.9	20.4	12.3	5.6

Note: Mineral Resource estimate by domain and resource classification using a nominal 0.4% V₂O₅ wireframed cut-off for low grade and nominal 0.7% V₂O₅ wireframed cut-off for high grade (total numbers may not add up due to rounding)

Geology & Mining: Gabanintha South Ore Reserve Table¹ (original AVL Reserve)

The updated Ore Reserve for the Australian Vanadium Project 2022 Bankable Feasibility Study is detailed in the table below

Ore Reserve	Mt	V ₂ O ₅ %	Fe ₂ O ₃ %	TiO ₂ %	SiO ₂ %	LOI%	V ₂ O ₅ production kt	Ore Reserve	Mt
Proved	10.5	1.11	61.6	12.8	9.5	3.7	70.9	Waste	238.5
Probable	20.4	1.07	63.4	12.2	9.2	3.0	152.9	Total Material	269.4
Total Ore	30.9	1.09	62.8	12.4	9.3	3.2	223.8	Strip Ratio	7.7

The Ore Reserves and Inferred Resources utilised for the life of mine (LOM) schedule for the Australian Vanadium Project 2022 Bankable Feasibility Study, inclusive of the Ore Reserve above, is detailed in the table below.

Ore Reserve	Mt	V ₂ O ₅ %	Fe ₂ O ₃ %	TiO ₂ %	SiO ₂ %	LOI%	V ₂ O ₅ production kt	Ore Reserve	Mt
Proved	10.5	1.11	61.6	12.8	9.5	3.7	70.9	Waste	296.5
Probable	20.4	1.07	63.4	12.2	9.2	3.0	152.9	Total Material	335.7
Inferred Resources	8.2	1.04	63.4	12.0	9.2	3.1	57.6	Strip Ratio	7.6
Total Ore	39.2	1.08	62.9	12.3	9.3	3.2	281.4		

The Ore Reserve for the Australian Vanadium Project 2022 Bankable Feasibility Study was developed by Orelogy Consulting Pty Ltd. The economic evaluation of the Project in this presentation is underpinned by Reserves and Inferred Resources comprising:

- The Ore Reserve including both Proved and Probable classified material
- Additional Inferred Mineral Resources comprising approximately 20.5% of the proposed process plant feed material

1. Note: Tonnage and contained metal have been rounded to reflect the accuracy of the estimate, and numbers might not add due to rounding

Yarrabubba Mineral Resource Estimate (original TMT Resource)

Yarrabubba Mineral Resources as at 7th November 2022

Classification	Material	Mt	V ₂ O ₅ %	Fe %	Al ₂ O ₃ %	SiO ₂ %	TiO ₂ %	LOI %	P %	S %
Measured	Massive	4.4	1.1	48.1	5.5	7.3	12.4	-0.4	0.01	0.3
Measured	Disseminated	1.5	0.6	30.0	10.8	23.4	7.7	2.5	0.01	0.2
Measured	Massive + disseminated	5.9	1.0	43.5	6.8	11.4	11.2	0.3	0.01	0.3
Indicated	Massive	8.0	1.1	48.1	5.4	7.1	12.5	0.0	0.01	0.3
Indicated	Disseminated	6.9	0.6	28.4	12.5	25.2	7.2	2.6	0.02	0.3
Indicated	Massive + disseminated	14.9	0.9	39.0	8.7	15.5	10.0	1.2	0.01	0.3
Inferred	Massive	5.7	1.1	47.4	5.6	7.8	12.3	0.1	0.01	0.3
Inferred	Disseminated	11.4	0.6	27.9	12.6	25.8	7.2	2.0	0.02	0.3
Inferred	Massive + disseminated	17.1	0.8	34.4	10.3	19.8	8.9	1.4	0.02	0.3
Total	Massive + disseminated	37.9	0.8	37.6	9.1	16.8	9.7	1.1	0.01	0.3

Notes: The Mineral Resource was estimated within constraining wireframe solids using a nominal 0.9% V₂O₅ lower cut-off grade for the massive magnetite zone and using a nominal 0.4% V₂O₅ lower cut-off grade for the banded and disseminated magnetite mineralisation zones. The Mineral Resource is quoted from all classified blocks within these wireframe solids above a lower cut-off grade of 0.4% V₂O₅. Differences may occur due to round

For further information, refer to ASX Announcement 7 November 2022.

Source: TMT ASX Announcement dated 7 November 2022 'MTMP Global Mineral Resource Upgrade Delivers 26% Increase to Measured and Indicated Resource'

Yarrabubba Ore Reserve (original TMT Reserve)


Yarrabubba Ore Reserve at August 2022


Category	Tonnes (Mt)	V ₂ O ₅ (%)	TiO ₂ (%)	Rec. V ₂ O ₅ (M lb)	Rec. TiO ₂ (kt)
Proven	–	–	–	–	–
Probable	15.88	0.87	10.0	202.7	1,132.6
Total	15.88	0.87	10.0	202.7	1,132.6

Note: Quantities have been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding

Source: TMT ASX Announcement dated 5 August 2022 'MTMP Mine Life Increased to 25 Years – Maiden Ilmenite Reserve and Production Profile'



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