

LARGO PHYSICAL VANADIUM

Invest in a greener future

Investor Presentation
January 2024

TSX.V: VAND, OTCQX: VANAF
www.lpvanadium.com

DISCLAIMERS

DISCLAIMER

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This presentation contains forward-looking information under applicable securities laws, some of which may be considered “financial outlook” for the purposes of application Canadian securities legislation (“forward-looking statements”). Forward-looking statements in this presentation include, but are not limited to, statements with respect to: the rising demand for physical vanadium, VFBs, and stationary energy storage; the sufficiency of any rental payments to adequately offset administrative and corporate expenses; projections concerning supply, production and consumption of vanadium, including without limitation the probability of a vanadium supply deficit and the probability and impact of new vanadium suppliers entering the market; the effect of green initiatives, including, without limitation, decarbonization and new economy use cases, and infrastructure spending, on the demand for vanadium; the effect of vanadium based improvements to lithium-ion battery technology; the ability to allocate operating costs in an advantageous manner; the availability of rental vanadium contracts with VFB customers on terms acceptable to VAND; sufficient investor interest in direct exposure to physical vanadium generally, and VAND specifically; VAND’s ability to enter into key agreements on the terms set out herein; the ability to successfully market and attract investment in VAND; obtaining necessary stock exchange approvals; the effect of vanadium rental contracts on VFB cost; the effect of VAND on the liquidity of vanadium market;

the increased adoption of VFB technology generally; and global interest in and uptake of green products containing vanadium. Forward-looking statements pertaining to Largo Inc. (“Largo”) which may impact VAND in this presentation include, but are not limited to, statements with respect to its ability to operate and grow its VFB business; its ability to direct its vanadium supply toward VFBs; its production and manufacturing capacity; and its ability to market and sell its VCHARGE± battery system on specification and at a competitive price.

Forward-looking statements can be identified by the use of forward-looking terminology such as “plans”, “expects” or “does not expect”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates” or “does not anticipate”, or “believes”, or variations of such words and phrases or statements that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur” or “be achieved”. All information contained in this news release, other than statements of current and historical fact, is forward looking information. Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of VAND or Largo to be materially different from those expressed or implied by such forward-looking statements. Forward-looking statements are based on the opinions and estimates of management as of the date such statements are made. Although management of VAND has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements. VAND and Largo do not undertake to update any forward-looking statements, except in accordance with applicable securities laws.

INVESTMENT SUMMARY

Largo Physical Vanadium Corp. (TSX.V: VAND, OTCQX: VANAF) is a **vanadium holding company** that purchases and holds physical vanadium



Physical ownership of vanadium provides direct exposure to vanadium price without exploration, operational, or financing risk



Vanadium is essential to steel and energy decarbonization. LPV provides unique opportunity to actively power green revolution



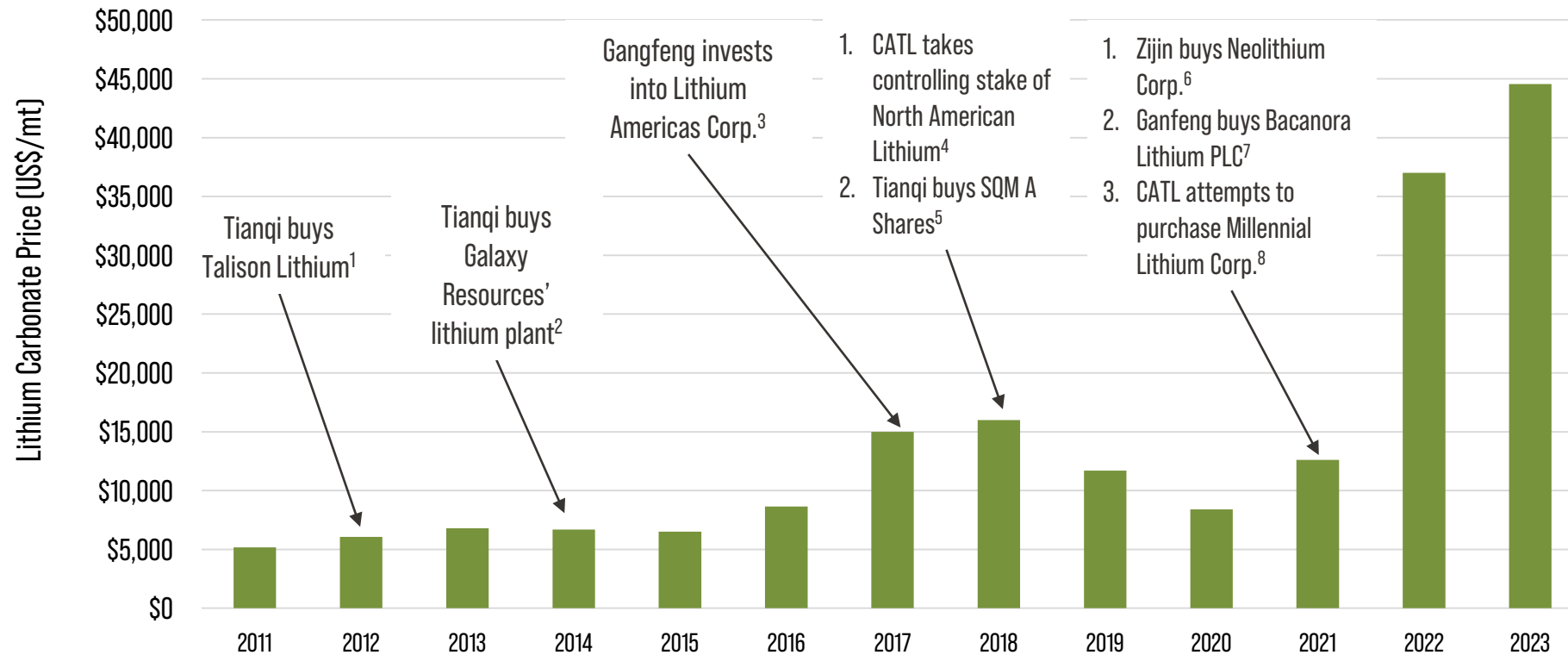
Enable the energy transition: Vanadium can be stored in vanadium flow batteries generating storage revenue rather than incurring storage fees



Expected reduced administration expenses with rental payments received from battery customers



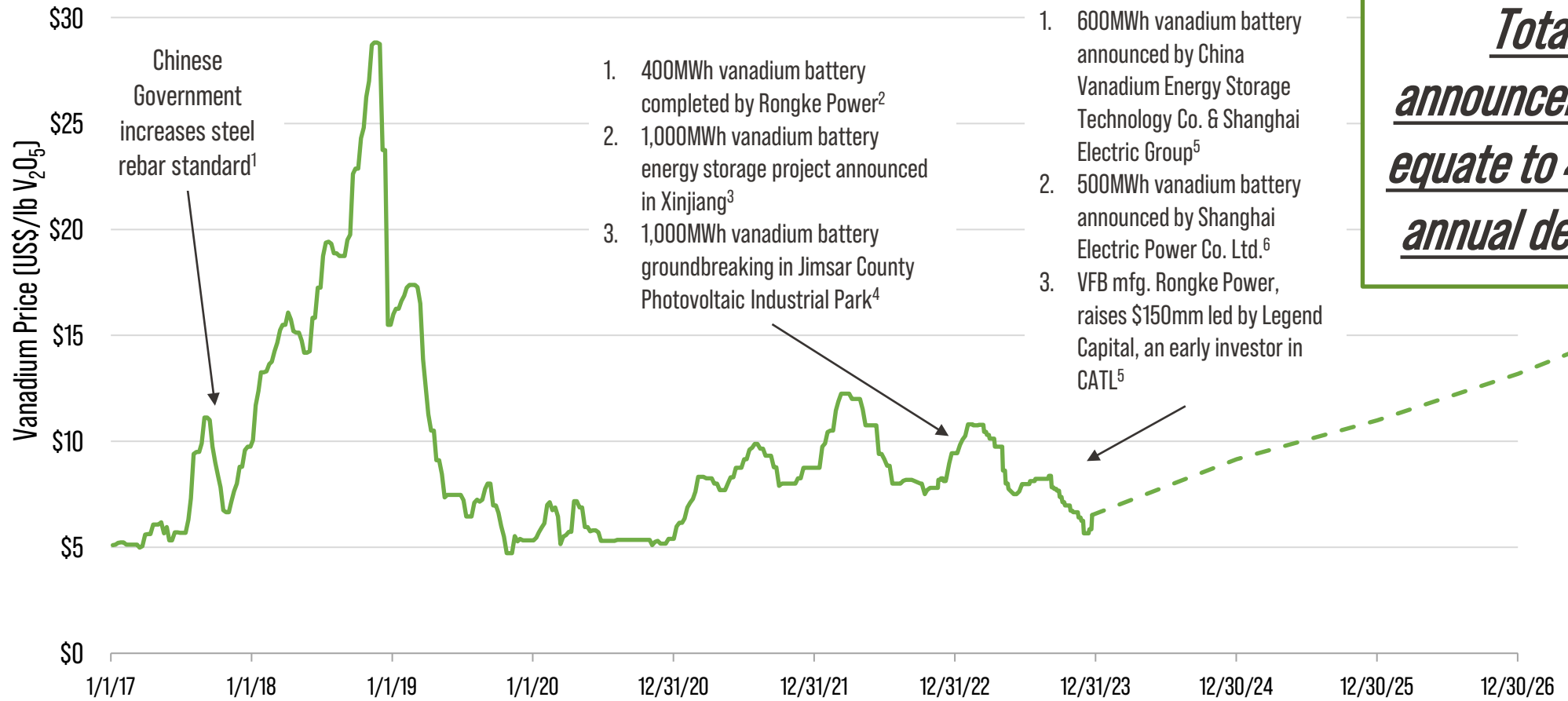
CHINA LED THE LITHIUM BOOM BEFORE THE PRICE SPIKE



Source: Statista, Benchmark

1. <https://www.prnewswire.com/news-releases/chengdu-tianqi-agrees-to-acquire-talison-lithium-511341741.html>
2. <https://www.proactiveinvestors.com.au/companies/news/154757/galaxy-resources-to-sell-jiangsu-lithium-carbonate-plant-to-sichuan-tianqi-54604.html>
3. <https://www.lithiumamericas.com/news/lithium-americas-closes-us-172-million-strategic-financing-with-ganfeng-lithium>
4. <https://www.ft.com/content/4a59e8d0-261f-11e8-b27e-cc62a39d57a0>
5. <https://www.nutrien.com/investors/news-releases/2018-tianqi-lithium-agrees-purchase-nutriens-sqm-share-investment>
6. <https://www.newswire.ca/news-releases/zijin-mining-to-acquire-neo-lithium-corp-in-all-cash-offer-852178076.html>
7. <https://www.nasdaq.com/articles/chinas-ganfeng-agrees-takeover-of-bacanora-lithium-in-%24264.5-mln-deal-2021-05-06>
8. <https://www.cbc.com/2021/09/29/chinese-battery-maker-catl-to-acquire-canadas-millennial-lithium.html>

CHINA NOW LEADING THE WAY IN VANADIUM



***Total
announcements
equate to 43% of
annual demand***

Source:

1. <https://vanitec.org/latest-from-vanitec/article/vanitec-applauds-new-stricter-chinese-rebar-standard/>
2. <https://www.py-magazine.com/2022/09/29/china-connects-worlds-largest-redox-flow-battery-system-to-grid/>
3. <https://www.seetao.com/details/183647.html>
4. <http://m.solarzoom.com/marticle/170196>
5. Vanitec
6. [100MW/500MWh_1_Panzhuhua_Vanadium_Titanium_High-tech_Zone_signed_a_contract_with_for_the_all-vanadium_flow_energy_storage_demonstration_power_station_project_-_China_Energy_Storage_Network_\(escn.com.cn\)](http://www.100MW/500MWh_1_Panzhuhua_Vanadium_Titanium_High-tech_Zone_signed_a_contract_with_for_the_all-vanadium_flow_energy_storage_demonstration_power_station_project_-_China_Energy_Storage_Network_(escn.com.cn))

POTENTIAL FOR 100% INCREASE IN ANNUAL DEMAND

Massive Growth Declared at Industry Conference: March 2023



- Expects cumulative 180 GWh of Vanadium Flow Battery (“VFB”) installation by 2030, requiring 1.44 million tons of V_2O_5 ¹
- Equivalent to ~100% of current vanadium supply through 2030 (Total 2022 supply was 208k tons V_2O_5).
- Vanadium could be undersupplied by ~95%
- Vanadium production is mostly a by-product, supply response limited with no new primary mines financed or in construction

Source:

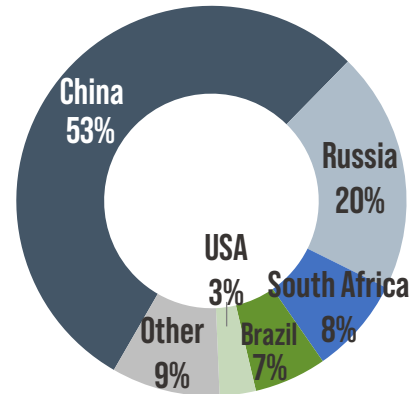
1. Dalian Institute of Chemical Physics, Chinese Academy of Science

VANADIUM MARKET OVERVIEW

- Total market size of ~\$3.6 billion at \$8/lb V₂O₅;
- Vast majority transacts on annual contracts;
- Inelastic Supply: ~70% of vanadium is byproduct of steel production using blast furnaces and low-quality iron ore.

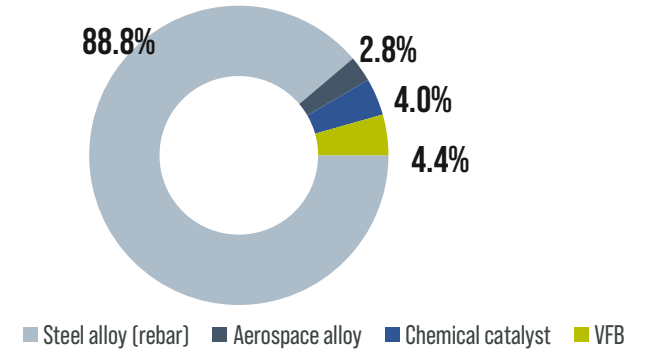
Global Vanadium Supply

By Region



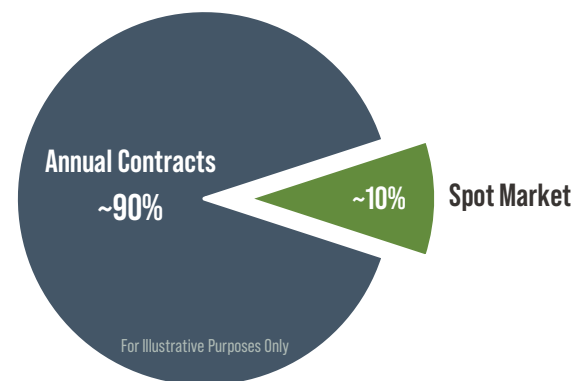
Global Vanadium Demand

By Region



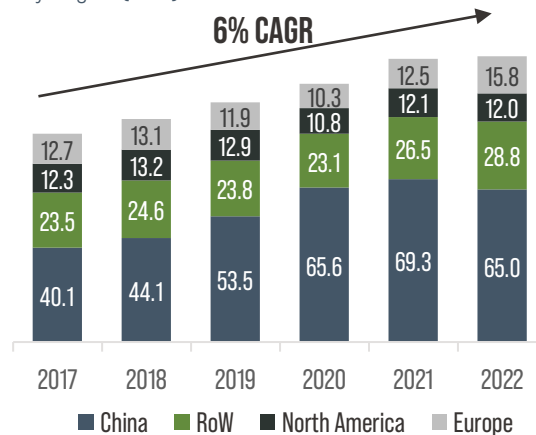
Vanadium Market Sales Distribution

(%)



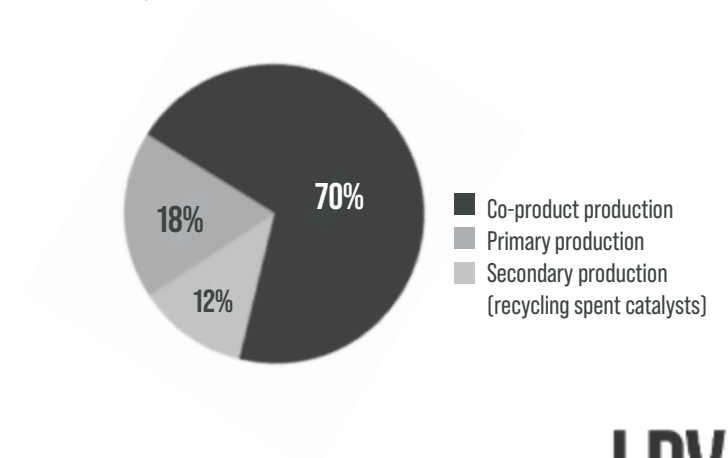
Vanadium Consumption

By Region (MTV)



Global Vanadium Production

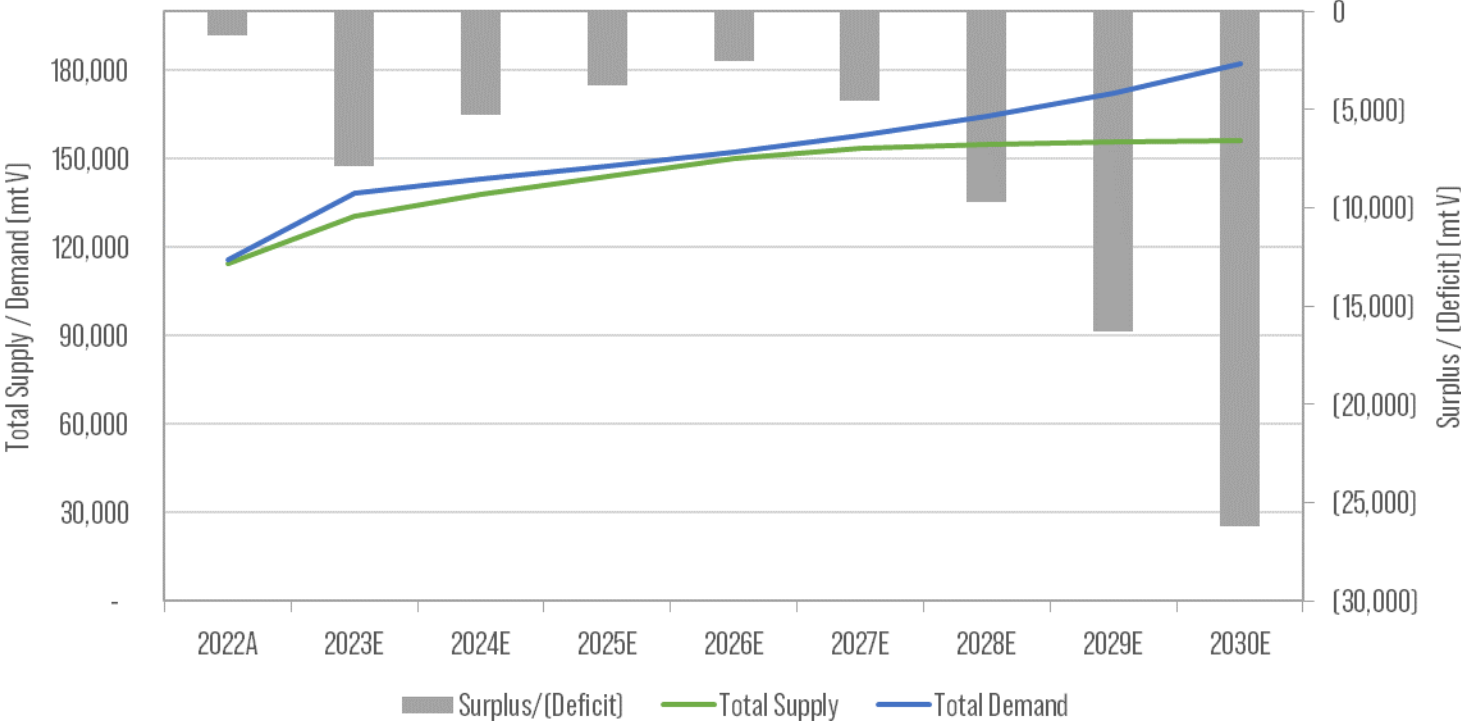
By Method (MTV)



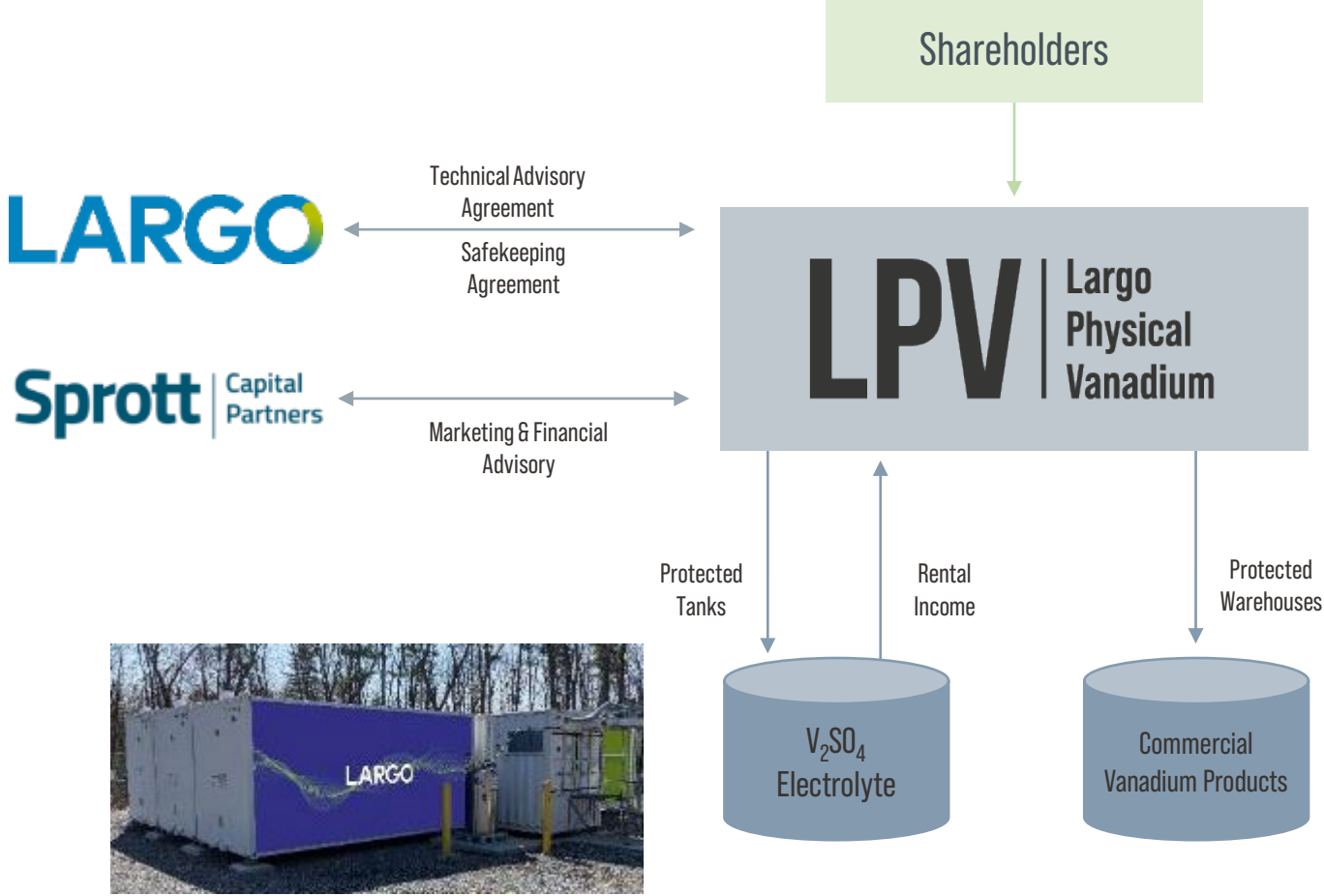
CURRENT SUPPLY DEFICIT TO PERSIST

- Difficult, capital intensive and lengthy to bring new vanadium to market; only one new vanadium mine in over ~30 years
- Strong increase in demand expected from Long Duration Energy Storage applications. Batteries are the 2nd largest vanadium application globally

Projected Vanadium Supply/Demand Balance



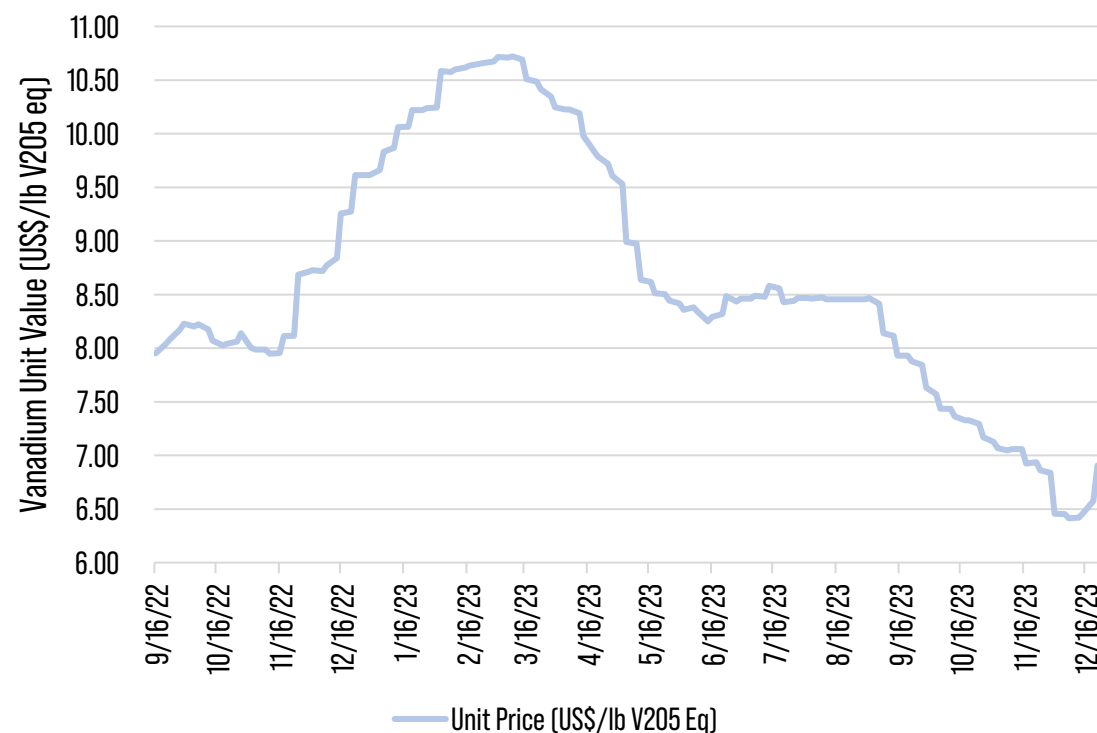
VAND:TSXV / VANAF:OTCQX STRUCTURE



CAPITAL STRUCTURE (TSX.V: VAND, OTCQX: VANAF)

Share Price [C\$/sh] ¹	\$1.10
Shares Outstanding (mm)	16.82
Options/Warrants (mm)	Nil
Fully-Diluted (mm)	16.82
Market Cap [C\$mm] ¹	\$18.1
Cash [C\$mm] ²	\$1.8
Debt [C\$mm]	Nil
Vanadium Owned [C\$mm] ³	\$25.3
Net Asset Value per Share [C\$/sh]	\$1.54

VAND Vanadium Unit Portfolio Price Since Inception



Notes:

1. As of 12/27/2023
2. As of 12/27/2023, unaudited and gross of GST/HST Receivables
3. As of 12/27/2023 unaudited and purchases recognized at time of transaction and not delivery. Value of vanadium based on market prices provided by FastMarkets, CRU, and Ferroalloy.net that is based on location and product type

Management and Directors



Paul Vollant
CEO/Director

- ✓ Over 15 years of experience in the sales and marketing of strategic metals and minerals



Jonathan Lee
Chairman

- ✓ Director at Arias Resource Capital with over 20 years of experience in engineering and finance, including 13 years in metals and mining



John Kanellitsas
Director

- ✓ Vice Chairman of Lithium Americas Corp. (LAC:US) and former COO Geologic Resource Partners, LLC



Carmelo Marrelli
CFO

- ✓ Over 20 years of providing accounting and regulatory compliance services to listed companies on TSX and TSXV



Larry Ciccarelli
Director

- ✓ President and Secretary of Rinlar Inc., a private family office, and the Vice President and Secretary of a private investment firm, KARR Securities



Erik Bethel
Director

- ✓ General Partner of Americas Frontier Fund and former US representative for the World Bank

SUMMARY



Invest in commodity associated with a superior energy transition technology without operational, exploration, or financing risk



Physical ownership with secure title and transparent market pricing



Vanadium rental structure to reduce expenses and enable deployment of vanadium flow batteries



Expected Upside Driven By:

- 1 Inelastic production expected to taper over time with transition away from blast furnaces and fossil fuels, while;
- 2 VAND could dramatically reduce VFB cost to battery customer, driving VFB and vanadium demand without affecting battery cost;
- 3 VAND expected to help create a more a liquid vanadium market for new investors, driving demand

Vanadium Price Overview



APPENDIX

VANADIUM: SUPPORTING THE NEW ECONOMY

Vanadium is key transition metal used in **green steel** and **energy storage** applications. Decarbonization expected to drive fast increases in demand.



Demand for low-carbon technology should require 173% more vanadium production by 2050

- Vanadium contributes to reducing 0.38% of global fossil carbon footprint from its use in micro alloyed steel
 - Stationary energy storage to grow at a 43% CAGR over the next 5 years
 - Driven by the integration low-cost renewables and new net-zero policy



Long duration vanadium batteries in conjunction with wind and solar, are ideal for the replacement of fossil fuel power plants



Vanadium supports the ESG investment case with non-degrading, full recyclable electrolyte and carbon reducing steel alloying applications

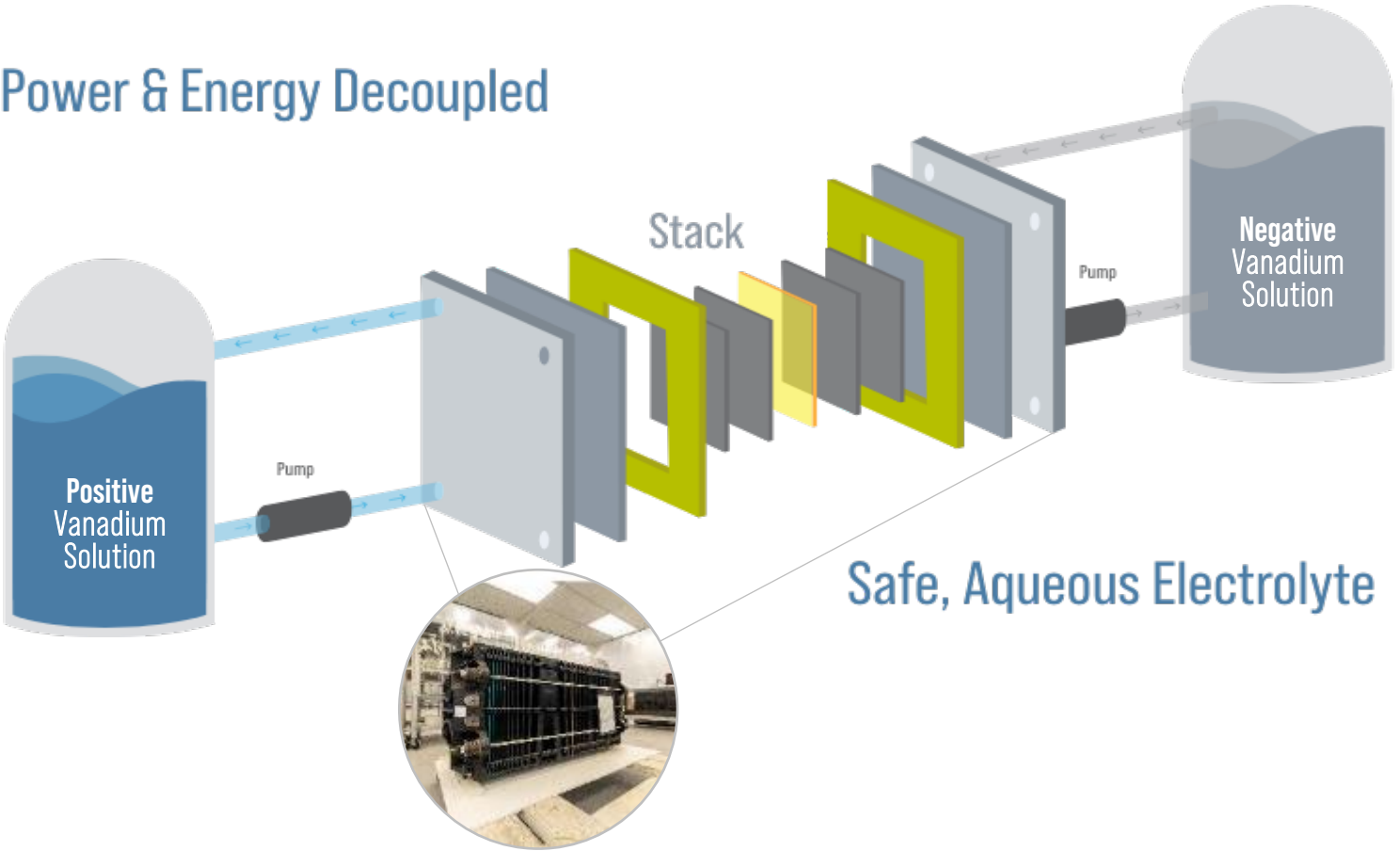
- 78% less carbon emissions emitted vs. Li-ion



Growth in new economy use cases is expected to drive additional global demand for vanadium

VFB: Batteries Designed to Last for Decades

Power & Energy Decoupled



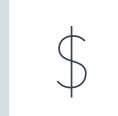
Safe, Aqueous Electrolyte



Vanadium electrolyte in cathode and anode eliminating cross contamination

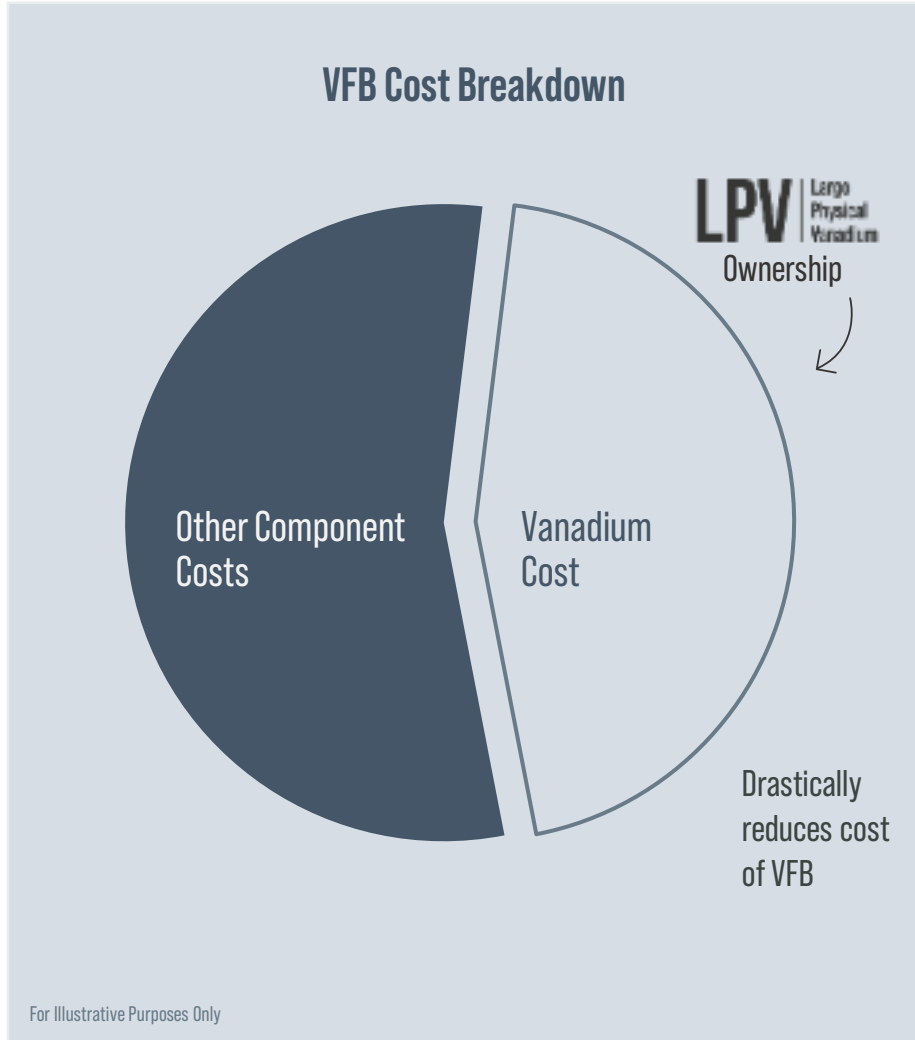


Batteries last for decades, are reusable, and non-degrading electrolyte allows for unlimited use



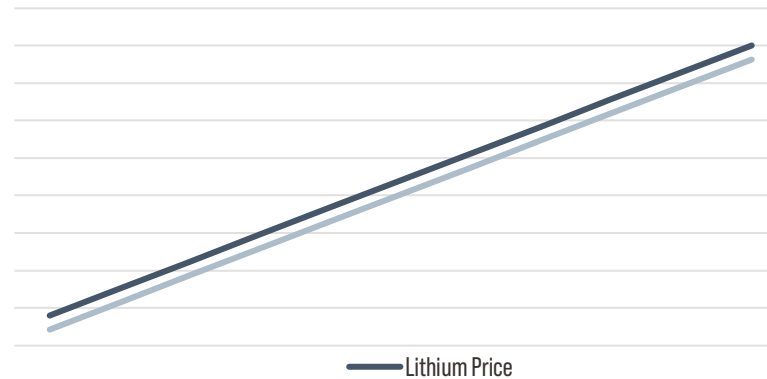
~40 to 50% of battery cost is vanadium electrolyte

VAND: ENABLING THE ENERGY TRANSITION



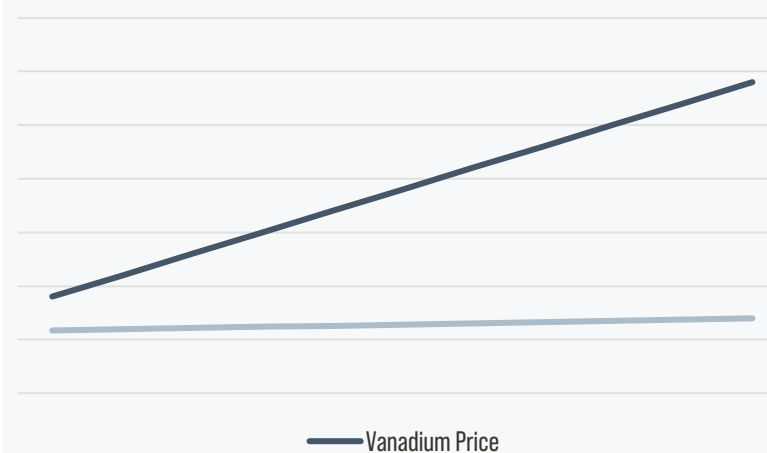
Lithium Price vs. Li-ion Battery Cost

For Illustrative Purposes Only



Vanadium Price vs. VFB Cost

For Illustrative Purposes Only



“fundamental cost advantage in flow cells with an asterisk: given the low cost electroactives. Vanadium works today. If vanadium was super low cost and it had a stable price, we could all go home. Ok, the fact is its not stable so what’s why people look to other chemistries”

- Sue Babinec, Program Lead
Stationary Storage



LPV | Largo
Physical
Vanadium

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