

# LARGO PHYSICAL VANADIUM

Invest in a greener future

Investor Presentation  
February 2023

# DISCLAIMERS

## DISCLAIMER

Largo Physical Vanadium Corp. ("VAND") has not authorized anyone to provide prospective investors with additional or different information. VAND is not offering to sell shares or other securities in any jurisdiction where the offer or sale of such securities is not permitted.

## Market and Industry Data

This corporate presentation of VAND includes market and industry data and forecasts that were obtained from third-party sources, industry publications and publicly available information. Third-party sources generally state that the information contained therein has been obtained from sources believed to be reliable, but there can be no assurance as to the accuracy or completeness of included information. Although management believes it to be reliable, management has not independently verified any of the data from third-party sources referred to in this presentation or analyzed or verified the underlying studies or surveys relied upon or referred to by such sources, or ascertained the underlying economic assumptions relied upon by such sources.

## Forward-Looking Statements

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, VRFBs, 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 VRFB 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 VRFB cost; the effect of VAND on the liquidity of vanadium market;

the increased adoption of VRFB 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 VRFB business; its ability to direct its vanadium supply toward VRFBs; 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) is a new publicly listed vanadium holding company that purchases and holds physical vanadium



**Direct exposure to physical vanadium price**



**Advised by Largo, a tier one vertically integrated, mining and vanadium flow battery (VRFB) company and Sprott Capital Partners**



**Secure storage of vanadium through Largo's Safekeeping agreement**



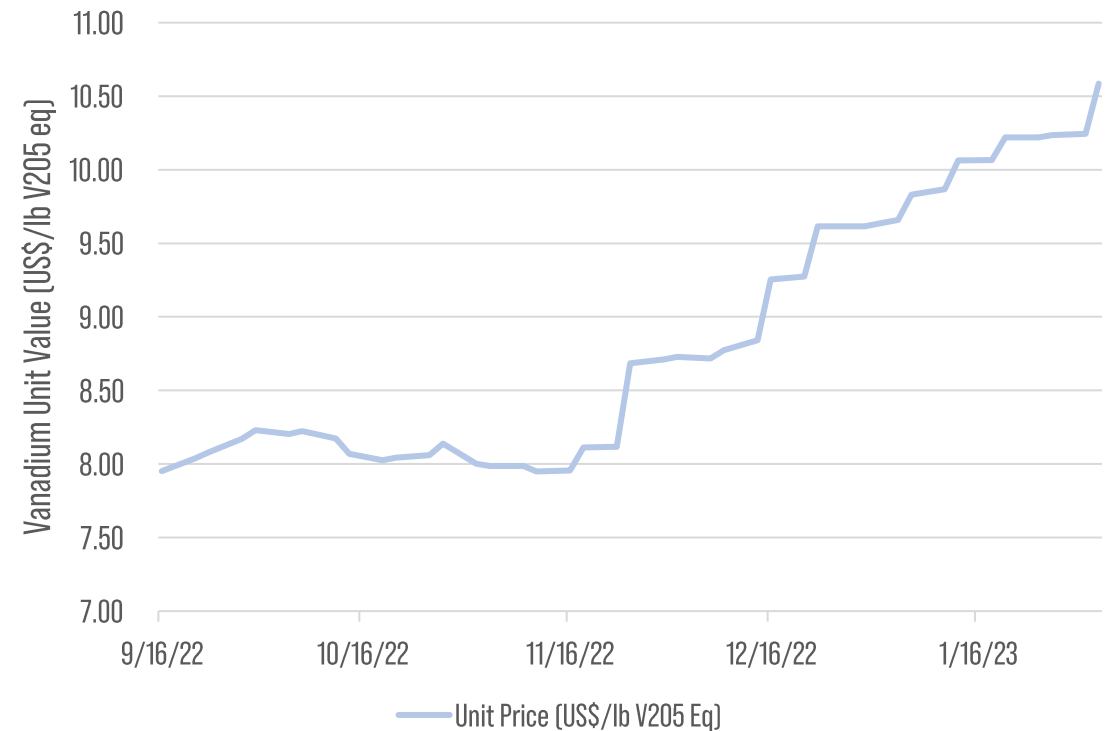
**Reduced management expense ratio—Anticipated that a portion of VAND's administration expenses will be offset by rental payments received from battery customers**



# CAPITAL STRUCTURE (TSX.V: VAND)

Share Price [C\$/sh] <sup>1</sup>	\$1.76
Shares Outstanding (mm)	16.82
Options/Warrants (mm)	Nil
Fully-Diluted (mm)	16.82
Market Cap [C\$mm] <sup>1</sup>	\$29.6
Cash [C\$mm] <sup>2</sup>	\$2.2
Debt [C\$mm]	Nil
Vanadium Owned [C\$mm] <sup>3</sup>	\$41.0
Net Asset Value per Share [C\$/sh]	\$2.56

VAND Vanadium Unit Portfolio Price Since Inception



Notes:

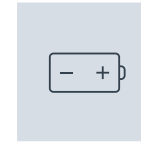
1. As of 2/3/2023
2. As of 2/3/2023, unaudited and net of accrued accounts payable
3. As of 2/3/2023, unaudited and purchases recognized at time of transaction and not delivery. Value of vanadium based on market prices provided by FastMarkets, CRU, and Ferroalloy.net that is based on location and product type

# VANADIUM DEMAND DRIVEN BY NEW USE CASES

Growth in VRFBs may put upward pressure on prices without new supply

- In tight market the 2017/2018's price increase was driven by revision to Chinese rebar standards
- VAND is expected to be a demand driver in small spot vanadium market
- Symbiotic Relationship: VAND expected to lower VRFB installation costs and improve competitiveness to other long duration grid storage solutions, driving increased sales and vanadium demand

## Vanadium Price Overview



### Energy Storage

- ✓ V<sub>2</sub>O<sub>5</sub> is ideally suited to grid storage solutions
- ✓ Global stationary battery installations expected to reach over 600 GWh by 2030
- ✓ ~10,000 mt of V<sub>2</sub>O<sub>5</sub> is required for each GWh of VRFB energy storage



### Greener Steel

- ✓ Global push for the utilization of lower-carbon steel
- ✓ 1 kg of vanadium in 1 tonne of steel increases its tensile strength by ~84%; Less steel required in infrastructure projects



### Developing Countries

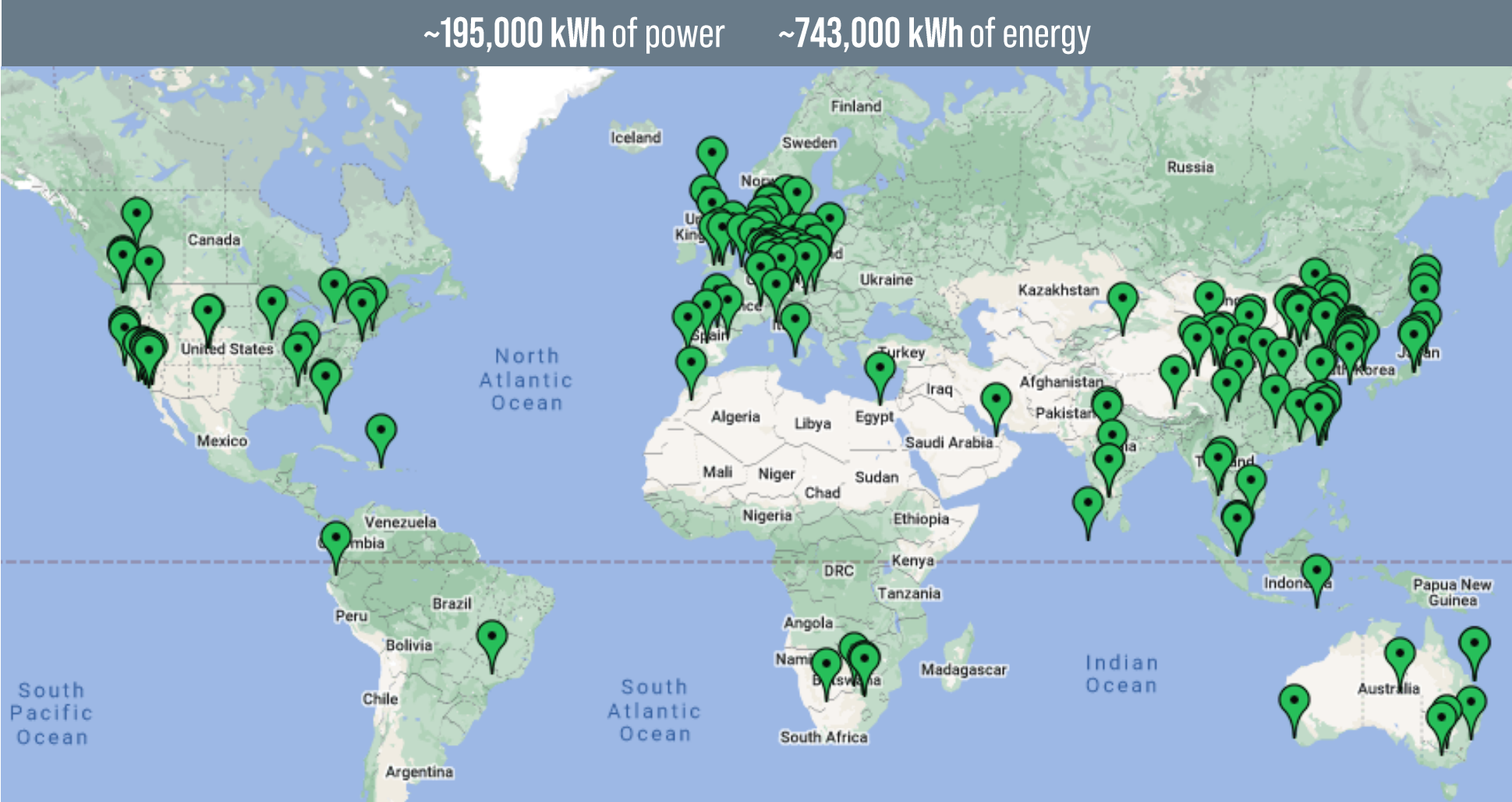
- ✓ Developing countries expected to drive consumption through new steel production and changes in the regulatory environment.



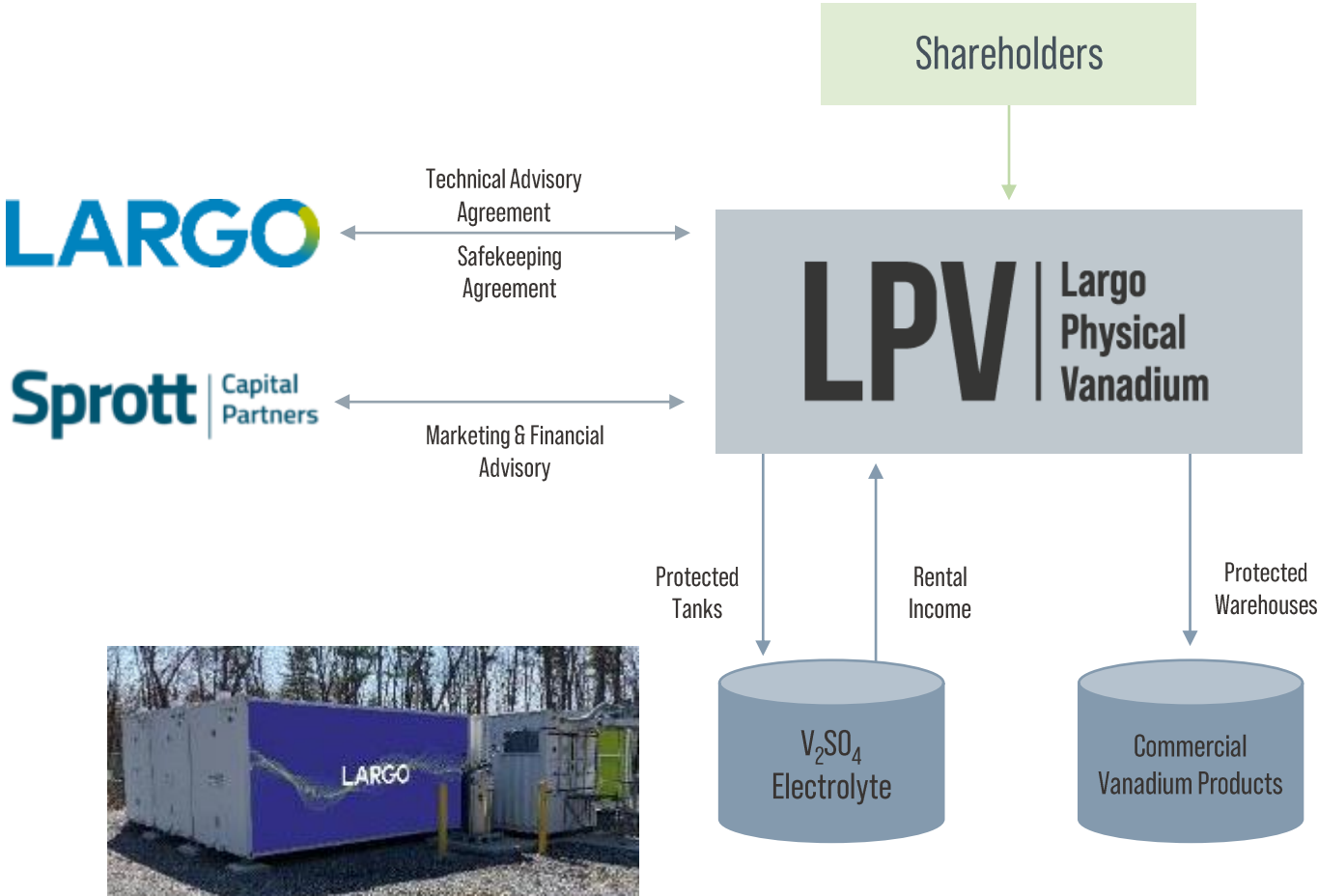
### Infrastructure Investment

- ✓ Infrastructure spending programs expected to boost steel and vanadium consumption.

# 185 OPERATIONAL VRFB INSTALLATIONS, JUST GETTING STARTED.



# VAND:TSXV STRUCTURE



# SUMMARY



Opportunity to invest in the underlying commodity associated with a superior energy transition technology and its role in major global ESG initiatives



Physical ownership with secure title and transparent market pricing



Vanadium electrolyte rental structure expected to cover a portion of VAND expenses



## Expected Upside Driven By:

- 1 Inelastic production expected to taper over time with transition away from blast furnaces and fossil fuels, while;
- 2 VAND expected to dramatically reduce VRFB cost to battery customer, driving VRFB demand, driving 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



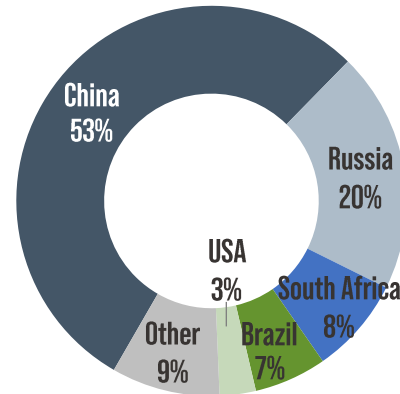
**Growth in new economy use cases is expected to drive additional global demand for vanadium**

# VANADIUM MARKET OVERVIEW

- Total market size of ~\$4 billion at \$9 / lb V<sub>2</sub>O<sub>5</sub>; Vast majority of market transacts on annual contracts;
- Inelastic Supply: ~70% of vanadium is byproduct of steel production using blast furnaces and low-quality iron ore.

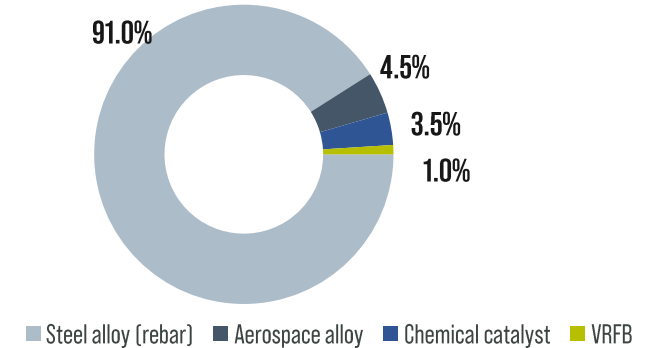
## Global Vanadium Supply

By Region



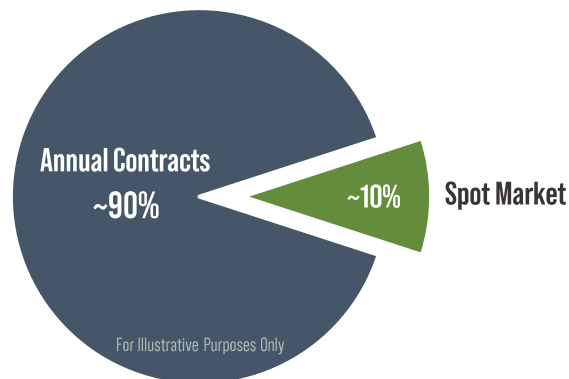
## Global Vanadium Demand

By Region



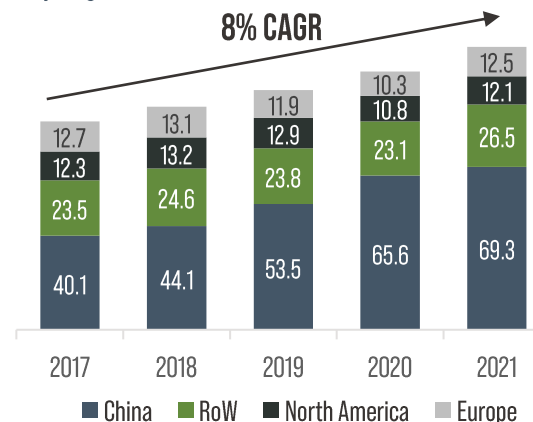
## Vanadium Market Sales Distribution

(%)



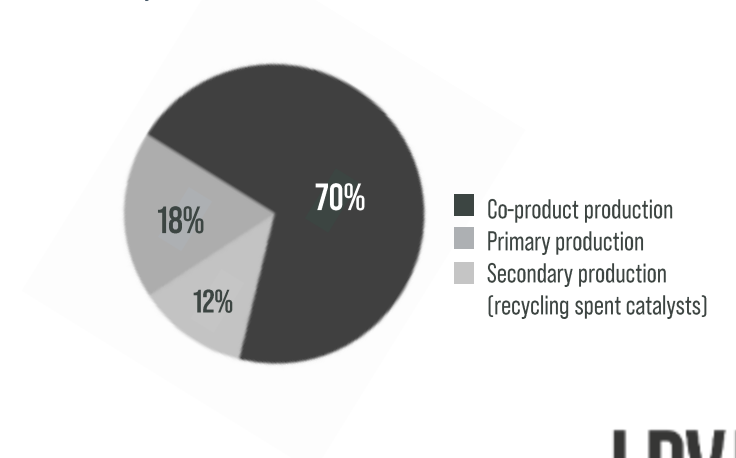
## Vanadium Consumption

By Region (MTV)



## Global Vanadium Production

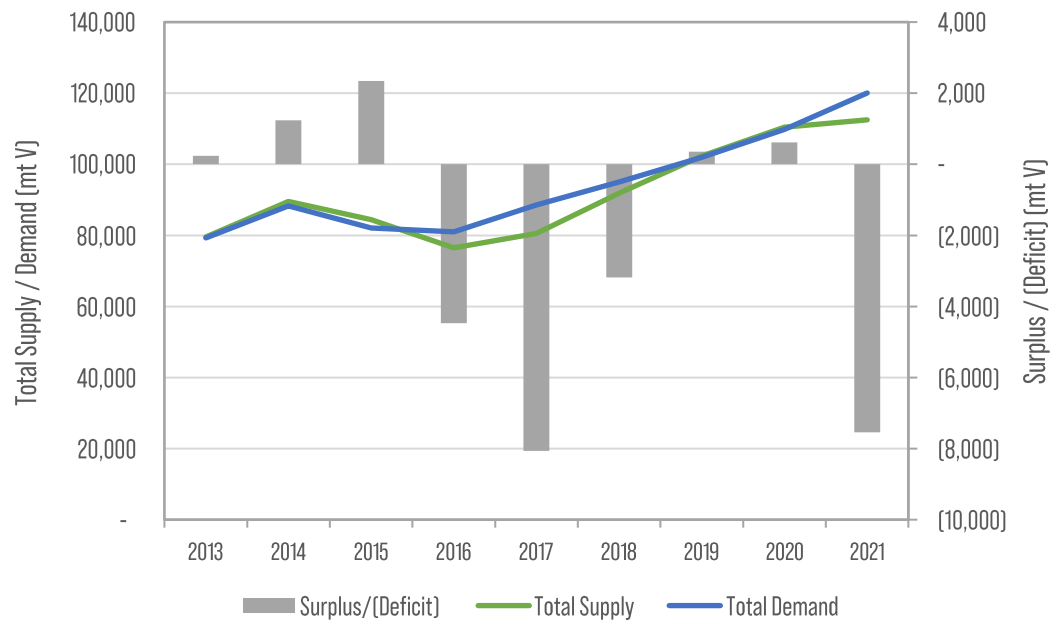
By Method (MTV)



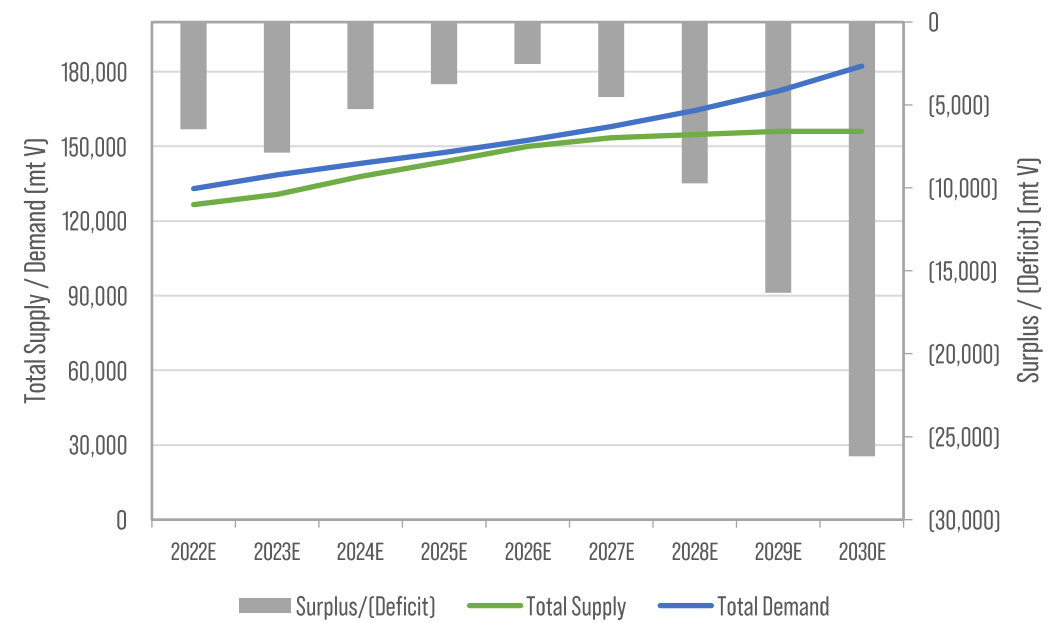
# CURRENT SUPPLY DEFICIT TO PERSIST

- Difficult and lengthy to bring new vanadium to market; Largo's Maracás Menchen Mine is only new vanadium mine in over ~30 years
- Lower iron ore prices and Chinese restrictions aiming to reduce carbon emissions are expected to decrease production

## Historical Vanadium Supply/Demand Balance

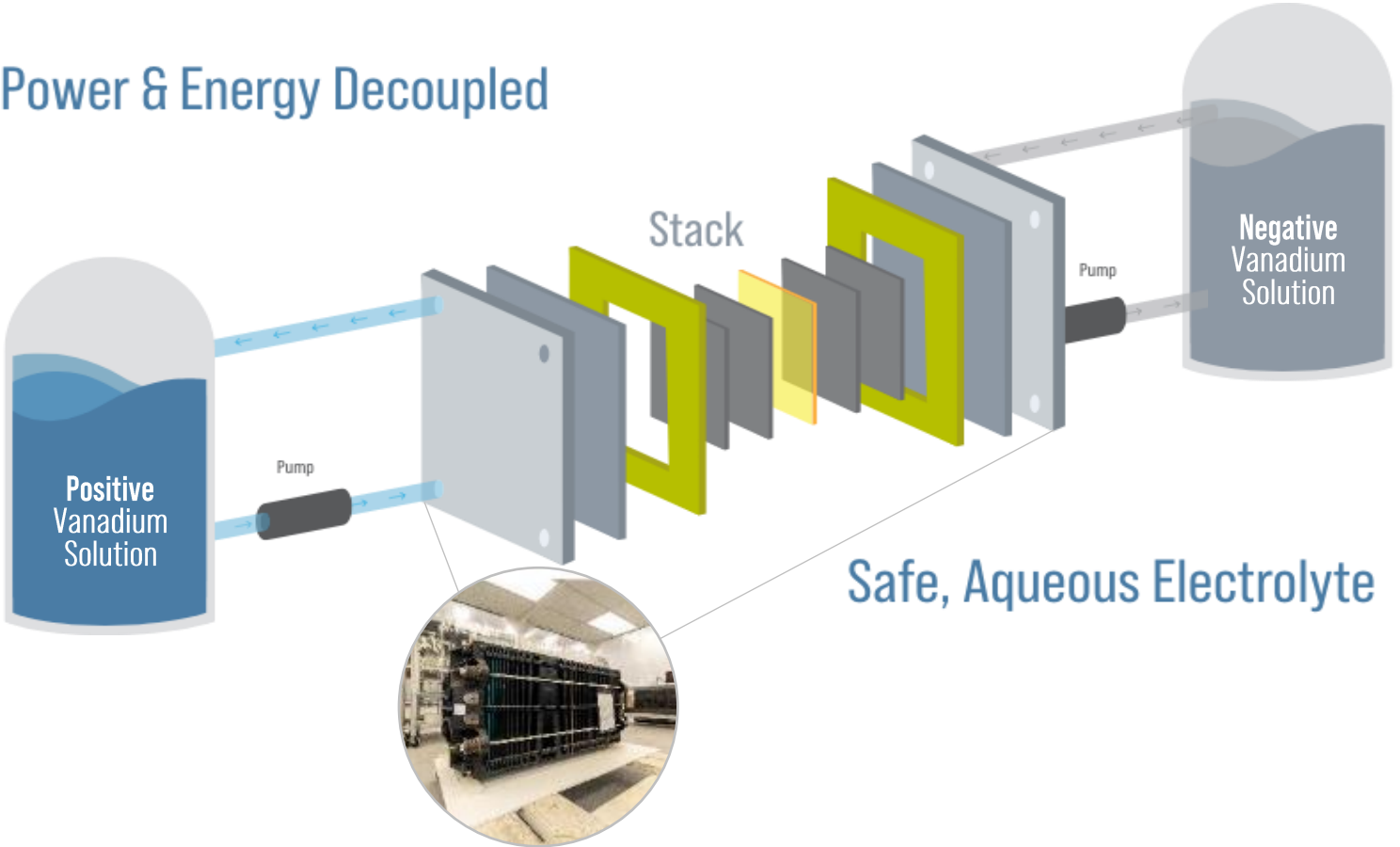


## Projected Vanadium Supply/Demand Balance



# VRFB: Batteries Designed to Last for Decades

## Power & Energy Decoupled



Vanadium electrolyte in cathode and anode eliminating cross contamination

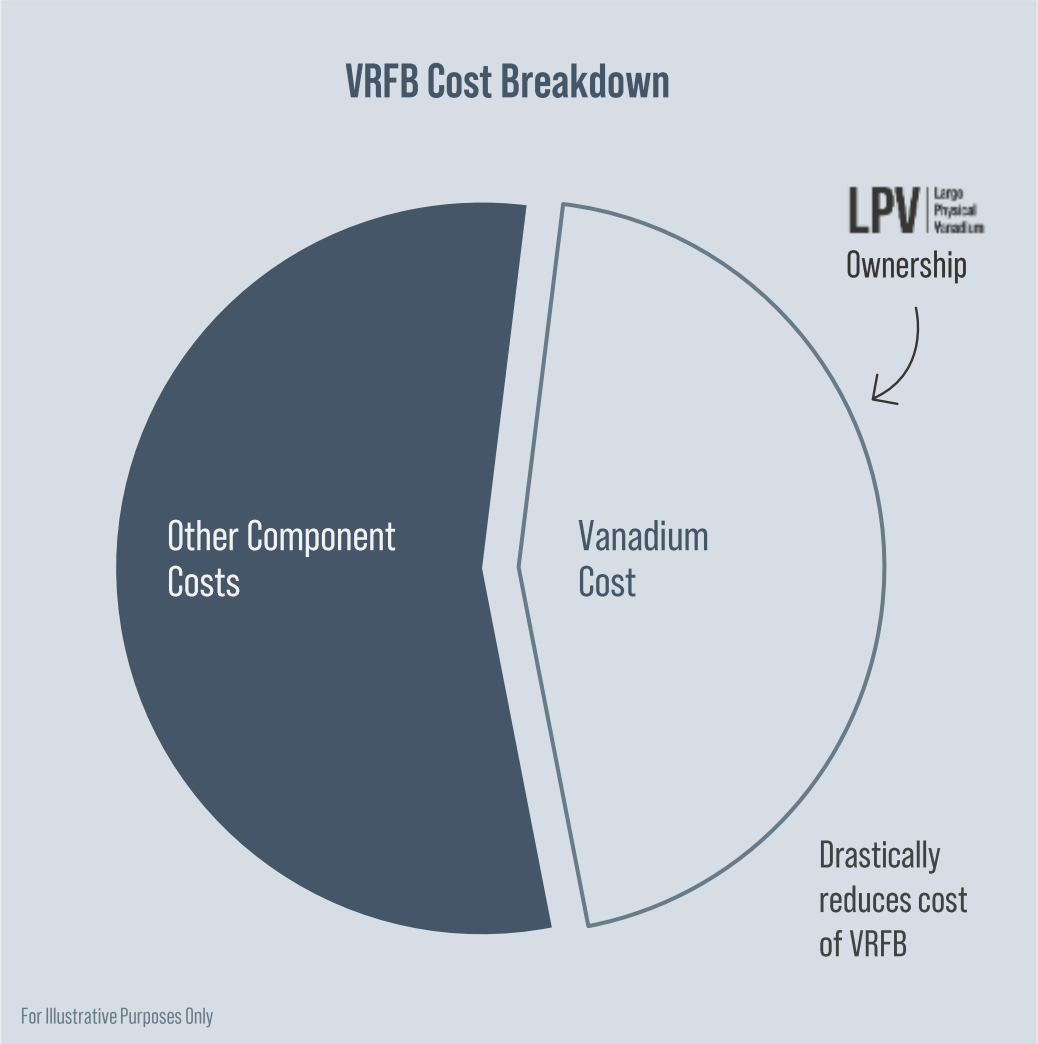


Batteries last for decades, are reusable, and non-degrading electrolyte allows for unlimited use



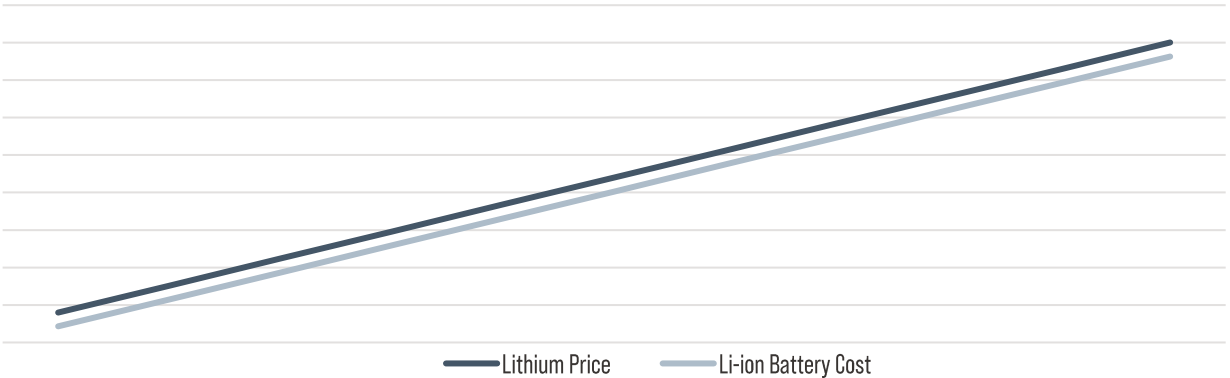
~40 to 50% of battery cost is vanadium electrolyte

# VAND & VRFB: Innovative Business Model



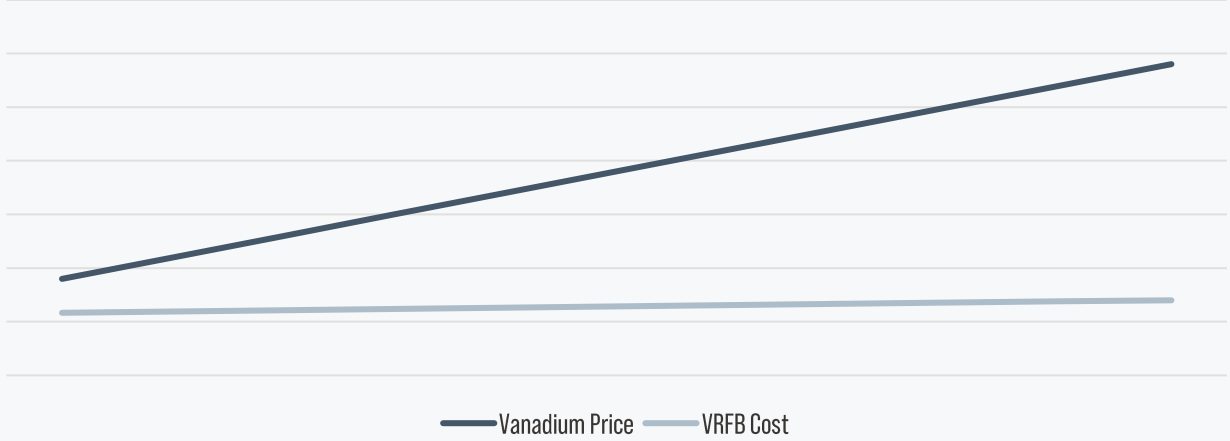
### Lithium Price vs. Li-ion Battery Cost

For Illustrative Purposes Only



### Vanadium Price vs. VRFB Cost

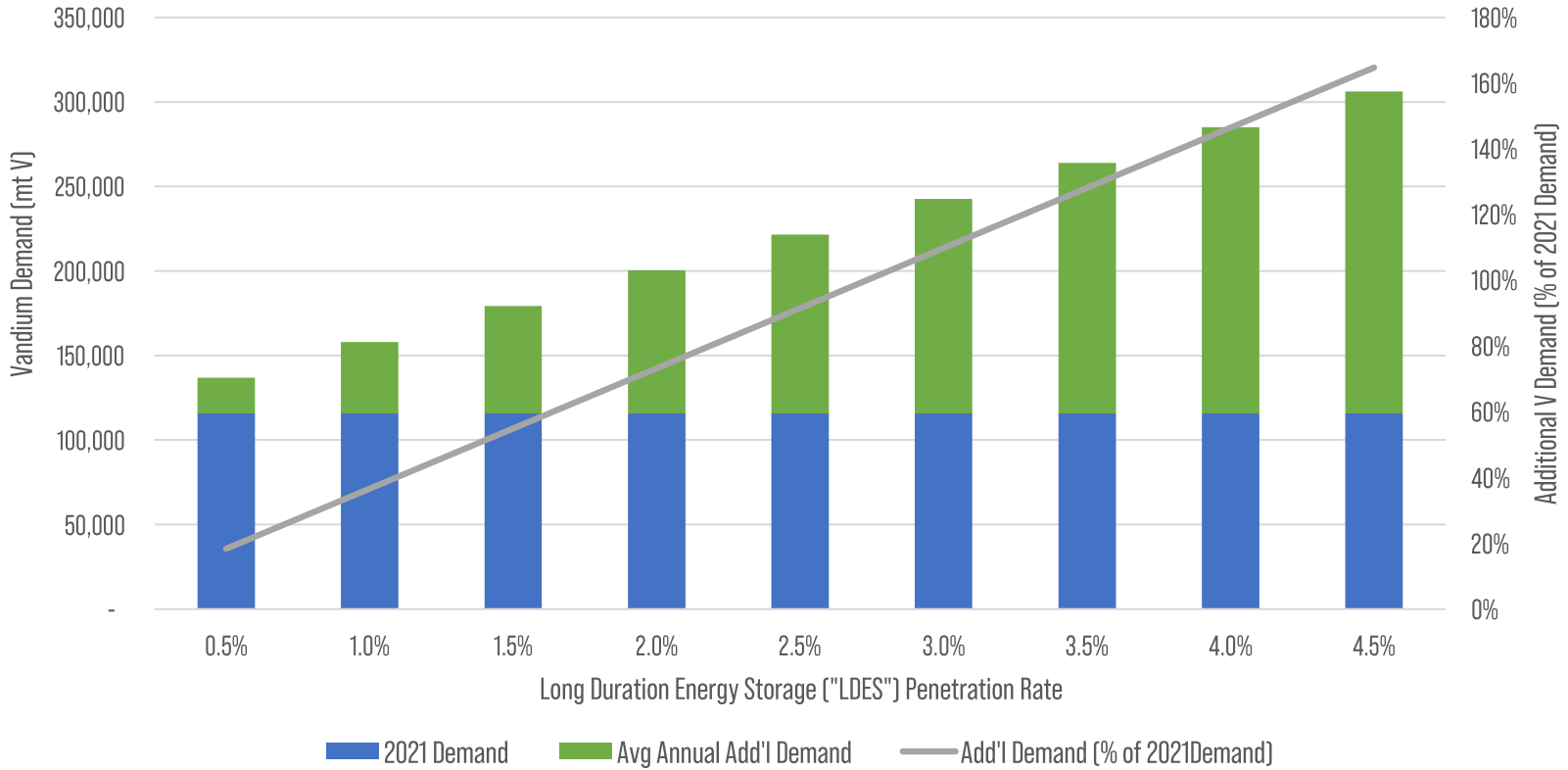
For Illustrative Purposes Only



# LONG DURATION ENERGY STORAGE COULD DRIVE DEMAND



Additional Annual V Demand Through 2030 v. LDES Penetration Rate



- McKinsey estimates a cumulative installed long duration energy storage capacity of approximately 7.5TWh by 2030
- Small penetration rates by VRFBs could lead to dramatic increase in vanadium demand over 2021

# Management and Directors



**Paul Vollant**  
CEO

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



**Carmelo Marrelli**  
CFO

- ✓ Over 20 years of providing accounting and regulatory compliance services to listed companies on the Toronto Stock Exchange and the TSX Venture Exchange



**Jonathan Lee**  
Chairman

- ✓ VP at Arias Resource Capital with over 19 years of experience in engineering and finance, including 12 years in metals and mining



**Andrea Weinberg**  
Director

- ✓ Director of Strategy at Cosan with vast capital markets experience at BTG Pactual, BlackRock, Alliance Bernstein, Merrill Lynch & Goldman Sachs



**Justin Reid**  
Director

- ✓ Geologist and capital markets executive with +20 years of experience in the mineral resource space



**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



**John Kanellitsas**  
Director

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

# VAND: OPERATING OVERVIEW

VAND Details	
<b>Name:</b>	Largo Physical Vanadium Corp.
<b>Exchange:</b>	TSX Venture Exchange (Ticker: VAND)
<b>Governance:</b>	<ul style="list-style-type: none"> <li>Officers: CEO, CFO and Corporate Secretary.</li> <li>Directors: 6 – including the CEO, 1 Largo nominee, 1 Seed Investor nominee, 3 independents.</li> </ul>
<b>Objectives:</b>	<ul style="list-style-type: none"> <li>Invest and hold a minimum of 90% of total net assets in physical vanadium.</li> <li>Provide secure, convenient and exchange-traded investment alternative for investors looking for physical vanadium exposure.</li> </ul>
<b>Strategy:</b>	Purchase fully allocated; physical vanadium sourced by Largo (pursuant to VAND Agreements). Over time it is anticipated that VAND will hold a large percentage of its assets in batteries in the form of aqueous vanadium sulfate salts (V <sub>2</sub> SO <sub>4</sub> ). The V <sub>2</sub> SO <sub>4</sub> would be stored in protected tanks comprising vanadium flow batteries (pursuant to the Safekeeping Agreement), which would result in storage revenues passing through to VAND and partially offset VAND operating costs.
<b>Vanadium Purchases, Rentals &amp; Key Agreements:</b>	<p>VAND entered into three key agreements with Largo and Sprott Capital Partners (details on the next slide). VAND restricted from issuing additional securities below the published NAV and future material purchase, sale and/or rental will be:</p> <ul style="list-style-type: none"> <li>at the direction of the independent board of directors, with an accompanying recommendation from Sprott Capital Partners; and</li> <li>all transactions facilitated by Largo in its capacity as technical advisor</li> </ul>
<b>Vanadium ROFR:</b>	VAND has a right of first refusal over any non-committed commercial vanadium products from Largo from Jan to Sept of any fiscal year.
<b>Annual Fees:</b>	0.85% per annum plus 1.0% acquisition fee on commercial vanadium products (acquisition fee waived on Initial Largo Contribution and initial purchase transactions).
<b>Storage:</b>	V <sub>2</sub> SO <sub>4</sub> used in vanadium flow batteries will remain allocated and owned by VAND per the Safekeeping Agreement, any storage revenues received by the Safekeeper will be passed to VAND and used to offset ongoing operating costs.
<b>Annual Expenses:</b>	Standard public company costs, including audit, logistics, listing, directors, officers, insurance, transfer agents, legal, custodian, storage, financial advisory, etc.

# KEY VAND AGREEMENTS

VAND entered into key agreements with Largo and Sprott

## Marketing and Financial Advisory Agreement

- ✓ Provide marketing and capital markets support; and
- ✓ Provide advice and recommendations to Board of Directors in respect of VAND's strategy and restrictions, including, whether potential vanadium purchases reflect market conditions at the time and any capital raising initiatives

## Technical Services Agreement

- ✓ Technical Advisor provides commercial services with respect to: (i) the management of the movement and storage/safekeeping of vanadium assets in accordance with reasonable standard industry practice; (ii) all of VAND's transactions involving the purchase and sale of vanadium and relocation of vanadium, and (iii) other means of optimizing the portfolio's value;
- ✓ Technical Advisor provides VAND with right of first refusal over any non-committed commercial vanadium products from January to September of any fiscal year

## Safekeeping Agreement

- ✓ Safekeeper provides management and safekeeping of the physical vanadium in the form of commercial vanadium products and vanadium sulfates in electrolyte in VRFBs, in its sole discretion;
- ✓ Safekeeper has right to enter into long term use contract for use of vanadium, which contracts will yield Storage Revenues for the Issuer
- ✓ Safekeeper will, at its own expense, convert powder/flake form of vanadium into vanadium sulfate salts or from vanadium sulfate salts into powder/flake form



**LPV** | Largo  
Physical  
Vanadium

## Contact Information

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