General Corporate Presentation

May 23rd, 2023

Toronto Stock Exchange (TSX:EFL) & (OTCQB:EFLVF)

Disclaimer

This presentation contains forward-looking statements, including statements that relate to, among other things, the effect of the COVID-19 public health emergency on the Company's operations, its employees and other stakeholders, including on customer demand, supply chain, and delivery schedule, the size of the Company's sales pipeline and the ability to satisfy orders thereunder, the Company's ability to satisfy its ongoing debt obligations, anticipated increased collaboration with OEMs and OEM channels constituting a source of sales growth for the Company, anticipated continued increase in sales momentum in fiscal 2023 and 2024 through OEMs and directly to large global companies, including Fortune 500 companies, the future direction of the Company's business and products, including E-bus applications and additional intellectual property protection, the Company's ability to source supply to satisfy demand for its products and satisfy current order volume, technology development progress, all trademark logos and trademarks are owned by the respective Company's, the Company's application for a listing on NASDAQ and its ability to be listed thereon, pre-launch plans, plans for product development, plans for shipment using the Company's technology, production plans, the Company's markets, objectives, goals, strategies, intentions, beliefs, expectations and estimates, and can generally be identified by the use of words such as "may", "will", "could", "should", "would", "likely", "possible", "expect", "intend", "estimate", "anticipate", "believe", "plan", "objective" and "continue" (or the negative thereof) and words and expressions of similar import. Although the Company believes that the expectations reflected in such forward-looking statements are reasonable, such statements involve risks and uncertainties, and undue reliance should not be placed on such statements. Certain material factors or assumptions are applied in making forward-looking statements, and actual results may differ materially from those expressed or implied in such statements. Important factors that could cause actual results to differ materially from expectations include but are not limited to: the COVID-19 outbreak will not have significant further effects on the Company's supply chain or operations; that current customers will continue to make and increase orders for the Company's products, and in accordance with communicated intentions, that the Company's alternate supply chain will be adequate to replace material supply and manufacturing, that the Company's interpretation of the effect of any comfort given to Litarion's auditors of the Company's financial support for Litarion's operations is correct, that Litarion's insolvency process will proceed in an orderly fashion that will satisfy Litarion's debt without a significant negative effect on the Company or its assets, actions taken by creditors and remedies granted by German courts in the Litarion insolvency proceedings and their effect on the Company's business and assets, negative reactions of the Company's existing customers to Litarion's insolvency process, general business and economic conditions (including but not limited to currency rates and creditworthiness of customers), Company liquidity and capital resources, including the availability of additional capital resources to fund its activities, level of competition, changes in laws and regulations, legal and regulatory proceedings, the ability to adapt products and services to the changing market, the ability to attract and retain key executives, the granting of additional intellectual property protection, and the ability to execute strategic plans. Additional information about material factors that could cause actual results to differ materially from expectations and about material factors or assumptions applied in making forward-looking statements may be found in the Company's Annual Information Form for the year ended September 30, 2022 under "Risk Factors", and in the Company's most recent annual Management's Discussion and Analysis under "Qualitative And Quantitative Disclosures about Risk and Uncertainties" as well as in other public disclosure documents filed with Canadian securities regulatory authorities. The Company does not undertake any obligation to update publicly or to revise any of the forward-looking statements contained in this document, whether as a result of new information, future events or otherwise, except as required by law.

Our Mission

To accelerate the energy transition with safer and better batteries through technology advancement

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Electrovaya at a Glance

1996 — **Founded**

2000 — **listed** TSX

2002-2010 — **Partnerships**: CHRYSLER, gm, SUZUKI, NASA, Microsoft

2015

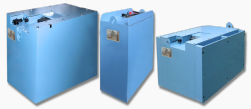
DAIMLER

Electrovaya powers Daimler's electric smart car and acquires 700 MWh/year plant

Launched infinity Li-ion cells

2017-2021

Commercial Launch:
Material Handling products



OEM partnership:

RAYMOND

Direct Sales :

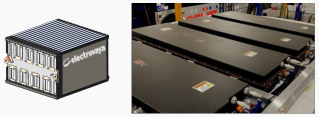
Walmart, Mondelēz International

2022/2023

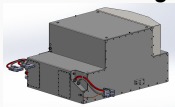
Production Ramp up (40% ↗) & Expand OEM partnership

Products development

HV battery: E-bus, E-truck



HV material handling battery



US Expansion
Jamestown NY Gigafactory

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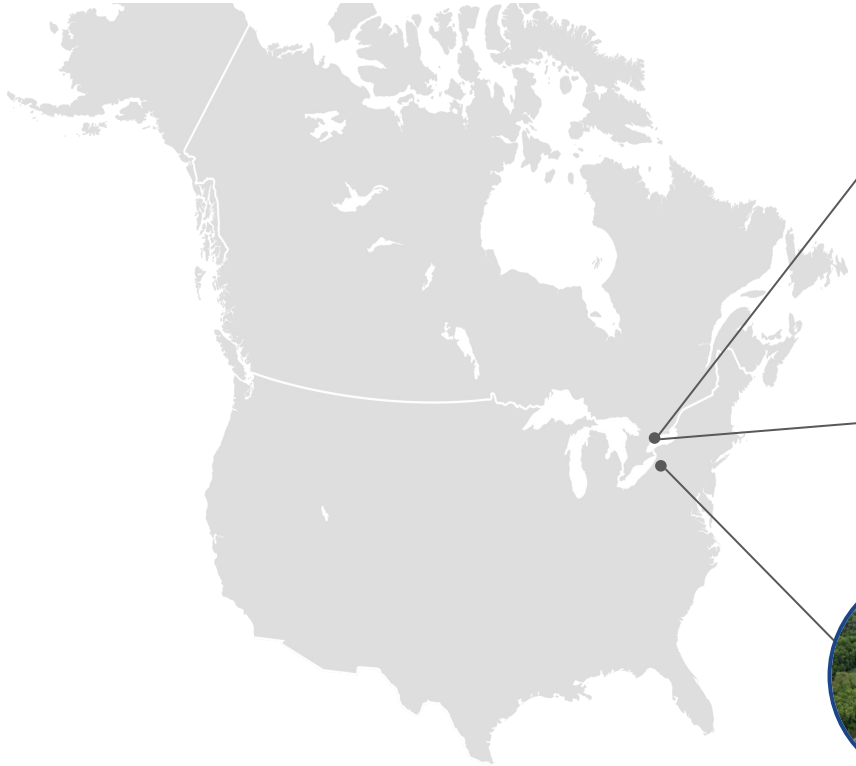
About Electrovaya: Our locations



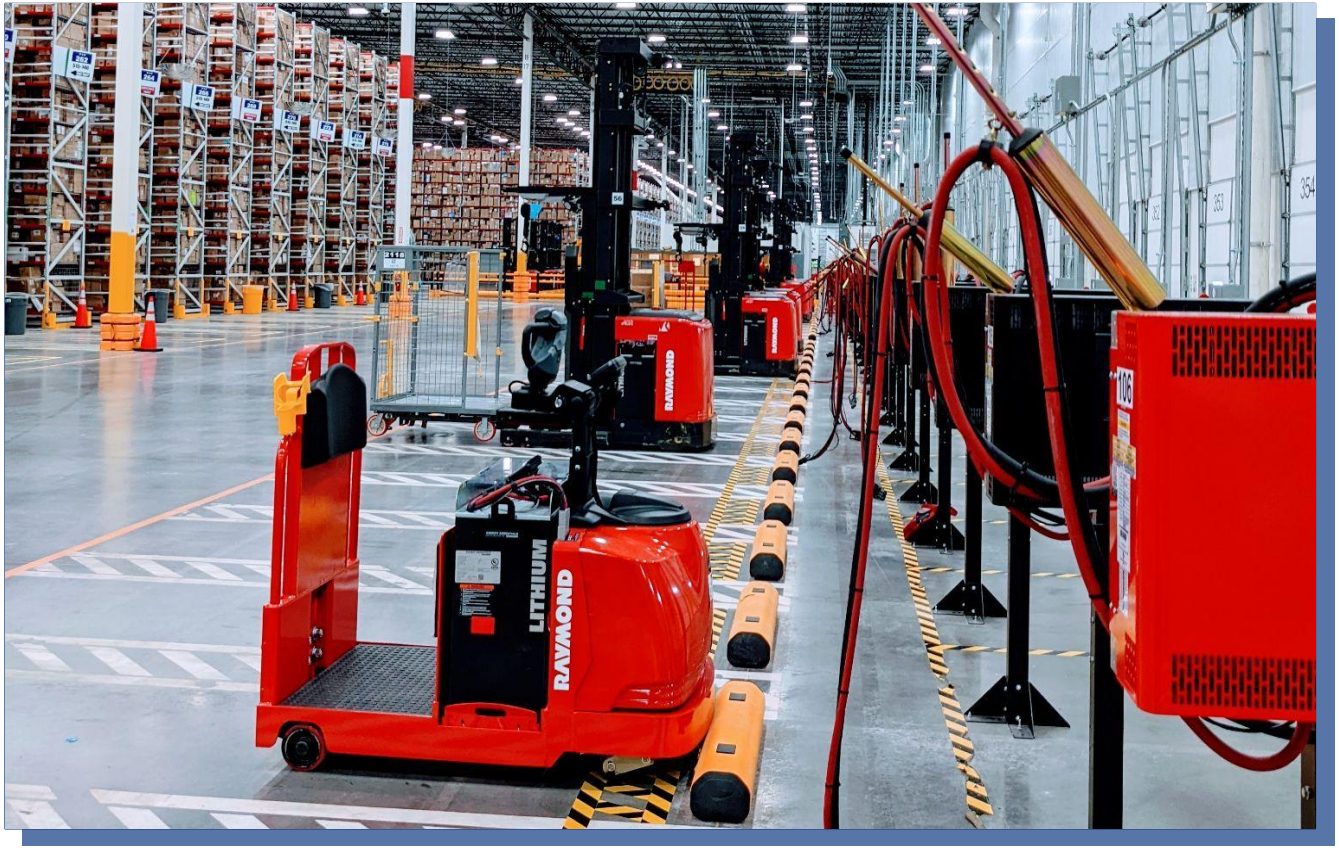
- Canadian Headquarters: 63,000 Sq feet Facility in Mississauga, ON
- Module &Pack assembly & engineering development

ISO 9001:2015

- Electrovaya Labs: 25,000 Sq feet facility in Mississauga, ON
- Cell technology development & scale up

- US Headquarters: 130,000 sq feet and 52 acres facility in Jamestown, NY
- Cell, module & pack assembly
- Planned overall capacity >1 GWh/yr
- Powered by low cost hydro energy (~$0.05/kWh)

Electrovaya: Success based on innovation



Electrovaya Batteries Powering vehicles at a Fortune 100 Customer site

Industry Leader

Providing the safest multi-million-mile batteries

Top-tier Customer Base

Fortune 100 customers and leading OEMs

Unparalleled Experience

25+ years of experience and100+ Patents

High Revenue Growth

>4x since 2019 with projected 100% growth in FY2023

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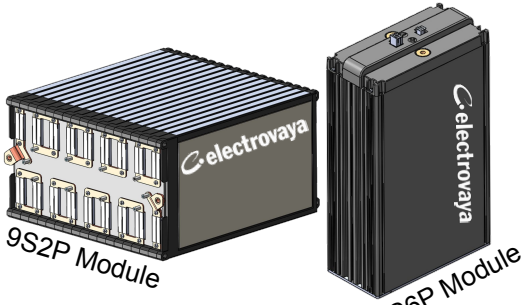
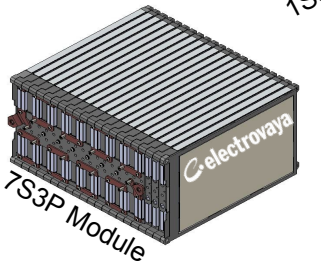
Electrovaya Capabilities

Electrovaya expertise and capabilities includes designing and manufacturing lithium ion batteries cells / Modules / Packs / Battery systems and other battery-related products (BMS)

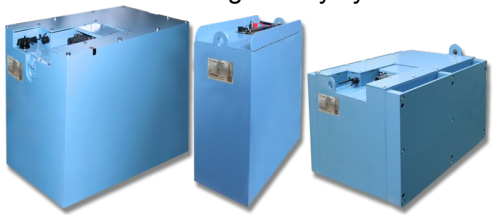
Cell → **Module** → **Pack**





High Voltage battery systems

Material handling battery systems



Technology Solutions

Electrovaya complementary technologies targeting the various EV applications.
Infinity batteries provides industry leading *longevity* and SSBs provides industry leading *energy density*

Infinity Batteries

Commercial today
Global partners & users

Superior Safety & Lowest Cost of Ownership

Based on proprietary separator and electrolyte technology

E-bus, E-forklift, E-trucks, Energy storage systems

Solid State Batteries

In late stage development

Highest Energy Density

Based on proprietary separator and electrolyte technology

Passenger EVs, Over the road (OTR) trucking, aerospace

Market Opportunity Summary: Infinity Platform

APPLICATION	USAGE	MARKET SIZE
 **E-Buses E-Delivery Trucks**	12-20 hrs/day	~ $9.6 Billion Addressable Market*
 **E-Forklifts/ Warehousing**	20-24 hrs/day	~ $4.5 Billion Addressable Market*
 **Stationary energy storage**	12-20 hrs/day	~ $4.2 Billion Addressable Market*

Battery Requirements: Efficiency, Lifetime, Safety & Cost of Ownership

*Data Numbers Obtained Through MarketWatch

Infinity Batteries: Commercial Ecosystem

OEM Customers
(not a complete list)

RAYMOND

JABIL

End Users Examples **(not a complete list)**

Retail & eCommerce

FORTUNE 100 *Confidential User

Walmart

The Home Depot

Ashley HOMESTORE

LOWE'S

Food distribution

MARS incorporated

Unilever

MAPLE LEAF

Mondelēz International

Manufacturing

P&G

PVH

PHILLIPS-VAN HEUSEN CORPORATION

Logistics

CEVA LOGISTICS

interstate warehousing
a Tippmann Group Company

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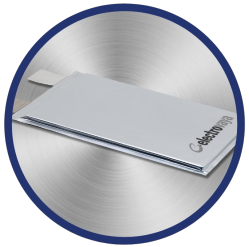
Infinity Batteries: Proven technology

Lithium-ion ceramic cells with highest cycle life and safety setting the industry standards.



Li-Ion Ceramic Technology*

Heavy Duty Vehicles

Material Handling Equipments

OEM Partners (not a full list)

RAYMOND

Autonomous Guided Robots

OEM Partners (not a full list)

JABIL badger technologies

Electric Trucks and Buses

Coming Soon 2023

- **High Cycle Life**
  Lowest Cost of Ownership
- **Safety**
  Zero Fire Incidents
- **High Reliability**
  Performance in 24/7 applications

**An earlier iteration of our lithium-ion ceramic technology has also been used in ~20,000 Daimler Smart cars (no active cooling).*

**There have been no known battery safety incidents in these vehicle or the 5000+ Material Handling/AGV battery systems*

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Competitive Advantage

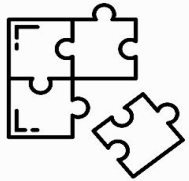
Electrovaya prides itself by providing leading edge Lithium ion battery cells and systems

Longevity

Using patented innovations we provide very stable longer-life power source than other cell chemistries.

Superior Safety

Proprietary fire propagation prevention technology
UL2580 listed
(including fire propagation)



Modular Approach

Performance Oriented System design
Modular battery systems tailored for unique applications requirements

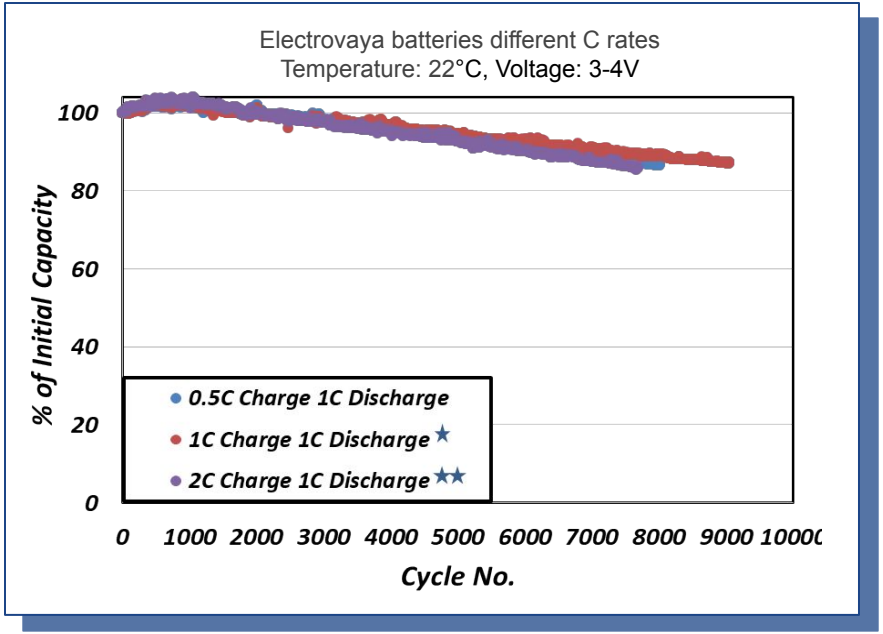
Lowest cost of ownership

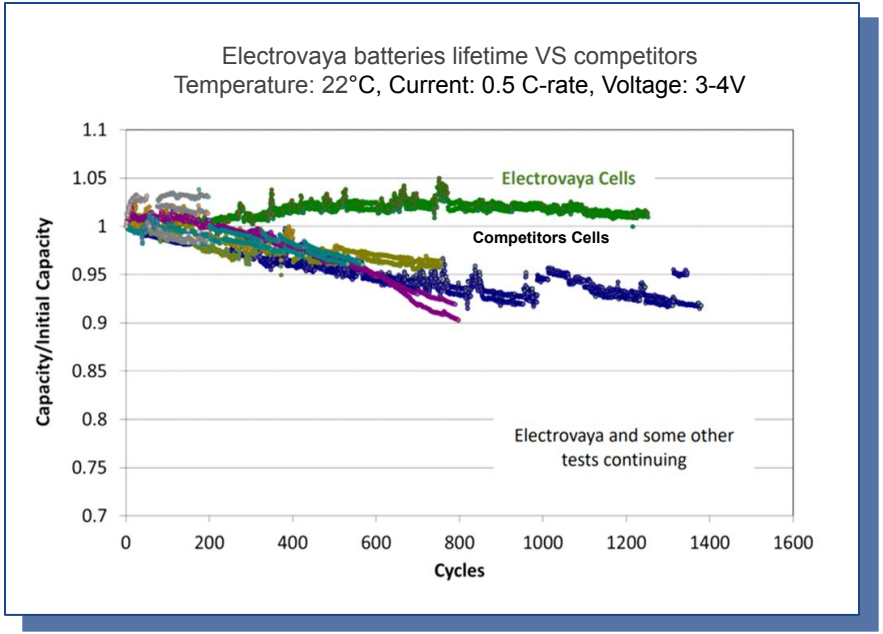
Best Cycle Life + superior safety
No battery replacement required
(Up to **12 years warranty**)

Multi-Million-Mile Batteries- In a Class of Its Own

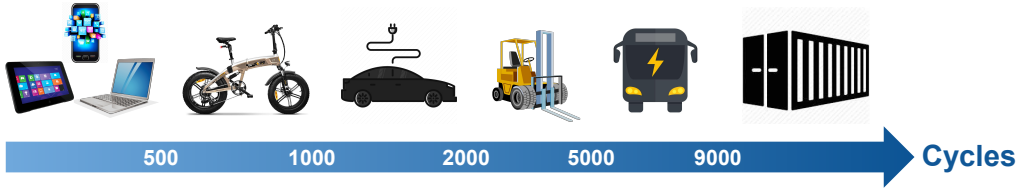
Electrovaya Patented Technology provides the longest Cycle life in Industry: Electrovaya batteries can operate for >25 years with 1 cycle/day

Third party testing

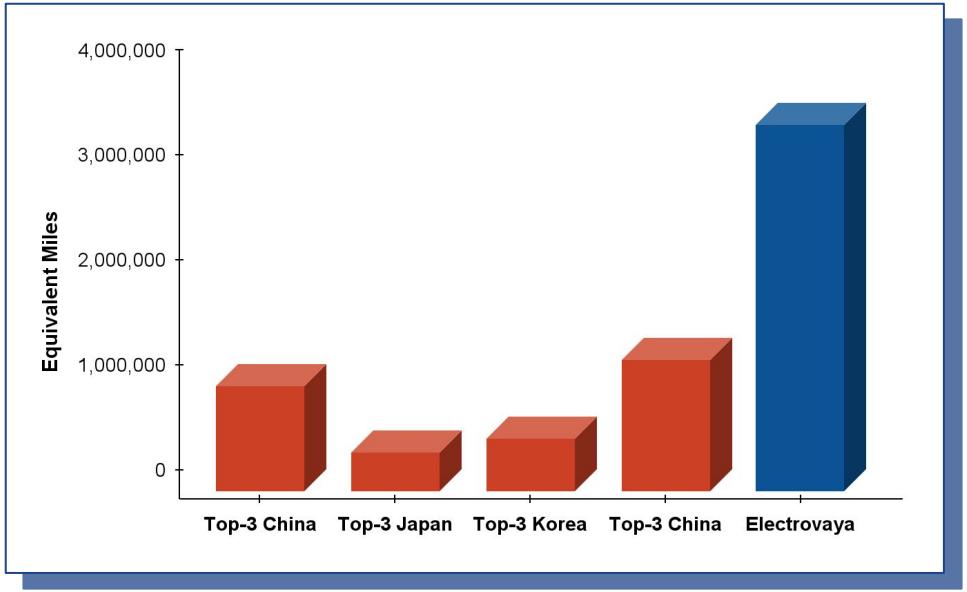




Multi-Million-Mile Batteries: Infinity Batteries



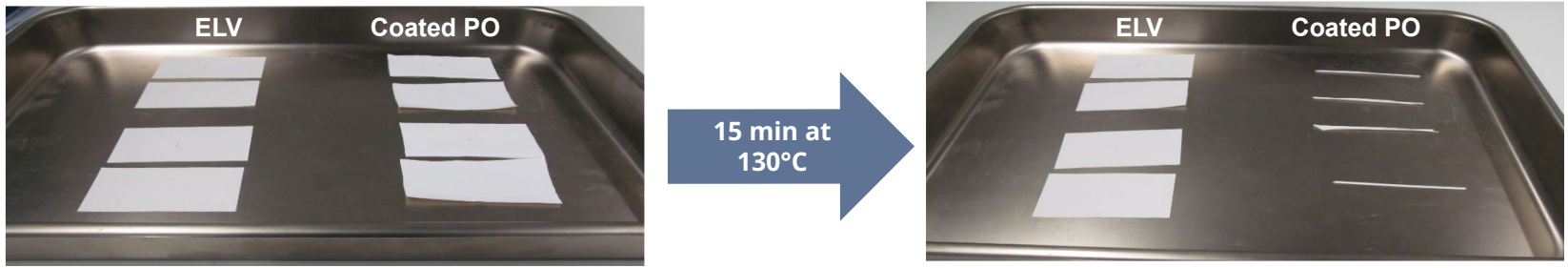
Cycle equivalent:
14,000 cycles is equivalent to 3,500,000 miles for 250-mile range car with 1 charging cycle per day



Superior Safety

Multi-level cell and system safety technology with end result being a non-propagating battery design

Electrovaya Ceramic vs Coated PO Separator

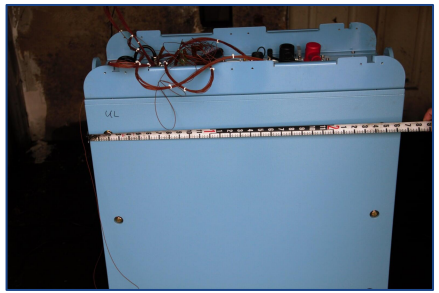


Third Party fire propagation test

An Electrovaya 24V battery AFTER fire propagation testing for UL

- Individual cell in fully charged battery pack was forcibly heated to +200°C
- No internal propagation, the fire was contained within the faulted sub-module
- No flames escaped the battery enclosure

Test conducted by UL in early 2020, UL comment about the fire propagation test results: "best results seen in lithium ion battery regardless of the chemistry"

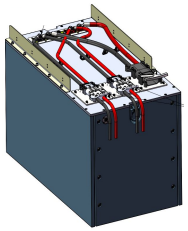


Product landscape: Infinity Batteries

24V, 36V, 48V Forklifts (~40 Battery Models)

AGVs

Gen 2 Forklift Batteries



AGV

Walkie Pallet Jacks

E-trucks

E-bus

Stationary ESS

Hybrid Fuel Cells

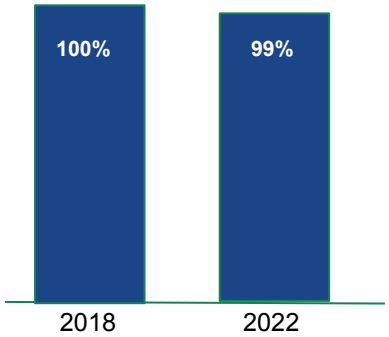
2023 2024

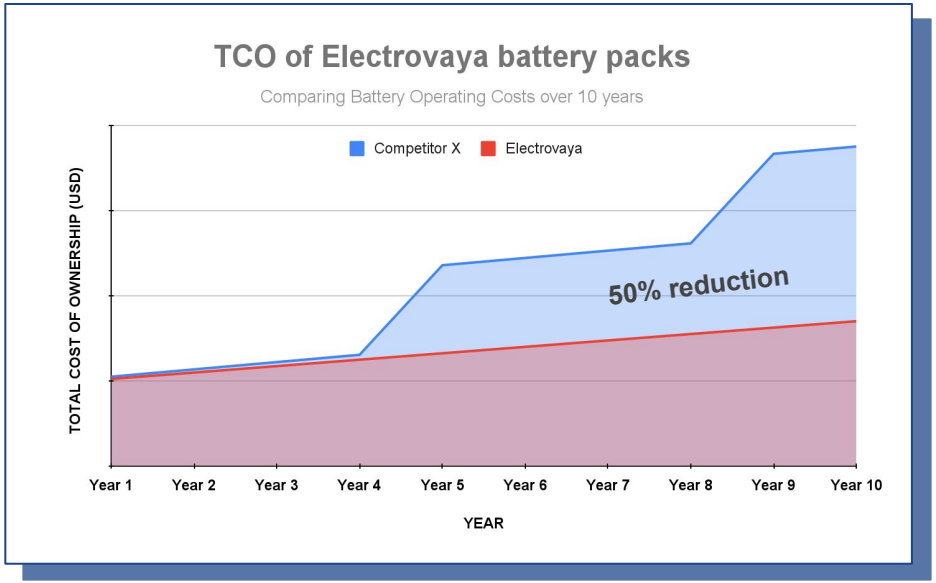
Lowest Cost of Ownership

Electrovaya's batteries have Best Cycle Life in Industry, Providing lowest total cost of ownership when compared to other lithium ion batteries, fuel cells and lead acid batteries.

Heavy Duty Vehicles (HDV) Operate at ~2 cycles per day
→ ***Battery replacement*** needed every 6 years

Electrovaya E-forklift battery performance from a Fortune 100 company after 4 years of continuous operation (equivalent to 192,000 miles of driving)





High Voltage battery systems - Launching 2023

Advanced customized packaging technology for demanding application

High Voltage Batteries

Energy Storage Systems

Electrovaya HV batteries designed for high performance stationary applications.

Electric Buses

Based on OEM benchmarks, Electrovaya batteries should last longer than 16 years.
(Multiple times better performance than standard solutions)

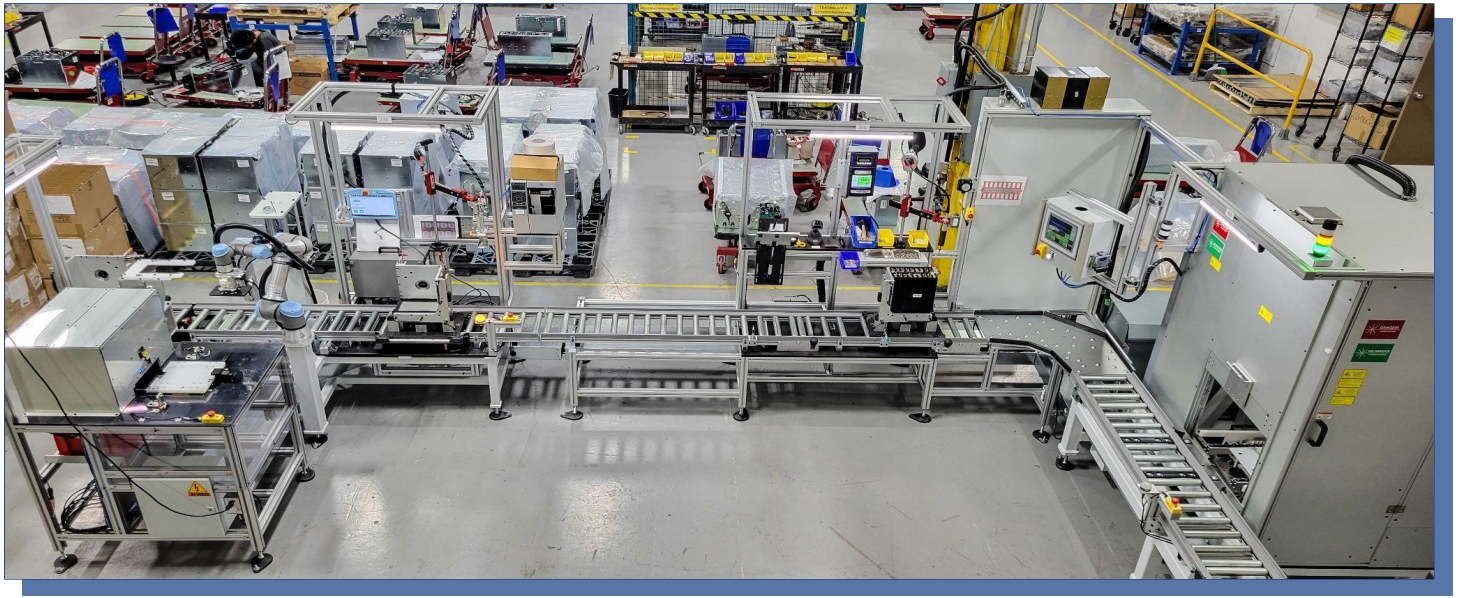
- **High Cycle Life & Safety**
  Lowest Cost of Ownership
- **Modular Design**
  Tailored for specific application
- **Strongest Warranty**
  Up to 12 years

High Voltage battery systems - Approach

- ➔ Electrovaya is currently focusing on launching a new product line: ***High-Voltage Battery Systems.***
  Targeted : E-Buses, E-Trucks & ESS

- ➔ **Goal:** to provide domestically produced battery systems with cutting edge safety and performance.

Electrovaya Semi-Automated Module Assembly line - video



Recently Installed advanced automated module assembly line at Electrovaya's Mississauga facility

Technology Solutions:

Electrovaya complementary technologies targeting the various EV applications.
Infinity batteries provides industry leading *longevity* and SSBs provides industry leading *energy density*

Infinity Batteries

Commercial today
Global partners & users

Superior Safety & Lowest Cost of Ownership

Based on proprietary separator and electrolyte technology

E-bus, E-forklift, E-trucks, Energy storage systems

Solid State Batteries

In late stage development

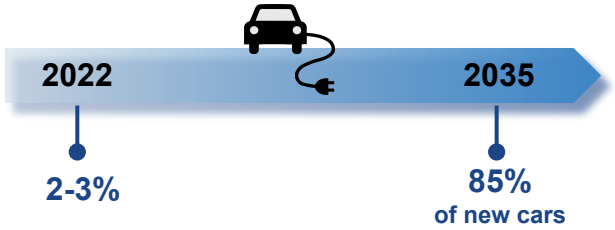
Highest Energy Density

Based on proprietary separator and electrolyte technology

Passenger EVs, Over the road (OTR) trucking, aerospace

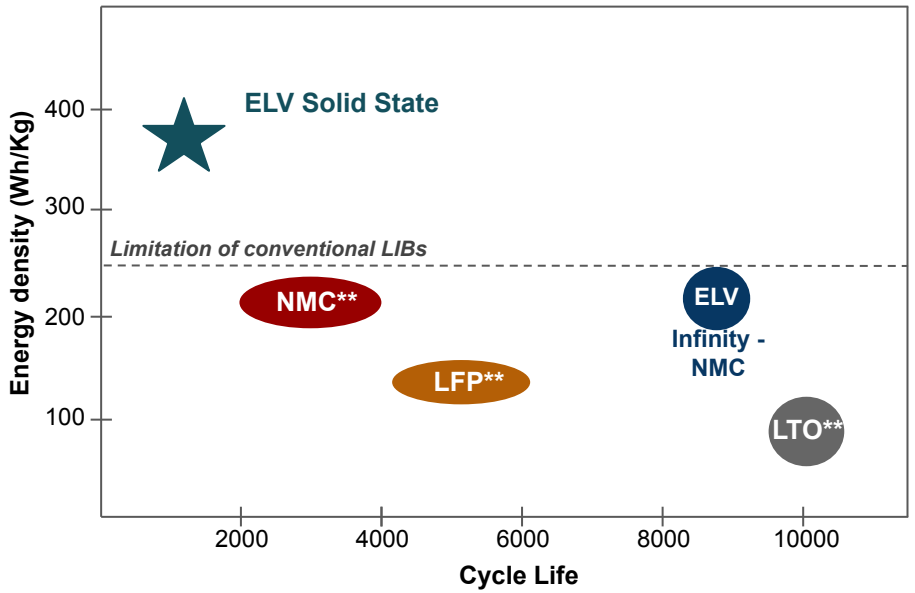
Next Gen-Solid State batteries

EV penetration in the global vehicle market



Battery Requirements for E-cars adoption

- *Energy Density > 350 Wh/Kg (>750 Wh/L)*
- *>10 years lifetime*
- *Superior Safety*
- *Cost < 100 $/Kwh for cells*

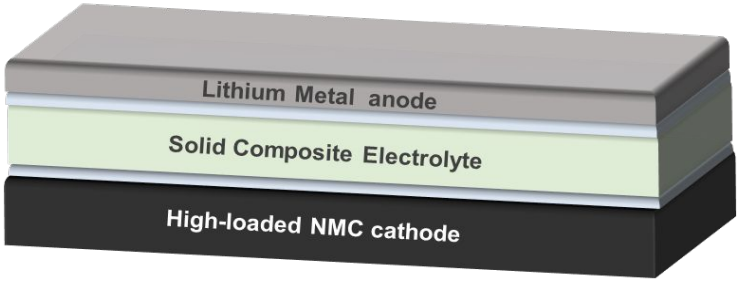


** Competitor data sheets/estimates

Solid-State Batteries: Electrovaya's Approach

Solid State battery platform with versatile proprietary technology

Four Solid State Battery Related Patents Filed

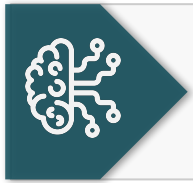


Hybrid Lithium Metal SSB	Lithium Metal SSB	"Anode-Free" SSB
Thin Lithium Metal anode	Thin Lithium Metal anode	No Standalone Lithium Electrode
Cathode: Agnostic. Testing with NMC (622/811), proprietary solvent-free thick cathode coating		
Proprietary Composite Ceramic Separator	Proprietary Composite Ceramic Separator	Proprietary Composite Ceramic Separator

Solid-State Batteries: Value proposition

Energy dense electrodes

Enables the use of Lithium metal anodes with 10x higher specific capacity than conventional graphite
⇒ *20%-40% increased energy density*



Solid Electrolyte

High decomposition voltage (larger operating voltage window)
Use of liquid electrolytes minimized or eliminated

Low Cycle Life

Formation of lithium dendrites during repeated charge/discharge
Poor electrode-electrolyte interfacial contact

Complex Scaled Manufacturing

Production of high-quality lithium metal batteries at scale remains unachieved in the global battery market

Expansion: Jamestown Gigafactory Update

The Gigafactory Plant in Jamestown, NY will allow Electrovaya to onshore manufacturing and streamline supply chains to support increased battery demands

130,000 sqft
Industrial Facility

100%
Renewable Energy

$0.05/kWh
Energy Cost

< 3 hours
Travel to HQ and Key Customer Bases

Update

2022
* Site Acquired in Jamestown, NY state
* Term sheet received from a NY State consortium lenders covering 80% of stage 1 costs

2023
* Hiring drive started
* LV pack assembly will go live in Jamestown in Q4-2023

2024
* HV/LV module and HV pack assembly will go live in Jamestown in Q3-2024

2025
* Cell assembly will go live in Q1-2025

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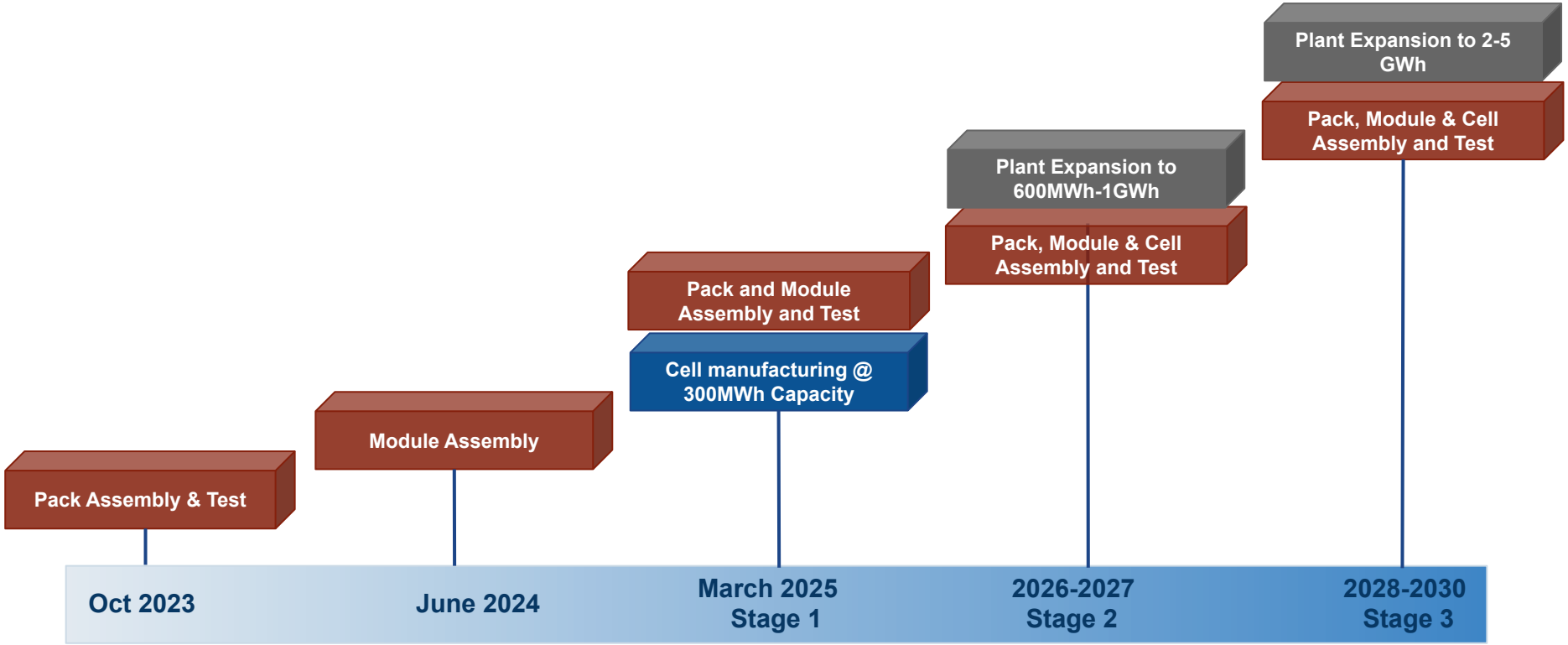
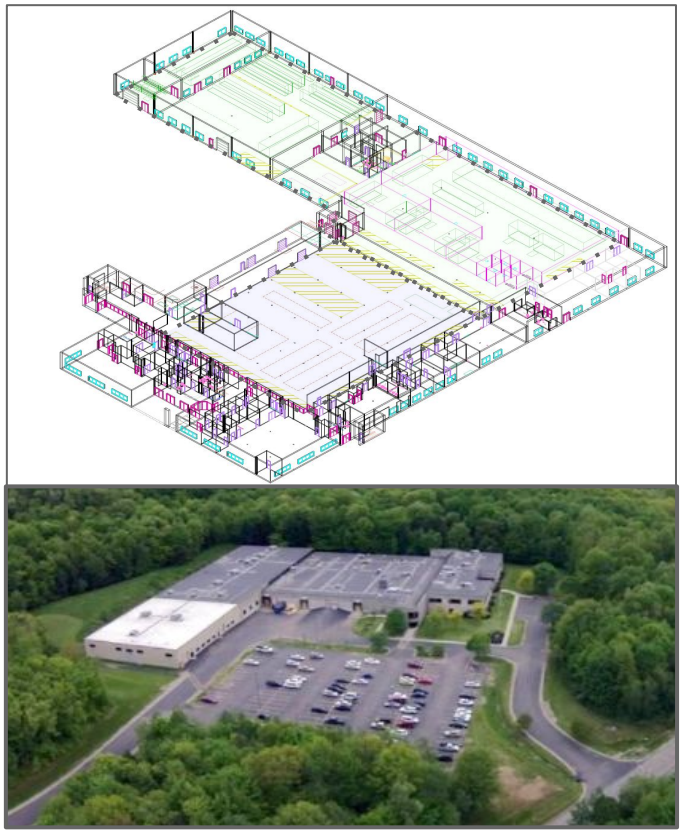
Jamestown Gigafactory Roadmap (1/2)



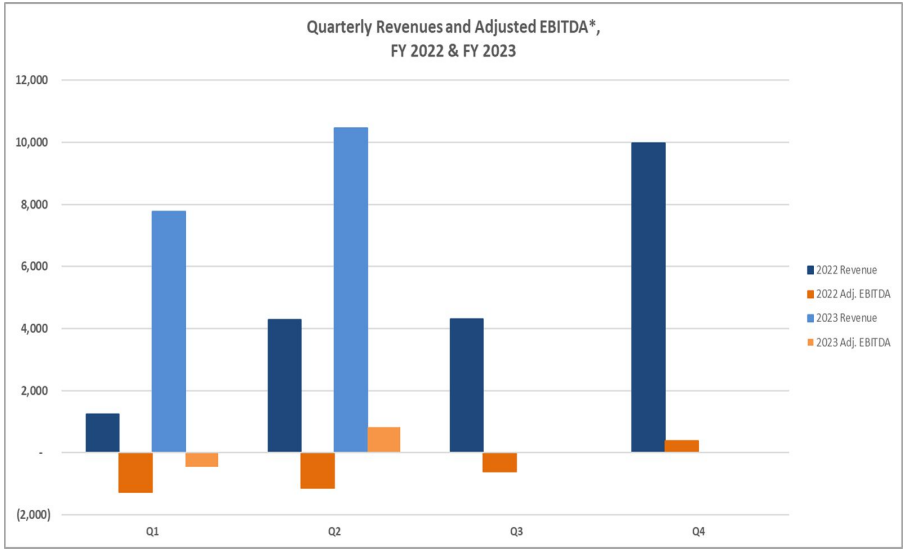
Jamestown Gigafactory Roadmap (2/2)

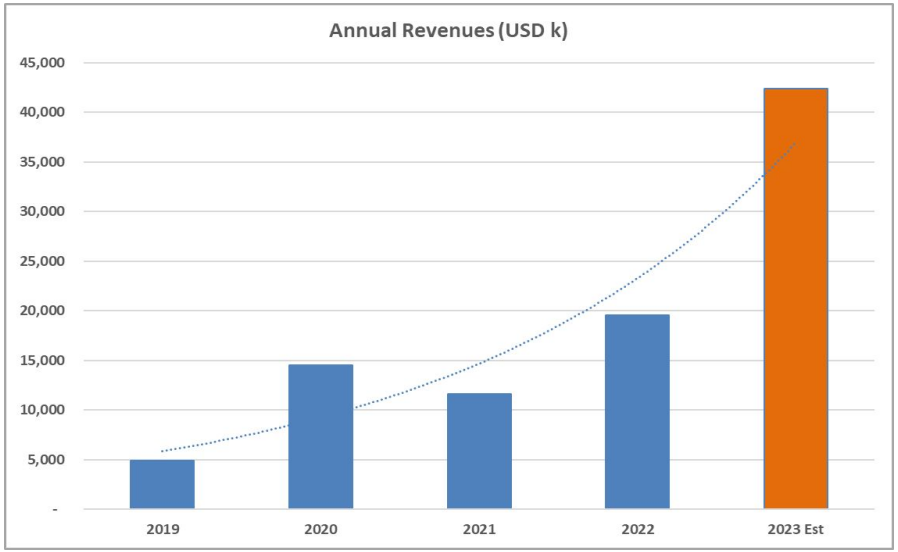
- **Initial operations** in Jamestown will mirror what is done in Mississauga
- Pack and Module assembly to **increase overall capacity**
- **Cell assembly** expected to go live in calendar **Q1 2025**
- **IRA** expected to provide $10 per KWh for modules and $35 per KWh for cells.
- If we operate at 100% capacity that would translate to **~$13.5m in cash rebates**
- Reshoring of cell production expected to **increase gross margins** by 3-5%
- Increased capacity allows us to consider **alternate revenue streams** such as growing our rental fleet, E-Buses and Trucks, and EaaS offerings (where we are engaging in a feasibility study with Jupiter Power)
- Our goal is to remain flexible and **scale as demand increases**.



Financials

FY2023 revenue target ~$42 million (~C$56 million)**





** Non-IFRS Measure: Adjusted EBITDA does not have a standardized meaning under IFRS. Therefore it is unlikely to be comparable to similar measures presented by other issuers. We believe that certain investors and analysts use Adjusted EBITDA to measure the performance of the business. Adjusted EBITDA is defined as loss from operations, plus finance costs, stock-based compensation and depreciation costs.*

*** Estimated value with noting a risk that supply chain disruptions could impact the timing of revenue. The Company has faced some production delays throughout the 2022 fiscal year due to specific component shortages or delays. Electrovaya has taken steps to mitigate supply chain issues and will continue to closely monitor the situation.*

Capital share structure

Ticker:	**TSX:EFL**
Shares Outstanding* :	**164,862,364**
Share Price* :	**CAD $1.01**
Market Cap* :	**CAD $166,510,958**
Insider Ownership:	**~ 35%**

* Stock price, shares, and market cap are current as of 5:00 PM EST, May 23, 2023

Ticker:	**OTCQB:EFLVF**
Shares Outstanding* :	**164,862,334**
Share Price* :	**USD $0.735**
Market Cap* :	**USD $121,190,302**
Insider Ownership:	**~ 35%**

* Stock price, shares, and market cap are current as of 5:00 PM EST, May 23, 2023

Management Team

Dr. Raj S. Das Gupta,

CEO, Director

Raj has been with the company since 2009 and became CEO in 2022 following his previous role as COO. Raj attended Imperial College, London; MIT; and the University of Cambridge, where he received his Doctorate in Materials Science

John Gibson,

CFO

John is a Certified Professional Accountant (“CPA, CA”) with over 15 years of experience in public and private corporations and brings significant experience in corporate accounting and finance, strategic and financial planning, internal controls, and systems.

Dr. Jeremy Dang,

VP, Business & Project Development

Jeremy’s client portfolio includes lift truck OEMs and Fortune 500 clients from material handling, and energy storage industries. Jeremy is a Certified Chartered Chemist and Project Management Professional with a doctorate in Chemical Engineering.

Dr. Elmira Memarzadeh

Director, Engineering Programs

Elmira has been with Electrovaya since 2014 and currently manages cell production. She has worked on several development projects with other Engineering departments within Electrovaya as well as Vendors and Clients. Elmira received her PhD in Material Science from the University of Alberta.

Jason Roy,

Director, Corporate Development and Investor Relations

Jason has been with the company since 2018. He brings with him over 18 years of Capital Markets experience, in various roles of Investor Relations, Communications, Business & Corporate Development with both Publicly traded and Private companies.

Board of Directors

Prof Carolyn Hansson,

Director

Professor Carolyn Hansson CM, FCAE, FRSC has a long and distinguished career in industries such as Lockheed Martin (Martin Marietta), Danish Corrosion Labs and Bell Labs as well in academia (Waterloo, Queens, Columbia & SUNY) and was earlier a member of the Board of a TSX and NASDAQ listed Alternate Energy Company (Hydrogenics).

Dr Jim Jacobs,

Director

Dr. Jacobs' innovations have been instrumental in the development of Electrovaya's SuperPolymer technology. He co-founded the company with Sankar DasGupta in 1996 and was an instrumental part of its IPO in 2000. He served as CTO of the company until 2003. Dr. Jacobs received a BA from Oberlin College, Ohio and completed both his MA and PhD in solid-state physics at the University of Toronto.

Dr. Sankar Das Gupta,

Executive Chairman

Sankar is an entrepreneur and an award-winning scientist with over 50 US patents who is passionate on the urgency to reduce the effects of Climate Change. He has been a member of many committees including the White House Committee on Energy & Environment, chaired by then Vice-President Al Gore. Recently he was an Advisor to the Indian PM on Climate Change and Energy

Kartick Kumar,

Director

Kartick Kumar is a seasoned climate change and sustainability investor. Has two decades of investment and operations experience in energy and decarbonization transition issues across Europe, Asia, Latin America, Africa, and the Middle East. Held a range of senior roles within the World Bank Group, the International Finance Corporation (IFC).Holds degrees in economics and law from U of Cambridge, U of Columbia and the U of Toronto.

Electrovaya Summary

Pure Play Battery Tech/Manufacturing

Electrovaya is a Pure Play North American Lithium ion Battery Technology and Manufacturing company on track for Rapid Growth

Leading Partners

Electrovaya has strong OEM relationships with some of the leading industrial vehicle manufacturers and numerous Fortune 100 and Blue Chip customers.

Premium Performance

Infinity Technology Products offer significant competitive advantages which allow Electrovaya to sell products at higher gross margins than competitors

Next Gen Technology

Electrovaya Solid State Battery Technology developments will be a game-changing technology

North American Footprint

Plans to Reshore Production into the USA improves capacity, security and gross margins

Growth and Route Profitability

70% increase in revenue from FY21, 115% increase forecast for FY23. EBITDA and Cash Flow positive for FY23 and beyond

Investor & Media queries, please contact:

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Toronto Stock Exchange (TSX:EFL) & (OTCQB:EFLVF)