

UPDATE NOTE

ELECTROVAYA, INC. | EQUITY RESEARCH

ELECTROVAYA, INC.

(OTCMKTS: EFLVF, TSX: EFL)

4Q22/FY22 Results: Management Forecasts FY23
Revenue to Grow Twofold and Reach \$42 Million

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KEY POINTS

- Revenue rose by 140.1% Y/Y (+131.8% Q/Q) to \$10.0 million from \$4.2 million in 4Q21. For FY22, the revenue figure stood at \$19.8 million, an increase of 71.1% compared with \$11.6 million in FY21. The increase in revenue was due to increased order volume and a ramp-up in production to meet the demand. Complete results can be accessed [here](#).
- Revenue was predominantly from the sale of batteries for Materials Handling Electric Vehicles (MHEVs), which accounted for \$18.7 million or ~95% of revenue for FY22 versus \$9.5 million or ~82% for FY21. The sale of engineering services, research grants, and other sources of revenue accounted for the remaining \$1.1 million or 5% in FY22 versus \$2.1 million or 18% in FY21.
- Revenues had a modest headwind due to unforeseen supply chain risks that delayed certain deliveries into 1Q23. The company expects FY23 revenues above \$42 million, which is more than twice the FY22 figure.
- The company's gross margin decreased to 24.5% from 35.2% in 4Q21 and 25.1% in FY22 from 33.9% in FY21. The decline was primarily attributable to changes in the product mix, price hikes in raw materials, higher shipping and logistics costs, and currency fluctuations. This is expected to improve going forward.
- Net loss decreased to \$0.7 million from the net loss of \$2.0 million in 4Q21. For FY22, net loss was \$6.5 million compared with the net loss of \$7.5 million in FY21. This net loss decreased largely due to the increase in revenue during the year. The company also benefited from movements in exchange rates and recognized a foreign exchange gain of \$0.5 million compared with the loss of \$0.2 million in the prior year.
- The ending cash balance was \$0.6 million and the company has drawn the full \$11.6 million of a working capital facility. ElectroVaya targets positive adjusted EBITDA in FY23 (\$0.4 million reported in 4Q22).

KEY STATISTICS

Price	\$0.92
52-Week Range	\$0.40 - \$1.01
Avg. Daily Vol. (30-Day)	59,933
Shares Out (MM)	147.13
Market Cap (\$MM)	\$135.36
Enterprise Value (\$MM)	\$150.54
Revenue TTM (\$MM)	\$19.8
Fiscal Year-End	September

Source: YCharts, as of December 5, 2022

EARNINGS SNAPSHOT

Financial Summary

(\$mm, except per share)	4Q22	Y/Y	Q/Q	2022	Y/Y
Revenue	10.0	140.1%	131.8%	19.8	71.1%
Gross Profit	2.4	97.7%	135.4%	5.0	26.8%
Gross Margin	24.5%	(1070) bps	(70) bps	25.1%	(880) bps
Net Income	(0.7)	1.4	0.8	(6.5)	1.0
Adjusted EBITDA	0.4	1.2	1.0	(2.1)	1.7
Diluted EPS	(0.01)	-	-	(0.04)	0.01
Cash	0.6	(3.6)	(0.3)	0.6	(3.6)
Debt	16.6	7.9	0.4	16.6	7.9

Revenue Mix

(\$mm)	4Q22	Y/Y	Q/Q	2022	Y/Y	% of Revenue*
Batteries	9.2	6.7	4.9	18.7	97.8%	94.6%
Services	0.1	0.1	0.1	0.1	61.4%	0.7%
Grant Income	0.7	(0.9)	0.7	0.7	-60.9%	3.3%
Others	0.0	(0.1)	(0.0)	0.3	-19.8%	1.5%

*2022 Revenue

(\$mm)	4Q22	Y/Y	Q/Q	2022	Y/Y	% of Revenue*
Canada	1.4	(0.1)	1.3	1.9	-11.4%	9.7%
United States	8.5	5.9	4.3	17.9	89.9%	90.1%
Others	0.0	0.0	(0.0)	0.0	-	0.2%

*2022 Revenue

HIGHLIGHTS

- The US accounted for ~90% (\$17.9 million) of revenue, reflecting a growing interest in material handling batteries and an increased direct and indirect sales presence in the region. Moreover, in October 2022, ElectroVaya announced the selection of New York State as the location for its first US gigafactory to produce cells and batteries. The final capital cost of the facility is estimated at ~\$75 million and it is expected to open in phases starting in late 2023.
- In November 2022, ElectroVaya [announced](#) that it plans to start the development of high-voltage stationary energy storage battery systems using its existing proprietary Infinity Battery Technology Platform. In the same month, it [announced](#) closing a ~C\$14.8 million (US\$10.8 million) equity raise at \$0.8461 per unit by entering into securities purchase agreements with its current and new institutional investors. This will provide the company with capital to fund its future growth strategy.
- In July 2022, the company achieved a key milestone of receiving [ISO 9001:2015 certification](#) for its quality management. In the same month, it [announced](#) an increase in its credit facility from C\$14 million to C\$16 million to support working capital needs in accelerating production and meeting the current demand.
- In July 2022, the company secured the largest single MHEVs battery order (in its history) of [\\$11 million](#) from a prominent Fortune 100 company. ElectroVaya's current infrastructure can support annual sales by \$60-70 million.
- In June 2022, the company [announced](#) the receipt of a US patent for a unique battery electrode microstructure with superior distribution of active and non-active materials. This patent covers some unique attributes of battery electrodes made through ElectroVaya's proprietary NMP-free technology, potentially producing thicker electrodes with higher performance and energy density.
- ElectroVaya is taking initiatives to mitigate inflationary pressures, such as increasing product sales prices and buying critical components for delivery in 2022 and 2023, effectively locking current component costs and preventing additional price hikes.
- Our prior content on EFL can be accessed [here](#).

OUR PREVIOUS RESEARCH CONTENT

Initiation of Coverage Report

01/20/22 [Powering Ahead With Lithium-Ion Batteries For Material Handling and Electric Vehicles](#)

Extensive coverage on ElectroVaya assessing key opportunities, obstacles, technology, industry, risks, competition, financials, management profiles, etc.

Management Series Summary

03/09/22 [Two Key Battery Platforms to Drive Growth in Commercial Scale Lithium-Ion and Solid-State Batteries \(SSBs\) On The Horizon](#)

Dr. Raj DasGupta talks about ElectroVaya's breakthrough technology, target market, competition, financial expectations, and more.

04/19/22 [Dr. Sankar Das Gupta: ElectroVaya's Disruptive Battery Technology, Strong Growth Prospects, and IP](#)

Co-founder and CEO Dr. Shankar Das Gupta gives a technology overview of the lithium-ion ceramic Infinity battery platform, the battery's compliance with stringent safety certifications, and why the Infinity platform is well suited for the material handling market as well as commercial transportation.

Update Note Summary

05/11/2022 [2Q22 Results: Revenue Surged 46.6% Y/Y; Gross Margin Declined By 6.4% Y/Y; Key Recent Developments](#)

ElectroVaya reported 2Q22 earnings results. Revenue surged by 46.6% to \$4.3 million, compared with \$2.9 million in 2Q21. ElectroVaya revised its revenue guidance downward from ~\$27 million to ~\$21-25 million for FY22, citing production delays due to raw material shortages in the first half of FY22.

08/16/2022 [Revenue Jumps 124.5% Y/Y; Gross Margin Declines by 12.1% Y/Y; Production Ramped Up to Satisfy Growing Demand](#)

Revenue jumped by 124.5% Y/Y to \$4.3 million, compared with \$1.9 million in 3Q21. June contributed to more than 50% of the revenue for the quarter as the company successfully ramped up production and effectively addressed the supply chain constraints that affected sales in April and May.

COMPANY OVERVIEW

Electrovaya is a leading manufacturer of safe and long-lasting lithium-ion batteries with differentiated performance and safety attributes, according to the company. The company has two primary battery platforms: Infinity and Solid State. The Infinity battery platform targets commercial vehicles, including lithium-ion e-forklift, e-bus, and e-trucks. This product has been launched commercially through global partners, including Toyota, Raymond, and Walmart. To date, Infinity sales have been primarily to the material handling industry, where lithium-ion batteries are replacing lead-acid batteries and, to some degree, fuel cells. The company's batteries can also be used in larger grid-scale energy storage. The Solid State platform (SSB) is under development and targeted to launch in 2023, focusing on creating the lowest initial \$/energy (kWh) and highest energy density. The target market for SSB will be e-passenger cars where a low initial cost (sticker price) is required. Electrovaya sells battery solutions through two primary channels: OEM strategic supply agreements and a direct sales force. It primarily utilizes strategic partners for battery sales into new equipment or vehicle production and its direct sales force for the retrofit market. In addition to the two battery platforms, Electrovaya also develops cells, modules, battery management systems, software, and firmware necessary to deliver the systems. Electrovaya has substantial intellectual property in the lithium-ion battery sector and continues to conduct research and development activities in lithium-ion batteries, with more than 100 patents in its portfolio. In June 2021, a new operating division named [Electrovaya Labs](#) was formed to focus on the R&D and commercialization of other disruptive technologies, including next-gen solid-state cells and a unique patented electrode processing technology. Electrovaya Inc. was founded in 1996 and is headquartered in Mississauga, Canada.

The Technology

Infinity Battery Platform: According to Grand View Research, the global lithium-ion battery market was valued at \$53.6 billion in 2020 and is expected to cross \$216.5 billion by 2028, representing a CAGR of 19%. The Infinity lithium batteries are based on proprietary ceramic technologies, allowing improved safety and longevity without compromising energy and power. The EV-44 is Electrovaya's primary lithium-ion ceramic cell and meets the most stringent safety, energy density, cycle life, and performance standards. In addition, Electrovaya's battery systems are designed to be scaled through a modular approach, which provides flexibility for an application's specific capacity requirements.

Solid State Platform: According to Grand View Research, the global solid-state battery market was valued at \$590.9 million in 2020 and is expected to cross \$5.3 billion by 2028, representing a CAGR of 36%. Electrovaya believes it is well-positioned for this next-generation battery technology. Its division, Electrovaya Labs, focuses on developing solid-state battery technology, among others, and has targeted 2023 for the debut of its solid-state battery platform.

Battery Management Systems: Electrovaya's 5th Generation BMS provides the highest levels of cell balancing, IoT functionality, and safety. It is reviewed and certified by UL to UL991 and UL1998 for specific applications, and it is available for both low- and high-volume battery systems. Electrovaya's hardware and firmware engineering team keep advancing and improving this technology to keep up with the increasing demands of the e-mobility industry. Electrovaya has launched a cloud-based battery analytics system for recurring revenues with a subscription model. The system monitors battery health, utilization, and charging to provide customers with optimized fleet and charging management. Furthermore, the system improves the capability and efficiency of troubleshooting and maintenance. Several customers have started using this analytics system.

The Markets

Material Handling: The material handling industry is undergoing a massive sea change from lead-acid batteries to alternative power sources, including lithium-ion and fuel cells. Electrovaya is having notable success in penetrating the material handling market as management believes it has arguably the highest-performing battery solution in the market today. In addition, the company's customers have proven meaningful RIOs in material handling compared with lead-acid, showing paybacks as short as a month, opening a significant opportunity for new units sold and retrofits.

E-Mobility: In October 2021, Electrovaya announced a strategic supply agreement with e-bus and e-truck manufacturer [Vicinity Motor Corp.](#) for EV buses and fully electric VMC I200 Class 3 trucks. Management believes this is opening a new market for its batteries, targeting further development and commercialization in this market. The company's solid-state battery platform will also target this market, with an expected launch date in 2023.

ABOUT THE ANALYST



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Shawn Severson is President & Co-Founder of Water Tower Research and is a member of the Board of Managers. Prior to co-founding Water Tower Research and previously founding predecessor firm alphaDIRECT Advisors, Shawn spent over 20 years as a senior equity research analyst covering the Technology and ClimateTech sectors, including senior positions at JMP Securities, ThinkEquity, Robert W. Baird (London), and Raymond James.

Shawn started his career as an Equity Research Associate at Kemper Securities. Shawn was frequently ranked as a top research analyst, including one of the Wall Street Journal's "Best on the Street" stock pickers and a StarMine Analyst Awards Top 3 stock picker. Shawn holds a B.A. in Finance and Economics from Augustana College.

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