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Zacks Small-Cap Research

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POET Technologies Inc. (NASDAQ: POET)

POET Sees the Light at the End of the Tunnel as Product Revenues Are Expected By Year End

Given its unique product offering and large TAM we believe POET shares are worth \$14.50 based on peer multiples given no further equity dilution than forecast.

OUTLOOK

POET Technologies is a startup seeking to disrupt the photonics industry with a new design that eliminates parts of an optical transceiver and replaces them with a single integrated device which is smaller, cheaper and faster than the current solutions. It has a \$50M joint venture with Sanan IC to make and sell optical engines to data centers and telecom. Its solution can be produced in a fab, eliminating costly manual steps, and allowing it to be easily produced in large quantities. We believe POET's platform can be applied to many other large photonics markets including high-speed computing, co-packaged optics, Medtech, wearables, augmented reality, LIDAR, and the Internet of Things.

Current Price (4/6/23) US\$3.87
Valuation US\$14.50

SUMMARY DATA

52-Week High \$7.16
52-Week Low \$2.41
One-Year Return (%) -43.0
Beta 1.1
Average Daily Volume (sh) 18,555

Shares Outstanding (mil) 39.6
Market Capitalization (\$mil) \$154
Short Interest Ratio (days) 2.3
Institutional Ownership (%) 2.0
Insider Ownership (%) 0.6

Annual Cash Dividend \$0.00
Dividend Yield (%) 0.00

5-Yr. Historical Growth Rates
Sales (%) N/A
Earnings Per Share (%) N/A
Dividend (%) N/A

P/E using TTM EPS N/M
P/E using 2023 Estimate N/M
P/E using 2024 Estimate N/M

Risk Level Above Average
Type of Stock Small-Growth
Industry Elec Comp-Semis

ZACKS ESTIMATES

Revenue

(in millions of US\$)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2021	\$0.0 A	\$0.2 A	\$0.0 A	\$0.0 A	\$0.0 A
2022	\$0.0 A	\$0.1 A	\$0.2 A	\$0.2 A	\$0.6 A
2023	\$0.2 E	\$0.2 E	\$0.5 E	\$2.1 E	\$3.0 E
2024					\$10.0 E

Earnings Per Share

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2021	-\$0.13 A	-\$0.13 A	-\$0.10 A	-\$0.10 A	-\$0.45 A
2022	-\$0.15 A	-\$0.14 A	-\$0.11 A	-\$0.17 A	-\$0.57 A
2023	-\$0.15 E	-\$0.15 E	-\$0.15 E	-\$0.13 E	-\$0.58 E
2024					-\$0.35 E

POET Sees the Light at the End of the Tunnel as Product Revenues Are Expected This Year

POET is getting closer to showing product revenue after spending 2022 working with customers developing products for their launches. POET-designed optical engines released to production have been produced by SPX and provided to its customers, but none of those samples have been booked as revenue. POET will begin booking product revenue when it sends interposer wafers to SPX that are incorporated into products bought by SPX's end-user customers, or when POET ships advanced products, such as its packaged light sources for AI accelerators to customers from its Singapore location. We expect this will happen in Q3. SPX should then show its first revenues in Q4 as it ships products to its Chinese module customers. As the interposer is a third or less of the cost of an optical engine, every \$1 in revenue for POET is \$3 or more for SPX. So, if POET books \$10 million in sales in 2024, SPX would book at least \$30 million. The value of POET would then be both that of a company generating \$10 million in sales and 80% of a company generating \$30 million in revenues.

In addition to orders from SPX, POET should also be booking product revenues from at least Celestial AI and ADVA by year-end. While Celestial has already been generating NREs for POET, we expect that it will start to buy product to build inventory for its product launches. POET will be providing Celestial AI LightBar modules. Each accelerator Celestial AI sells has four POET chips. At \$200 per chip, Celestial could represent \$800 million in potential revenues by itself. We believe most if not everything Celestial is planning to sell contains POET. Due to the market's new interest in AI, we expect Celestial is getting exceptional interest. Hopefully, some of that interest will rub off on POET. Back in February 2022, Celestial raised \$56 million in a Series A round at a \$150 million post-money valuation, bringing its total capital raised to over \$64 million. We expect its current valuation is much higher than that due to its progress and the recent excitement over AI. According to MarketsandMarkets the global AI chipset market size was \$7.6 billion in 2020 and is likely to reach \$57.8 billion by 2026, yielding a CAGR of 40.1% during the forecast period.

ADVA has already announced the MicroMux *Quattro*, a product that uses POET's technology, and that product is expected to be in production in the fall. To build inventory, we expect ADVA should also start generating revenues for POET this year.

SPX is Generating Interest From Investors Abroad

SPX is getting interest from overseas investors in China and Singapore as it is expected to have larger near-term revenues than POET and also is in a geographic area where valuations are much higher than in the US (by 5X). While the JV is still officially only valued at \$50 million, we expect that once it starts generating revenue its perceived value should jump and could be as high as \$200 million by year-end based on current Asian valuations. If it were to take outside investment, that would raise the value of SPX and likely result in a gain on investment for POET as well as prove its value. Ultimately SPX could also become a public company providing liquidity for POET.

During the Quarter

On November 14, 2022, POET announced it will use high-speed directly modulated laser (DML) technology from Lumentum in its transmit optical engines to enable high volume, low power, and cost-efficient 400G, 800G, and 1.6T pluggable transceivers for hyperscale data centers. Since this announcement, all the large module makers have taken notice of POET and are considering whether to redesign their current products to take advantage of the cost savings from using POET as that would be the only path to significant product cost reduction for them.

Q4 2022 Earnings Report

Q4 revenues were \$199,559 and came from NREs paid by AI Celestial and others versus no revenue in Q4 2021. We expect the company to book NREs again in Q1.

Total operating expenses were \$6.1 million compared to \$4.7 last year. This included stock-based compensation of \$1.6 million compared to \$1.2 million last year. SM&A expenses increased by \$530,000 to \$2.6 million from \$2.1 million last year. R&D expenses increased to \$3.5 million from \$2.6 million last year. In R&D expense contract manufacturer costs increased by \$1,150,618 from \$75,624 in Q4 2021. Stock-based compensation increased by \$407,331 (34%) to \$1.6 million in Q4 2022 from \$1.2 million in Q4 2021.

80.7% of the joint venture generated a loss of \$1.7 million in the quarter. Most of the increase was from the JV starting to add depreciation expense, all of which was put in Q4 for the 2022 year. POET also recognized a gain of \$1.3 million from its contribution of IP to the JV in the quarter. Every time its partner adds cash to the project, the valuation increases, net of the JV's losses.

The net loss was \$6.3 million up from \$3.7 million in Q4 2021. This resulted in an IFRS loss per share of \$0.17 per share and a non-IFRS loss of \$0.12 per share, compared to a loss of \$0.10 and a non-IFRS loss of \$0.07 last year. The total common shares outstanding on December 31, 2022, were 37.8 million, and there were 42.7 million shares fully diluted.

Balance Sheet

POET Technologies ended the December quarter with \$9.2 million in cash and marketable securities, no convertible debentures, and no debt. On Dec. 2nd, POET sold 1,126,635 units at C\$3.81 (US\$2.78) per unit for gross proceeds of C\$4,292,479.35 (US\$3,132,045.30). Each unit was comprised of one share and a one-half warrant exercisable at C\$4.95 (US\$3.61) for three years.

Working capital was \$5.8 million. The company had a negative cash flow (excluding changes in working capital) of \$3.9 million and a negative free cash flow of \$5.5 million. The company is burning about \$1.3 million a month. We expect that the required conversion of debentures between April and September of 2023 should add another \$3.5 million to POET's coffers and augment its runway.

In Q1, as of March 22nd, the company had received \$5.5 million (CAD\$7.5 million) from the exercise of 1,758,716 warrants. On March 22, 2023, there were 39,629,166 shares outstanding.

At its current burn rate, the company has a potential of nine months of cash (\$9.2 million December cash balance + \$5.5 million in Q1 as of March 22nd + \$3.5 million from conversion minus three months of burn of \$4 million = \$14.2) from today. We expect it needs to do another capital raise which should get easier as it starts to generate product revenues in Q3. As revenues ramp, we expect the burn rate to decline.

Trade Shows

The CIOE 2022, the 24th China International Optoelectronic Exposition in Shenzhen, China was rescheduled to December and later canceled. POET intended to demonstrate a 400G TX prototype engine using CW lasers with a SiP modulator plus the existing RX engine, a 1.6T RX engine, and a 100G LR4 TX and RX. These were the subject of a video that the Company posted to its website.

At OFC, in March of 2023, the company showed:

- 800G 2xFR4 receive optical engines with integrated DMUX, photodiodes, and trans-impedance amplifier
- 100G LR4 transmit and receive optical engines for 10km transmission applications
- O-Band LightBar™ products with high-power CW lasers for co-packaged optics and artificial intelligence/machine learning (AI-ML) GPUs

- A mechanical demo of 800G 2xFR4 QSFP-DD transceiver showcasing the simplicity of a transceiver design utilizing POET's optical engines.

Several potential module customers realized that POET's technology might be their only path to 800G and 1.6T.

After the Quarter Ended

On January 10, 2023, POET announced that it released four optical engine products to production. These small form factor optical engines with integrated directly modulated lasers (DMLs), optical multiplexers, high-speed photodiodes, and optical demultiplexers enable low-power, cost-efficient, and highly scalable optical engines for pluggable transceivers for telecom and data center markets. The four products include 100G CWDM4 TX and RX, 200G FR4 RX, and 400G FR4 RX.

On January 18, 2023, the company announced it developed multi-engine 100G CWDM4 and 100G LR4 chip-on-board solutions for ADVA Optical Networking SE. ADVA is using POET's multi-engine transmit and receive chips in an innovative pluggable solution that packs the functionality of four independent 100Gbit/s interfaces into a single QSFP-DD housing.

On February 2, 2023, POET announced that it has started sampling 400G FR4 and 800G 2xFR4 receive optical engines (RXOEs) and is partnering with Luxshare Technology to sell power-efficient and cost-optimized 400G and 800G transceiver solutions. LuxshareTech is focused on expanding its 400G and 800G pluggable transceivers portfolio for the data center market. POET expects to complete design verification testing and reliability qualification of the RXOEs in the first half of 2023 and **start production in the second half of 2023**.

On February 22, 2023, POET announced it will be selling Beijing FeiYunYi Technology custom-designed optical engines from SPX for use in transceiver modules. POET will design the modules and purchase engines from SPX and then sell the engines to BFYY to make and sell modules for sale to end-user customers. This startup will jump-start the module business for POET and eliminate the need to rely solely on current module makers with legacy products for engine sales. BFYY was recently formed to sell modules using POET-designed optical engines sourced from SPX. With deep connections to the telecom industry in China, BFYY is investing in assembly facilities to build, market, and sell modules that will be competitive in the data center market, specifically focused on large telecom service providers. BFYY's first product will be a 100G optical transceiver with complete transmit and receive functionality. Using the "POET ONE™" single-chip solution will offer significant performance advantages as well as reduce the design cycle time for BFYY. The wafer-scale assembly and the single-chip solution will enable BFYY to cost-effectively ramp to high-volume production. The agreement was valued at \$1 million over two years and includes NREs for POET and a purchase order of 10,000 units from SPX. BFYY has forecasted optical engine purchases from SPX at over US\$30 million over three years.

On March 6th POET and Vanguard Automation GmbH announced a collaboration to integrate Vanguard's Micro-Lenses with POET's Optical Interposers. This will create a powerful platform for electro-optical engines for transceivers, co-packaged optics, light engines, and sensing devices. Incorporating Micro-Lenses improves the coupling efficiency of light as it passes from one photonic device to another, which in turn reduces the power consumption of the combined solution. The precise alignment and printing of the Micro-Lenses at the wafer level offer significant scalability. They will initially combine Micro-Lenses with POET's LightBar products, targeting **AI-ML accelerators and bio-sensing applications**. POET expects to **start sampling** LightBar products incorporating Vanguard Automation's Micro-Lenses to customers in the **second half of 2023**.

KEY POINTS

- The Holy Grail in photonics is cost reduction (through efficiencies in process and materials) combined with lower power consumption. Throw in a smaller size, and higher performance and customers should beat a path to your door. POET believes it can provide all four with its proprietary “optical interposer” based on a novel low-loss material that can allow multiple components to be integrated into a single package entirely at wafer-scale. What this means is that it can eliminate steps in the labor-intensive assembly process currently used when manufacturing optical transceivers. Manual assembly results in higher scrap rates, longer production times, and higher equipment costs. Also, its base material is far better suited to use in the management of light than silicon due to its lower loss and planar architecture, thus allowing lower-powered lasers, resulting in lower power consumption and the ability to use less expensive lasers. POET hopes to disrupt the current market for photonics devices and have its Optical Engine platform become the standard in the industry.
- In 2021, POET established a \$50 million joint venture with Xiamen Sanan Integrated Circuit Co. Ltd. of Xiamen, China (SPX). POET is contributing know-how and a license to some of its technology, and Xiamen is contributing intellectual property, capital, and production facilities. It will ultimately be 53% owned by Sanan IC and 47% by POET, but today POET owns 80.7%. Its percent ownership is reduced as its partner’s investment increases. Its first products will be optical engines to be sold to manufacturers of 100G, 200G, and 400G devices for use in data centers and telecommunications. This joint venture could generate as much as \$200-\$300 million in revenues per year by 2026 by taking a modest market share.
- The stock currently trades at a fully diluted enterprise value of US\$155 million. According to Yole Group, the optical transceiver market is rising at a CAGR of 15% from \$10.4 billion in 2021 to about \$24.7 billion in 2027. POET’s product is a component of an optical transceiver and the market is about a third of the transceiver market. If POET can secure even a small portion of that market with its unique offering, its valuation should far exceed its current price. We believe the stock could be worth US\$14.50 based on \$200 million in revenues in 2026 at 6.8xs EV to Sales, discounted at 30% back to present value.

VALUATION

POET’s business model would make it similar to fabless semiconductor companies. Third parties would provide the production of its devices and we expect it would have margins similar to those companies below. If we throw out Nvidia, they average 6.8xs enterprise value to estimated 2023 revenues. Currently, POET trades at an enterprise value of \$155 million using a fully diluted share count. We need to look further out to where we think revenues would be by 2026. If we say the joint venture can reach \$200 million in revenues by then and the rest of the business can ramp to \$100 million that would be \$200 million in revenues for POET in 2026. Using 6.8xs gives us an enterprise valuation of \$1.4 billion. For the valuation, we calculated the company’s fully diluted share count using the treasury stock method at 42.6 million fully diluted shares outstanding. \$1.4 billion divided by 42.6 million shares is approximately US\$32.00 per share by 2026. This would be a present value of approximately US\$14.50 or CN\$ 19.50 per share discounted by 30% per year.

Company	Ticker	Calendar		LTM	EBITDA	EBITDA Margin	Enterprise Value / Sales			EV/EBITDA	Included in Average?	Ent. Value
		2024E	2023E				2024E	2023E	LTM			
AMD	AMD	\$27,660	\$23,650	\$23,600	4,700	20%	5.6x	6.5x	6.6x	32.9x	y	154,840
Broadcom	AVGO	NA	\$35,900	\$34,410	20,000	58%	NA	8.2x	8.5x	14.7x	y	294,050
Cirrus Logic	CRUS	NA	\$1,843	\$2,010	489	24%	NA	3.1x	2.9x	11.7x	y	5,740
Lightwave Logic	LWLG	NA	NA	\$0	(16)	NM	NA	NA	NA	-34.7x	n	566
Marvell	MRVL	\$6,490	\$5,490	\$5,920	1,790	30%	6.3x	7.4x	6.9x	22.7x	y	40,680
Monolithic Power Sys	MPWR	\$2,300	\$1,960	\$1,790	572	32%	10.0x	11.7x	12.8x	40.1x	y	22,950
NVIDIA	NVDA	\$37,040	\$29,760	\$26,970	7,120	26%	18.7x	23.2x	25.6x	97.0x	n	690,940
Qualcomm	QCOM	NA	\$39,700	\$42,960	16,300.0	38%	NA	3.8x	3.5x	9.2x	y	150,000
Average						19%	7.3x	6.8x	6.9x	21.9x		194,171

Warrant and Option Stack
31-Dec-22

Expiration	Type	Holder	Ave. Strike Price		Number	Value	
			CAD	USD		CAD	USD
2023 Options	Employee		\$ 7.80	\$ -	-	\$ -	\$ -
2024 Options	Employee		\$ 3.20	\$ 2.40	30,000	\$ 96,000	\$ 72,000
2026 Options	Employee		\$ 6.20	\$ 4.65	100,000	\$ 620,000	\$ 465,000
2027 Options	Employee		\$ 2.93	\$ 2.20	592,712	\$ 1,736,646	\$ 1,302,485
2028 Options	Employee		\$ 3.30	\$ 2.48	714,940	\$ 2,359,302	\$ 1,769,477
2029 Options	Employee		\$ 3.60	\$ 2.70	1,374,417	\$ 4,947,901	\$ 3,710,926
2030 Options	Employee		\$ 4.73	\$ 3.55	870,048	\$ 4,115,327	\$ 3,086,495
2031 Options	Employee		\$ 10.99	\$ -	-	\$ -	\$ -
2032 Options	Employee		\$ 3.79	\$ 2.84	1,800,144	\$ 6,822,546	\$ 5,116,909
				\$ 2.83	5,482,261	20,697,722	15,523,292
2023 Warrants	Debenture Conv.		\$ 5.00	\$ 3.75	1,078,250	\$ 5,391,250	\$ 4,043,438
2025 Warrants	Debenture Conv.		\$ 4.95	\$ 3.71	560,000	\$ 2,772,000	\$ 2,079,000
2/11/23 Warrants	Private placement		\$ 4.25	\$ 3.19	1,764,720	\$ 7,500,060	\$ 5,625,045
				\$ 3.45	3,402,970	\$ 15,663,310	\$ 11,747,483
Total ITM Options & Warrants					8,885,231	\$ 36,361,032	\$ 27,270,774
2023 Options	Employee		\$ 7.80	\$ 5.85	23,000	\$ 179,400	\$ 134,550
2026 Options	Employee		\$ 7.90	\$ 9.00	102,500	\$ 809,750	\$ 607,313
2028 Options	Employee		\$ 5.20	\$ -	-	\$ -	\$ -
2030 Options	Employee		\$ 5.30	\$ -	-	\$ -	\$ -
2031 Options	Employee		\$ 10.59	\$ 7.94	925,625	\$ 9,802,369	\$ 7,351,777
2032 Options	Employee		\$ 8.30	\$ 6.23	219,939	\$ 1,825,494	\$ 1,369,120
				\$ 7.44	1,271,064	\$ 12,617,012	\$ 9,462,759
2/11/23 Broker warrants	Private placement		\$ 8.50	\$ 6.38	105,883	\$ 900,006	\$ 675,004
2023 Warrants	Debenture Conv.		\$ 5.00	\$ 3.75		\$ -	\$ -
2/11/23 Warrants	Private placement		\$ 11.50	\$ 8.63		\$ -	\$ -
			\$ 6.38	\$ 6.38	105,883	900,006	675,004
Total OTM Options & Warrants					1,376,947	\$ 13,517,018	\$ 10,137,763
TOTAL OPTIONS OUTSTANDING					6,753,325	\$ 33,314,735	\$ 24,986,051
TOTAL WARRANTS OUTSTANDING					3,508,853	\$ 16,563,316	\$ 12,422,487
TOTAL OPTIONS AND WARRANTS OUTSTANDING					10,262,178	\$ 49,878,050	\$ 37,408,538

Fully Diluted Shares Using Treasury Stock Method

Share Outstanding	37,841,950
Warrants	3,508,853
Options	6,753,325
Debentures	
All in shares	48,104,128
Fully diluted shares	48,104,128
Cash raised by warrants and options	27,270,774
Share purchased by cash raised	5,454,155
Current share price \$	\$ 5.00
Fully diluted shares, TS Method	42,649,973

RISKS

- POET is a startup and has virtually no revenues. It may not be able to close customers if its technology does not work or work within the needed parameters. Given its cash burn rate, we expect it will need to raise capital adding the risk of equity dilution.
- Many potential customers may be hesitant to do business with a small, money-losing start-up, making market penetration even more difficult.
- The company and its joint venture may take longer to book sales, ramp slower or produce less than expected sales and profits. The current foundry capacity shortage has caused the timetable for the company to produce and ship samples to customers and we believe industry conditions beyond its control could lead to further delays.
- POET's solution is significantly different from that currently used in the industry. For customers to switch, it may take more time than expected to persuade them to leave their legacy methodology.
- The pandemic continues to affect the supply chain and POET has experienced delays in shipping as well as acquiring needed components from suppliers. General decision-making has been slowed with potential customers as well due to their supply chain issues.
- The potential of worldwide recession would affect POET and its customers and suppliers.

POET INCOME STATEMENT

	Q1 21	Q2 21	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22	Q1 23E	Q2 23E	Q3 23E	Q4 23E	2021	2022	2023E	2024E
Revenue	\$ 0	\$ 209,100	\$ 0	\$ 0	\$ 0	\$ 120,261	\$ 232,928	\$ 199,559	\$ 200,000	\$ 200,000	\$ 500,000	\$ 2,100,000	\$ 209,100	\$ 552,748	\$ 3,000,000	\$ 10,000,000
Cost of revenue	0	0	0	0	0	0	0	0	0	0	400,000	1,470,000	0	0	1,870,000	6,500,000
Gross margin	0	209,100	0	0	0	120,261	232,928	199,559	200,000	200,000	100,000	630,000	209,100	552,748	1,130,000	3,500,000
Gross margin %	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	20.0%	30.0%	100.0%	100.0%	37.7%	35.0%
Operating expenses																
Selling, marketing and administration	2,328,432	2,282,280	2,362,922	2,081,894	2,445,944	2,383,973	2,074,704	2,611,650	2,500,000	2,500,000	2,500,000	2,500,000	9,055,528	9,516,271	10,000,000	10,000,000
R&D	1,542,718	2,259,987	1,714,014	2,648,409	2,564,739	2,300,642	2,361,991	3,519,371	3,000,000	3,000,000	3,000,000	3,000,000	8,165,128	10,746,743	12,000,000	12,000,000
Operating expenses	3,871,150	4,542,267	4,076,936	4,730,303	5,010,683	4,684,615	4,436,695	6,131,021	5,500,000	5,500,000	5,500,000	5,500,000	17,220,656	20,263,014	22,000,000	22,000,000
Operating income	(3,871,150)	(4,333,167)	(4,076,936)	(4,730,303)	(5,010,683)	(4,564,354)	(4,203,767)	(5,931,462)	(5,300,000)	(5,300,000)	(5,400,000)	(4,870,000)	(17,011,556)	(19,710,266)	(20,870,000)	(18,500,000)
Impairment and other loss	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest expense	(234,579)	(94,799)	(19,729)	(15,512)	(13,793)	(12,627)	(11,707)	(11,611)	(11,611)	(11,611)	(11,611)	(11,611)	(364,619)	(49,738)	(46,444)	(10,000)
Interest income	7,309	19,772	21,353	26,650	21,999	40,300	57,429	68,592	50,000	35,000	30,000	20,000	75,084	188,320	135,000	0
Forgiveness of COVID govt loans	0	0	186,747	0	0	0	0	0	0	0	0	0	186,747	0	0	0
Impact of joint venture (80.7% owned)	0	0	(634,666)	(507,583)	(430,321)	(745,961)	(379,368)	(1,656,343)	(800,000)	(800,000)	(800,000)	(800,000)	(1,142,249)	(3,211,993)	(3,200,000)	(1,000,000)
Gain on contribution of IP to JV	0	0	1,057,500	1,530,000	0	0	496,115	1,250,872	0	200,000	200,000	200,000	2,587,500	1,746,987	600,000	5,000,000
Pretax loss	(4,098,420)	(4,408,194)	(3,465,731)	(3,696,748)	(5,432,798)	(5,282,642)	(4,041,298)	(6,279,952)	(6,061,611)	(5,876,611)	(5,981,611)	(5,461,611)	(15,669,093)	(21,036,690)	(23,381,444)	(14,510,000)
Income tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net loss	(4,098,420)	(4,408,194)	(3,465,731)	(3,696,748)	(5,432,798)	(5,282,642)	(4,041,298)	(6,279,952)	(6,061,611)	(5,876,611)	(5,981,611)	(5,461,611)	(15,669,093)	(21,036,690)	(23,381,444)	(14,510,000)
Non-IFRS net loss	(4,098,420)	(4,368,372)	(2,584,935)	(2,515,373)	(4,435,357)	(4,312,981)	(3,160,502)	(4,691,246)	(5,061,611)	(4,876,611)	(4,981,611)	(3,961,611)	(11,134,723)	(16,600,086)	(18,944,840)	(10,010,000)
Basic and diluted net loss per share	\$ (0.13)	\$ (0.13)	\$ (0.10)	\$ (0.10)	\$ (0.15)	\$ (0.14)	\$ (0.11)	\$ (0.17)	\$ (0.15)	\$ (0.15)	\$ (0.15)	\$ (0.13)	\$ (0.45)	\$ (0.57)	\$ (0.58)	\$ (0.35)
Yr-to-yr growth	126.1%	-6.1%	99.2%	20.8%	16.0%	12.8%	10.9%	62.7%	3.2%	2.8%	36.9%	-18.5%	26.2%	28.9%	-38.2%	
Non-IFRS loss per share	(0.13)	(0.13)	(0.07)	(0.07)	(0.12)	(0.12)	(0.09)	(0.12)	(0.13)	(0.12)	(0.12)	(0.10)	(0.32)	(0.45)	(0.47)	(0.24)
Share outstanding (millions)	32.1	34.5	35.2	36.4	36.7	36.7	37.0	38.0	39.6	39.7	40.0	40.6	34.5	36.7	40.0	41.0
Yr-to-yr growth	10.8%	18.6%	20.2%	23.8%	14.3%	6.3%	5.2%	4.4%	8.1%	8.2%	8.1%	6.7%	18.4%	6.4%	15.8%	11.6%
Adjusted EBITDA	(3,618,419)	(2,826,385)	(2,859,694)	(3,267,750)	(3,711,224)	(3,281,017)	(2,986,525)	(4,001,738)	(3,961,541)	(3,989,321)	(4,178,186)	1,929,724	(11,376,664)	(13,980,504)	(10,199,324)	(6,237,783)

SPX INCOME STATEMENT

	Q4 23E	2023E	2024E	2025E	2026E
Revenue	\$ 900,000	\$ 900,000	\$ 30,000,000	\$ 100,000,000	\$ 200,000,000
Operating expenses	(1,891,326)	(1,891,326)	(31,428,571)	(92,857,143)	(190,000,000)
Net loss	(991,326)	(991,326)	(1,428,571)	7,142,857	10,000,000

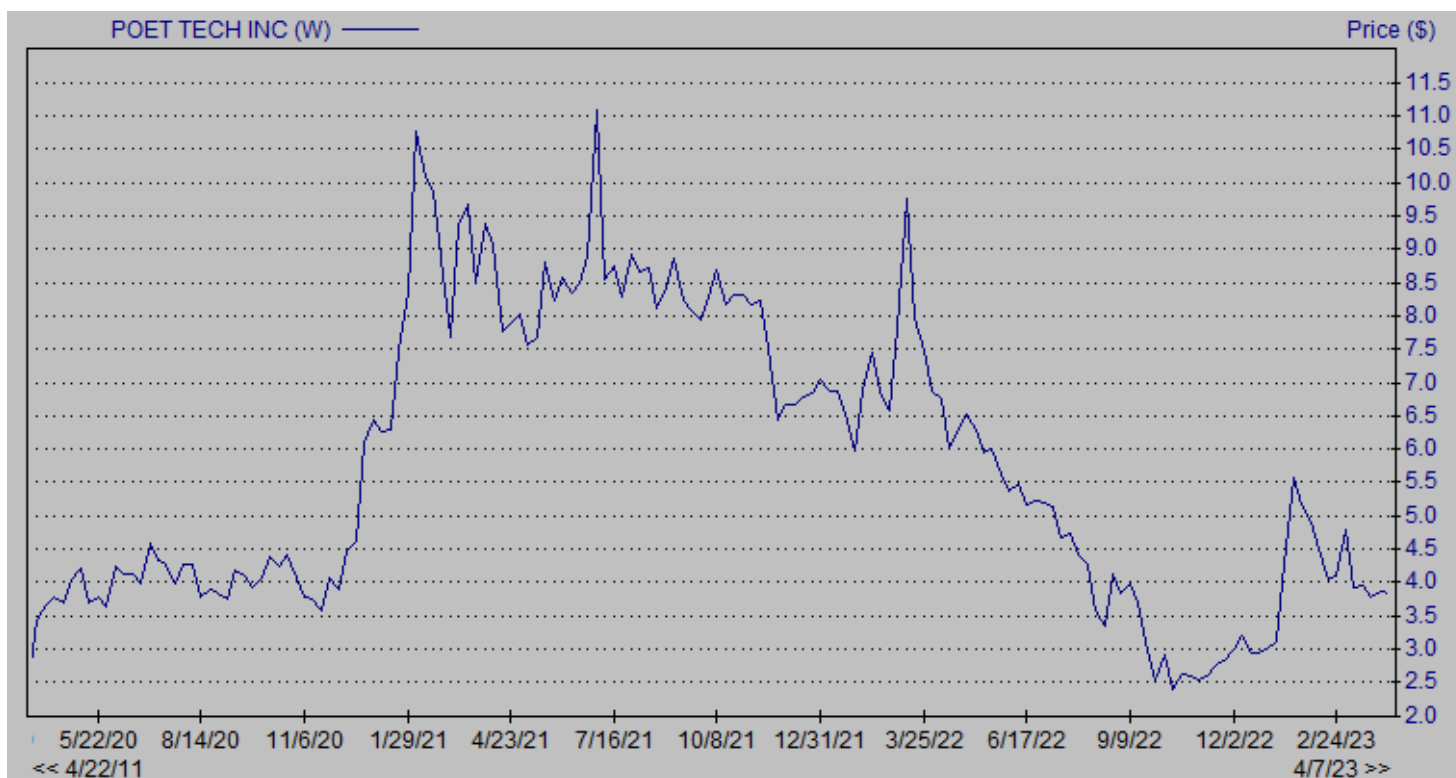
BALANCE SHEET

	Dec 31, 2022	Sept 30, 2022	Qtr-Qtr % Growth	Dec 31, 2021	Yr-Yr % Growth
Current					
Cash and cash equivalents	\$ 9,229,845	\$ 10,269,148	-10%	\$ 14,941,775	-38%
Short-term investments	0	0	0%	6,366,828	-100%
Accounts receivable	62,842	0	NM	0	NM
Prepays and other current assets	275,507	342,054	-19%	480,523	-43%
Current Assets	9,568,194	10,611,202	-10%	21,789,126	-56%
Investment in joint venture	0	308,327	-100%	1,445,251	-100%
Property and equipment	5,070,507	3,339,830	52%	3,064,234	65%
Patents and licenses	510,705	532,236	-4%	528,476	-3%
Right of use asset	241,047	274,689	-12%	326,890	-26%
Total Assets	15,390,453	15,066,284	2%	27,153,977	-43%
Liabilities					
Accounts payable and accrued liabilities	3,362,430	1,422,380	136%	1,791,222	88%
Contract liabilities	274,192	389,561	-30%	0	NM
Covid-19 government support loans	29,520	28,916	2%	31,660	-7%
Lease liability	150,951	193,269	-22%	101,074	49%
Current Liabilities	3,817,093	2,034,126	88%	1,923,956	98%
Lease liability	128,312	117,568	9%	258,274	-50%
Total liabilities	3,945,405	2,151,694	83%	2,182,230	81%
Shareholders' Equity					
Share capital	151,206,539	148,926,833	2%	147,729,846	2%
Warrants & comp options	5,905,642	5,248,908	13%	5,328,455	11%
Contributed surplus	51,016,808	49,428,102	3%	46,954,333	9%
Accumulated other comprehensive loss	(2,660,281)	(2,945,544)	-10%	(2,053,917)	30%
Deficit	(194,023,660)	(187,743,709)	3%	(172,986,970)	12%
Shareholder's Equity	11,445,048	12,914,590	-11%	24,971,747	-54%
Tot Liabilities and Share. Equity	\$ 15,390,453	\$ 15,066,284	2%	\$ 27,153,977	-43%
Cash and short-term investments	\$ 9,229,845	\$ 10,269,148	-10%	\$ 21,308,603	-57%
Cash per share	0.25	0.28	-12%	0.58	-57%
Current ratio	2.5	5.2	-52%	11.3	-78%
Working capital	5,751,101	8,577,076	-33%	19,865,170	-71%
Debt	0	0	0%	0	0%

CASH FLOWS

US Dollars	2020	Mar. 31, 2021	Jun. 30, 2021	Sep. 30, 2021	Dec. 31, 2021	2021	Mar. 31, 2022	Jun. 30, 2022	Sep. 30, 2022	Dec. 31, 2022	2022
OPERATING ACTIVITIES											
Net loss	\$ (18,169,070)	\$ (4,098,420)	\$ (4,408,194)	\$ (3,465,731)	\$ (3,696,748)	\$ (15,669,093)	\$ (5,432,799)	\$ (5,282,642)	\$ (4,041,298)	\$ (6,279,951)	\$ (21,036,690)
Adjustments for:											
Depreciation of property and equipment	631,263	188,220	205,154	219,148	227,844	840,366	233,854	253,414	282,812	284,184	1,054,264
Amortization of patents and licenses	65,782	16,995	16,994	29,848	5,723	69,560	20,376	20,440	82,529	(43,099)	80,246
Amortization of right of use assets	116,057	47,516	48,041	47,428	47,611	190,596	47,788	39,822	(28,895)	99,933	158,648
Accretion of debt discount on converts & int.	524,095	128,229	48,768	18,548	18,298	213,843	13,794	12,627	11,707	11,610	49,738
Stock-based compensation	3,612,945	820,538	1,236,593	1,295,864	1,181,375	4,534,370	997,441	969,661	880,796	1,588,706	4,436,604
Non-cash settled operating costs	910,738	0	13,814	0	0	13,814	0	0	0	40,029	40,029
Expected credit loss allowance	2,500,000	0	0	0	0	0	0	0	0	0	0
Gain on lease modification	(786)	0	0	0	0	0	0	0	0	0	0
Gain on contribution of IP to JV	0	0	0	(1,057,500)	(1,530,000)	(2,587,500)	0	0	(496,115)	(1,250,872)	(1,746,987)
Share of loss in JV	0	0	0	634,666	507,583	1,142,249	430,321	745,961	379,368	1,656,343	3,211,993
Forgiveness of COVID loans	0	0	0	(186,747)	0	(186,747)	0	0	0	0	0
Non-cash foreign exchange	161,000	0	0	0	0	0	0	0	0	0	0
Net change in non-cash working capital accounts:											
Accounts receivable	0	0	(209,100)	209,100	0	0	0	0	0	(61,099)	-61099
Prepaid and other current assets	232,522	(465,106)	798,311	88,597	(286,876)	134,926	175,956	(77,334)	30,893	(485,714)	(356,199)
Accounts payable and accrued liabilities	(22,510)	882,528	(450,207)	(679,765)	317,767	70,323	(139,990)	(414,464)	305,454	1,845,690	1,596,690
Contract liabilities	0	0	0	0	0	0	0	341,975	47,586	(142,708)	246,853
Cash flows from operating activities	(9,437,964)	(2,479,500)	(2,699,826)	(2,846,544)	(3,221,237)	(11,233,293)	(3,653,259)	(3,390,540)	(2,592,749)	(2,736,948)	(12,325,910)
INVESTING ACTIVITIES											
Purchase of short-term investments	0	0	0	(6,328,226)	0	(6,366,828)	(16,474)	4,017,149	2,366,153	(6,366,828)	0
Maturity of short-term investments						0	0	0	0	6,366,828	6,366,828
Proceeds from sale of discount operations	15,500,000	0	0	0	0	0	0	0	0	0	0
Purchase of property and equipment	(1,521,788)	(123,564)	(508,458)	(61,320)	(78,181)	(771,523)	(381,815)	(491,357)	(492,745)	(1,645,645)	(3,011,562)
Purchase of patents and licenses	(52,075)	0	0	(17,470)	(141,889)	(159,359)	(9,100)	0	(53,375)	0	(62,475)
Cash flows from investing activities	13,926,137	(123,564)	(508,458)	(6,407,016)	(258,672)	(7,297,710)	(407,389)	3,525,792	1,820,033	(1,645,645)	3,292,791
FINANCING ACTIVITIES											
Proceeds from COVID-19 loans	218,151	0	0	0	0	0	0	0	0	0	0
Issue of common shares for cash, net	1,088,450	19,150,387	1,588,712	1,667,954	4,384,258	26,791,311	363,736	1,588,712	87,637	2,936,440	3,639,722
Payment of lease liability	(144,142)	(58,720)	(60,064)	(59,425)	(59,425)	(237,634)	(59,190)	(53,663)	(46,905)	(44,760)	(204,518)
Cash flows from financing	1,162,459	19,091,667	1,528,648	1,608,529	4,324,833	26,553,677	304,546	198,246	40,732	2,891,680	3,435,204
EFFECT OF EX RATE ON CASH	(205,867)	110,758	149,254	(292,328)	78,523	46,207	28,715	(149,387)	(444,953)	451,610	(114,015)
NET CHANGE IN CASH	5,444,765	16,599,361	(1,530,382)	(7,923,545)	923,447	8,068,881	(3,727,387)	184,111	(1,129,351)	(1,039,303)	(5,711,930)
CASH AND CASH EQUIVALENTS, beginning	1,428,129	6,872,894	23,472,255	21,941,873	14,018,328	6,872,894	14,941,775	11,214,388	11,398,499	10,269,148	14,941,775
CASH AND CASH EQUIVALENTS, end	6,872,894	23,472,255	21,941,873	14,018,328	14,941,775	14,941,775	11,214,388	11,398,499	10,269,148	9,229,845	9,229,845
Cash flow	(9,647,976)	(2,896,922)	(2,852,644)	(2,464,476)	(3,238,314)	(11,438,542)	(3,689,225)	(3,240,717)	(2,929,096)	(3,893,117)	(13,752,155)
Free cash flow	(11,169,764)	(3,020,486)	(3,361,102)	(2,525,796)	(3,316,495)	(12,210,065)	(4,071,040)	(3,732,074)	(3,421,841)	(5,538,762)	(16,763,717)

HISTORICAL STOCK PRICE



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