

Zentek – US\$3.85B Nuclear-Grade Graphite Asset Trading at ~US\$60M

Rating
BUY
Initiating

Target Price
\$2.70
Initiating

September 14, 2026

Disseminated on Behalf of Zentek Ltd.

All figures in CAD unless otherwise stated

Zentek Limited	ZEN:TSXV, ZTEKF:OTCQX
Rating	BUY
Target Price	\$2.70
Return to Target	275%

Market Data	
Share Price	\$0.72
Average Daily TSXV Volume (K)	122.0
FD ITM Shares (M)	128.6
Market Cap (\$M)	\$91.2
Cash & Cash Equivalents (\$M)	\$16.6
Debt (\$M)	\$1.9
Enterprise Value (\$M)	\$76.5

Valuation	
Albany PEA NPV (8%, US\$M)	\$2,290
P/NPV	0.03x

Please refer to the applicable disclosures on the back page
Source: Atrium Research, CapitalIQ, Company Documents



Zentek Ltd. is a Canadian intellectual property development and commercialization company advancing a portfolio of graphene-enabled and advanced material technologies across clean air, next-generation materials, and critical minerals. Core platforms are Albany Graphite, ZenGUARD™, and Triaera. Albany is the Company's principal critical minerals asset.

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What you need to know:

- Zentek's core asset is the Albany Graphite Project, a PEA-stage deposit of naturally occurring ultra-high-purity graphite in northern Ontario.
- Albany is being developed to supply 5N (99.999%) specification-grade graphite to the nuclear, defence, and semiconductor markets, and its recent PEA carries an after-tax NPV_{5%} of US\$3.85B (US\$2.29B at 8%).
- Bench-scale purification has already reached 5N+ (99.9992% carbon) at 2.60 ppm equivalent boron content through an acid-free process.

Zentek Ltd. (ZEN:TSXV, ZTEKF:OTCQX) is a Canadian advanced-materials company developing a rare ultra-high-purity graphite deposit in northern Ontario. While most graphite developers are geared toward the battery supply chain, Zentek's Albany Graphite Project is suited to nuclear, defence, and semiconductor applications that require 5N (99.999%) specification-grade material. An updated PEA released in August reframes Albany around that opportunity, and bench-scale testing has already purified its graphite to nuclear-grade specifications. Alongside the deposit, Zentek has commercialized a graphene platform through ZenGUARD™, a graphene-based coating, and is advancing an aptamer-based diagnostics platform. **We are initiating coverage on Zentek with a BUY rating and a \$2.70/share target price.**

Investment Thesis Summary

The Value is in Albany. Its August 2026 PEA carries an after-tax NPV_{5%} of US\$3.85B (US\$2.29B at 8%), a 27.4% IRR, and a 4.4-year payback over a 30-year mine life, reframing Albany as an ultra-high purity developer rather than a commodity flake developer like nearly all other peers.

Purity That Commands a Premium. Albany targets 4N (99.99%) and 5N (99.999%) graphite for nuclear, defence, and semiconductor use, in which material typically sells for US\$25,000-\$120,000/t against roughly US\$500-\$1,500/t for commodity flake graphite. Bench-scale purification has already reached 5N+ (99.9992% carbon) at 2.60 ppm equivalent boron content, inside the nuclear-grade threshold, supporting the PEA's US\$23,485/t realized price.

AI Has a Graphite Problem. Graphite is a listed critical mineral in the US, Canada, and EU, yet roughly 79% of mine supply and the bulk of downstream purification sit in China. Hyperscalers are contracting nuclear power for AI, and many advanced reactor designs need graphite that North America does not supply.

Commercialized Graphene in ZenGUARD™. Zentek already generates revenue from ZenGUARD™, a patented graphene-based air-filtration coating, and sits on a broader base of graphene IP that opens further opportunities across coatings, advanced materials, and diagnostics. It is early proof the Company can turn its materials science into commercial products.

Experienced Team, Undervalued Story. A leadership team rebuilt through 2025 has repositioned Zentek around high-purity graphite processing. We value the Company on a sum-of-the-parts basis, applying a 0.1x multiple to Albany's NPV_{8%} of US\$2.29B.

Catalysts

- Albany NI 43-101 Technical Report – Q3/26
- Pre-Feasibility Study – TBD
- ZenGUARD Commercial Orders & Channel Expansion – Ongoing

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Investment Thesis

Zentek Ltd. (ZEN:TSXV, ZTEKF:OTCQX) is a Canadian advanced-materials company with its value anchored by the Albany Graphite Project, a PEA-stage deposit of naturally occurring ultra-high-purity graphite in northern Ontario. Albany is being developed to supply 5N (99.999%) specification-grade graphite material into the nuclear, defence, and semiconductor markets, and its August 2026 PEA carries an after-tax NPV_{5%} of US\$3.85B, reframing the project as a specialty producer rather than a commodity flake developer.

Alongside the deposit, Zentek has commercialized its graphene platform through ZenGUARD™, a patented graphene-based filtration coating and holds an aptamer-based diagnostics business in Triaera Biosciences. We view these product platforms as evidence the Company can carry its materials science from the lab to market, while the core of the thesis and the bulk of the value, sits with Albany. **We are initiating coverage on Zentek with a BUY rating and \$2.70/share target price.**

Albany – Ultra-High-Purity Graphite Deposit

The Albany project is the core of our thesis and the primary driver of value in the story. The deposit hosts naturally occurring high-purity graphite that can be upgraded to 5N (99.999%) through a thermal, acid-free process that avoids hydrofluoric acid, positioning Zentek to supply the nuclear, defence, and semiconductor markets that pay a premium for specification-grade material. Bench-scale work has already demonstrated the result, with fluidized bed reactor (FBR) purification reaching 5N+ (99.9992% carbon) at 2.60 ppm equivalent boron content, inside the ~5 ppm boron ceiling nuclear-grade graphite demands, followed by successful graphite brick fabrication in early 2026. This sets Albany apart from the flake developers that make up the majority of the sector and serve commodity and battery-anode demand rather than the specialty end of the market.

Updated 2026 PEA

The August 2026 PEA reframed Albany as a specialty producer and, in our view, marks a key value-inflection point for the story. On the study's base case, Albany carries an after-tax NPV_{5%} of US\$3.85B (NPV_{8%} of US\$2.29B), and a 4.4-year payback, over a 30-year mine life producing 30Ktpa of 4N, 4N+ and 5N product. At a realized price assumption of US\$23,485/t against product-level operating costs of US\$7,989/t (most of that being the FBR purification step), Albany runs at an operating margin north of 60%. The project is funded by US\$817M of initial capex and US\$1,161.6M of sustaining capital over the life of mine. This represents a step-change from the Company's 2015 study, which modelled a lower-purity operation using a US\$7,500/t price assumption, reflecting both a slightly larger resource and a repositioning toward the highest-value end of the graphite market. The headline economics and production profile are set out below.

Metric	Unit	2026 PEA
Economics		
After-tax NPV (@5%)	US\$M	\$3,855
After-tax NPV (@8%)	US\$M	\$2,290
After-tax IRR	%	27.4
After-tax Payback	Years	4.4
Capital & Operating		
Initial Capital	US\$M	\$817
Sustaining Capital	US\$M	\$1,162
Operating Cost	US\$/t	\$7,989
Realized Price	US\$/t	\$23,485
Production & Resource		
Mine Life	Years	30
Finished Product	tpa	30,000
Head Grade	% Cg	3.9
Product Purity	%	99.9992

Figure 1: 2026 PEA Highlights (Source: Company Documents)

The supporting technical report should follow within 45 days of the August 10th announcement (by approximately September 24th) and from there we look for the Company to move toward a pre-feasibility study, progress on the offsite FBR purification facility, and continued customer qualification across the nuclear, defence, and semiconductor channels.

The Graphite Pricing Story the Market Misses

Unlike gold or base metals, graphite does not trade on a live commodities exchange, so there is no single transparent price. Graphite is sold under private contracts, with price scaling steeply with purity. The most common form, flake concentrate, sells for roughly US\$500 to US\$1,500/t, and even purified battery-grade spherical graphite runs US\$2,500 to US\$4,500/t. Specification-grade material for nuclear, defence, and semiconductor use sits an order of magnitude higher at US\$25,000 to US\$120,000/t, as upgrading to 5N purity with tight impurity limits, most importantly boron, is difficult and costly, with few producers able to do it at all. Albany is designed for that top tier.

We would like to highlight that Albany's PEA price is not a management assumption. The US\$23,485/t realized price was developed for Micon from independent market research by AppEco and a US-based advanced graphite materials company, both of which assessed the nuclear, defence, and aerospace segments where Albany's specifications apply, benchmarked to nuclear-grade graphite and extended to 2035 under multiple scenarios, with further detail expected when the technical report is filed (expected later this month). While the price looks high in absolute terms, it sits below the low end of the nuclear-grade range, and we view it as conservative.

Importantly, price is only half the story. China dominates natural graphite mining and purification, and the nuclear-grade graphite in service today is predominantly synthetic and supplied by qualified Japanese and European producers, while demand is set to rise with the global build-out of small modular reactors and the broader revival of nuclear power, many of the new reactor designs relying on nuclear-grade graphite as a moderator, alongside growing defence and semiconductor use and a policy push across North America to source critical minerals domestically.

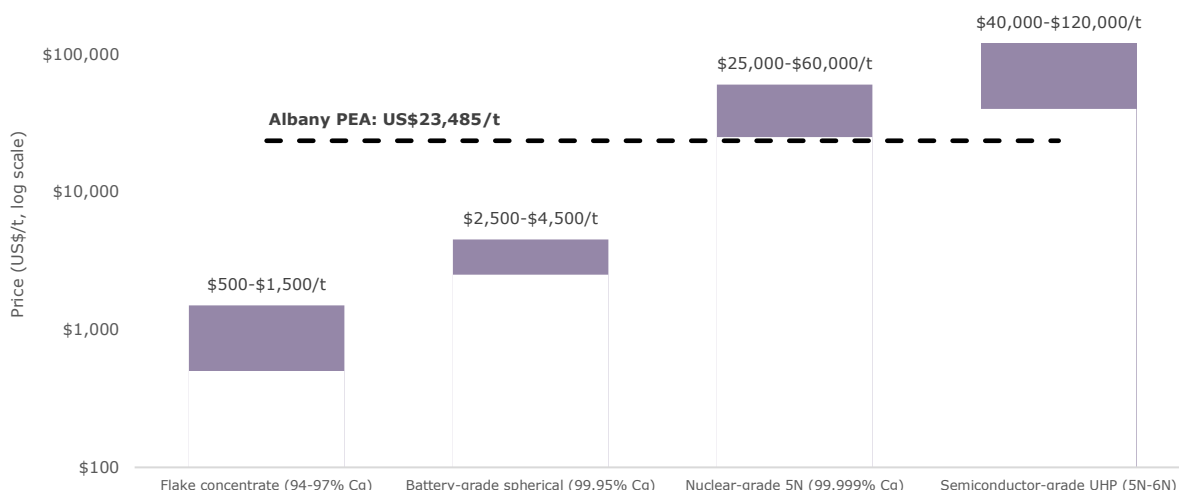


Figure 2: Graphite Pricing Ladder vs. Albany PEA Price (Source: Company Documents)

X-Energy (XE:NASDAQ, ~US\$7.2B market cap) has signed graphite supply agreements totalling over US\$140M for its first four-unit plant, roughly US\$35M per reactor. Applied across its announced pipeline of more than 11 GW, that implies graphite procurement approaching US\$5B from a single developer. We discuss the supply chain behind those contracts in the Albany section below.

ZenGUARD™ – Graphene Commercialized

ZenGUARD™ is the Company's commercialized graphene technology and the source of its current revenue. It is a patented graphene-based coating that improves a filter's ability to capture airborne particles without restricting airflow or raising energy use, commercialized today through two product lines, coated air-filtration media and enhanced HVAC filters, and separately coated surgical masks. The technology has been independently validated by the National Research Council of Canada and in three peer-reviewed ASHRAE publications, cleared for sale in Canada, and is now selling across multiple channels, from two federal channels, an Innovative Solutions Canada Pathway to Commercialization source-list placement and a Government of Canada standing offer awarded in August 2026, to a first U.S. commercial order from converter Quality Filters in July 2026.

Of these channels, the federal opportunity is the most concrete, and its value is as much about access as revenue, being on the source list removes the procurement process that normally keeps a supplier this size out of federal contracts. A department buying through the normal route must run a competitive tender, defining requirements, publishing a solicitation, evaluating bids, and managing a challenge period, a process that routinely runs six to twelve months and in which a small supplier can lose on scale rather than performance. ZenGUARD™'s placement on the Innovative Solutions Canada Pathway to Commercialization source list removes that step, allowing any federal department or agency to issue a purchase order directly, without a competitive bid, for a three-year window, with the credibility screen already applied through the ISC Testing Stream and NRC testing. For a company of Zentek's size, the historical barrier to federal sales has been more process related than product related, and the listing addresses that.

On an illustrative basis, we size the channel from roughly 286M SF of federal building floor space, which at about one filter per 1,000 SF, replaced two to four times a year at ~\$20-30 each, points to an addressable range of roughly C\$10-35M per year from federal property alone. This frames the scale of a single channel rather than booked demand.

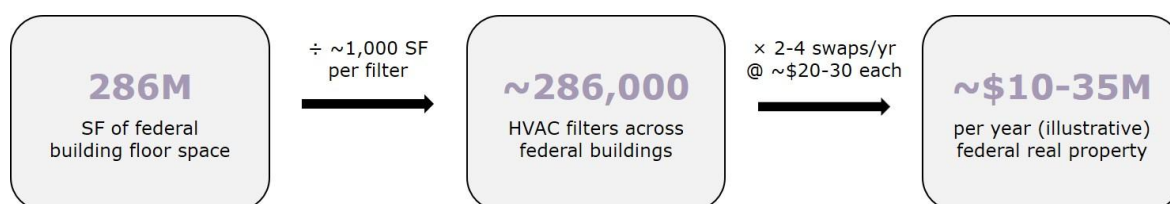


Figure 3: Federal Procurement Addressable Opportunity (Source: Government of Canada)

Atrium estimates, for illustrative purposes only. Not Zentek management guidance. Assumes all federal buildings use pleated panel HVAC filters of a type for which ZenGUARD Enhanced Air Filters are a drop-in replacement, which has not been verified; a source-list placement does not guarantee orders.

A Compounding IP Platform

The larger opportunity is not ZenGUARD™ itself, but the platform that has produced it, and the best evidence of that platform's value is what Zentek has been able to build with it. ZenGUARD™ further validated the model commercially in July, with Quality Filters completing a qualification program and placing a commercial order for coated media; however, ZenGUARD™ is only the first output of this platform. Applying the same graphene chemistry to different substrates, Zentek has developed a series of further products, each independently validated, including ZenArmor™ (anti-corrosion coating), ZenICE (icephobic coating), ZenFire (fire-retardant additive), and ZEN-EMI-01, a water-based EMI shielding coating produced from purified Albany graphite for which a US provisional patent application was filed in August 2026, among others.

The sheer number of applications using the graphene technology compounds as partners and government fund the work, while Zentek keeps the resulting intellectual property (IP), which now sits at 25+ patent families across air, surface, and industrial uses. While these non-core programs were paused in January as management looks to reset focus on Albany, they remain future optionality for the Company, with a platform-licensing model as the intended endgame.

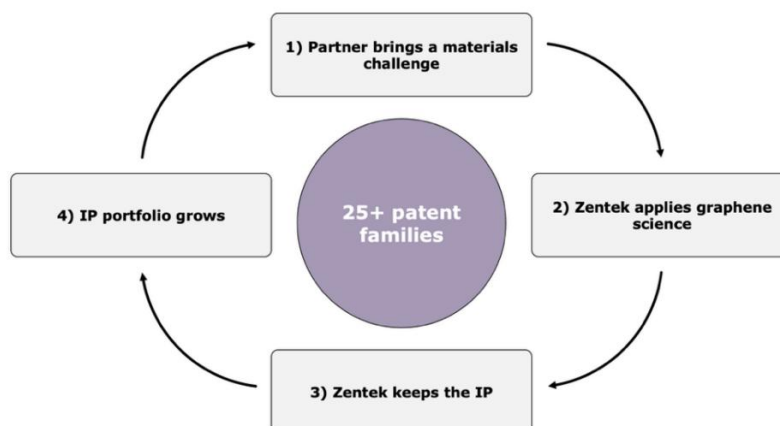


Figure 4: Development on Demand Model (Source: Company Documents)

New Leadership, Refined Focus

Zentek is backed by a highly experienced leadership team, bringing a wealth of operational and capital markets expertise across industries. Mohammed (Moe) Jiwan was appointed CEO in December 2025, bringing more than 20 years of operational, capital markets, and innovation leadership across public companies and high-growth ventures in the technology, healthcare, and life sciences sectors. Within weeks of his arrival, Zentek announced a strategic reset that narrowed the Company to three core platforms we mentioned above, with each managed against defined milestones, capital allocation criteria, and a 24-month roadmap, with non-core initiatives paused or wound down to preserve capital and management focus. We view this refocus positively, as it allows management to concentrate capital and attention on the core value drivers, Albany and ZenGUARD™, rather than spreading resources across a wide range of earlier-stage programs.

In addition to Mr. Jiwan, Chairman John Snisarenko, who has held the role since October 2023, adds over 35 years of experience across the specialty pharmaceutical, biologics, and medical device sectors. The board of directors pairs mining, capital markets, and materials-science experience. Current management and the board together hold ~1.85M shares (1.5%), and institutions hold ~3.95M shares (3.1%).

Ownership	
Management & Board	1.5%
Institutions	3.1%
Retail	95.4%

Figure 5: Ownership Summary (Source: Capital IQ)

Valuation

We value Zentek on a sum-of-the-parts basis, valuing Albany on a P/NAV basis against natural graphite developers and ZenGUARD on a strategic, licensing-oriented basis.

Peer Group Analysis

We benchmark Albany against a group of publicly listed natural graphite developers, shown below. The group spans preliminary feasibility through construction stage and is skewed by Nouveau Monde Graphite (NMG), the most advanced name and the only one in construction, which trades at 0.42x P/NAV and lifts the group average to 0.14x. Excluding Nouveau Monde, the remaining developers, which sit between permitting and feasibility, trade at an average of 0.08x P/NAV.

Company	Ticker	Mkt Cap (C\$)	EV (C\$)	Location (Primary Project)	Stage	P/NAV
Nouveau Monde Graphite Inc.	NMG	\$616	\$578	Quebec	Construction	0.42x
Graphite One Inc.	GPH	\$190	\$150	Alaska	Permitting	0.04x
Falcon Energy Materials Plc	FLCN	\$162	\$137	Morocco	Feasibility Study	0.09x
Focus Graphite Inc.	FMS	\$45	\$45	Quebec	Feasibility Study	0.16x
Lomiko Metals Inc.	LMR	\$10	\$9	Quebec	Preliminary Feasibility Study	0.02x
Average						0.14x
Average (excl. Nouveau Monde)						0.08x

Figure 6: Albany Peer Group Analysis (Source: FactSet)

Nouveau Monde's NAV reflects analyst consensus, while the remaining peers are valued on the NAV reported in each company's own economic study, consistent with our treatment of Albany.

Against that backdrop, the market currently ascribes very little to Albany. At C\$0.72/share, Zentek's market capitalization is ~C\$91M (US\$66M), and net of C\$14.7M in cash and debt, enterprise value is ~C\$77M (US\$55M). Against the PEA's after-tax NPV_{8%} of US\$2,290M, the market is paying 0.03x (roughly three cents per dollar of the NPV). Graphite developers ex-NMG trade at an average 0.08x P/NAV, the full peer group at 0.14x, and Nouveau Monde at 0.42x; applying those multiples to Albany implies US\$1.43, US\$2.65 and US\$7.52 per share, respectively.

P/NAV applied to NPV8%	Multiple	Implied Share Price (US\$)	Implied Share Price (C\$)	Implied Return
Current (market)	0.03x	\$0.52	\$0.72	—
Peer Group Average (ex-NMG)	0.08x	\$1.43	\$1.98	2.7x
Overall Peer Group Average	0.14x	\$2.65	\$3.67	5.1x
Nouveau Monde Graphite	0.42x	\$7.52	\$10.43	14.5x

Figure 7: Implied Share Price at Peer P/NAV Multiples

We value Albany at 0.1x P/NAV, a modest premium to the 0.08x ex-Nouveau Monde average. The premium reflects Albany's differentiated end product, ultra-high-purity 5N graphite for nuclear, defence, and semiconductor use, which sells for roughly 10x the flake and battery-grade graphite its peers supply, while we hold the multiple below the overall group average and NMG to reflect Albany's earlier PEA stage and the permitting, engineering, and financing milestones ahead. We anchor our valuation on the study's 8% discount-rate NPV of US\$2,290M and carry the headline NPV_{5%} of US\$3,855M as a sensitivity to our valuation. Applying 0.1x yields an Albany valuation of US\$229M.

ZenGUARD™

For ZenGUARD™, we benchmark against publicly listed graphene-materials companies, an early-commercial group in which only NanoXplore generates meaningful revenue, trading at an average of 2.9x 2027E sales and 2.0x 2028E sales. Applied to our FY28E sales estimate, that multiple implies a value of ~C\$2M. We treat this as a floor rather than our base case, because a near-term sales multiple understates a platform whose intended endgame is an outright license to a large filter manufacturer. On a strategic, licensing-oriented basis, reflecting the 25+ families, the exclusive federal procurement channel, and the U.S. pathway opened by the Applied Silver license, we value ZenGUARD™ at US\$10M. We view this as conservative given the additional optionality across the broader coating pipeline, which we do not value separately.

Company	Ticker	Mkt Cap (\$C)	EV (\$C)	EV/EBITDA			EV/Sales		
				2026E	2027E	2028E	2026E	2027E	2028E
Hydrograph Clean Power Inc.	HG	\$2,355	\$2,297	N/A	N/A	N/A	N/A	N/A	N/A
Graphene Manufacturing Group	GMG	\$299	\$285	N/A	8.0x	5.7x	N/A	4.0x	3.1x
Nanoxplore Inc.	GRA	\$249	\$270	N/A	24.5x	8.5x	2.3x	1.8x	1.3x
Black Swan Graphene Inc	SWAN	\$52	\$45	N/A	N/A	N/A	8.9x	4.3x	2.2x
First Graphene Limited	FGR	\$48	\$44	N/A	N/A	N/A	N/A	N/A	N/A
Haydale Plc	HAYD	\$47	\$43	N/A	N/A	9.5x	3.3x	1.7x	1.3x
Average				N/A	16.3x	7.9x	4.8x	2.9x	2.0x

Figure 8: ZenGUARD™ Peer Group Analysis (Source: Capital IQ)

Target Price Derivation

Summing the two, Albany at US\$229M and ZenGUARD at US\$10M gives a total enterprise value of US\$239M, or C\$331.4M. Adjusting for C\$16.6M of cash and C\$1.9M of debt gives an equity value of C\$346.1M and a target price of C\$2.70/share.

Valuation	
Albany PEA NPV (8%, US\$M)	\$2,290.0
P/NPV	0.1x
Albany Valuation (US\$M)	\$229.0
ZenGuard Valuation (US\$M)	\$10.0
Total Enterprise Value (C\$M)	\$331.4
(+) Cash (C\$M)	\$16.6
(-) Debt (C\$M)	\$1.9
Equity Value (C\$M)	\$346.1
Target Price (C\$, Rounded)	C\$2.70
Upside	275%

Figure 9: Valuation Summary

Insider Activity

Insiders have added to their positions in recent weeks through open-market purchases at prices. In our view that buying is consistent with our thesis that Albany and ZenGUARD™ are being undervalued.

Date	Insider	Role	Shares	Price (C\$)	Post-Trade Holding
Aug 19, 2026	Mohammed Jiwan	CEO	10,000	0.82	371,833
Aug 31, 2026	Mohammed Jiwan	CEO	2,054	0.73	373,887
Aug 31, 2026	Mohammed Jiwan	CEO	3,200	0.67	377,087
Sep 1, 2026	Eric Wallman	Director	30,000	0.72	584,373

Figure 10: Recent Open-Market Insider Purchases (Source: SEDI, Direct Ownership Only)

Tear Sheet

Market Data		Capital Structure	
Ticker	ZEN:TSXV, ZTEKF:OTCQX	Basic Shares Outstanding (M)	126.6
Stock Price	\$0.72	Warrants (M)	23.7
Rating	BUY	Options (M)	5.6
Target Price	\$2.70	FD Shares (M)	155.9
Upside	275%	FD ITM Shares (M)	128.6
Market Cap (\$M)	\$91.2	Ownership	
Cash (\$M)	\$16.6	Management & Board	1%
Debt (\$M)	\$1.9	Institutions	3%
EV (\$M)	\$76.5	Retail	95%

Financial Estimates												
	FY25A	Q1/26A	Q2/26A	Q3/26A	Q4/26A	FY26A	Q1/27A	Q2/27E	Q3/27E	Q4/27E	FY27E	FY28E
Revenue (\$M)	0.9	0.1	0.0	0.1	0.0	0.2	0.0	0.1	0.1	0.1	0.4	1.1
% YoY	2826%	953%	-60%	73%	-95%	-81%	-100%	2116%	111%	274%	148%	161%
Gross Profit (\$M)	0.2	0.0	0.0	(0.0)	(1.7)	(1.7)	0.0	0.0	0.0	0.0	0.0	0.2
Gross Margin	26%	47%	48%	-38%	N/A	N/A	N/A	10%	10%	10%	10%	15%
EBITDA (\$M)	(7.5)	(1.5)	(2.2)	(2.1)	(3.2)	(9.1)	(1.7)	(0.7)	(0.7)	(0.7)	(3.9)	(3.9)
Net Income (\$M)	(10.0)	(1.4)	(2.4)	(2.5)	(3.5)	(9.8)	(2.0)	(1.2)	(1.2)	(1.2)	(5.8)	(5.6)
EPS (Basic)	(0.10)	(0.01)	(0.02)	(0.02)	(0.04)	(0.09)	(0.02)	(0.01)	(0.01)	(0.01)	(0.05)	(0.05)

Figure 11: Tear Sheet

Company Overview

Zentek Ltd. is a Canadian advanced-materials company based in Guelph, Ontario, operating three platforms unified by a common foundation in materials science. The bulk of the Company's value is the Albany Graphite Project in Northern Ontario, a rare deposit that has demonstrated ultra-high-purity, nuclear-grade graphite (99.9992% carbon, or 5N) in bench-scale testing. As Western governments move to secure critical-mineral supply chains, Albany is positioned to become a domestic North American source of the specification-grade graphite that nuclear, defence and aerospace applications increasingly demand, and, over time, a feedstock for Zentek's own graphene technologies.

The Company's other two platforms serve as a proof of concept for graphene technologies, which include the ZenGUARD™ platform, a graphene-based coating already generating revenue in air filtration and personal protective equipment, and Tiera Biosciences, an aptamer platform in diagnostics and therapeutics licensed from McMaster University. Both demonstrate the Company's commercialization capability, while Albany is the scale opportunity that anchors the investment case.

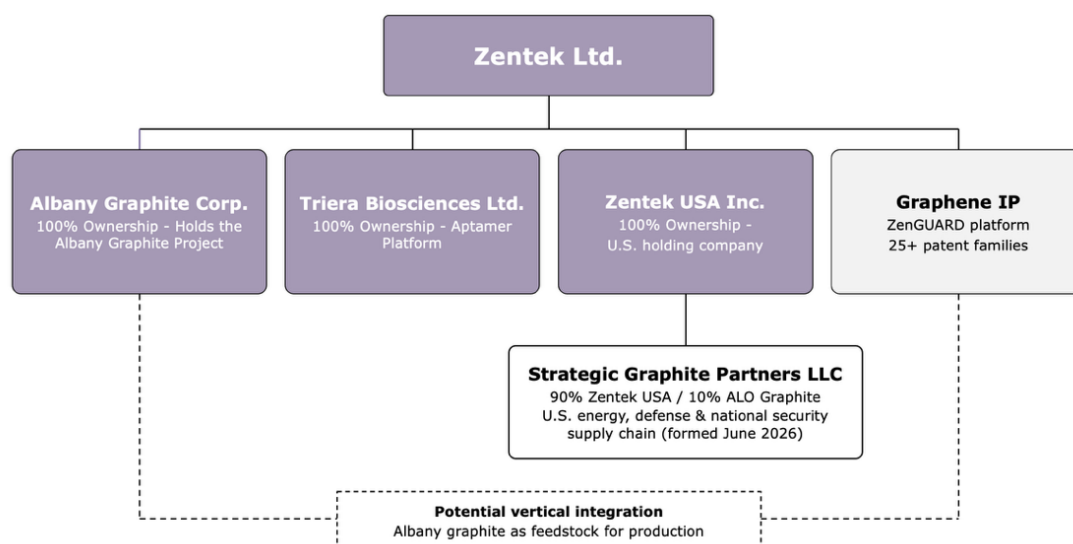


Figure 12: Zentek Organizational Structure (Source: Company Documents)

Albany Graphite Project

Albany is Zentek's flagship asset, located in Northern Ontario near Hearst, within 30km of the Trans-Canada Highway and close to existing road, rail, power transmission and natural gas infrastructure. It is an igneous-hosted, hydrothermal graphite deposit, a globally unusual style that underpins its exceptional purity. Bench-scale testing has thermally purified Albany material to 5N+ (99.9992% carbon) with an equivalent boron content of 2.60 ppm, meeting benchmarks for nuclear-grade graphite. That specification separates Albany from the flake developers that make up most of the sector and positions it as a potential domestic North American source of ultra-high-purity graphite for nuclear, defence and aerospace supply chains, in which governments increasingly require secure, traceable, allied-sourced material, with no Western natural graphite source yet in qualified commercial production for nuclear applications. Graphite is a designated critical mineral in both Canada and the United States.

Earlier this month, Zentek released an updated PEA that validated the project's scale, returning an after-tax NPV_{5%} of US\$3.85B (NPV_{8%} of US\$2.29B), and we would expect a staged purification scale-up and optimization program ahead of a potential PFS.

The PEA is preliminary in nature. It includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability, and may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. The PEA was prepared by Micon International Limited, with qualified persons William Lewis (P.Geo.), Oktay Erten (P.Eng.) and Charley Murahwi (P.Geo.); the mineral resource estimate has an effective date of June 30, 2026.

Geology & Deposit

Albany is hosted in a rare, intrusion-related breccia-pipe vent system, and unlike conventional flake graphite, which forms from metamorphosed carbon-bearing sediments, Albany's graphite is interpreted to have precipitated from carbon-rich fluids released as an ascending magma degassed. Two properties of that source rock determine which market a deposit can serve. The first is the purity ceiling set by how impurities sit in the ore, and the second is crystallinity, since nuclear and defence buyers require graphite that behaves predictably under thermal and neutronic stress, a property set at the crystal scale. Albany's origin produced small graphite crystallites in which impurities are concentrated largely at crystal boundaries and surfaces rather than within the crystal lattice, a geometry that suits both efficient thermal purification and the specification demands of the specialty market, and that supports the 5N purity achieved in bench-scale testing.

The system comprises two near-vertical breccia pipes spaced ~250m apart. The West Pipe is larger by tonnage, roughly 300m by 175m and modelled to ~500m depth, hosting 13.7Mt of Indicated resource at 3.07% Cg, while the narrower East Pipe is higher grade at 9.4Mt grading 5.69% Cg (holding ~27% more contained graphite, 53.5Kt against 42.1Kt, despite its smaller footprint) and extends to ~600m. Both remain open at depth. Barren sills (waste rock), 10m to 60m thick and roughly 200-300m below surface, cut across both pipes and split the deposit in two, with the material above the sills being mined by open pit (basis of the PEA economics), while material below is captured in the mineral resource but excluded from the study.

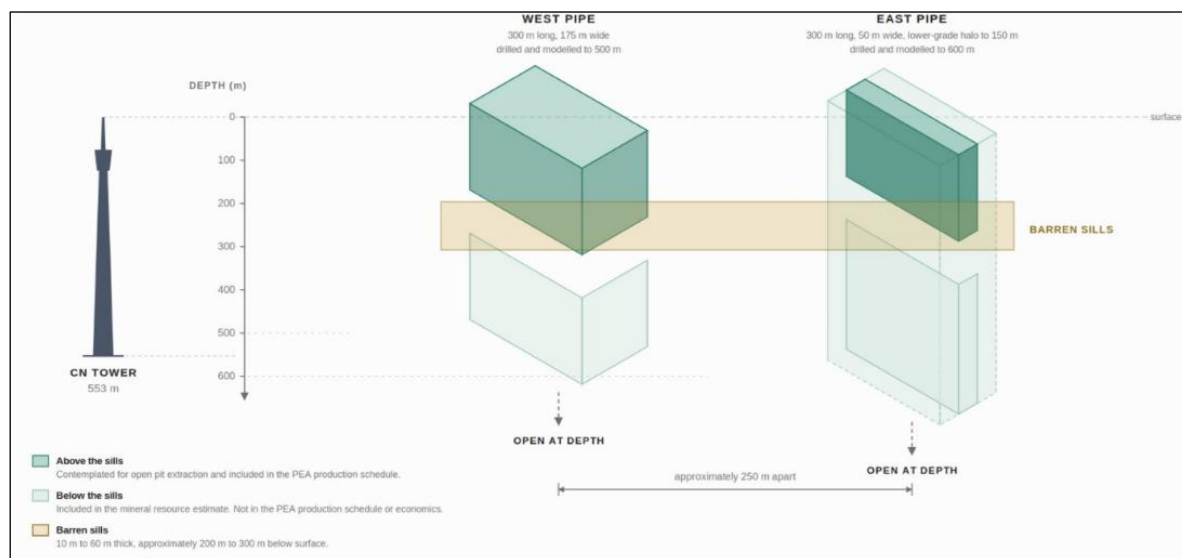


Figure 13: Breccia Pipe Geometry (Source: Company Documents)

Updated Mineral Resource

Alongside the release of the PEA, the Company updated the resource on a combined open-pit and underground mining scenario, which is consistent with the previous 2023 resource estimate. Total Indicated resources are now 23.1Mt grading 4.14% Cg for ~957.1Kt, and total Inferred resources are 13.3Mt at 2.88% Cg for ~382.1Kt, up modestly from the 2023 estimate of 22.9 Mt at 4.07% (Indicated) and 13.1 Mt at 2.87% (Inferred).

Mining Method	Resource Category	Cut-off Grade (% Cg)	Tonnage (Mt)	Grade (% Cg)	Contained Graphite Carbon (t Cg)
Open Pit	Indicated	1.48	23.10	4.14	957,075
	Inferred	1.48	9.35	2.73	254,747
Underground	Indicated	-	-	-	-
	Inferred	1.77	3.94	3.23	127,383
Total Indicated		1.48	23.1	4.14	957,075
Total Inferred		Variable	13.3	2.88	382,130

Figure 14: Albany Mineral Resource Estimate (Source: Company Documents)

The increase reflects updated modelling on the new drill data, revised pit-optimization and mining parameters, a higher graphite price assumption, and refinements to the geological and block models. Notably, all of the Indicated resource sits within the optimized open-pit shell, and the PEA mine plan draws on ~25.9Mt of open-pit mill feed over the 30-year mine life. That mill feed includes Inferred material: 9.35Mt at 2.73% Cg of the open-pit resource is classified as Inferred, so conversion of that material to Indicated is a key de-risking step ahead of a PFS. The 3.94Mt of underground Inferred material is excluded from the study and represents potential upside.

2026 PEA Highlights

The August 2026 PEA is the first study to assess Albany on a nuclear-grade basis. As we mentioned above, it returned an after-tax NPV_{5%} of US\$3.85B (US\$2.29B at an 8% discount rate), with a 4.4-year payback, against initial capital of US\$817M, a step-change over the 2015 study driven principally by the shift from high-purity industrial pricing to specialty nuclear-grade pricing.

The 2026 study is also more rigorously constructed than its predecessor, as the 2015 PEA relied on a single engineering firm, a single long-term price assumption, and drill data from 2013. The updated resource was re-estimated on drill data through June of this year, and capital and operating costs were rebuilt from the ground up on current pricing. Most notably, the realized price was developed independently by two firms, AppEco and a U.S.-based advanced graphite materials company, which we touch on in more detail below.

Metric	Unit	2026 PEA	2015 PEA
After-tax NPV (@5%)	US\$M	\$3,855	-
After-tax NPV (@8%)	US\$M	\$2,290	\$615
After-tax Payback	Years	4.4	4.0
Initial Capital	US\$M	\$817	\$411
Sustaining Capital	US\$M	\$1,162	\$291
Realized Price	US\$/t	\$23,485	\$7,500
Product Purity	%	99.9992	99.94

Figure 15: Albany PEA – Key Economics vs. 2015 Study (Source: Company Documents)

The physical design of the project has changed far less than the economics. Output is unchanged at 30Ktpa over a slightly longer 30-year mine life, with the nominal processing rate and average head grade slightly lower.

Metric	Unit	2026 PEA	2015 PEA
Mine Life	Years	30	22
Nominal Processing Rate	tpa	894,454	983,000
LOM Average Head Grade	Cg %	3.90%	4.05%
Strip Ratio	waste:ore	6.6	-
Flotation Recovery	%	86.0%	84.5%
Finished Product	tpa	30,000	30,000

Figure 16: Production & Design Parameters vs. 2015 Study (Source: Company Documents)

Product & Pricing Basis

The PEA's US\$23,485/t realized price reflects Albany's position as a supplier to specialized, high-value markets rather than commodity or battery-grade ones, and drives average annual revenue of ~US\$651M gross (~US\$639M net of royalties and concentrate transport), reflecting a life-of-mine average of ~27.7Ktpa against 30Ktpa nameplate capacity. The price was benchmarked to nuclear-grade graphite across scenarios to 2035, with a premium for domestically sourced supply. Because material at this grade is contract-priced following qualification rather than index-referenced, realized pricing will ultimately be set through offtake negotiation.

Capital and Operating Costs

Initial capital of US\$817M is roughly double the US\$411M estimated in 2015, largely reflecting the fluidized bed reactor (FBR) purification facility and inflation, with total life-of-mine capital of US\$1,978.7M.

LOM Capex (US\$M)	
Geology	\$0.8
Mining	\$106.9
Infrastructure	\$29.2
Concentrator	\$157.7
Tailings and Water Management	\$52.3
Offsite Infrastructure	\$881.7
Indirect, Contingency and Owner's Costs	\$711.9
Closure and Rehabilitation	\$38.1
Total Capital Expenditures	\$1,978.7
Initial Capital	\$817.0
Sustaining Capital (LOM)	\$1,161.6

Figure 17: Capital Cost Estimate (Source: Company Documents)

Operating costs show a similar increase. At US\$7,989/t for the finished product, the unit opex is ~4x the 2015 figure, as reaching 5N purity is far more processing-intensive than the 99.94% product modelled a decade ago. The FBR site is the single largest capital component, and FBR purification makes up US\$6,436 of the US\$7,989/t operating cost (~80% of the total).

	LOM OPEX (US\$M)	US\$/t Product
Mining	\$732.0	\$880.1
Processing (Concentrator)	\$303.5	\$365.0
FBR Purification	\$5,353.1	\$6,435.8
G&A	\$256.6	\$308.5
Total	\$6,645.2	\$7,989.4

Figure 18: Operating Cost Estimate (Source: Company Documents)

Processing & Purification

Albany is designed as an integrated operation, from mining and flotation at the mine site through to a dedicated FBR purification facility located offsite, a change from the 2015 study, which contemplated on-site purification. Run-of-mine material is crushed and ground, then upgraded in a flotation circuit that separates graphite from waste, notably using no lime or acid pH modifiers, producing a concentrate grading ~87% Cg at an assumed 86% flotation recovery. That concentrate is then transported to the FBR facility, where it is suspended in an upward-flowing gas stream and heated to an elevated temperature, driving off residual impurities and lifting carbon content into the ultra-high-purity range without hydrofluoric acid at any stage. This thermal FBR step is the value-add that turns a concentrate into the 4N, 4N+, and 5N products nuclear, defence, and aerospace buyers require, and is what separates Albany from conventional flake graphite.

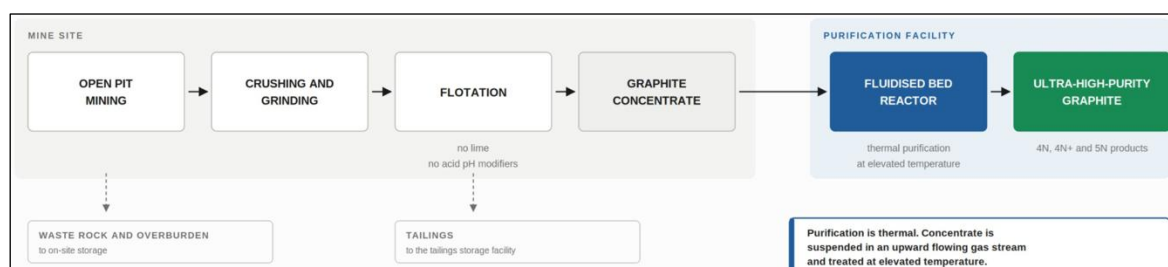


Figure 19: Simplified Process Flowsheet (Source: Company Documents)

What Buyers Are Actually Paying

The clearest evidence of specialty graphite pricing comes from the supply agreements behind the new wave of advanced reactors, several of which are being built to power AI data centres. The reactors tied to the Amazon and Google commitments, X-energy (which Amazon has backed) and Kairos Power (which holds a power agreement with Google), have sourced their graphite entirely from offshore producers of synthetic graphite, with no natural-graphite supplier involved to date. The map below traces that supply chain from producer to power buyer.

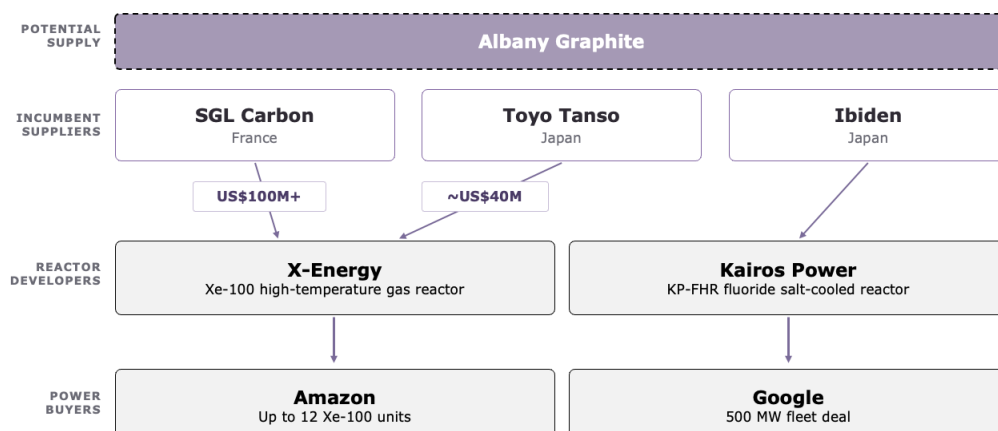


Figure 20: Nuclear Grade Graphite Supply Chain (Source: X-Energy, SGL Carbon, Kairos Power and Ibiden)

X-energy's first commercial plant is a useful gauge of the dollars involved. The four-unit, 320 Mwe installation with Dow in Texas required two suppliers to cover its graphite, SGL Carbon of France and Toyo Tanso of Japan.

Supplier	Jurisdiction	Buyer	Scope	Disclosed value
SGL Carbon	France	X-Energy	10-year framework; initial three-year award, first commercial deployment	Over US\$100M
Toyo Tanso	Japan	X-Energy	Core structural components, same four reactors	~US\$40M
Ibiden	Japan	Kairos Power	Reflector blocks and internal structural components	Not disclosed

Figure 21: Disclosed Nuclear-Grade Graphite Supply Agreements
(Source: X-Energy, SGL Carbon, Ibiden)

That is over US\$140M of graphite for a single plant, or roughly US\$35M per Xe-100 unit. Extrapolated across X-energy's announced engagements, it implies graphite procurement approaching US\$5B from one developer.

X-Energy Program	Units	Implied Graphite
Long Mott, Texas, with Dow (contracted)	4	Over US\$140M
Cascade, Washington, if option exercised	12	~US\$420M
Centrica, UK, up to 6 GW	~75	~US\$2.6B
Total announced engagements, 11+ GW	~144	~US\$5.0B

Figure 22: Implied Graphite Procurement Across X-Energy's Pipeline (Source: X-Energy)
Extrapolated from the Long Mott contracts at ~US\$35M per Xe-100 unit.
Announced engagements are not firm orders.

These are contract values for synthetic isostatic graphite, the material advanced reactors have qualified to date, so they are not a direct price for Albany's output. We interpret them as evidence of the tier the market pays for specification-grade graphite, an order of magnitude above commodity and battery material and consistent with what the Albany PEA models. The gap against battery-grade supply is stark. EcoGraf's August 2026 offtake of up to 40Ktpa exceeds Albany's 30Ktpa nameplate yet implies only ~US\$43M of annual revenue at the USGS flake price of ~US\$1,070/t, against the ~US\$651M Albany models on comparable volume.

The binding constraint on this market is qualification rather than raw-material availability. Reactor grades are not interchangeable, testing a grade against a given design takes years and switching suppliers means starting over; graphite is locked in early and held for the life of the program. China's December 2023 export permits effectively rule out Chinese supply for US reactor designs regardless of capacity, narrowing the qualified pool well below the global producer count and forcing even a single four-unit plant to line up two suppliers. Graphite is a listed critical mineral in the US, Canada, and the EU, and securing domestic and allied supply is now backed by federal funding and faster permitting. Albany fits that policy profile as an integrated, single-ownership source in an allied jurisdiction that draws on its own deposit rather than scarce isotropic coke. Its material has been purified to 5N at bench scale, in line with nuclear-grade specifications, though qualification into any reactor design still lies ahead.

Strategic Graphite Partners

In June, Zentek formed Strategic Graphite Partners, a joint venture with ALO Graphite Partners LLC, with Zentek USA Inc., a wholly owned subsidiary of Zentek, owning 90% and ALO, owned and controlled by Perkin Industries and Jeremy Roenick, owning 10%. The U.S. currently mines no natural graphite domestically, with most of its supply from non-allied suppliers and close to half of imports from China. With this in mind, the JV was formed to establish a U.S. footprint for ultra-high-purity graphite suitable for energy, defence, and national-security markets, with Zentek's 100% ownership in Albany unaffected.

The initial mandate for the JV is to support U.S. customer engagement and material qualification, offtake discussions, strategic industry engagement, U.S. government relations, and the evaluation of potential U.S. federal and allied government funding opportunities for the Albany project. Perkin is Chairman and CEO of New Orleans holding company, Perkin Industries and an experienced founder, while Roenick is a Hockey Hall of Famer with 20 NHL seasons who now invests across consumer, tech, and sports. Each was granted 50K stock options, exercisable for 24 months at C\$0.56, vesting against ALO's capital contribution milestones to the JV.

Constance Lake First Nation & Local Benefits

Albany is located in the traditional territory of Constance Lake First Nation (CLFN). The Project lies west of the community of Constance Lake and the town of Hearst. Zentek has maintained a partnership with CLFN since 2011, formalized through an Exploration Agreement (2012), a Memorandum of Understanding (2018) and a 2021 Implementation Agreement that established the project's Project Partnership Structure governance framework. CLFN remains integral to the project's social license, ongoing environmental baseline work and long-term operating structure, with any development scenario proceeding with its input. The PEA contemplates a workforce of ~1,050 personnel during construction and ~230 personnel during operations. The Company intends to work with CLFN on training, employment and business opportunities associated with the Project.

Graphene Platform – ZenGUARD™

ZenGUARD™ is Zentek's commercialized graphene technology and the source of essentially all current revenue. Graphene has long been difficult to produce at scale and convert into saleable products, and ZenGUARD™ is the Company's proof that it can do so. The platform operates on a development-on-demand model, where industry partners and governments fund the development work, and Zentek retains the resulting intellectual property, now spanning 25+ patent families. The Company's principal markets are HVAC filter manufacturers and personal protective equipment manufacturers.

Rather than manufacture finished filters, Zentek supplies the coating to manufacturers for use in their own production lines, or supplies pre-coated media. In our view, the larger opportunity is the platform itself, being the repeatable ability to apply graphene chemistry to new problems while adding to a Company-owned patent base with each engagement. The Company has already begun development of additional use cases, which we highlight below.

Products

ZenGUARD™ is a patented graphene-based coating applied to filtration media and other air-contact surfaces. The coated media alters the surface topography of the filter media, increasing surface area and promoting mechanical interactions with the air stream. This improved air disruption mechanism does not increase pressure differential, so no additional energy consumption or HVAC modification is required. That matters because the conventional way to improve indoor air quality, fitting a denser filter or drawing in more outside air, raises energy costs; ZenGUARD™ lifts a filter's effectiveness without that penalty, positioning it as a cost-saving upgrade rather than a premium add-on. It is commercialized through two product lines.



Figures 23 & 24: ZenGUARD™ Filtration Media (Source: Company Documents)

Air-filtration media is the primary focus. Consistent with an asset-light strategy of supplying an input rather than competing as a filter maker, ZenGUARD™-coated media is sold principally as rolls to filter manufacturers rather than as finished filters; producing custom-size finished filters at scale would require only a modest slitter retrofit (~\$10K).

The second line is coated surgical masks, in which the coating is applied to non-woven spunbond polypropylene and distributed through Henry Schein to Canadian dental practices, with a distribution agreement also in place with Southmedic for Canadian hospitals. After its contract manufacturer wound down mask production in early 2026, Zentek brought manufacturing in-house, improving COGS and giving it full value-chain control.

Testing

ZenGUARD™ is backed by both independent validation and the Company's own testing. The work by the National Research Council of Canada and the peer-reviewed ASHRAE papers provides the independent validation that institutional and government buyers require before adoption.

- **National Research Council of Canada (December 2022):** Tested in a purpose-built simulated classroom under an Innovative Solutions Canada (ISC) contract. Testing showed an approximately fivefold improvement in aerosol filtration efficiency over an equivalent uncoated filter in a single air exchange, documented in three peer-reviewed ASHRAE publications.
- **LMS Technologies (September 2023):** Compared ZenGUARD™-enhanced MERV 9 filters against equivalent uncoated filters under ASHRAE 52.2 methods. Pressure drop remained consistent as dust loading increased, confirming the technology does not restrict airflow or increase HVAC energy consumption.
- **ParticleOne (September 2023):** Modelled a ~\$15.0K reduction in annual absenteeism costs versus an uncoated filter, in a 10,000 SF office with 75 occupants.
- **Energy Study (January 2024):** Using ZenGUARD™ filters to control infectious aerosols, rather than increasing outside air intake for comparable risk reduction, could cut HVAC energy consumption by ~62% for the same office profile.
- **Shelf-life Testing (March 2025):** Filters aged 20 months showed unchanged VFE, demonstrating consistent performance across the product's shelf life.

Real-World Pilot

Beyond laboratory and modelled results, ZenGUARD™ Enhanced Air Filters have been tested in the field. Over three months, the Grand Erie District School Board ran a pilot at McKinnon Park Secondary School in Caledonia, Ontario, replacing the Minimum Efficiency Reporting Value ("MERV") 13 filters in two air handlers, serving the gym and cafeteria, with ZenGUARD™ Enhanced Air Filters. The lower-pressure-drop ZenGUARD™ filters cut fan energy by roughly 22% while maintaining filtration performance, equal to combined energy savings of about \$0.46 to \$1.58 per SF per year depending on the space, alongside reduced outdoor-air conditioning and the associated CO2 reductions. Observed dust loading implied an estimated change-out interval of roughly 16 months, against about two months for the MERV 13 filters replaced. Service life depends on indoor and outdoor air conditions at each site, and general product guidance is up to six months. By keeping indoors spaces safe with less pressure drop, ZenGUARD™ Enhanced Air Filters can lower both maintenance labour costs and filter waste and aligns with the federal Greening Government Strategy.

Why This Matters for Valuation

Two things distinguish ZenGUARD™ from a conventional filtration business, the first being the product delivers two benefits simultaneously, which include improved air quality and lower operating cost. The NRC and ASHRAE work establish cleaner air and the McKinnon Park pilot establishes lower operating cost. Residential and commercial buildings account for close to 40% of total US energy consumption and HVAC systems are the largest single load within them, so a filter that materially reduces fan energy without compromising filtration efficiency is a plant-operations decision, not just an air-quality one.

The second is that the buying case runs across four functions rather than one as the purchasing case spans facilities (fewer changeouts), finance (lower energy costs), sustainability (reduced emissions), and occupational health (compliance with ASHRAE Standard 241, Control of Infectious Aerosols, which conventional MERV 13 filters do not meet). That combined value is, in our view, why a large HVAC manufacturer would rather license the technology than compete with it, and it supports a valuation range for ZenGUARD™ above one built on today's direct sales alone.

Space	Filter Type	Energy Consumption kWh/ft ² /year	CO ₂ eq Emission kWh/ft ² /year	Energy Cost CAD/ft ² /year
Gym	M9AZG	18.37	2.35	\$1.45
	CM13	24.23	3.10	\$1.92
	Savings	5.86	0.75	\$0.46
Cafeteria	M9AZG	14.79	1.89	\$1.29
	CM13	32.9	4.21	\$2.88
	Savings	18.11	2.31	\$1.58

Figure 25: McKinnon Park Pilot – Energy Consumption and CO₂eq by Space
(Source: Sridhar et al., ASHRAE 2025)

The multi-year ISC and NRC collaboration ultimately supported two regulatory milestones in May 2026 that opened the Canadian opportunity. Health Canada classified ZenGUARD™ Enhanced Air Filters as outside the scope of the Pest Control Products Act on the basis that the product operates through a mechanical mode of action, clearing the Company to accept Canadian commercial orders. In the same month, Innovative Solutions Canada added the product to its Pathway to Commercialization source list, establishing Zentek as an exclusive supplier and allowing any federal department or agency to purchase directly for a three-year window, as discussed in the Investment Thesis. In August 2026, Zentek added a second federal channel via a competitively awarded standing offer for HVAC filters in the National Capital Region, running to August 2027 with a maximum published value of ~C\$350K.

In the significantly larger U.S. market, Zentek is pursuing commercialization through an exclusive license secured in June 2026 to incorporate Applied Silver's EPA-registered silver technology into indoor air quality and air filtration products across HVAC, cabin air, cleanroom, and healthcare applications. Manufacturing and distribution are handled by Quality Filters Inc. in Robertsedale, Alabama, which completed a validation and qualification program and placed its first commercial order in July 2026.

Sales Channels

Management has identified three routes to market, deliberately avoiding the capital and complexity of becoming a full-scale filter manufacturer.

- 1) **Coated media sold to converters** – Converters are the manufacturers who fabricate finished filters and buy media as an input. In July, U.S. partner Quality Filters placed a commercial order for 244 rolls, marking the transition from pilot evaluation to commercial production.
- 2) **Platform license** – The Company identifies IP licensing and technology transfer as its preferred commercialization route, on the basis that it generates high-margin recurring revenue without significant capital requirements. The objective is for a large filter manufacturer to license the platform outright, with ZenGUARD™ becoming a branded input within an established product line rather than competing at retail.
- 3) **Direct-to-consumer** – Finished ZenGUARD™-enhanced products sold directly to end users would be a natural extension of the platform, though no such channel has been announced.

Supporting these channels is a distribution network built over several years. We would note that most business development to date has come through inbound enquiries, and the Company intends to initiate outbound marketing as production capacity comes online.

Facility

Zentek operates a ~30,000 SF facility in Guelph, Ontario, housing both its research laboratory and an industrial-scale coating line that functions as a small-scale factory. Media is fed in on a roll, coated, cured in an oven, then cut, packed, and shipped, serving both the HVAC media and surgical mask product lines. Construction of the coating line was effectively complete in November 2022, and the line became commercially operational in August 2023, with cumulative spend of ~\$2.8M and no further capital required. The Guelph processing and R&D lab operates a Medical Device Establishment License (MDEL) quality management system supporting the development and marketing of medical devices in Canada.



**Figure 26: ZenGUARD Coating Line at Guelph Manufacturing Facility
(Source: Company Documents)**

The equipment is already in place, so output can scale further with increased manufacturing shifts rather than additional capex.

Product Pipeline

Beyond ZenGUARD, Zentek is advancing a pipeline of graphene-enhanced coatings that apply the same platform to new problems. The Company disclosed R&D initiatives and cumulative spend on each:

Product	Application	Stage	R&D Spend
ZenFire (fire-retardant intumescent)	Intumescent additive to improve fire-protection coatings; potential fire-resistant polymers	Intermediate	~\$175,700
ZenArmor (corrosion protection)	Nano-pigment additives to improve corrosion protection of organic coatings	Intermediate	~\$91,200
ZenICE (icephobic)	GO/polymer icephobic coating for wind-turbine and drone blades	Intermediate	~\$19,900
GO fuel additive	Graphene additive to liquid fuels for burn efficiency and fuel economy	Early	~\$98,900
3D printing / EM shielding	GO/nanomaterial filaments for conductivity and electromagnetic shielding	Early	~\$65,600

Figure 27: Graphene Coating Pipeline (Source: Company Documents)

Recently, the Company announced ZEN-EMI-01, which is a water-based electromagnetic interference shielding coating for which a US provisional patent application was filed in August 2026, made from purified Albany Graphite. Early laboratory testing shows it dissipates electromagnetic energy within the coating rather than reflecting it, which is what defence electronics buyers require.

Triera Biosciences

Triera Biosciences is Zentek's aptamer platform, which was launched as a subsidiary in late 2023 and built on a 20-year royalty-bearing license from McMaster University covering all aptamer and DNAzyme applications, including diagnostics, therapeutics, and neutralization agents, with exclusivity attaching to the patents enumerated in the license. Aptamers are short synthetic DNA or RNA strands that bind to a specific target, offering a synthetic, stable, and rapidly adaptable alternative to antibodies. The underlying technology was developed by a McMaster team with clinical validation funded by the Canadian Institutes of Health Research, and demonstrated saliva-based detection with accuracy comparable to PCR in under ten minutes. Zentek paid McMaster a \$100K licensing fee, which was split evenly between cash and shares.

Much of the development has been funded by government grants rather than by Zentek. In November 2024, Trieria was awarded a \$1.1M Government of Canada contract, under the federal Innovative Solutions Canada program, to test its multivalent aptamer technology for the rapid discovery of a therapeutic or prophylactic for highly pathogenic avian influenza (H5N1). Trieria selected a lead aptamer in seven weeks, and subsequent in vivo testing against seasonal influenza (H1N1) showed 5x greater survival and 80% less weight loss five days post-infection in prophylactically dosed animals versus control. The testing phase of the contract concluded in March 2026. This built on earlier NSERC grants to McMaster supporting the platform, and the largely non-dilutive nature of this funding meaningfully lowers the Company's cost of maintaining the option.

Rather than funding a long and capital-intensive path to a regulated diagnostic, which would require a Class IV Medical Device Active License from Health Canada, the Company now intends to commercialize the platform principally through a client-funded contract research organization model. Under this approach, rather than spending its own capital to develop and seek approval for finished products, Trieria sells its aptamer-discovery expertise as a paid service, whereby pharmaceutical and biotech clients fund the development of aptamers for their own targets. Trieria remains pre-commercial and, consistent with its status as Zentek's lowest near-term priority, we treat it as longer-dated optionality rather than a value driver.

Financials

Balance Sheet & Capital Structure

Zentek exited its most recent quarter (ended June 30th) with \$16.6M in cash, up from \$1.3M at March 31st, following the \$18M equity offering it closed on May 27th. The financing was completed at \$1.00/share with a full warrant. Zen carries \$1.9M in debt, with \$1.8M of that being 5% convertible debentures, secured against the Albany property, which mature in April 2028 and convert at \$2.20/share. The Company used \$1.2M in OCF during the quarter, roughly flat YoY, against a \$5.1M burn in FY26 that we expect to ease as product sales ramp. Therefore, post-financing, the balance sheet is quite clean and provides strong support for growth.

As for the capital structure, the Company has 126.6M shares outstanding, which have grown considerably over the years due to dilution. The Company also has 5.6M in options and 23.6M in warrants, the majority of which are out-of-the-money at the current share price; the 50,000 options exercisable at C\$0.56 are in the money. Of the warrants, 18.0M were issued in the May 2026 financing and are exercisable at C\$1.50 for 36 months, expiring May 2029.

Recent Announcements

On August 20th, Zentek was awarded a Government of Canada standing offer to supply HVAC filtration products, including ZenGUARD™ Enhanced Air Filters, to federal facilities in the National Capital Region. Awarded through a competitive open-bidding process, the standing offer establishes pre-arranged pricing and terms for federal department call-ups from August 19, 2026 to August 18, 2027, with a maximum published value of CAD \$348,666.84. This is Zentek's second federal channel, alongside the existing Pathway to Commercialization source-list placement.

On August 17th, Zentek filed a provisional patent application with the United States Patent and Trademark Office for ZEN-EMI-01, a water-based electromagnetic interference shielding coating, produced using purified graphite from the Albany deposit. Preliminary laboratory testing showed that it dissipates electromagnetic energy within the coating rather than reflecting it toward adjacent systems

On August 10th, the Company announced a new PEA for its Albany Graphite Project, outlining an after-tax NPV_{5%} of US\$3.85B (27.4% IRR), initial capital investment of US\$817M, after-tax payback of 4.4 years and a 30-year mine life. The new PEA evaluates Albany's integrated production pathway, encompassing resource extraction through flotation processing and fluidized bed reactor purification to produce ultra-high-purity graphite.

On July 7th, Zentek announced that its U.S. manufacturing and distribution partner Quality Filters Inc. completed a validation and qualification program for ZenGUARD™ Enhanced Air Filtration Media and placed a first commercial order for 244 rolls.

On June 29th, the Company secured a pathway to sell ZenGUARD™ media in the U.S. via an exclusive license to incorporate Applied Silver's EPA-registered silver technology into indoor air quality and air filtration products across HVAC, cabin air, cleanroom, and healthcare applications.

On June 26th, Zentek formed Strategic Graphite Partners LLC, a U.S. joint venture 90% owned by Zentek USA Inc. and 10% by ALO Graphite Partners (controlled by Perkin Industries and Jeremy Roenick), to position Albany ultra-high-purity graphite within U.S. energy, defence, and national-security supply chains.

On June 9th, the Company was granted a U.S. Patent covering the foundational graphene technology underlying ZenGUARD™, including a 327-day term extension, complementing its issued Canadian patent covering HVAC and PPE applications.

On May 27th, Zentek closed its fully subscribed brokered LIFE offering for gross proceeds of \$18.0M, issuing 18.0M units at \$1.00 including the full exercise of the agent's option, with proceeds earmarked for the Albany PEA, ZenGUARD™ commercialization, and critical-minerals development work.

On May 19th, the Company announced that its marketed LIFE offering was oversubscribed and fully allocated, having initially targeted up to \$15.0M at \$1.00 per unit.

On May 13th, Zentek announced that ZenGUARD™ Enhanced Air Filters had been added to Innovative Solutions Canada's Pathway to Commercialization source list, establishing the Company as an exclusive supplier of this type of innovation and allowing any federal department or agency to purchase the product directly for a three-year period.

Industry Overview

The Graphite Market, Commodity vs. Specialty Pricing

Graphite is often discussed as a single commodity, but it spans a wide range of forms and purities that serve very different end-markets at very different price points. Natural graphite is mined as flake, vein, or amorphous material, while synthetic graphite is manufactured from petroleum coke. The large majority of global supply by volume is consumed by refractories, steelmaking, and lithium-ion battery anodes, where graphite competes largely on cost and where China controls the bulk of mining and processing, producing ~79% of the world's supply.

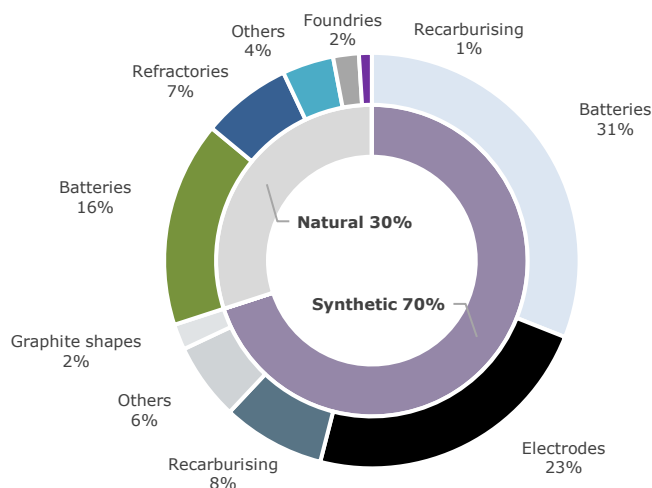


Figure 28: Graphite Global Uses, 2024 (Source: Natural Resources Canada)

Unlike gold or base metals, graphite does not trade on a live commodities exchange, so there is no transparent price. Prices are instead negotiated directly between buyers and sellers and vary with flake size, purity, and impurity levels. As the dominant producer, China exerts significant influence over international prices, which tend to be set by large, high-volume buyers. The USGS reports average import values of roughly US\$1,070/t for flake, US\$2,900/t for lump, and US\$640/t for amorphous graphite.

Why Purity Commands a Premium

Purity is expressed in "nines": 4N denotes 99.99% carbon, 5N denotes 99.999%, and 6N denotes 99.9999%. Battery-anode graphite generally runs around 3N to 4N, whereas nuclear, defence, aerospace and semiconductor applications require 5N and above, together with tight limits on specific impurities, most importantly boron, which absorbs neutrons and must typically sit below ~5 ppm for reactor-grade material. Producing to this standard is difficult and costly, and price scales accordingly. Purified specialty grades sell many times higher than commodity flake, reaching US\$25,000–120,000 per tonne for nuclear- and semiconductor-grade material versus roughly US\$500–1,500 for flake concentrate.

Grade/Market	Public Reference Range (US\$/t)
Flake graphite concentrate 94-97% Cg	~\$500-1,500/t
Spherical purified graphite 99.95% Cg	~\$2,500-4,500/t
Nuclear-grade graphite 5N (99.999% Cg)	~\$25,000-60,000/t
Semiconductor-grade UHP 5N to 6N (99.999-99.9999% Cg)	~\$40,000-120,000/t
Precision-machined UHP components nuclear / semi / defence	Not publicly benchmarked

Figure 29: Graphite Purity and Pricing Ladder (Source: Company Documents)

The takeaway is that flake graphite is not the critical-mineral product buyers pay up for; it is the specification-grade, ultra-high-purity material, produced in a domestic jurisdiction, that carries both the pricing and the strategic demand. Albany is being developed as a specialty producer rather than a volume-driven commodity miner. This is why its 2015 study, priced at US\$7,500/t against a high-purity industrial market, no longer reflects the opportunity, and why the 2026 PEA instead models 4N, 4N+ and 5N products at US\$23,485/t, near the low end of the public nuclear-grade reference range and an order of magnitude above battery and flake material.

Nuclear Power & Small Modular Reactors

Demand for the highest-purity graphite is being driven by the global revival of nuclear power, and specifically by small modular reactors (SMRs), advanced reactors generally rated below 300 MW, or about one-third of a traditional plant. Many advanced SMRs, including high-temperature gas reactors, pebble-bed reactors, and molten-salt reactors, are graphite-moderated, using graphite inside the reactor core as moderator, reflector, and structural material. Because the graphite sits in the core, purity requirements are extreme, typically 99.999% carbon or better with very low boron content, as boron absorbs neutrons and degrades reactor performance.

The global SMR development pipeline continues to expand rapidly, driven by rising electricity demand from data centres, AI infrastructure, and broader power-grid requirements. According to Wood Mackenzie, the unrisken pipeline reached approximately 47 GW in Q1/25, up 42% QoQ, representing an ~US\$360B investment opportunity. Conventional power generation remained the largest end market at 51% of the pipeline, while data centres had grown to 39%, highlighting the emerging role of SMRs in supplying reliable, around-the-clock power to energy-intensive digital infrastructure. The U.S. accounted for 53% of the global pipeline, while key SMR developers including Oklo (OKLO:NYSE, US\$7.1B mkt cap), GE Hitachi (alliance between GE Vernova and Hitachi), and X-energy (XE:NASDAQ, US\$8.1B mkt cap) collectively represented nearly 31 GW of planned capacity. The contracting behavior this pipeline has already generated, and what it implies for graphite pricing, is discussed in the Investment Thesis.

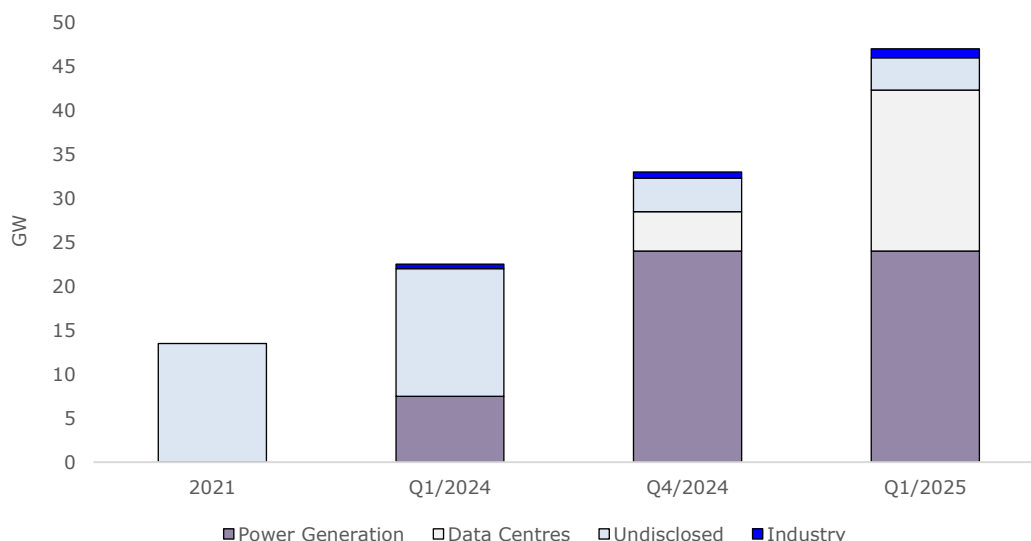


Figure 30: Global Nuclear SMR Pipeline by End Market, Q1/25 (Source: Wood Mackenzie)

The market is also beginning to move beyond announcements toward licensing, construction, and final investment decisions. Wood Mackenzie estimates that ~6.7 GW of SMR capacity could advance toward FID over the next several years. Important milestones expected in 2026 include the ACP100 in China targeting first commercial operations, Ontario Power Generation beginning construction of its first BWRX-300 unit at Darlington, TerraPower's Natrium project in Wyoming progressing toward receipt of its construction permit, and the Rolls-Royce SMR completing a key stage of the UK regulatory approval process. Together, these projects provide tangible evidence that the SMR market is transitioning from a largely conceptual pipeline into a commercial build-out, supporting future demand for specialized reactor materials, including nuclear-grade graphite.

Critical Minerals, Defence & Allied Supply Chains

China's dominance of global graphite mining and processing has made supply security a strategic concern for Western governments and industrial buyers. Beijing introduced export-permit requirements for certain graphite products in December 2023 and has since demonstrated its ability to tighten access to materials considered sensitive or dual-use. For defence, aerospace, nuclear, and other high-performance applications, the issue extends beyond availability as buyers are requiring exceptionally high purity, full traceability, and material sourced from jurisdictions that satisfy allied procurement and national-security rules.

Country	Thousand tonnes	% of total
China	1,270	79.4%
Madagascar	89	5.6%
Mozambique	75	4.7%
Brazil	68	4.3%
India	30	1.7%
Tanzania	25	1.6%
Russia	20	1.3%
Canada	12	0.7%
South Korea	10	0.6%
North Korea	8	0.5%

Figure 31: World Mine Production of Graphite, 2024 (Source: Natural Resources Canada)

This shift is opening higher-value markets that are largely separate from conventional battery-grade graphite. Company-provided industry estimates place the defence and aerospace specialty graphite market at approximately US\$2B-4B in 2025, while the defence battery market is projected to reach US\$22.8B and the aerospace and eVTOL battery market US\$14.2B by 2030. Military UAV deployment is also expected to grow substantially, increasing demand for lightweight, high-performance batteries across drones, submarines, soldier systems, satellites, and electric aircraft. These applications typically involve long qualification processes, but once a material is approved, supply relationships can extend across the life of the platform and support recurring demand.



Figure 32: Selected High-Purity Graphite End-Market Indicators

Albany's relevance lies in the combination of its Canadian origin and its preliminary high-purity results. As mentioned, the Company has reported graphite grading 99.9992% carbon with 2.60 ppm equivalent boron content, positioning the material for further evaluation in applications where purity, neutron absorption, traceability, and security of supply are critical.

Indoor Air Quality & the HVAC Market

The heating, ventilation, and air conditioning (HVAC) industry designs the systems that move, condition, and clean air in buildings, and air filtration is one segment within it, led by global OEMs such as Carrier, Daikin, and Trane, above a long tail of specialty media suppliers. Zentek's ZenGUARD™ platform sells into the filtration segment of this market.

There is heightened public awareness of the air we breathe indoors, and demand for cleaner indoor air has stayed elevated since. The global market for indoor air quality solutions was worth roughly US\$14.8B in 2025 and is expected to grow to about US\$25.6B by 2034. A major driver is a new wave of health-driven building standards, most notably a 2023 standard from ASHRAE, the industry body that sets air-system guidelines, which pushes schools, hospitals, offices, and other public buildings to improve the air they circulate, typically by upgrading their filters. That translates into steady, recurring demand for better filtration, and ZenGUARD™ is built to meet it, improving a filter's effectiveness without making the HVAC system work harder or use more energy.

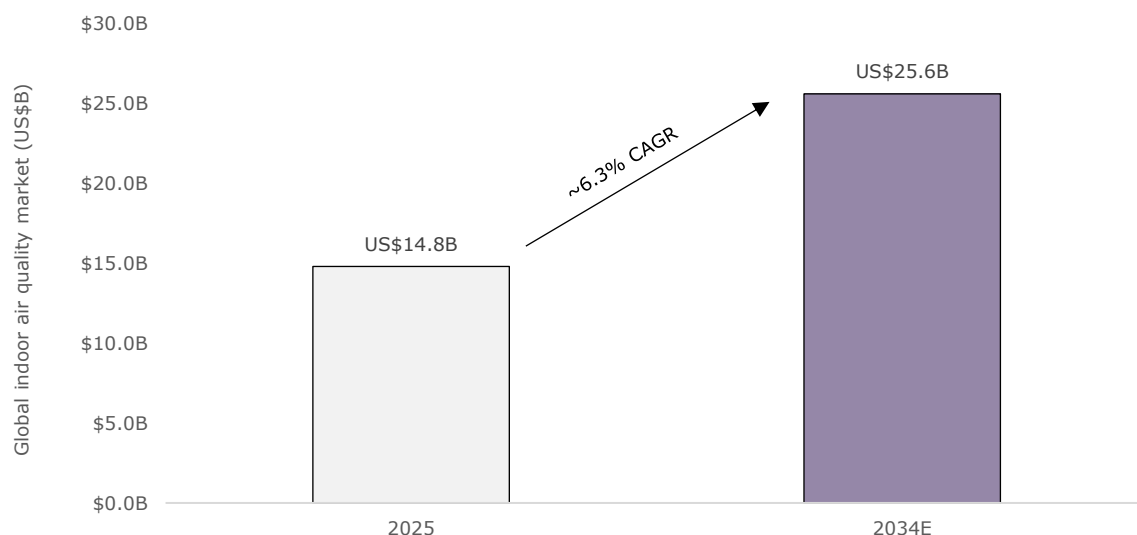


Figure 33: Indoor Air Quality Market (Source: Business Research Insights)

As we mentioned, Zentek does not aim to become an HVAC OEM or filter manufacturer. Its edge is the ZenGUARD™ graphene media and underlying IP, designed to slot into existing filter and HVAC lines rather than compete at retail. In a large, fragmented, and consolidating market where established players actively acquire and license differentiated technology, a validated, patent-protected media platform is, in our view, well positioned either as a licensed input to an incumbent's line or as a strategic target in its own right.

Management & Board

Mohammed (Moe) Jiwan – CEO & Director

Mr. Jiwan has served as CEO and Director since December 2025. He brings more than 20 years of operational, capital markets, and innovation leadership experience across public companies and high-growth ventures in the technology, healthcare, and life sciences sectors. Prior to joining Zentek, he held senior executive and advisory roles focused on corporate strategy, capital markets, business development, and scaling technology-driven companies. Since joining the Company, he has led Zentek's strategic repositioning toward a technology-focused graphite processing business targeting nuclear, defence, semiconductor, and advanced battery applications. Mr. Jiwan has extensive experience in public company governance, investor relations, and strategic finance. He holds an Executive MBA from McGill University and HEC Montréal. He holds 408,933 shares of ZEN, held directly and through controlled entities.

Wendy Ford, CPA – CFO

Ms. Ford serves as CFO and brings extensive finance and executive leadership experience across manufacturing and public company environments. Previously, she served as CFO of AirBoss of America Corp. from 2014 to 2016 and as VP Finance and CFO of Mancor Canada from 2017 to 2022. Throughout her career, she has developed expertise in financial reporting, corporate finance, strategic planning, and operational leadership. Ms. Ford holds a Bachelor of Commerce in Commerce, Economics, and Psychology from the University of Toronto and is a Chartered Accountant, having obtained her designation from the Institute of Chartered Accountants of Ontario in 1990. She holds 45,000 shares of ZEN.

Adam MacIntosh – R&D Director

Dr. MacIntosh serves as R&D Director and brings experience in synthetic chemistry, nanomaterials, and advanced research programs. He leads internal R&D activities across Zentek's graphene and bioscience platforms, overseeing research supply procurement, laboratory operations at the Company's Guelph facility, and collaboration with external research partners. Alongside this, he focuses on translating complex research programs into commercialization opportunities by coordinating multidisciplinary projects and advancing technologies through the development process. Dr. MacIntosh has experience leading research initiatives across multiple institutions, with expertise in nanomaterial analysis, chemical synthesis, and technical program integration. He holds a Ph.D. from McMaster University.

Ryan Shacklock, CPA – SVP Strategy & Business Development

Mr. Shacklock serves as Senior VP of Strategy and Business Development and has been with the Company since 2021. He brings experience in corporate strategy, business development, finance, and the mining sector. Prior to joining the Company, he held several positions at Nutrien Ltd. (formerly Potash Corporation of Saskatchewan Inc.), where he gained experience across investor relations, risk management, corporate and sustainability reporting, treasury, internal control compliance, and finance transformation. Alongside this, he has supported the Company's strategic initiatives, stakeholder engagement, and business development activities. Mr. Shacklock is a graduate of the University of Saskatchewan and is a Chartered Professional Accountant. He holds 178,200 shares of ZEN.

Peter Wood, P.Eng., P.Geo – VP Development

Mr. Wood serves as VP of Development of Albany Graphite Corp. and is the designated Qualified Person for the Albany Graphite Project under NI 43-101 and brings extensive experience in mineral exploration, geology, and project development. He has served as President and Geologist of Geodigital Mapping Systems Inc. since 1991. Mr. Wood's extensive geological experience has supported the advancement of the Albany Graphite Project and the Company's broader development initiatives. He holds a Master of Science in Geology and a Bachelor of Applied Science in Geological/Geophysical Engineering (Honours) from the University of Toronto. He holds 237,718 shares of ZEN.

John Snisarenko – Chairman

Mr. Snisarenko has served as Chairman since October 2023. He brings over 35 years of experience across the specialty pharmaceutical, biologics, medical device, and commercialization sectors, with experience spanning start-up companies through to large pharmaceutical and biotechnology organizations. From 2017 to 2019, he served as Group VP and Head of the Ophthalmology Franchise at Shire, where he led the Company's global ophthalmology business prior to its divestment to Novartis Pharmaceuticals. He subsequently served as CCO of Oyster Point Pharma from 2019 to 2022, where he oversaw commercial strategy and market development initiatives. Beyond this, he currently serves as an Independent Director of Alimera Sciences and Cytophage Technologies Ltd. Mr. Snisarenko holds a Bachelor of Science in Biochemistry and an MBA in Marketing and International Business from McGill University. He holds 300,000 shares of ZEN.

Eric Wallman, CPA – Director & Board Secretary

Mr. Wallman has served as a Director since 2018 and currently serves as Board Secretary, Chair of the Audit Committee, and Chair of the Governance Committee. He is a Chartered Professional Accountant with nearly four decades of experience across finance, accounting, manufacturing, and strategic planning. Since obtaining his designation in 1986, he has held senior accounting and finance positions within industry, including most recently serving as Senior Vice-President, Finance and Administration at Bothwell Cheese, which was the largest independently owned cheese manufacturer in Canada prior to its acquisition in 2022. His responsibilities included financial oversight, strategic planning, and business unit leadership across the company and related entities. Alongside this, Mr. Wallman has been an active investor in the junior mining sector since 1992 and currently holds ownership interests in several private Canadian corporations. He graduated from the University of Manitoba in 1983 and obtained his Chartered Accountant designation in 1986. He holds 584,373 shares of ZEN.

Matt Fontes – Director

Mr. Fontes has served as an Independent Director since September 2025. He brings experience in construction, project management, entrepreneurship, and building innovation. He currently serves as Partner and Project Manager at Catalyst Custom Modular Ltd., a British Columbia-based company specializing in custom prefabricated modular construction utilizing modern building science. In this role, he has overseen the development and commissioning of advanced HVAC systems across both site-built and modular custom homes. Prior to joining Catalyst, he was the proprietor of Fontes Homes, where he gained experience in residential construction, project execution, and business management. Mr. Fontes brings expertise in entrepreneurship, operational planning, and innovative construction practices. He holds 73,609 shares of ZEN.

Pete Gettinby – Director

Mr. Gettinby has served as an Independent Director since September 2025. He brings extensive international experience across renewable energy, environmental services, land management, and business development. From 2019 to 2025, he served as Director of International Development at RSK Environment Limited, a global provider of environmental and engineering solutions, where he supported international growth initiatives. Prior to this role, he served as Regional Development Director for the Middle East and earlier held the position of Land Manager at Vattenfall in Edinburgh and London. Throughout his career, Mr. Gettinby has developed expertise in renewable energy, property, agriculture, market expansion, client acquisition, and team development across the Middle East, Africa, Asia, and the United Kingdom.

Risks

Dilution/Financing Risk – High

Zentek has been reporting negative operating cash flow due to minimal revenue and increasing expenses, and management expects this to continue going forward. While the recent \$18M equity financing provides a strong runway for the next couple of years, the Company will likely need to tap the equity market again to fund revenue growth and mine development. The Albany project has an initial capex of US\$817M, which will require external financing as well.

Commercialization Risk – High

The Company has recorded only minimal revenue from graphene-related products to date and faces sales cycles that can stretch from one to multiple years between initial customer testing and commercial adoption. There is no assurance that broad commercial applications will prove feasible, that test results will translate to real-world performance, that required permits will be obtained, or that long-term, high-volume supply agreements will be secured to reach profitability. Persistent delays or shortfalls in converting the pipeline into scalable revenue would prolong cash burn and make it difficult for investors to model a clear path to meaningful earnings.

Regulatory Risk – Average

Operations require various federal, provincial, and international licenses, permits, and approvals, with no guarantee of timely receipt or continued compliance. Non-compliance could trigger investigations, fines, operational halts, or lost sales opportunities. The Albany project is located in Ontario, one of the strongest mining jurisdictions in the world, which reduces jurisdictional risk, though permitting timelines remain a potential source of delay.

Supply Chain Risk – Average

The Company relies on external partners for key manufacturing steps, exposing it to disruptions, quality issues, or capacity constraints in scaling ZenGUARD coated materials and other products. Potential shortages of specialized supplies, equipment, or skilled labour, combined with the complexities and costs of launching new production or facilities, could delay commercial ramp-up and increase operating expenses. Any failure to secure reliable alternative manufacturing arrangements or achieve efficient scale would directly pressure margins and timelines for achieving positive cash flow.

OTCQX Trading and Liquidity – Average

Zentek's common shares were suspended from Nasdaq on September 2nd and began trading on the OTCQX Best Market under the symbol ZTEKF the same day. The Company has stated its intention to request a hearing to appeal the Nasdaq delisting determination, and there is no assurance the shares will be relisted or that the Company will regain compliance with any Nasdaq listing requirement. Trading over the counter in the United States may be less liquid than trading on a national securities exchange, and continued OTCQX quotation is subject to the Company satisfying ongoing requirements and to one or more market makers continuing to quote the shares. The Company's TSX Venture Exchange listing is unaffected and remains its primary listing.

Pricing & Offtake Risk – High

The PEA economics rest on a realized price of US\$23,485/t for a product that is contract-priced following customer qualification rather than index-referenced. There is currently no offtake agreement, no qualified customer and no published index against which realized pricing can be benchmarked. Realized price is the single largest sensitivity in the model, and a materially lower price would reduce project economics proportionately.

Permitting & Social License – Average

Development of Albany requires provincial and federal permits and environmental assessment, and depends on continued support from Constance Lake First Nation, with whom the Company has maintained a partnership since 2011 through an Exploration Agreement, a Memorandum of Understanding and a 2021 Implementation Agreement. A long-standing relationship reduces but does not eliminate permitting and social-license dependency, and timelines for both remain outside the Company's control.

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