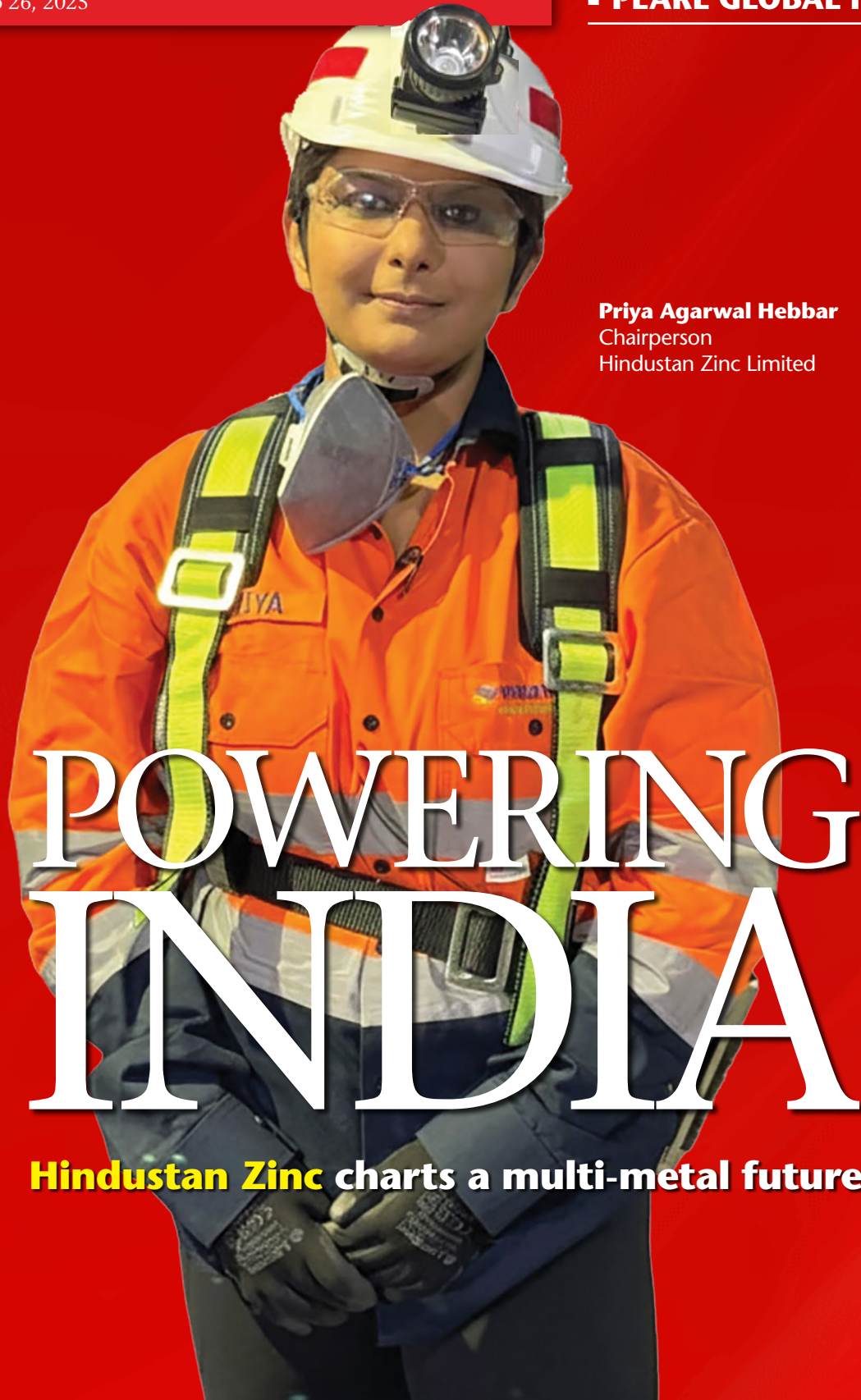


Business India

THE MAGAZINE OF THE CORPORATE WORLD

October 13 to 26, 2025

- BMW INDUSTRIES
- GOPAL SNACKS
- PEARL GLOBAL INDUSTRIES



Priya Agarwal Hebbar
Chairperson
Hindustan Zinc Limited

POWERING INDIA

Hindustan Zinc charts a multi-metal future



Priya: infusing the organisation with a deeper sense of purpose

BEYOND ZINC

In an era where industrial growth is being redefined by energy transition, technology, and supply chain sovereignty, Hindustan Zinc Limited (HZL) stands at the intersection of national ambition and global necessity. As India's only and the world's largest integrated producer of zinc, the company has steadily

expanded its horizons, with silver emerging as a fast-growing co-product that now underwrites both diversification and resilience.

On a recent visit to HZL's headquarters in Udaipur and its Dariba underground operations at SK Mines, what becomes immediately clear is that this is not a company standing still. Beneath

the Aravalli ranges, where cutting-edge digital command centres monitor activity hundreds of metres below the surface, HZL is scripting a transformation that goes well beyond tonnages and costs. As part of the Vedanta group, HZL reflects the group's philosophy of responsible growth and operational excellence. The association brings strategic depth and



From zinc legacy to multi-metal leadership, HZL is expanding its horizons

financial strength, positioning HZL at the forefront of India's drive for mineral self-reliance.

That philosophy bears the imprint of Chairperson Priya Agarwal Hebbar – the 36-year-old daughter of Anil Agarwal, Founder and Chairman, Vedanta Resources – whose stewardship has infused the organisation with a deeper sense of purpose to align operational

excellence with national priorities. For her, minerals and metals are no longer commodities in the old sense; they are strategic enablers of clean energy, mobility, electronics, and advanced manufacturing.

"The world's clean energy future rests on critical minerals and energy transition metals. Nations everywhere are racing to secure them, and India holds a natural advantage with rich geology. The opportunity, and the challenge, lies in unlocking these resources responsibly, through scientific and sustainable mining. At Hindustan Zinc, with our legacy, our people, and our technology, we see it as our responsibility to lead this journey," says Priya.

That conviction, purpose-driven and forward-looking, defines the next phase of HZL's journey. "We are evolving beyond our legacy of zinc and silver to becoming a multi-metal, future-enabling enterprise. For me, this goes far beyond business. It is about powering India's aspirations, reducing import dependence, and contributing to an Atmanirbhar, Viksit Bharat," she adds.

As global economies reorganise around clean energy and critical mineral security, HZL's trajectory mirrors India's own aspirations to move from resource potential to resource power.

From legacy to leadership

HZL's journey from a government-owned enterprise to a global benchmark in cost, scale, and governance is well known. What is less appreciated is how decisively the company has rearchitected its operating system over the last few years. Under Priya's stewardship, HZL crossed the psychological million-tonne mined-metal threshold and has sustained it, while strengthening

the spine of the business, asset reliability, process discipline, and digital operations.

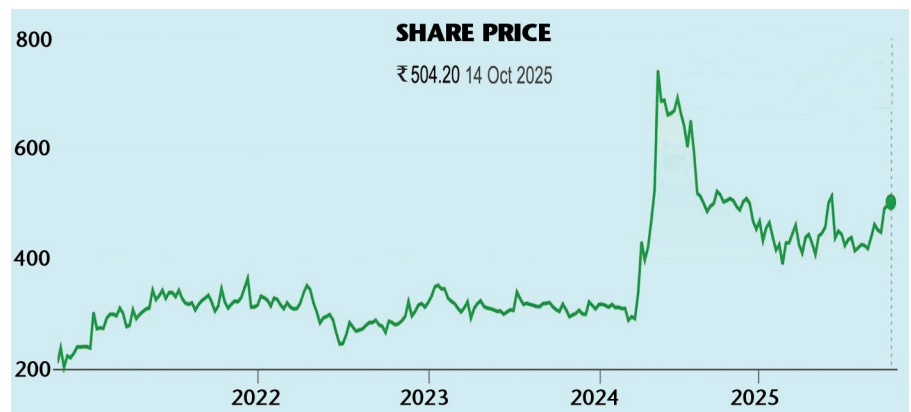
At the operational helm of this transformation is Arun Misra, CEO of HZL, whose leadership has brought the same clarity and rigour to execution that Priya has brought to purpose. Misra's own arc reads like the biography of Indian industry: trained at IIT Kharagpur, shaped by hard operational tours and leadership programmes across mines and smelters, and then handed a mandate to scale with prudence.

"When I joined HZL in 2019, the company was producing around 0.7 to 0.8 million tonnes of mined metal. Our dream was to cross the one-million-tonne mark. We achieved that and have sustained it for 3 consecutive years. Now, we are launching the next phase, doubling production to two million tonnes per annum," he says.

The phrase he returns to most often is deceptively simple: maximise asset utilisation. In practice, it means ruthless uptime discipline at the smelters, planned mining, and quality management that leaves little to chance.

This is the operating equation. India's metals and mining industry has shown unusual resilience amid stagnant global commodity volumes. Domestic steel demand grew 7 per cent year-on-year in FY25, and capacity is projected to rise to 300 million tonnes by 2030, driving zinc demand for galvanisation. India's positioning as a standout market reinforces the long-term consumption case for HZL's portfolio.

Commodity businesses are often caricatured as price-takers. HZL's playbook – to be a structural low-cost producer, to move higher up the value curve, and to make the portfolio more weather-proof



– is the counter-narrative. The company has focused on three reinforcing levers: production scale, product mix (including lead, silver and alloys), and cost leadership powered by technology and renewables.

India's primary lead demand grew by 6-7 per cent in FY2025, supported by automotive, battery, and infrastructure expansion. The industry is witnessing an accelerated shift toward the secondary (recycled) market, which now accounts for over 60 per cent of supply, given its cost advantage over primary metal. The removal of customs duties on lead scrap in the FY2026 budget is further driving investment in formal recycling infrastructure.

The silver story is emblematic. Industrial demand from solar, electronics, 5G and EVs has put silver at the centre of the transition economy. HZL, India's only primary silver producer, has scaled output more than twenty-fold in two decades and is building towards a 1,500 tpa silver target under its 2x growth plan (from 706 tonne in FY25). Silver's dual personality – industrial demand with investment-hedge characteristics – adds a stabilising layer to HZL's earnings mix.

Global silver prices stood at around \$46-47 per ounce at the end of September 2025, reflecting sustained investor interest and robust industrial demand. While jewellery consumption has eased under these elevated levels, demand from EVs, 5G infrastructure, and solar panels continues to underpin long-term growth. The World Silver Survey 2025 highlights that mine supply is expected to remain steady through the year before moderating, underscoring the



Misra: we are launching the next phase

scarcity premium and positioning primary producers like HZL to capture significant value.

Analysts, too, are taking note. "We believe HZL/VEDL's exposure to silver is underpriced, as consensus expectations trail the strong move in silver in recent months, with the metal now trading at \$47/oz. Global peers like Fresnillo and Grupo Mexico have already re-rated YTD, and we therefore see a strong potential for HZL to be repriced higher, to reflect current prices," says Amit Lahoti of Emkay Global.

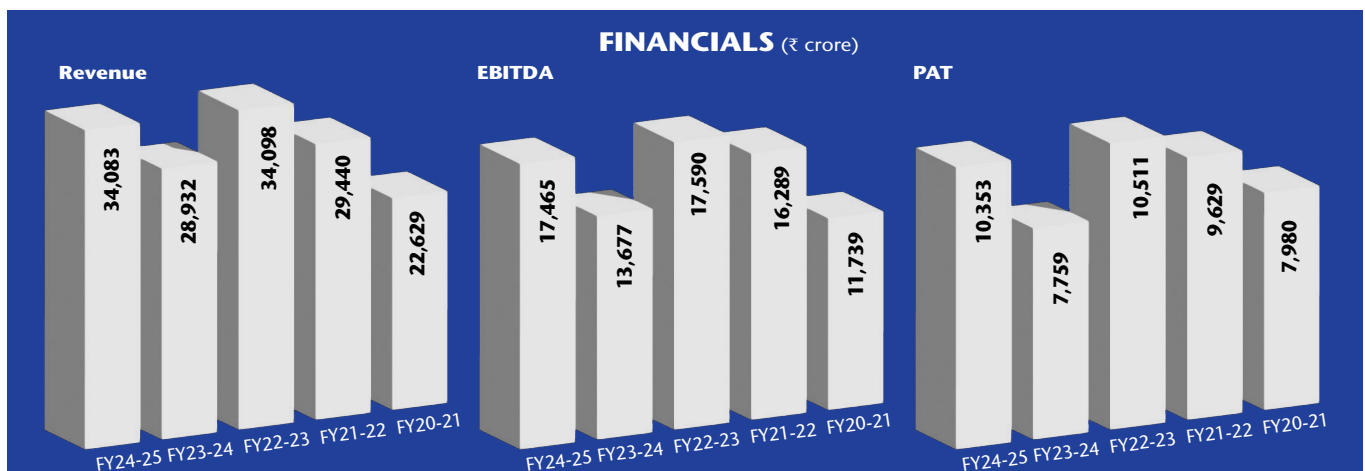
Echoing this view, Manav Gogia,

Research Analyst at YES Securities, adds: "HZL is well placed to benefit from both the recovering zinc prices and rising silver prices, supporting our constructive stance over the next 12 months."

Alloys are also moving from pilot to platform, as domestic steelmakers expand requirements beyond SHG zinc into ZAM (zinc-aluminium-magnesium) and other advanced grades that enhance corrosion resistance and lifecycle performance. Zinc alloys represent a strong import-substitution opportunity for India, with HZL generating about ₹100 crore in EBITDA from 10 kt production in FY25, including a record 5 kt in Q1 FY26, strengthening its differentiated solutions portfolio and advancing the Make in India vision through reduced import dependence and greater domestic alloy capacity.

Perhaps the most important signal of HZL's maturation is its admission into the International Council on Mining and Metals (ICMM), the first and only Indian company to join a forum otherwise populated by names like BHP, Rio Tinto, Anglo American, and Glencore. Priya has been instrumental in steering this shift, ensuring that HZL benchmarks itself not only against Indian peers but also against the world's most responsible miners. She is unequivocal that growth must be decoupled from footprint.

For Priya, growth and responsibility are inseparable. "Growth is meaningful only when it is responsible," she says. "At HZL, our carbon-footprint mitigation strategy is two-pronged: to increase renewables in our energy mix and to improve efficiency through technology, to achieve Net Zero by 2050 or sooner.



Source: Annual Report

PEOPLE, INCLUSION, AND SOCIAL VALUE

Mining's social licence is built in communities, not conference rooms. HZL's inclusion agenda has both symbolism and substance: India's first all-women underground rescue team, 25 per cent women in the workforce with a target of 30 per cent across functions, and an engineering culture where young professionals are trusted with real responsibility early. Visitors often remark on the confidence and professionalism of HZL's women miners, engineers, and finance leaders underground – a far cry from dated stereotypes about mines as male-only spaces.

Priya believes inclusion is not a policy but a way of doing business. "True growth is inclusive," she says. "For us, business progress and social prosperity go hand in hand."

The company's CSR architecture extends this philosophy of inclusivity beyond the workplace. It now reaches over 2,300 villages and 2.3 million people through programmes spanning education, healthcare, skill development, grassroots sport, and culture. Initiatives such as Nand Ghars, which modernise anganwadis, and the Zinc Football Academy, which nurtures young talent, reflect this integrated approach to social transformation.

As Priya explains: "Beyond recognition, our focus is impact. Through these initiatives, we are working in thousands of villages and touching millions of lives. Our Zinc Football Academy is nurturing young

talent, helping girls and boys learn from the best and shine. Our flagship Nand Ghars ensure the holistic development of women and children. These are platforms that inspire, empower, and create opportunities for communities to dream bigger."

Her personal commitment to compassion also extends beyond the company's operating footprint. "YODA began as a simple Facebook group of friends rescuing stray puppies," she recalls. "That spirit became the foundation of The Animal Care Organisation (TACO), where our dream is to build a world-class animal welfare ecosystem across India. What keeps me going is the belief in One Health: that human, animal, and environmental well-being are deeply connected. A compassionate India is not just an aspiration; it's a responsibility."

WOMEN UNDERGROUND: THE TEXTURE OF CHANGE

At one of HZL's underground sites, we step into an air-conditioned vehicle and are driven through a vast, well-lit tunnel network by a 24-year-old mining professional. It is a scene that would have been unthinkable a decade ago. Facilities created underground – from sanitation to transport – reflect not a token gesture, but a re-engineering of the workplace. These details matter because they are the preconditions for a genuinely diverse workforce to thrive, not merely survive.

This underground moment captures more than an operational detail; it signals the cultural and organisational reinvention

of HZL. Gender diversity is now visible everywhere – from smelters and mines to HR, marketing, and communications – a shift driven by Priya's insistence that inclusion must be hard-wired into growth.

She points to the women leading across HZL's operations as proof of that belief in action. "Today, more than a quarter of our workforce are women, leading many of our businesses, plants, and operations. Whether it is our mineral exploration business or our silver refinery plant, our key verticals are led by women in an industry that has long been one of the most male-dominated globally."

HZL's advocacy led to a turning point in 2019, when legal restrictions on women working underground were lifted. Priya recalls that milestone with pride. "At HZL, we advocated for and built India's first all-women underground mine workforce after the restrictions were lifted. Our first-of-its-kind all-women underground mine-rescue teams have won global accolades and are shaping next-generation safety leaders."

Priya's leadership philosophy has been shaped by formative experiences that placed people at the heart of every challenge. "For me, leadership has always been about people. I learnt very early on that you can't build anything meaningful alone. It truly does take a village. Strength, compassion, and empathy weren't just words, they were qualities I saw in action every day. Those lessons continue to guide how I show up as a leader today."

Today, around 19 per cent of our power mix is renewable, and our goal is to reach 70 per cent by FY28. In FY25, we reduced our greenhouse-gas-emissions intensity by 15 per cent from our 2020 baseline, even while increasing production each year."

Joining ICMC is not a press-release event; it is a compliance journey between intention and verification. As Misra explains, membership binds the company to principles around human rights, biodiversity, tailings governance, and climate, audited by third-party assessors over multiple years. In practical terms, that has translated into clear guardrails: prioritising underground expansion with a pledge to avoid displacement, adopting global tailings standards, and codifying 'no net loss'

biodiversity objectives.

HZL has committed to growth through underground expansions, a choice that minimises surface disturbance, avoids displacement, and tightens the environmental envelope. It is a rare example in India of a scaling miner choosing the harder, but more sustainable, path.

The company's 990 MW round-the-clock green-power partnership anchors its transition to a low-carbon future. HZL's EcoGen SHG grade, produced using renewable energy, offers a substantially lower embedded-emissions profile, giving downstream customers a clear advantage in carbon-constrained export markets.

"We have also forayed into zinc-battery technology. Our commitment is

clear, to expand while reducing our footprint. We are already 3.32 times water-positive, and, aligned with our circular-economy vision, we are on track to commission India's first 10-million-tonne-per-annum tailings-reprocessing plant by FY2030 to recover metal from legacy tailings without fresh mining," adds Priya.

As Rohitesh Dhawan, President & CEO of ICMC, notes: "It has been a privilege to visit HZL's operations in Rajasthan and see first-hand how cutting-edge technology is being integrated with ESG leadership. World-class, responsible mining is very much happening here in India, and it reaffirms the essential role the country's metals and minerals will play in enabling the global energy transition. We are delighted to welcome HZL

as ICMM's first Indian member, a milestone that strengthens both our collective efforts and HZL's leadership within India's mining industry."

Priya frames this recognition as both a validation and a responsibility. "We are proud to be setting benchmarks for the industry. HZL is the first Indian mining company to have its climate targets validated by the SBTi in line with the 1.5 °C pathway, and the only Indian member of the ICMM. For 2 years in a row, we have been ranked as the world's most sustainable metals and mining company by S&P Global. These milestones are not just recognition; they are a responsibility to keep raising the bar for our industry and for India."

Financial resilience

The company's strong balance sheet and disciplined capital management reflect Vedanta group's broader commitment to financial prudence and shareholder returns. As one of the group's most profitable verticals, HZL anchors Vedanta's long-term value creation strategy and contributes significantly to its dividend stream and fiscal strength

HZL's financial performance has been marked by industry-leading margins, reflecting its structural cost advantage. "Our philosophy is 'last man standing'. We continue to be one of the lowest-cost producers of zinc globally. HZL is unique due to its backward integration, which helps us remain resilient across all commodity cycles," says Sandeep Modi, CFO, HZL.

"At all times, our EBITDA margin has remained above 45 per cent, including during the Covid period. Even in a low LME environment, we delivered a 47 per cent EBITDA margin. As far as hedging is concerned, principally our objective remains to achieve whatever the market gives to us on a monthly average basis, for whatever zinc, lead and silver we sell. All our ESG initiatives are implemented with economic prudence, making our products greener while creating value for all stakeholders," he adds.

Over the past 5 years, revenue has grown from ₹22,629 crore in FY21 to ₹34,083 crore in FY25, while EBITDA has risen from ₹11,739 crore to ₹17,465 crore, and PAT from ₹7,980 crore to ₹10,353 crore.

Analysts see this consistency as a differentiator. "We remain positive on HZL



Modi: Our philosophy is 'last man standing'

given its presence in the lower end of the global cost curve, sizeable scale, and a diversified revenue stream with increasing contribution from silver sales," notes an analyst from JM Financial.

Hindustan Zinc's role extends well beyond operational and financial performance into nation-building. According to the company's 8th Tax Transparency Report, HZL contributed ₹18,963 crore to the exchequer in FY25, equivalent to 56 per cent of its revenue from operations and a 44 per cent increase over the previous

year. Over the past 5 years, cumulative contributions have reached ₹87,616 crore, underscoring the company's significance as one of the largest fiscal contributors in India's mining and metals sector.

Policy tailwinds

From MMDR to the Critical Minerals Mission, India's mining policy has moved with unusual velocity in the last 2 years, with the Mines and Minerals Development and Regulation (MMDR) Amendment Bill, 2025 aimed at speeding up discovery, unlocking scale in deep-seated minerals, and enabling better utilisation of existing leases. For an operator like HZL, the most relevant levers are enhanced exploration pathways, one-time lease-area expansions for deep-seated minerals, and clarity on surplus sales in captive regimes. Together, these measures lengthen mine lives, improve project viability, and de-risk the investment cycle.

These reforms sit alongside a national push to localise critical-mineral supply chains. For India to meet its targets in renewables, EVs, electronics and defence, a domestic backbone of strategic metals is non-negotiable. HZL's first-mover posture in tungsten, potash and rare-earth-bearing monazite, together with its exploration subsidiary, positions the company as a practical execution arm of that policy intent. Analysts see this as more than just diversification.

India's policy architecture has shifted decisively in favour of discovering and developing 'strategic' minerals – the inputs that make batteries, wind turbines, chips, fertilisers, and



Well-lit tunnels: re-engineering the workplace

defence electronics possible. HZL has been early to translate that policy signal into a portfolio. Letters of Intent have been secured for potash in Rajasthan, rare earths (monazite) in Uttar Pradesh, and tungsten in Andhra Pradesh; exploration programmes will build resource visibility over the next few years, with a measured approach to mine development and processing integration thereafter.

To institutionalise exploration at scale, HZL has set up Hindmetal Exploration Services, a data-to-discovery unit that blends drone-based mapping, geophysics, and advanced analytics. The logic is straightforward: reduce discovery risk and time, and create a pipeline of options that can be prioritised as technology and economics evolve. It is a classic first-mover attempt at building a domestic exploration ecosystem in sync with the National Critical Minerals Mission.

Globally, the push towards clean energy is driving robust demand for copper, aluminium, nickel, lithium, cobalt, and rare earths. Zinc too plays a vital role, particularly in corrosion protection for steel used in renewables. Silver has moved beyond its traditional role as a precious metal, emerging as a strategic resource vital to electronics, solar PV, and 5G infrastructure. This reinforces HZL's dual focus on zinc and silver as essential to the transition economy.

Circularity at scale

If critical minerals represent the horizontal expansion of HZL's surface area, tailings reprocessing is the vertical – mining the mine. At Rampura Agucha, HZL is investing ₹3,823 crore in a first-of-its-kind 10-million-tonne-feed facility to reprocess F tailings. The industrial logic is elegant: recover residual zinc and silver locked in tailings, convert a legacy waste liability into a cash-flowing asset, and, in time, assay for traces of strategic elements that could be selectively recovered as technology matures. Misra's simple description belies the ambition: "We are putting up a 10-million-tonne tailings recycling plant. From what was once considered waste, we will produce zinc, lead, silver, and potentially even critical minerals."

Circularity is not an ornamental ESG theme here; it is a core industrial capability that compounds margins,

improves land and water outcomes, and creates learning curves for future mineral recovery. Analysts view this as more than just sustainability: it is economics. Vikash Singh, Analyst at Phillip Capital, notes: "HZL reported a multi-year low CoP at \$994/t, driven by good volumes and lower power cost due to higher renewable use." In a world where greenfield development cycles are elongating, such urban-mining models will not only strengthen HZL's balance sheet but also provide a competitive edge.

Market tightness provides the context: global refined zinc output fell 4 per cent in CY2024 to 13,167 kt, even as consumption rose 1.7 per cent to 13,602 kt, creating a deficit of 436 kt. LME zinc averaged \$2,875/t in FY25, a 16 per cent increase over FY24. This backdrop highlights the value of tailings reprocessing and urban mining, turning latent resource into supply in a structurally tight market.

Fertilisers are often misunderstood as a step away from HZL's core, but the upcoming 510 ktpa plant leverages the sulphuric acid by-product, supports food security and forex savings, and in fact represents a logical extension of HZL's core strengths. In reality, the logic flows from chemistry and logistics. HZL generates sulphuric acid as a by-product of smelting; selling and transporting concentrated acid by road is both a safety and demand-dependency variable. By combining sulphuric acid with locally available rock phosphate to make DAP, HZL localises value, reduces dependence on third-party offtake, and substitutes a portion of India's heavy DAP imports.

The first 0.5-million-tonne phase is planned at Sindesar Khurd, with an expandable design.

Misra is candid about the economics; fertilisers are not a profit-maximising business, but a value-stabilising one that converts a by-product into a useful domestic good while tightening the company's circular-economy loop. Over time, zinc-fortified specialty fertilisers could evolve into a smart niche as India's agriculture shifts towards larger-scale, precision and contract farming.

The digital mine

HZL's cost advantage is as much digital as it is geological. AI-assisted ore-haul optimisation, automation in underground operations, predictive maintenance at smelters, and advanced safety systems have driven the cost of production for zinc to multi-year lows. The renewable power programme further de-risks costs by insulating the energy line-item from volatility while meeting climate targets.

These technology investments are complemented by systematic operational learning: bringing in global smelter experts to mentor teams, codifying playbooks across mines, and using data to tighten quality management. Misra summarises the ethos: "Our strategy is to maximise asset utilisation, and to keep operations under strict control."

HZL's recent milestones – ICMM admission, third-party ESG benchmarking, and tightened tailings governance – are as much about investor trust as they are about operating safety. Internally, the bias is towards predictable execution: do not break ground without



HZL has committed to growth through underground expansions



Technology investments put HZL ahead of peers

clearances; deliver ahead of regulatory clocks; build township-like infrastructure that reduces friction for employees and contractors; and codify a safety culture that is lived, not laminated.

Priya's leadership idiom blends exacting standards with informality: the kind of collegiality where young engineers can challenge a plan if the data demand it. That culture matters more than any single project, because it is culture that scales execution.

Zinc and silver are cyclical, but cycles are increasingly shaped by policy (infrastructure outlays, green spending), supply discipline, and geopolitics. The medium-term demand picture remains constructive as grids are rebuilt, vehicles electrify, and buildings standardise on higher corrosion-protection norms. HZL's strategic response – lower costs, more silver, alloys and by-products, and a measured glidepath to 2 Mtpa – is built for such a world.

As one analyst notes: "HZL continues to be a structurally strong play, backed by robust silver leverage, long mine-life visibility, and a pipeline of growth projects that position it for sustained earnings expansion through FY25-28."

No serious operating plan ignores risk. For HZL, the obvious ones are commodity-price volatility, project-execution delays, and regulatory uncertainty. The mitigants are built into the strategy: cost leadership, portfolio diversification (silver, alloys, by-products), renewables-anchored energy costs, and a pipeline-based approach to projects with staged gates

and embedded learnings. Circularity and exploration further add options – tailings for near-term metal recovery, and critical minerals for medium-term optionality.

India consumed 783 kt of zinc in FY25, with demand projected to grow 6-7 per cent in CY2025 to 867 kt, supported by infrastructure spending and urbanisation. With the Union Budget 2025-26 hiking capital expenditure by 9.8 per cent to ₹11.2 lakh crore, steel-intensive projects will directly translate into higher zinc requirements.

HZL's next decade is not a single bet; it is a portfolio of reinforcing choices. A low-cost zinc core gives cash-flow



HZL is determined to be a proud partner in India's growth story

solidity. Silver deepens exposure to the transition economy while providing a financial hedge. Alloys knit HZL closer to customers and substitute imports. Tailings reprocessing mines yesterday's waste with today's technology. Exploration opens doors to tomorrow's strategic critical metals and minerals. And through it all, a values-based operating model – safety, inclusion, biodiversity, and water stewardship – makes scale not just possible, but investable.

As Priya puts it: "The next decade is going to be defining for India, and HZL is determined to be a proud partner in India's growth story. We are focused on responsible expansion, doubling production capacity, investing ₹30,000-35,000 crore in new projects, and embedding sustainability into every layer of our operations. The path ahead is about balancing growth with responsibility: securing critical resources for the nation, creating long-term shareholder value, and ensuring that the communities around us rise with us. That is the legacy we have built and are proud to carry forward."

Reflecting on balance and purpose, Priya adds: "Over the years, I have come to understand that the idea of a 'perfect' work-life balance is a myth. In fact, chasing it can sometimes lead to mediocrity. What truly matters is being fully present: whether at work, with family, or in service. Whatever you are doing, give it your hundred per cent."

For Vedanta, HZL is more than a portfolio company, it is a model for responsible resource development that advances India's self-reliance in critical minerals and sustainable industrial growth.

There are few Indian industrial stories where leadership, operating discipline, sustainability, and national relevance intersect so tightly. HZL happens to be one of them: a company that began with ore and smelters and now stands at the centre of India's resource sovereignty and energy transition. As it evolves into a multi-metal future, the company embodies a new industrial paradigm where growth is inseparable from responsibility, technology drives sustainability, and India's mineral strength fuels a global clean-energy economy.

LANCELOT JOSEPH

lancelot.joseph@businessindiagroup.com