Adamas Intelligence

October 2025

Rare Earth Market Monthly Report

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SUPPLY

European companies complain of selectivity in the export license process

The European Chamber of Commerce in China (ECCC) stated that foreign companies, including its members, are still not being granted access to rare earth products by the Chinese government.

DEMAND

China's rare earth magnet exports jump higher in August

China's rare earth magnets exports jumped 10.2% in August 2025, hitting 6,146 tonnes – the highest volume since January and the second largest monthly volume on record.

OXIDES

Heavy mag-REO prices held relatively steady in September while light mag-REO prices dipped

Surging magnet export volumes are adding support for mag-REO demand in China, potentially limiting the extent of more downward price movements.

METALS

September metal and alloy prices mixed, market indecisive going into China's golden week holiday in early October

The rapid upswing of metal and alloy prices that began in July came to a halt in September as prices trended down modestly.

NDFEB ALLOYS

With mag-REO prices falling in September, the prices of NdFeB alloys fell marginally as well

Following a steady rise over the prior 4 months, magnet alloy prices were mostly stagnant in September, notching slightly lower overall.

Other Rare Earth Oxide Prices

(Mag-REO prices on page 13)

(USD per KG)	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25
La oxide													
Δ MoM													
Ce oxide													
Δ MoM													
Sm oxide													
Δ MoM													
Eu oxide													
Δ MoM													
Gd oxide													
Δ MoM													
Ho oxide													
Δ MoM													
Er oxide													
Δ MoM													
Yb oxide													
Δ MoM													
Lu oxide													
Δ MoM													
Y oxide													
Δ MoM													

* Prices reflect the estimated global volume-weighted average at month-end (including 13% VAT) converted to USD at month-end FX rates

Source: Adamas Intelligence

Supply-Side Market Developments (1/5)

Despite boost in rare earth magnet exports from China, European companies complain of selectivity in the export license process

In September, the European Chamber of Commerce in China (ECCC) stated that foreign companies, including its members, are still not being granted access to rare earth products by the Chinese government.

The business organization reported that just 19 of 141 license applications - barely 13.5% - have been greenlit by Beijing's Ministry of Commerce as of early September, sparking warnings of factory shutdowns and hemorrhaging losses.

One unnamed ECCC member alone is bleeding "millions of euros" from stalled production, while small and medium-sized firms in automotive, defense and chipmaking sectors teeter on the brink of halts.

There was a boost in approvals in June and July prior to and after the EU-China summit but there has been a slowdown in approvals.

Members of the ECCC, which represents over 1,600 companies, have also been operating with heightened uncertainty due to singular license approvals not guaranteeing a steady supply of the rare earths they need.

The business lobby submitted recommendations to Chinese policymakers for consideration during its meeting this month to set the nation's 15th five-year plan that will define economic and development goals for 2026-2030.

Adamas take: This ongoing squeeze isn't mere bureaucracy - it's a calibrated chokehold on the rare earth supply chain to amplify pressure on the Trump admin to relinquish its restrictions on China from western allies.

Despite August magnet exports from China reaching the second highest level on record, the massive number of companies waiting for export license approval could signal that some end-users are stockpiling material, or replenishing captive inventories drawn down in recent months.

Beijing's August warning against over-requesting volumes hints at its awareness of this potential and its intention to curb stockpiling to preserve its stranglehold on supplies.

With export approvals sputtering in China, expect Q4 bottlenecks to ripple through global manufacturing sectors, straining supplier relationships and threatening balance sheets.

While alternative rare earth and magnet producers are emerging outside China, it will be years before collective supplies ramp up sufficiently to substantially reduce reliance on China, leaving many manufacturers at the mercy of China's export controls for years to come.

Malaysia advancing talks with China to build rare earth refinery

In early October, media reports disclosed that China and Malaysia are in preliminary discussions to establish a rare earths refinery in Malaysia, marking a potential departure from Beijing's long-standing ban on exporting its processing technology.

Sources indicate that Malaysia's sovereign wealth fund, Khazanah Nasional, could partner with a Chinese state-owned enterprise to build the facility, leveraging Malaysia's estimated 16.1 million tonnes of untapped rare earths.

The project aims to process both light and heavy rare earth elements, essential for electric vehicles, robotics and defense applications.

This comes amid Malaysia's ban on unrefined rare earth exports and challenges plans by Lynas, which operates a refinery in Malaysia, to source Malaysian feedstock.

No deal has been finalized, but the talks involve state-linked entities to safeguard trade secrets.

Adamas take: The China-Malaysia refinery venture, if realized, would mark a significant shift, being the first known export of China's rare earth processing technology since its December 2023 restrictions.

This strategic move appears designed to counter Western efforts, particularly Australia's Lynas, which has secured deals with Malaysian state-owned firms and signed an MOU with JS Link for a sintered magnet factory in Malaysia.

By partnering with Khazanah Nasional, China could secure access to Malaysia's vast deposits, strengthening its grip on global rare earth supply chains amid tightening export controls and U.S. - China trade tensions.

Malaysia's growing ties with western firms could enable it to negotiate favorable terms with China, strengthening it as a pivotal rare earths hub.

Myanmar's rise as major REE producer has led to major deforestation and river pollution in recent years

Recent on-the-ground reports and satellite imagery taken over

Supply-Side Market Developments (2/5)

Myanmar and neighboring Thailand show that the rare earth mining boom has obliterated over 80,000 acres of forest since 2018 and unleashed toxic slurry into tributaries feeding the mighty Mekong River.

Chinese-backed operations, the source for around half the world's dysprosium and terbium, now export over $1 billion worth of concentrate annually to China, up from a mere $1.5 million a decade ago.

But this windfall has come at a devastating cost: arsenic-bearing runoff turning rivers an eerie orange, killing fish stocks, blistering skin and threatening the livelihoods of a million Thais downstream.

In less than a decade, Myanmar has risen to become the world's third-largest REE producer with more than 300 mines in conflict-riddled Kachin state in the north and just south of there, at least 60 unregulated mines in Shan State. The projects are largely controlled by ethnic militias and allegedly overseen by Chinese firms.

Unregulated operations in Myanmar leach rare earths in-situ, generating by some estimates 2,000 tons of toxic waste per ton extracted – containing arsenic, manganese and mercury.

This effluent has contaminated three Mekong tributaries, prompting Thai authorities to issue health alerts and estimate a $40 million in economic fallout from tainted fisheries and agriculture.

In Kachin, rebel seizures of key mining sites last year displaced activities southward, exacerbating the Shan deforestation surge.

These mines feed supply chains for global automakers, underscoring the imminent need for alternative sources of supply.

Adamas take: As we have highlighted for years, if an organization is importing magnets from China there is a high probability that those magnets contain a fraction of Myanmar-sourced rare earths and thereby, knowingly or not, the organization is contributing to the environmental and social problems in the nation.

There have been numerous studies and exposes published on the issue in recent years, but end-users globally have been slow to take action, if at all.

However, with production in Myanmar disrupted since late last year, and the U.S. – China trade war expediting efforts to build alternative supply chains, alternatives to Myanmar's HREE-rich supplies are expected to increase in the near-term, enabling growing production of high-performance magnets outside China devoid of China/Myanmar-sourced materials.

India eyes rare earths in Myanmar as China clamps down

Media reports in September stated that India has begun to explore options for sourcing rare earth ores or concentrates from its border neighbor Myanmar.

In a July virtual meeting, the Ministry of Mines urged state-run Indian Rare Earths Limited (IREL) and private firms like Midwest Advanced Materials to procure samples from rare earth mines controlled by the rebel group Kachin Independence Army (KIA) in Kachin state.

The KIA, which seized the Chipwe-Pangwa belt in late 2024, has begun collecting HREE-rich ores for testing in Indian labs.

Feasibility studies for bulk exports are underway, though rugged terrain and junta skirmishes loom as logistical nightmares.

This unorthodox outreach follows Prime Minister Narendra Modi's August talks with Myanmar's junta leader Min Aung Hlaing on mining cooperation – yielding no formal pact.

The approach demonstrates India's determination to secure supply chains of domestic automakers and manufacturers reliant on China's permanent magnets while at the same time undermining China's stronghold in the country.

Yet, without ample processing capacity, India's haul risks becoming a costly curiosity.

Adamas take: China's tightening export controls, wielded as a geopolitical lever in the ongoing trade war, are pushing nations like India toward unconventional sources like KIA-controlled mines in Myanmar.

India's move could challenge China's >95% grip on HREO processing if scalable, but its lack of HREO refining capacity risks limiting this to a symbolic win.

The KIA has actively been engaging with foreign governments to circumvent China and demonstrate its independence.

If the rebel group can successfully establish an alternate supply chain with western partners and their allies, it would have significant leverage in any peace talks that could end the years-long conflict.

Neo Performance Materials opens new magnet plant in Estonia in September

Supply-Side Market Developments (3/5)

In September, Neo Performance Materials hosted a ribbon-cutting ceremony to inaugurate its new permanent magnet manufacturing plant in Narva, Estonia. Among the distinguished guests on hand for the event included Prime Minister of Estonia Kristen Michal and the President of the European Commission Ursula von der Leyen.

The facility, which cost an estimated $75M, was completed in 500 days and is expected to produce 2,000 tonnes of NdFeB blocks in its Phase 1a, scaling to 5,000 tonnes in Phase 1b.

Neo received $21.9M (€18.7M) from the European Union's Just Transition Fund and the company funded the balance.

In the days leading to the opening ceremony, the magnet maker announced it entered a multi-year supply Memorandum of Understanding (MOU) with Germany's Robert Bosch GmbH.

As part of the deal, Neo will reserve significant share of its annual production to supply the German appliance and automotive supply giant.

Adamas take: Neo's Narva facility, paired with its Sillamäe separation plant, cements Estonia as a linchpin in Europe's rare earth ambitions, aligning with the EU's Critical Raw Materials Act to slash reliance on China by 2030.

With Beijing's tightened export controls and U.S.-EU tariffs on Chinese magnets at 25%, Neo's 2,000 tonne per year output offers a critical hedge against volatility for those automakers and end-users that secure supplies.

The Bosch MOU signals robust demand, but Phase 1a capacity may be sold out soon.

So far this year, Neo has been awarded two contracts with Tier 1 traction motor suppliers to our knowledge. For end-users, securing early offtake could yield a discount down the road if spot prices continue to climb.

Ultimately, with Europe currently importing around 30,000 tonnes of NdFeB annually from China, there is a huge opportunity for Neo and others to scale magnet production in the near- to medium-term.

Less Common Metals acquired by USA Rare Earths for approximately $220M

Late September, Nasdaq-listed USA Rare Earth Inc (USAR) announced a deal to acquire UK-based REE metal and alloy producer Less Common Metals (LCM) for around $220M. In exchange for giving up control, shareholders of the British firm will receive $100M in cash and 6.7 million shares of USAR.

As one of few ex-China producers of REE metals and alloys, LCM, which has been in operations for three decades, will help accelerate USAR's mine-to-magnet strategy to further bolster America's rare earth supply chain. The British metal maker operates a facility in Cheshire that can produce rare earth and specialty alloys according to customers specification.

USAR is currently developing a magnet factory in Stillwater, Oklahoma, which produced its first batch of sintered magnets earlier this year and targets commercial production in early 2026.

The new factory will have an initial annual capacity to produce 1,200 tonnes of magnets, which will be boosted in two subsequent phases to reach 4,800 tonnes per year by 2028.

In August 2023, USAR signed a multi-year supply agreement to source NdFeB alloys from Australian Strategic Materials' Korean Metals Plant.

The LCM purchase will likely supplant the supply agreement with Australian Strategic Materials in time. USAR is expected to align LCM's UK capacity and output to support Stillwater's ramp up and planned expansions.

Adamas take: As the Trump administration is looking to take equity stakes in companies in critical and strategic sectors, Barbara Humpton, CEO of USAR confirmed in early October that the company is in communication with the White House.

By folding in LCM, USAR positions itself to back-integrate several steps up the supply chain making it a more attractive candidate for U.S. government support or investments.

Tying in a mine supply source, be it USAR's Round Top project in Texas or otherwise, the company would become a prime target for support as the second fully integrated rare earths player in the U.S. after MP Materials.

Korea's JS Link to build $223M magnet factory in U.S. state of Georgia

In early September, JS Link announced that it will invest $223M through its US subsidiary to build a rare earth magnet factory in Columbus, Georgia that will go into operation towards year-end 2027.

The announcement, which was made by CEO Jun Y. Lee and Georgia State Governor Brian Kemp, disclosed that the 130,000

Supply-Side Market Developments (4/5)

square foot complex will produce 3,000 tonnes of sintered NdFeB magnets annually once complete.

In the interim, JS Link will begin ramping at its first operating plant, a 1,000 tonne per annum (tpa) facility in Yesan, South Korea, while constructing another 3,000 tpa facility in Malaysia following an MOU with Lynas earlier this year.

Adamas take: With the addition of this Georgia plant to the pipeline, we expect the U.S. will be largely self-sufficient on a tonnage basis between 2028 and 2030, although potentially not with respect to magnet grades.

Post-2030 however, we expect demand growth to outpace new magnet supply growth, leading to a renewed and growing reliance on magnet imports if capacity is not expanded further.

By 2028, the US will host a diverse array of magnet makers including MP Materials, eVAC Magnetics, Noveon Magnetics, USA Rare Earth, Vulcan Elements and JS Link.

ReElement Technologies and POSCO forge ahead with U.S. rare earth refinery and supply deal

In September, ReElement Technologies and POSCO International signed a pair of deals to strengthen a partnership that began in late 2024.

As part of the first deal, both parties will develop an integrated rare earth and permanent magnet production complex in Noblesville, Indiana that will house all stages of production from raw ore sourcing to magnet fabrication and recycling all under one roof.

The second deal, a long-term offtake agreement, will see ReElement supply POSCO with 3,000 tonnes of separated rare earth oxides annually, including NdPr, Dy, Tb and Y, over the next five years.

The alliance kicks off with a joint feedstock taskforce scouring U.S. and allied sources for ore and recyclables. ReElement's Noblesville facility will refine outputs, while POSCO handles magnet manufacturing, aiming ambitiously for operational supply lines by next year.

POSCO claims to have secured 8,500 tonnes in magnet supply contracts from North American and European automakers for the period 2026 to 2034.

Adamas take: ReElement is seeking to rapidly scale rare earth oxide production via its chromatography-based refining technology by securing reliable, non-Chinese sources of rare earth feedstocks.

This partnership with POSCO gives ReElement a potentially wide avenue into the automotive market, albeit POSCO has established deals with a wide array of players in the space with little execution to-date.

That said, by committing to China-free raw materials, the latest deal could foster opportunities for U.S. and allied suppliers of REE feedstocks looking for offtake, ultimately positioning ReElement and POSCO as important players in the non-China supply chain should the agreement bear fruit.

Energy Fuels raises $700M to advance projects, REOs from White Mesa Mill qualified for EV motor production

Energy Fuels (EF) last month disclosed that NdPr oxide produced from its White Mesa Mill in Utah had been used to make NdFeB magnets that have been qualified for use in EV motors by MOU partner, POSCO.

According to the announcement, EF supplied 1.2 tonnes of NdPr oxide which was used to produce 3 tonnes of NdFeB magnets that passed all quality assurance and quality control (QA/QC) benchmarks for use in POSCO's motor cores.

Leveraging this momentum, EF priced a $700M convertible notes offering on October 1, upsized from $632.5M, to fund expansions, including its Phase 2 rare earth separation circuit at White Mesa, and to advance its Donald JV mining project in Australia.

The funding infusion will help EF advance towards commercial scale NdPr oxide production in the near-term, while pilot dysprosium oxide output paves the way for 2026 heavy rare earth oxide production capacity.

Adamas take: Energy Fuels' qualification of NdPr oxide for EV motor magnets is a positive step towards securing binding offtake agreements with POSCO and others.

The $700M convertible notes offering, upsized due to purported strong demand, will help accelerate and scale NdPr oxide production at White Mesa.

However, EF's ability to scale HREO production will remain limited until its Donald JV in Australia or its Toliara project in Madagascar come online, offering the feedstock needed to boost HREO output.

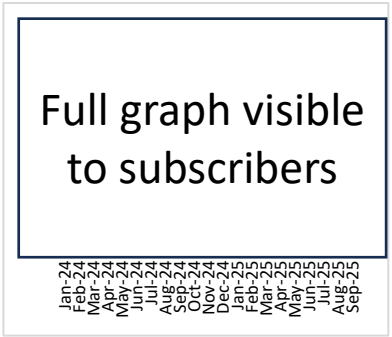
With EF, ReElement and a growing number of others counting on offtake from POSCO, execution risk tied to the latter is high.

Supply-Side Market Developments (5/5)

China domestic monazite price up 1.9% month-over-month in September

In September, the month-end price of China domestic monazite mineral concentrate (60% TREO min., excl. VAT) was $7.37 per kilogram, up 1.9% from month-end August despite a drop in magnet rare earth oxide prices over the same period.

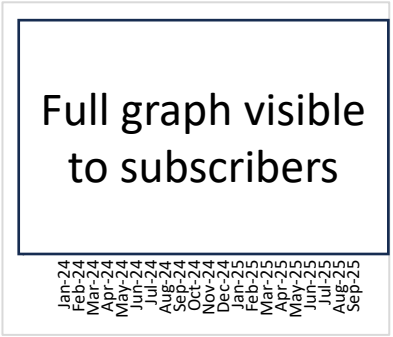
China domestic monazite price since January 2024 (USD/kg)



China domestic bastnaesite price down 8.4% month-over-month on average in September

In September 2025, the month-end price of bastnaesite mineral concentrate in China (70% TREO min., incl. VAT) was $5.37 per kilogram, down 8.4% from August as magnet rare earth oxide prices slid.

China domestic bastnaesite price since January 2024 (USD/kg)

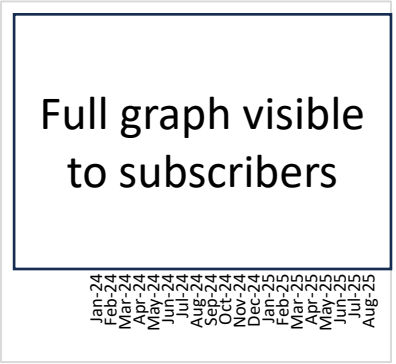


China monazite concentrate imports down 75.2% month-over-month in August

In August 2025, China imported 2,882 tonnes of monazite mineral concentrate, 75.2% less than it imported in July and 72.6% below the same month last year.

However, the average price paid for monazite imports in China jumped 154.8% in August to $5.53 per kilogram following a deluge of low-priced, low-grade imports the month prior.

China monthly monazite imports since January 2024 (tonnes)

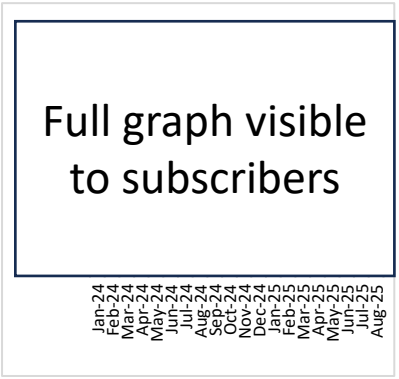


China bastnaesite concentrate imports cratered in August

In August, China received 32 tonnes of bastnaesite mineral concentrate from Burundi and Nigeria, 99.3% less than final US imports received the month prior and 99.5% less than the same month last year.

In August, the average price paid for bastnaesite imports in China was $2.08 per kilogram, 7.4% lower than the price of US imports the month prior and 8.5% less than the same month last year.

China monthly bastnaesite imports from the US since January 2024 (tonnes)

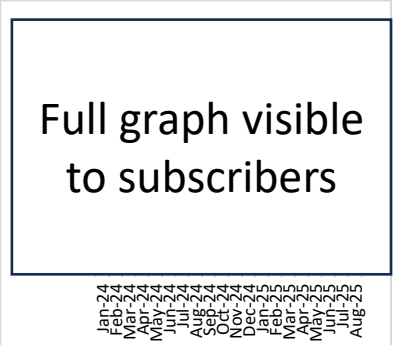


China mixed rare earth oxide imports down and carbonate imports up in August

In August 2025, China imported 942 tonnes of mixed rare earth carbonate (98% from Malaysia, 2% from India), up 57.2% month-over-month and 2,142.2% year-over-year.

Moreover, in August 2025, China imported 3,374 tonnes of mixed rare earth oxide concentrate (48% from Myanmar, 45% from Laos, 7% from Malaysia), down 7.0% month-over-month but up 5.8% year-over-year, following a slide in volume from Myanmar and a rise in volume from Laos.

China monthly mixed REO and carbonate concentrate imports since January 2024 (tonnes)



Demand-Side Market Developments (1/2)

China's rare earth magnet exports up again in August

China's rare earth magnet exports jumped 10.2% in August 2025, hitting 6,146 tonnes – the highest volume since this January of this year, which itself was the highest ever recorded.

Germany was the top recipient as volume spiked 20.7% to 1,347 tonnes but U.S.-bound deliveries dipped 4.7% to 590 tonnes.

The export frenzy timed neatly with a high-stakes Xi-Trump call in September, the second time both leaders have spoken this year as both countries aim to ease tariffs and sanctions.

While the call was hailed as progressive by both sides, no definitive action or clarity was provided after the discussions.

Xi and Trump may meet again later this month in South Korea, or possibly early next year.

Adamas take: China's export surge is more a reflection of strategic maneuvering than generosity.

By seemingly prioritizing non-U.S. markets like Germany, Beijing mitigates global supply pressures and disruption of its own industries while keeping U.S. end-users in the lurch.

However, supply chain challenges persist in Europe too, with inconsistent approvals causing bottlenecks, as evidenced by the purported 46 related production stoppages in the EU in September.

China's ongoing weaponizing of REE exports may help it achieve near term objectives but it's fueling the resolve of end users to secure alternative sources of supply, boding well for existing and emerging producers outside China.

Toyota to produce two full electric SUVs in Kentucky

In a strategic reshuffle amid escalating U.S.-China trade frictions, Toyota Motor North America has confirmed plans to produce two all-electric, three-row SUVs at its Georgetown, Kentucky facility starting in 2026.

The models, rumored to be electrified variants of the popular RAV4 and rugged Land Cruiser, will replace production of the Lexus ES sedan, which shifts to Japan. This move, part of a broader realignment across Toyota's U.S. plants including Indiana, aims to enhance manufacturing efficiency and align with strong demand for spacious EVs.

While Toyota has not disclosed investment figures, reports suggest up to $1.3B could flow into the Kentucky site, bolstering its role as a North American EV hub and potentially safeguarding thousands of jobs in the state.

However, the announcement comes against a backdrop of acute supply vulnerabilities. China's April 2025 export restrictions on NdFeB magnets has already triggered shutdowns, including at Toyota's own Kentucky hybrid lines in May due to alleged dysprosium shortages. U.S. automakers like Ford and GM have faced week-long halts, while EU suppliers report cascading disruptions.

Adamas take: Always against the grain, Toyota's all-electric plans in Kentucky come as other automakers in the U.S. like Ford and Stellantis are embracing more hybrids. The move comes as China's export controls threaten to further stall global EV production ramps. In recent months, supply bottlenecks have idled lines from Chicago to Stuttgart, inflating costs and delaying Toyota's own hybrids.

In the U.S., Toyota will have a growing number of emerging magnet suppliers to source from.

Stellantis to produce EREV version of Ram, scraps plans for full electric variant

Stellantis announced a shift in its Ram brand's electrification roadmap, cancelling the launch of its long-delayed full-electric 1500 pickup to instead rollout a plug-in hybrid version – specifically, an extended range electric vehicle, or EREV.

In an EREV, unlike a conventional PHEV, an onboard gasoline engine is used for charging the battery during driving, giving the vehicle a range upwards of 1,000 km (620 miles) per charge in many cases. However, because the combustion engine is not generally used to propel the vehicle, like in a traditional PHEV, the vehicle's electric motors must do all the work, and must carry the engine and fuel tank, so they tend to be very powerful. And in addition to those powerful motors, a typical EREV also often hosts a powerful permanent magnet generator, bumping up its magnet use even further.

The Ram 1500 REV will be powered by two permanent magnet motors, coupled with a gas-powered engine and permanent magnet generator, providing a total driving range exceeding 1,110 kilometers (690 miles). The Ram 1500 REV is expected to hit roads next year marking a pivot by the automotive giant into EREVs as demand for BEV pickups has slowed in recent months.

Adamas take: As Adamas highlighted on stage at Rare Earth

Demand-Side Market Developments (2/2)

Mines, Magnets & Motors 2025 last month, a future that sees more PHEVs (specifically EREVs) in the sales mix in the U.S. and Europe could be a net positive for NdFeB magnet demand (as it is today in China where EREVs are very popular) because of the powerful motors and generators these vehicles often contain.

Niron Magnetics breaks ground on rare-earth-free magnet plant in Minnesota, licenses motor design to deploy its novel magnets

In September, Niron Magnetics broke ground on a 190,000-square-foot facility in Sartell, Minnesota, set to produce 1,500 tonnes of iron nitride-based (FeN) permanent magnets annually from early 2027.

The plant, built on a repurposed coal community site, leverages a decade of U.S. Department of Energy-backed R&D to deliver high-performance magnets without rare-earth elements, using iron and nitrogen.

Backed by partners like Stellantis and Samsung, the plant's magnet output will target applications from EV motors to defense tech.

CEO Jonathan Rowntree hailed it as a "triumph for American innovation," underscoring domestic scaling amid rising demand.

Niron Magnetics' groundbreaking ceremony marks the long-awaited commercialization of iron nitride technology, a rare-earth-free alternative that reportedly exceeds the strength of NdFeB.

The Minnesota facility, supported by a $52.2 million Section 48C Advanced Energy Project tax credit, could help address supply bottlenecks as global automotive and other sectors drive strong magnet demand growth into the foreseeable future.

Since 2024, Niron has shipped samples from its pilot plant in Minneapolis to OEMs for qualification. The head of electric drive systems with Stellantis stated in the announcement that it is working on developing best-in-class motor performance using FeN magnet technology.

Niron licenses novel motor design to deploy its FeN magnets

Also in September, Niron licensed a suite of foundational patents for Variable Flux Motor (VFM) designs, seeking to shatter longstanding efficiency barriers in electric motors while creating demand for its novel magnets.

The goal is to pair FeN magnets with advanced VFM architecture to eliminate the classic tradeoff between low- and high-speed performance experienced by conventional electric motors.

If realized, this breakthrough could yield significant efficiency gains in applications ranging from EV drivetrains to data center cooling, industrial pumps and beyond.

To-date, VFM motor concepts have been made primarily with AlNiCo magnets but have not reached commercial output.

CEO Jonathan Rowntree hailed FeN as "the missing piece" for scalable commercialization, with partners like Alvier Mechatronics already advancing prototypes.

Adamas take: Stellantis' endorsement of Niron's iron nitride (FeN) magnets signals its potential as an alternative to NdFeB in electric motor applications.

Prototype results from Alvier and others will be telling. Paired with VFM, FeN technology could prove disruptive in some sectors, albeit manufacturing complexity, costs and controls are major hurdles ahead.

As Niron scales production and OEMs continue testing FeN in real-world applications, the next 12-18 months will reveal whether these magnets have a near-term future in high temperature applications like EV motors.

US launches program to fast track eVTOL rollout

In early September, Transportation Secretary Sean Duffy launched the FAA's Electric Vertical Takeoff and Landing Integration Pilot Program (eIPP), a White House initiative from Trump's June drone dominance order.

The program aims to streamline regulations for eVTOLs, testing air taxis, cargo, medical transport, and rural connectivity over three years via five public-private projects.

Joby Aviation, with 40,000 test miles, plans FAA certification in 2026 and commercial flights by 2027, partnering in Texas, Florida, Ohio, New York, and California.

Archer Aviation targets air taxi trials with United Airlines by 2026. However, China's 2025 rare earth export controls threaten eVTOL motor production.

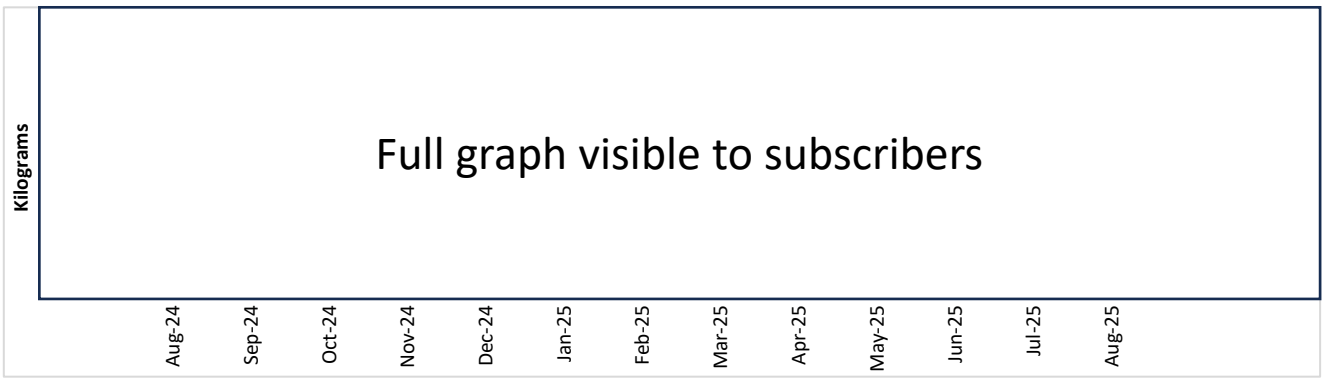
Adamas take: The eIPP will accelerate eVTOL certification, boosting test flights to attract customers.

However, NdFeB magnets with dysprosium and terbium, critical for eVTOL motors, face supply risks from China's export curbs, potentially delaying U.S. firms.

Trade & Export Prices – Nd Oxide

China monthly Nd oxide exports (kilograms)

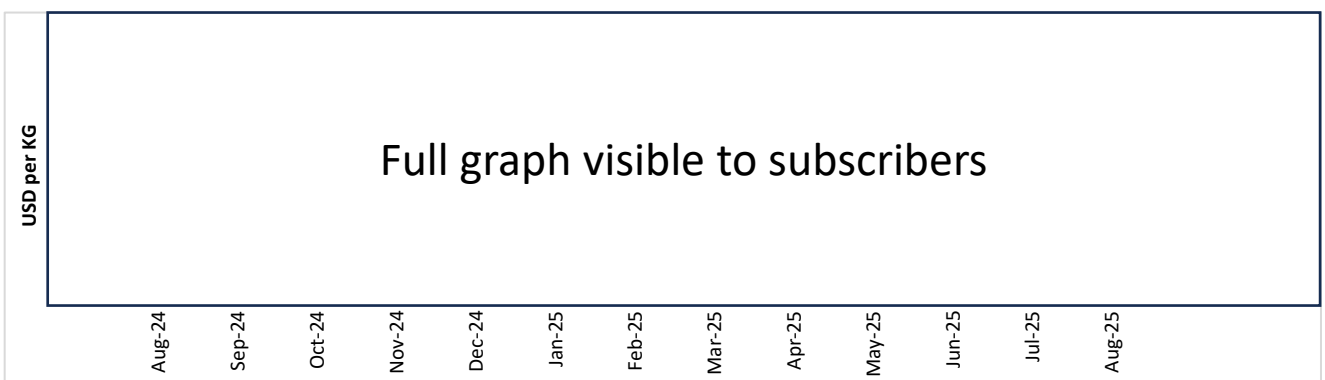
KG Exported	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25
Other													
World													



Source: China customs, Adamas Intelligence analysis

Realized Nd oxide export price (USD per kilogram)

USD per KG	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25
Other													
World Avg.													

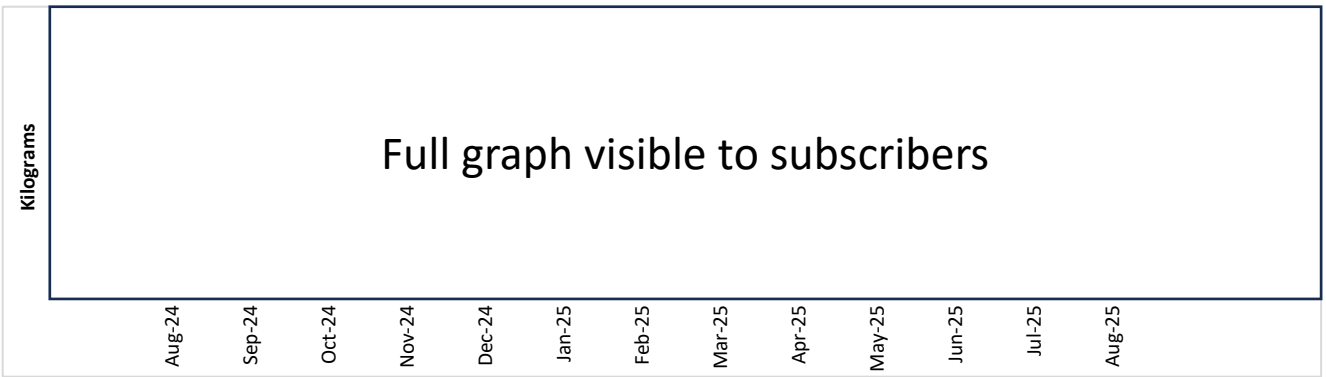


Source: China customs, Adamas Intelligence analysis

Trade & Export Prices – Dy Oxide

China monthly Dy oxide exports (kilograms)

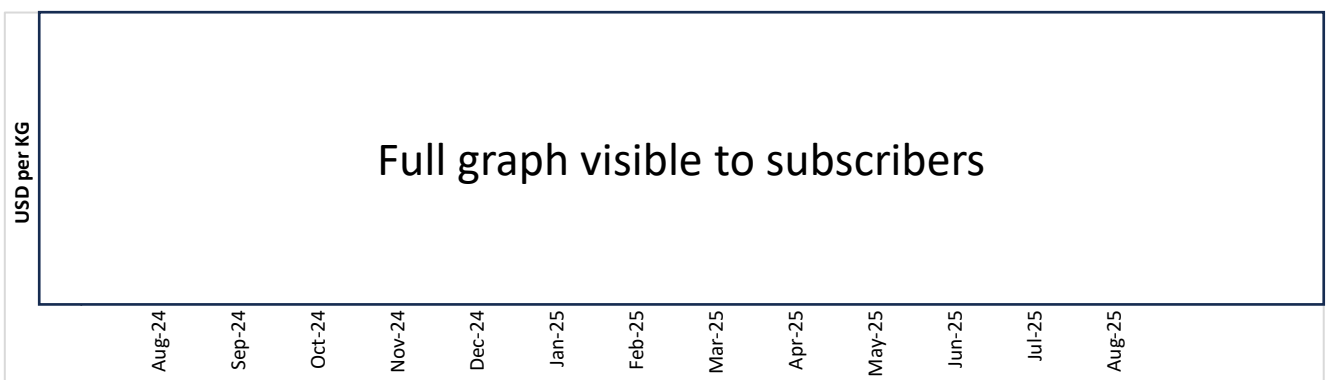
KG Exported	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25
Other													
World													



Source: China customs, Adamas Intelligence analysis

Realized Dy oxide export price (USD per kilogram)

USD per KG	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25
Other													
World Avg.													



Source: China customs, Adamas Intelligence analysis

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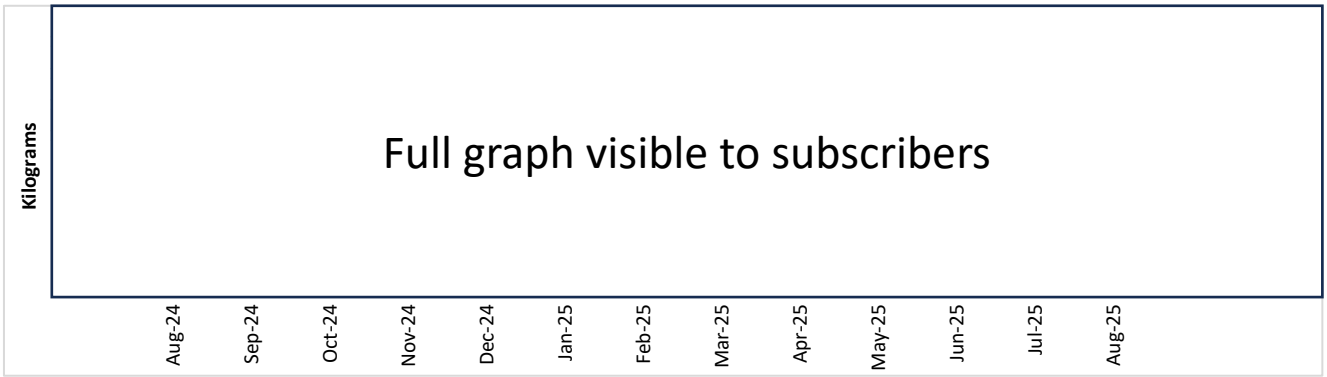
October 2025

Trade & Export Prices – Tb Oxide

China monthly Tb oxide exports (kilograms)

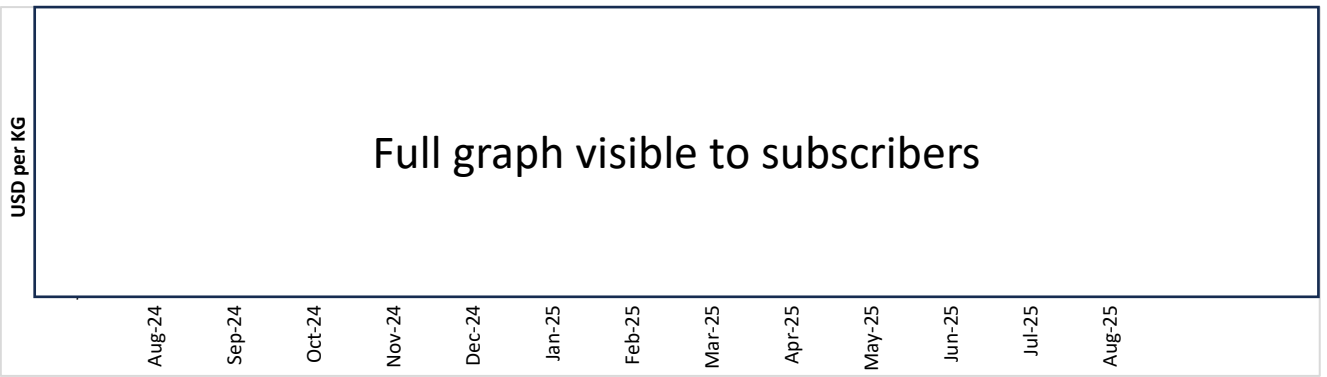
KG Exported	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25
World													



Source: China customs, Adamas Intelligence analysis

Realized Tb oxide export price (USD per kilogram)

USD per KG	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25
World Avg.													



Source: China customs, Adamas Intelligence analysis

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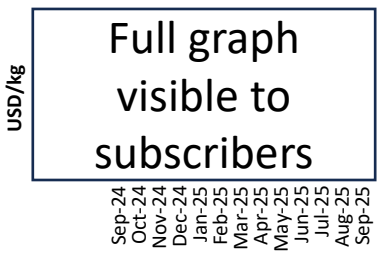
Ex-China Rare Earth Oxide Prices

Ex-China REO Prices (China-origin material)

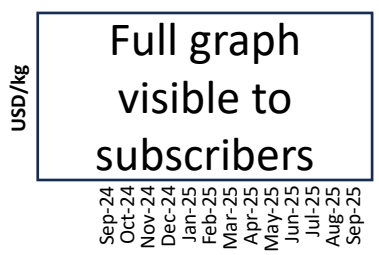
Location	(USD per KG)	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25
Rotterdam	Ce oxide													
	Δ MoM													
Rotterdam	Pr oxide													
	Δ MoM													
Baltimore	Gd oxide													
	Δ MoM													
Rotterdam	Tb oxide													
	Δ MoM													
Rotterdam	Dy oxide													
	Δ MoM													
Rotterdam	Er oxide													
	Δ MoM													
Rotterdam	Y oxide													
	Δ MoM													

Source: Asian Metal, Adamas Intelligence analysis

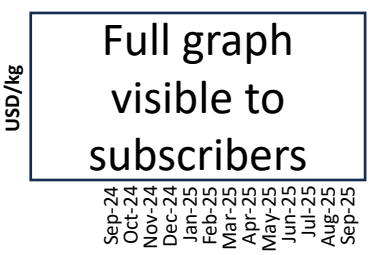
Ce oxide



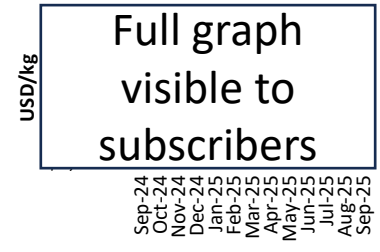
Pr oxide



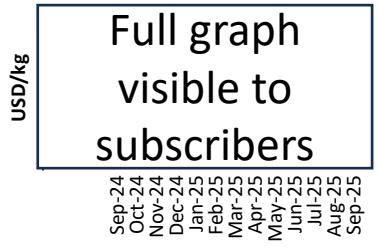
Gd oxide



Tb oxide

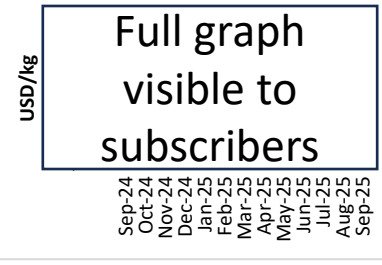


Dy oxide



Er oxide

Y oxide



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October 2025

Rare Earth Oxide Price Developments

NdPr oxide price down 6.4%, Nd oxide down 3.4% and Pr oxide down 1.3% in September 2025

In September 2025, the month-end NdPr oxide price was down 6.4%, the month-end Nd oxide price fell 3.4%, and the month-end Pr oxide price slipped 1.3% versus August-end, pulling back from the highest levels of the year, respectively. Most of the pullback occurred in the final week of the month.

In China, the domestic spot price of Nd oxide EXW was $85/kg at September month-end versus a much higher $97/kg FOB for Nd oxide exports. *(China does not export NdPr oxide, only NdPr alloy)*

Dy oxide price up 0.1% in September 2025 while volume of HREE concentrate exports from Myanmar slides

Following a 0.4% slip in August, the price of Dy oxide crept up 0.1% in September, reversing course from the month prior.

In China, the domestic spot price of Dy oxide was $226/kg EXW at September month-end versus a modestly higher $241/kg FOB for Dy oxide exports. At the same time, the Asian Metal price of China-origin Dy oxide warehoused in Rotterdam was a hefty $825/kg.

Tb oxide price down 0.7% in September, tempering recent price gains

After rising 1.3% in August, the price of Tb oxide pulled back 0.7% in September, just dollars below the $1,000 per kilogram mark surpassed the month prior.

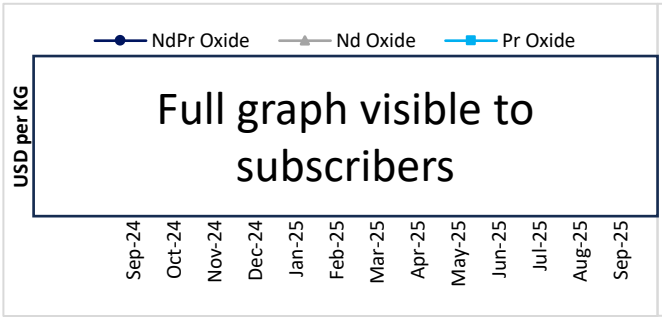
In China, the domestic spot price of Tb oxide was $990/kg EXW at September month-end versus a significantly higher $1,088/kg FOB for Tb oxide exports. At the same time, the Asian Metal price of China-origin Tb oxide warehoused in Rotterdam was a towering $3,550/kg.

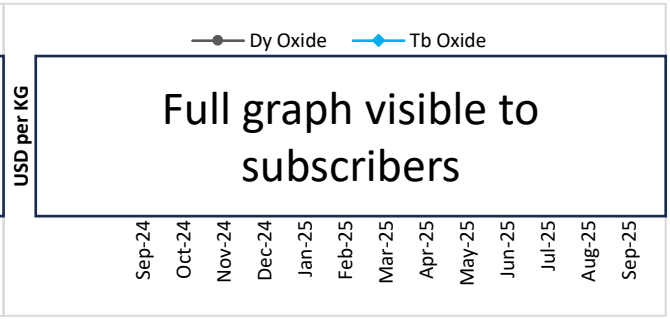
Heavy mag-REO prices held relatively steady in September while light mag-REO prices dipped

Following a four-month rally higher that accelerated in July, prices of light mag-REOs fell moderately in September from last month's peak but still registered the second highest month-end levels of the year.

Despite many companies in the EU and US continuing to report delays receiving exports from China, magnet export volumes from the nation are surging in recent months, adding support for domestic NdPr, Nd and Pr oxide demand in the nation which could limit the extent of downward price movements in Q4.

Heavy mag-REO prices held relatively steady in September while light mag-REO prices dipped





(USD per KG)	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25
NdPr Oxide													
Δ MoM													
Nd Oxide													
Δ MoM													
Pr Oxide													
Δ MoM													
Dy Oxide													
Δ MoM													
Tb Oxide													
Δ MoM													

* Prices reflect the estimated global volume-weighted average at month-end (including 13% VAT) converted to USD at month-end FX rates

Source: Adamas Intelligence

Rare Earth Metal Price Developments

NdPr metal price down 8.2%, Nd metal price down 1.0%, Pr metal price down 0.9% in September 2025

In September 2025, month-end prices of NdPr alloy and Nd metal were down 8.2% and 1.0%, respectively, versus August month-end, driven lower by a comparable drop in prices of respective oxide input materials.

In China, the domestic spot price of NdPr alloy EXW was $95/kg at September month-end versus a slightly higher $98/kg FOB for NdPr alloy exports.

Dy metal price up 0.2% while Fe-Dy alloy price down 1.2% in September

In September 2025, the month-end Dy metal price was up 0.2% from the month-end prior, propped up by a similar increase in the price of Dy oxide.

At the same time, month-end price of Fe-Dy alloy fell 1.2% after over-shooting Dy oxide and Dy metal gains the month prior.

In China, the domestic spot price of Dy metal EXW was $296/kg at September month-end versus a slightly higher $302/kg FOB for Dy metal exports.

Tb metal price up 1.9% in September, continuing its 2025 uptrend

In September 2025, the month-end Tb metal price was up 1.9% from August month-end, continuing its relentless rise despite Tb oxide prices undulating over the past four months. The price of Tb metal is yet to experience a down month in 2025 and is currently 21.6% higher than it was 12 months ago.

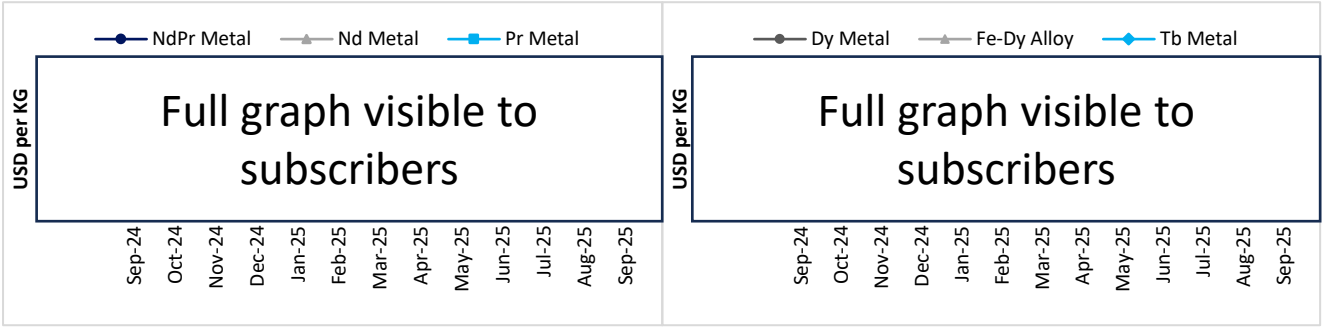
In China, the domestic spot price of Tb metal EXW was $1,243/kg at September month-end versus a moderately higher $1,310/kg FOB for Tb metal exports.

September metal and alloy prices mixed, market indecisive going into China's golden week holiday in early October

The rapid upswing of metal and alloy prices that began in July came to a halt in September as prices trended down modestly in advance of China's golden week holiday during the first week of October.

As with oxides, rising magnet export volumes from China coupled with seasonally strong demand in Q4 will add support for domestic metal and alloy demand, potentially limiting the extent of downward price movements in the months ahead.

September metal and alloy prices mixed, market indecisive going into China's golden week holiday



(USD per KG)	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25
NdPr Metal													
Δ MoM													
Nd Metal													
Δ MoM													
Pr Metal													
Δ MoM													
Dy Metal													
Δ MoM													
Fe-Dy Alloy													
Δ MoM													
Tb Metal													
Δ MoM													

* Prices reflect the estimated global volume-weighted average at month-end (including 13% VAT) converted to USD at month-end FX rates

Source: Adamas Intelligence

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October 2025

NdFeB Alloy Price Developments

SH grade NdFeB alloy prices down 0.6% month-over-month in September

In September 2025, the month-end price of N40SH NdFeB alloy in China was 288 RMB per kg, down from 290 RMB per kg the month before but up from 260 RMB per kg in September 2024.

In USD terms, the month-end price drifted down 0.6% month-over-month to $40.45 per kg in September 2025, a lesser slide than that of NdPr input costs over the same period.

UH grade NdFeB alloy prices down 0.4% month-over-month in September 2025

In September 2025, the month-end price of N35UH NdFeB alloy in China was 398 RMB per kg, down from 400 RMB per kg at end-August, while the end-September price of N38UH NdFeB alloy was 408 RMB per kg, down from 410 RMB per kg the previous month.

In USD terms, the end-September price of N35UH grade alloy slipped 0.4% month-over-month to $55.89 per kg while the month-end price of N38UH grade alloy drifted down 0.4% month-over-month to $57.30 per kilogram.

EH grade NdFeB alloy prices down 0.3% month-over-month in September 2025

In September 2025, the month-end price of N38EH NdFeB alloy in China was 428 RMB per kg, down from 430 RMB per kg at end-August but up from 400 RMB per kg recorded in the same month of 2024.

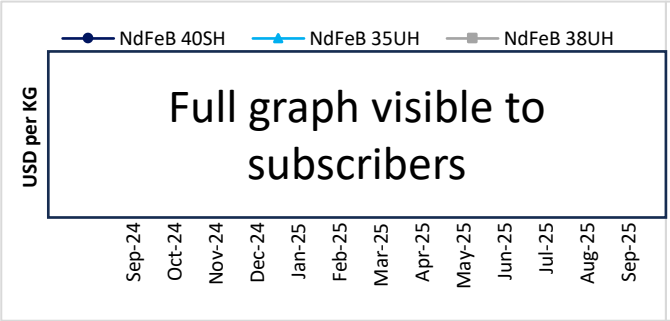
In USD terms, the month-end price fell 0.3% month-over-month to $60.11 per kg in September 2025, pulled lower by a drop-in rare earth input prices over the same period.

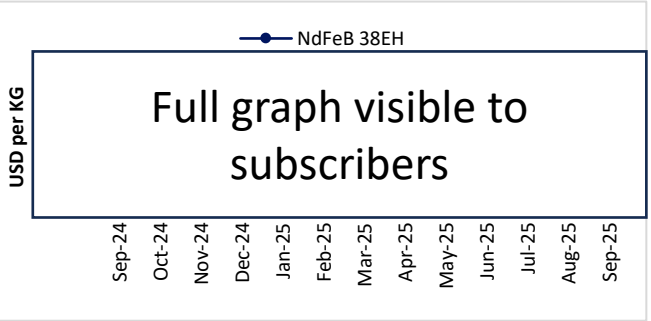
With mag-REO prices falling in September, the prices of NdFeB alloys fell marginally as well

Following a steady rise over the prior 4 months, magnet alloy prices were mostly stagnant in September, notching lower overall.

As with oxide and metal prices, rising magnet export volumes from China coupled with seasonally strong demand in Q4 will add support for domestic oxide, metal and NdFeB alloy demand, potentially limiting the extent of downward price movements in the months ahead.

With mag-REO prices falling in September, the prices of NdFeB alloys fell marginally as well





(USD per KG)	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25
NdFeB 40SH													
Δ MoM													
NdFeB 35UH													
Δ MoM													
NdFeB 38UH													
Δ MoM													
NdFeB 38EH													
Δ MoM													

* Prices reflect estimated China domestic prices at month-end (including 13% VAT) converted to USD at month-end FX rates

Source: Adamas Intelligence

* Prices are for bulk sintered NdFeB alloy precursor, not finished and coated magnets

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October 2025

NdFeB Alloy Price Developments

N-, M- and H-Series NdFeB Alloy Prices

(USD per KG)	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25
NdFeB N35													
Δ MoM													
NdFeB N45													
Δ MoM													
NdFeB N52													
Δ MoM													
NdFeB N35M													
Δ MoM													
NdFeB N45M													
Δ MoM													
NdFeB N50M													
Δ MoM													
NdFeB N35H													
Δ MoM													
NdFeB N45H													
Δ MoM													
NdFeB N48H													
Δ MoM													
NdFeB N50H													
Δ MoM													

* Prices reflect estimated China domestic prices at month-end (including 13% VAT) converted to USD at month-end FX rates

Source: Adamas Intelligence

* Prices are for bulk sintered NdFeB alloy precursor, not finished and coated magnets

China Industry Profitability Tracker (1/2)

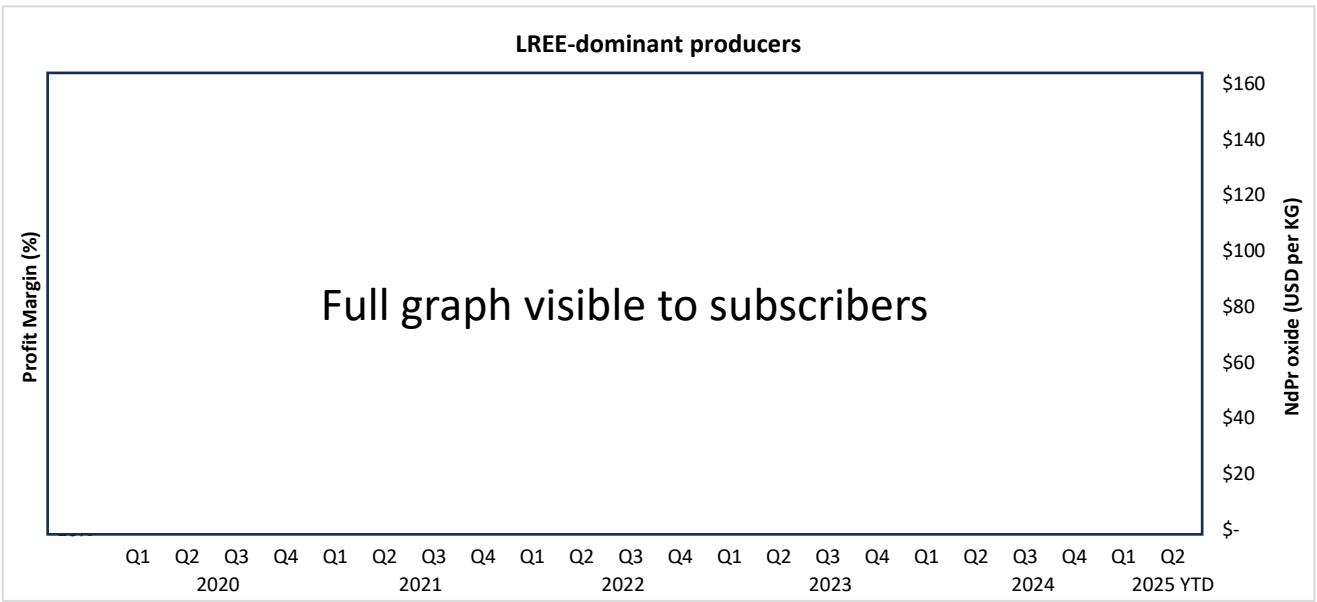
Upstream Producers

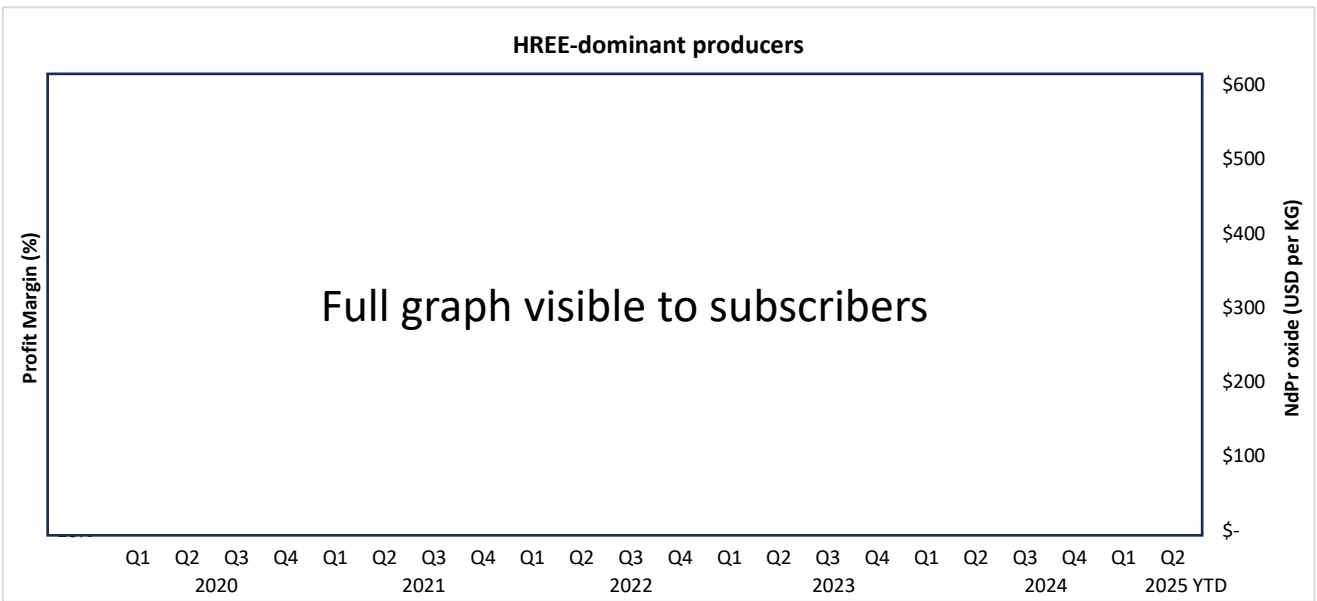
Year	2020				2021				2022				2023				2024				2025	
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Average LREE-dominant																						
Average HREE-dominant																						

Source: Company reporting, Adamas Intelligence analysis

NA = Not (yet) available

Note: Above groups and companies are vertically integrated to different degrees. Reported profitability is the result of all business activities they are engaged in.





China Industry Profitability Tracker (2/2)

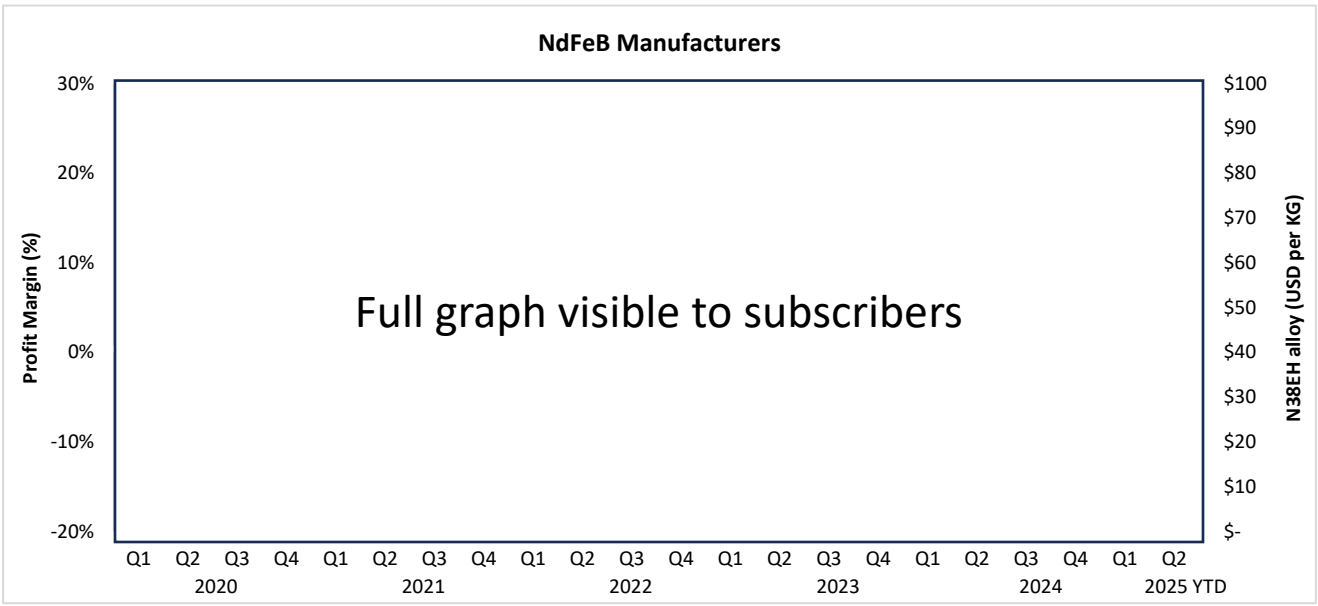
Magnet Makers

Year	2020				2021				2022				2023				2024				2025	
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Average NdFeB producer																						

Source: Company reporting, Adamas Intelligence analysis

NA = Not (yet) available

Note: Above groups and companies are vertically integrated to different degrees. Reported profitability is the result of all business activities they are engaged in.



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Important Notes:

All prices referred to herein are in U.S. dollars unless specified otherwise.

Due to rounding, numbers presented throughout each monthly report may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.