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Critical raw material supply gaps threaten EU clean energy goals: report

- EU faces declining domestic mining and refining capacity, increasing reliance on imports
- Likely struggles to meet Critical Resources Mineral Act targets
- Recommends new technologies, project financing, offtake agreements

Delays in critical raw material mining projects and inadequate refining capacity threaten to undermine the EU's aim to lead in the clean energy sector and its broader strategic autonomy, according to a new report by Systemiq, supported by Breakthrough Energy and analyzed by The Energy Transitions Commission.

In the report titled "Critical Raw Material Supply-side Innovation Roadmap for the EU Energy Transition," released Dec. 10, Systemiq noted that a key global challenge was the major supply shortfall for most critical raw materials expected by 2035, as clean technology deployment accelerated over the next 10 to 15 years.

Despite evolving battery chemistries, material innovation, and improved recycling rates potentially reducing primary supply requirements, the report projected a significant supply gap for most critical raw materials (CRMs) in a net-zero scenario by 2035.

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Assessments

Platts Key Metals Benchmarks

	Symbol		Change	Date assessed
Daily prices				
Alumina PAX FOB Australia ($/mt)	MMWAU00	750.000	-10.000	10-Dec
Aluminum MW US Transaction premium (¢/lb)	MMAKE00	21.950	0.050	10-Dec
Aluminum CIF Japan premium ($/mt)	MMANA00	193.000-193.000	0.000/0.000	10-Dec
Aluminum CIF Japan premium Q4 ($/mt)	AAFGA00	175.000-175.000	0.000/0.000	10-Dec
Aluminum duty paid IW Rotterdam premium ($/mt)	AALVE00	350.000-375.000	0.000/0.000	10-Dec
Molybdenum oxide, daily dealer ($/lb)	MMAYQ00	21.600-21.720	0.050/-0.080	10-Dec
Ferromolybdenum, 65% European ($/kg)	MMAFO00	50.500-50.750	0.200/0.150	10-Dec
Clean Copper Concentrates TC ($/mt)	PCCCB00	5.200	0.700	10-Dec
Clean Copper Concentrates RC (cents/lb)	PCCCC00	0.520	0.070	10-Dec
Twice weekly prices				
MW US A380 Alloy (¢/lb)	MMAAD00	133.500-135.000	-0.500/0.000	09-Dec
Weekly prices				
Aluminum CIF Brazil premium ($/mt)	MMABP04	250.000	0.000	06-Dec
Aluminum ADC12 FOB China ($/mt)	AAVSJ00	2400.000-2410.000	-10.000/-10.000	10-Dec
Aluminum Alloy 226 del. European works (Eur/mt)	AALVT00	2200.000-2280.000	10.000/20.000	06-Dec
Manganese Ore, 44% Mn, CIF Tianjin ($/dmtu)	AAWER00	4.200	0.000	06-Dec
Manganese Ore, 36% Mn, CIF Tianjin ($/dmtu)	AAXRX00	3.900	0.000	06-Dec
Moly oxide, Daily Dealer Wk Avg. ($/lb)	MMAGQ00	21.370-21.670	-0.020/0.004	06-Dec
Silicon, 553 Grade delivered US Midwest (¢/lb)	MMAJM00	135.000-145.000	0.000/0.000	04-Dec
Ferrochrome, US 65% High-Carbon IW US (¢/lb)	MMAFA00	135.000-150.000	-5.000/-5.000	04-Dec
Silicomanganese, 65:16 DDP NW Europe (Eur/mt)	MMAGR00	990.000-1040.000	0.000/0.000	04-Dec
Ferrosilicon, FOB China ($/mt)	MMAJP00	1200.000-1220.000	-10.000/-10.000	04-Dec
Ferrotitanium MW US, 70% ($/lb)	MMAFT00	3.500-3.600	0.300/0.100	05-Dec
Copper NY Dealer cathodes premium (¢/lb)	MMACP00	11.000-14.000	0.000/0.000	10-Dec
Copper MW No.1 Bare Bright Disc (¢/lb)	MMACL10	15.000	1.000	10-Dec

Aluminum

South32 withdraws Mozal Aluminium production guidance on civil unrest

- Civil unrest impacting transport of raw materials to Mozal smelter
- FY25 production guidance previously set at 360,000 mt
- Combined with Rusal cuts, could boost prices further: source

Mining and metals company South32 has withdrawn production guidance for its 63.7%-owned Mozal Aluminium smelter near Maputo, Mozambique as escalating civil unrest in the east African country impacts deliveries of raw materials, it said in a Dec. 10 notice.

The London-headquartered company said that road blockages were restricting the transport of raw materials to the smelter, adding that it had implemented contingency plans to mitigate operational impacts and was working with relevant stakeholders.

"We are withdrawing production guidance for Mozal Aluminium as we respond to the evolving situation. The safety and wellbeing of our people at Mozal Aluminium is our priority," South32 said.

It said there had been no security incidents at the smelter itself.

South32 previously set Mozal Aluminium's production guidance for financial year ending June 30, 2025 at 360,000 mt, with this expected to rise to 370,000 mt in fiscal year 2026.

The smelter produced 314,000 mt of aluminum in the 2024 financial year ended June 30, down 9% year over year.

An Asia-based producer source told S&P Global Commodity Insights that South32's move, together with Rusal's cuts, could potentially boost prices further, although "the underlying reason for cuts is probably a combination of weaker demand and increased costs."

"I don't think the higher prices are sustainable," he added.

A trader source said the news was "bullish on European premiums, translated to MJP premiums as well," referring to aluminum premiums on a CIF Japan basis.

A second producer source said the unrest had been going on for a while. "It will impact European supply immediately, and low-carbon supply as a whole," he said.

An EU trader source told Commodity Insights that the question was whether any impact would materialize.

"So far [the issue] is transport of raw material to Mozal, which means production is still unaffected, but if they cannot come through, it will be affected," he said.

Another EU trader said there would potentially be an impact on production and exports.

"When you stop the transport, you stop both the arrival of goods to the smelter, but also the arrival of aluminum to the Port of Maputo," he said.

A third EU trader said the event might be slightly bearish for alumina prices as South32 might need to sell some alumina back into the market, but it would be bullish for EU aluminum premiums if that supply was cut.

Platts, part of Commodity Insights, assessed the daily low-carbon aluminum prices at $337.50/mt duty unpaid in-warehouse Rotterdam and $382.50/mt duty paid in-warehouse Rotterdam Dec. 9, up 78% and 44% respectively since the start of 2024.

Mozambique's post-electoral protests have been ongoing since the presidential elections took place towards the end of October, which saw Daniel Chapo emerge as the winner.

Opposition supporters have opposed the election outcome, leading to clashes between state authorities and protesters.

— Jacqueline Holman, Jenson Ong, Khaula Bhatti

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CHINA DATA: Nov aluminum exports hit highest since June ‘22 ahead of tax rebate change

- Aluminum exports expected to remain elevated in Dec
- Aluminum prices seen rangebound in the short term
- Copper imports rise due to arbitrage opportunities

China’s exports of unwrought aluminum and related products rose 36.6% on the year and 15.3% on the month to 669,000 mt in November, hitting the highest level since June 2022, customs data showed Dec. 10.

Exports have increased year on year for 12 straight months.

Total aluminum outflows are expected to remain elevated in December as domestic processors rush to export before new tax rebate rules kick in. China removed the 13% tax rebates on aluminum and copper exports effective Dec. 1.

China’s unwrought aluminum exports rose 18.8% from the previous year to 6.16 million mt in the first 11 months of 2024.

Meanwhile, imports in November are expected to decline due to the closed import arbitrage window, market sources said. The import data is due to be released on Dec. 20.

The ratio between the Shanghai Futures Exchange and London Metal Exchange prices was 7.86 when the SHFE closed at 3:00 pm Beijing time on Dec. 9, indicating absent import arbitrage opportunities as LME prices remained stronger due to tight supply in seaborne markets.

Market sources anticipate that Chinese aluminum prices will remain rangebound in the short term, following a recent political meeting where the government committed to providing substantial fiscal policy support.

The most-active aluminum contract on the Shanghai Futures Exchange for February 2025 delivery closed at Yuan 20,320 ($2,805)/mt on Dec. 10, down 0.3% from the previous settled price, exchange data showed.

Copper imports hit 1-year high

China’s imports of unwrought copper and copper products strengthened 3.5% from a month earlier to an almost one-year high of 528,000 mt in November, customs data showed. However, the inflows were 4.1% lower from a year earlier.

Industry sources attributed the month-on-month increase in November’s unwrought copper imports to the recent availability of import arbitrage opportunities and ongoing smelter maintenance activities.

Unwrought copper imports increased 1.7% to 5.13 million mt in the first 11 months of the year.

China’s copper exports are expected to decline in November amid a closed export arbitrage window and more maintenance at domestic smelters, according to market sources. The copper export data will be out Dec. 20.

Market sources said China’s exports of copper products could decline in the short term due to the tax rebate rules. However, the rules may not significantly impact overall supply and demand, as China is a net importer of copper.

Copper cathode premium

Platts, part of S&P Global Commodity Insights, assessed Chinese copper import premiums at $45/mt plus London Metal Exchange cash, CIF China, on Dec. 9 for LME-registered normal brands of electrolytically refined cathode, up $5/mt from a month earlier.

In early December, spot liquidity surged significantly due to the favorable import arbitrage window to China, prompting many traders to purchase copper for shipment to the country.

Meanwhile, market participants have been concentrating on long-term contract negotiations. Most offers from smelters were reported to be above $80/mt for term contracts, although end-users showed reluctance to commit to purchases.

China’s imports of copper concentrates were down 2.8% month on month and little changed year on year at 2.25 million mt in November, customs data showed.

Sources indicated that the month-on-month decline aligned with market expectations, attributed to the slow progress of new projects and an increase in maintenance plans by domestic smelters.

Imports totaled 25.6 million mt in the first 11 months of 2024, up 2.2% from a year earlier.

— Lucy Tang: Market Specialist - Metals

US aluminum premium rises to 21.95 cents/lb on higher values, bullish sentiment

The Platts spot US aluminum premium inched up to 21.95 cents/lb plus LME cash, delivered Midwest, on Dec. 10, from 21.90 cents/lb previously, on higher indicative values and bullish sentiment.

Market participants said higher forward premiums, improved LME spreads and potential tariffs under the next Trump administration are creating a perfect storm for rising spot premiums.

“The LME spreads have become healthier,” a trader said. “And with the tariffs looming, we will see what happens with the premium. Whoever thinks the market is moving lower because it’s quiet, I don’t see why. I think, in general, demand has not deteriorated. All these factors are positive on the premium. It would be weird for people to offer metal against this backdrop.”

A second trader noted that with the CME AUP premiums trading at just under 25 cents/lb for next year, it did not make sense to sell now at 22 cents when he could get 25 cents later. He said the premium should be at 18 cents/lb, given the current supply/demand picture, but added that the tariff situation was dominating everything right now.

Despite some reports of consumers sitting on the sidelines in December, one consumer said the company has “been in the spot market numerous times this month, so that doesn’t sound right. The majority of prices we are seeing are at a premium to [Platts].”

A second consumer said he was a “little bit” active in the spot market but not much. “Year-end physical inventories and low raw material balance are important,” the second consumer said, adding that he’s only buying material for January if it is at a good price.

Another consumer said demand was very quiet, with the premium being driven "by pure trader-to-trader activity."

The most competitive offer left open at the close in the Platts Market on Close assessment process, reported by Gunvor SA, was 21.75 cents/lb over LME average Dec. 17-Jan. 9, 250 mt, net-cash payment terms. Platts normalized this offer to 22.75 cents/lb for net-30-day payment terms.

Gunvor also had the most competitive bid at 20.25 cents/lb over LME average Dec. 17-Jan. 9, 250 mt, net-cash payment terms. Platts normalized this bid to 21.25 cents/lb for net-30-day payment terms.

The range of indicative values heard on the day rose to 19.5-23 cents/lb, net-30-day payment terms.

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— Ross Richardson, Tina Allagh

Asian aluminum spot premiums inch up amid sustained higher indications

- South32 withdraws Mozal Aluminum production guidance amid unrest
- Production cuts, Chinese tax rebate cancellations support prices
- Mainstream Asian low-carbon premium indications at $20-$50/mt

Asian aluminum spot premiums inched up Dec. 10 due to the sustained impact of production cuts and policy changes out of China, following earlier gains amid higher Q1 MJP offers.

Platts assessed the CIF main Asian ports spot premium for 99.7% P1020/1020A aluminum ingot up $1/mt at $186/mt plus London Metal Exchange cash Dec. 10.

Tradable indications were reported in the $180s/mt on CIF Korea basis, although spot activity in the CIF Korea market remained muted.

No firm offers, bids or trades were reported over the day.

Although market participants saw muted spot activity in the CIF Korea market, buying interest continued on an FCA basis, with general tradable indications heard at around $200/mt FCA Korea.

However, sellers said they were not willing to deal at that level, indicating that there would be more interest to sell above FCA Korea $200/mt and even up to $220/mt.

Market participants saw higher tradable indications amid the higher Q1 MJP offers, but largely continued to attribute the high Q1 offers to expectations of supply tightness amid output cuts from RUSAL and South32 while China's removal of export tax rebates is leading to more enquiries for primary aluminum imports into the country.

Diversified miner South32 said in a Dec. 10 statement that it is withdrawing production guidance for its 63.7%-owned Mozal Aluminum smelter amid an "escalating civil unrest" in Mozambique.

"Transport of raw materials to Mozal Aluminium is being impacted by road blockages," it added. South32's majority-owned Worsley Alumina refinery in Western Australia supplies a portion of the alumina produced to the Mozal facility.

A producer said it was looking to settle some January shipments at Q1 MJP plus high-$10s/mt on CIF Southeast Asia basis, but noted that bid indications from traders were below Q1 MJP plus $10/mt.

On a CIF China basis, spot discussions were heard in the range of QMJP plus $20-$50/mt depending on the origin of the metal.

However, some participants said that Q1 MJP negotiations were expected to be lengthy amid a large bid-offer gap, which would also slow down other peripheral negotiations that depend on it. Offers were last heard at $230/mt and $260/mt CIF Japan, while bid indications were heard below $200/mt.

Meanwhile, spot low-carbon aluminum premium indications were mainly heard in the range of $20-$50/mt for 99.7% P1020/1020A aluminum ingot on a CIF Asia basis, with some offer indications heard hitting the three-digit mark for 2025.

Platts is proposing to launch daily low-carbon aluminum premiums for Japan and Asia and corresponding all-in calculations based on underlying spot and quarterly contract prices, effective Jan. 2, 2025.

The Japan Low-Carbon Aluminum Premium (Japan-LCAP) and Asia Low-Carbon Aluminum Premium (Asia-LCAP) assessments would reflect the spot premium or discount over standard P1020A aluminum for low-carbon aluminum with total certified direct and indirect emissions associated with aluminum smelting, typically considered by market participants as Scope 1 and 2 emissions, of 4-mt equivalent (mte) or less of CO_2 per ton of aluminum.

The Japan-LCAP would cater to material delivered into Japanese main ports while the Asia-LCAP would represent cargoes delivered to the rest of Asia, with South Korea's Incheon as the basis port.

Platts invites feedback, comments and questions on this proposal to platts_mjp_moc@spglobal.com and pricegroup@spglobal.com by Dec. 13, 2024.

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— Jenson Ong

Australian alumina falls amid improved cargo availability; market eyes update on Mozal

- South32 withdraws Mozal Aluminum smelter production guidance amid unrest
- Mozambique was fourth largest importer of Australian alumina in Q3
- Market monitoring impact on supply

Platts assessed the benchmark daily FOB Australia alumina price down $10/mt on the day at $750/mt FOB Dec. 10, in line with tradable levels, indicative bids and offers in the market.

Prospective sellers and buyers saw tradable levels in the range of $740-$770/mt for spot alumina cargoes aligned with Platts specifications.

Indicative bids were generally heard below $750/mt while indicative offers were generally heard above $760/mt on FOB Australia basis.

Diversified miner South32 said in a Dec. 10 statement that it is withdrawing production guidance for its 63.7%-owned Mozal Aluminum smelter amid an "escalating civil unrest" in Mozambique, Africa.

South32's share of aluminum production in FY 2024 from Mozal was 314,000 mt.

"Transport of raw materials to Mozal Aluminium is being impacted by road blockages," it added.

Mozambique was the fourth largest importer of Australian alumina in Q3 2024 at 340,035 mt, according to S&P Global Commodities at Sea data.

South32's majority-owned Worsley Alumina refinery in Western Australia supplies a portion of the alumina produced there to the Mozal facility.

Market participants were awaiting updates for clarity on the impact of the incident on aluminum output, which could potentially have a knock-on effect on alumina supply available for the broader market.

"I don't think anyone will trade on it unless and until [the information] becomes more concrete," a trader said, adding that it is something worth keeping an eye on.

Another trader said there is still no clarity on the duration and volume of impacted aluminum production, but expected a more immediate impact on European aluminum premiums.

S&P Global Commodity Insights reported earlier that a deal for 30,000 mt of Indonesian alumina loading in February concluded Dec. 6 at $760/mt FOB Kendawangan, Indonesia, payable at sight. The cargo was sold by a trader and was reported after the Dec. 6 market close.

Commodity Insights also reported earlier that a deal for 50,000-55,000 mt of Australian alumina concluded Dec. 5 at $750/mt FOB Western Australia for shipment in late December 2024 to early January 2025, with payment terms being pre-payment prior to loading. A producer sold the cargo on Dec. 5 and reported the trade on Dec. 6.

Market participants largely saw the latest transactions reflective of spot market fundamentals at the time of trade, with more spot cargoes heard available for the January-February loading period, for Australian, Indonesian, Vietnamese and Indian origins.

A few participants attributed the sudden increase in cargo allocations to the spot market to Rusal's reduction of primary aluminum output.

While Australian cargoes are banned from being exported to Russia, the global nature of alumina trade flows may bring about a rebalancing of cargo availability to the broader market regardless, sources said.

Commodity Insights reported in the week beginning Dec. 2 that some market participants held a more conservative view on prices, saying the bullish momentum was not that strong as there are currently more alumina sales tenders available in the market for shipment in January and February 2025.

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— Jenson Ong

Asian aluminum alloy prices edge down on sluggish demand

- Export prices drop slightly
- China domestic prices remain stable amid high raw material costs

Platts assessed the weekly Chinese ADC12 export price at $2,400-$2,410/mt FOB China on Dec. 10, down slightly by $10/mt from the previous week.

Offers from China were pegging around at $2,460/mt range CFR Japan for December shipment, according to market sources.

A producer source said there should be multiple factors leading to the weakness of the market.

"It is true that demand in Japan is not well, but demand elsewhere looks bad too, and that's why people are still trying to sell to Japan now," a producer source said.

Moreover, aluminum scrap prices remained strong and sustained raw material costs at a high level.

Producer sources said that they just want to secure the processing fee but it is not easy as scrap is too expensive.

Another producer noted that the market remains stable and soft and there are no new inquiries.

Offers for Taiwanese ADC12 cargoes for November shipment delivered to major Japanese ports were heard at $2,570/mt on Dec. 10, remaining steady.

Materials from Malaysia were heard offered at $2,440/mt on a CFR Japan basis, while materials from Europe were heard at $2,380/mt, respectively.

According to market sources, prices from Malaysia were always relatively lower, especially for small-scale producers, and in terms of the European materials, it was also due to the longer shipment periods.

The domestic China ex-works ADC12 assessment was at Yuan 19,900-20,000/mt ($2,743-$2,756/mt) Dec. 10, unchanged from the previous week.

Offers in the Chinese domestic market were in the Yuan 20,100-20,300/mt ($2,770-$2,798/mt) range on an ex-works China basis Dec. 10, market sources said.

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— Yuxi Du

Battery Metals

Orano and XTC New Energy to establish battery materials plants in France.

- JV partners plan to construct CAM and PCAM production plants in Dunkirk, France
- Orano exploring development of recycling plant for end-of-life EV batteries and production scrap.
- Aims to foster comprehensive value chain for EV battery production and recycling in France.

France-headquartered nuclear fuel company Orano, in collaboration with the Chinese group XTC New Energy, has unveiled plans to establish two joint venture production plants in Dunkirk, France, aimed at producing cathode active materials (CAM) and their associated precursor materials (PCAM).

In a joint statement, the partners confirmed that the facilities, named Neomat CAM and Neomat PCAM, will be situated on a site designated by the Grand Port Maritime de Dunkerque, within the municipalities of Gravelines and Loon-Plage.

Stakeholder consultations for the projects are already underway, with a public inquiry anticipated in the spring of 2025. The partners also indicated their intention to secure offtake agreements with European gigafactories as a prerequisite for any future investment decisions.

Michael Liu, CEO of Neomat CAM, emphasized the close collaboration between the joint venture partners since the announcement of the battery materials manufacturing plant in May 2023.

Liu noted that the initiative has garnered support from the French government, the Hauts-de-France Region, the Communaute Urbaine de Dunkerque, and local residents.

“This further strengthens our commitment to advancing the European electric vehicle industry and supporting the circular economy strategy in this new phase of our partnership,” Liu said.

Additionally, Orano is exploring the development of a plant dedicated to recycling end-of-life electric vehicle batteries and production scrap. Construction of this recycling facility, which will also be located on the Dunkirk industrial site, is projected to begin in 2027.

The recycling process involves collecting, dismantling, and shredding production offcuts or used batteries to produce black mass. This method has gained significance as a vital supplement to the supply of virgin materials and as a means to reduce the carbon footprint of the battery supply chain.

In September, Stellantis and Orano announced their decision not to proceed with a proposed joint venture for recycling end-of-life electric vehicle batteries and scrap, following a non-binding memorandum of understanding announced in October 2023.

Guillaume Dureau, Orano’s Senior Executive Vice President of Engineering, R&D, Innovation, and New Activities, said: “The ambition behind the establishment of the CAM, PCAM, and recycling plants is to foster a comprehensive value chain for the production and recycling of electric vehicle batteries in France, thereby enhancing French sovereignty in the manufacturing of critical battery materials.”

“Our priority is to develop a plan that aligns with market expectations and to effectively implement this plan while overseeing the subsequent stages of its development,” he said.

— Euan Sadden

China’s CATL signs deal with Stellantis to build lithium battery plant in Spain

- JV to have up to 50 GWh capacity
- LFP battery market share to rise in Western countries

Amsterdam-headquartered Stellantis and China’s CATL said Dec. 10 they reached an agreement to invest up to €4.1 billion ($4.3 billion) to build a large-scale European lithium iron phosphate battery plant in Zaragoza, Spain.

CATL is China’s leading battery producer as well as the world’s largest battery maker, while Stellantis is a multinational automotive manufacturer.

Targeted to start production by the end of 2026 at Stellantis’ Zaragoza site in Spain, the facility could achieve up to 50 GWh capacity, subject to the evolution of the electrical market in Europe and continued support from Spanish and EU authorities, Stellantis said.

The construction period of the 50-50 joint venture is planned over four years, to be implemented in several phases and investment plans, according to the company’s statements.

The plan follows Stellantis and CATL’s non-binding memorandum of understanding signed in 2023, aimed to ensure local supply of LFP battery cells and modules for electric vehicle production in Europe.

The project seeks to deepen the long-term strategic partnership between CATL and Stellantis in the new energy vehicle sector and promote global electrification and clean energy transformation, CATL said.

This cooperation aligns with CATL’s global strategy and further supports its overseas expansion plans, according to the company.

CATL’s first battery plant in Germany, with a capacity of 14 GWh, commenced operations in January 2023. CATL is also looking to complete the first phase of another battery plant in Portugal, with a total designed capacity of 100 GWh in 2025.

China’s battery makers are exploring opportunities to expand their operations in an increasingly competitive and regulated EV markets.

Stellantis previously highlighted LFP technology benefits, noting its long service life and high thermal stability, which contribute to the affordability of EVs. The European market is typically dominated by nickel-cobalt-manganese batteries.

However, Western automakers, including Stellantis, are turning to cheaper LFP batteries. LFP batteries are considered among the most affordable ones, enabling carmakers to reduce costs and pricing.

While NCM chemistries are expected to remain dominant in the European and US EV markets, LFP and its variations are expected to grow their market share amid improved driving ranges and greater mass market EV demand, S&P Global Commodity Insights analysts said.

— Lucy Tang: Market Specialist - Metals

Chinese natural flake, spherical graphite spot prices increase with higher offers

- Natural flake graphite offers increase on week
- Spherical graphite up, tracking natural flake
- Needle coke prices dip on lower offer

The Asian natural flake graphite market rose on a higher offer in the week to Dec. 10 despite quiet downstream demand, while needle coke prices inched down on a lower offer price.

Offers for natural flake graphite with 94% carbon content and minus 100 mesh size were heard at Yuan 2,600/mt ex-works

Luobei while natural flake graphite with 95% carbon content were heard at Yuan 2,800/mt ex-works Luobei.

"Some graphite operations have been halted due to the current cold weather; hopefully this won't exacerbate the current oversupply situation once the operation resume," said an international trader.

"According to recent news about China tightening the graphite export rules, the tightening of the graphite market could impact the availability of ultra-high purity graphite, which is used in advanced applications such as stealth technology, heat shields, radar systems etc. However, it is not expected to significantly affect the battery anode industry," said another international trader.

Platts assessed natural flake graphite at $405/mt FOB China Dec. 10, up $5/mt on the day. This price reflects the spot value of natural flake graphite with 94%-95% carbon content and minus 100 mesh size delivered to the Qingdao port.

Platts assessed flake graphite on a CIF Northeast Asia basis at $435/mt Dec. 10, also up $5/mt on the day. The price reflects materials in Northeast Asia normalized to Japan's main ports.

Downstream, Platts assessed spherical graphite with 99.95% carbon content, uncoated with a size of 15 microns, at $1,780/mt FOB China Dec. 10, up $5/mt on the day.

Platts assessed spherical graphite on a CIF Northeast Asia basis at $1,810/mt, also up $5/mt on the day.

Platts assessed uncalcined needle coke with maximum 0.5% sulfur at Yuan 4,750/mt DDP Qingdao, China Dec. 10, down Yuan 50/mt on the day and Yuan 100/mt on the week. Platts considers needle coke with maximum 5% moisture, minimum 1.35 g/cu cm true density, maximum 0.1% ash and 4%-7% volatile matter in its assessments.

Offers for uncalcined needle coke were heard at Yuan 4,600/mt ex-works Shandong in the week to Dec. 10. Tradable levels were reported at Yuan 4,500-4,600/mt ex-works Shandong.

"Only calcined needle coke [saw an] increase in the price, primarily due to the rising cost of its feedstocks," said a Chinese producer. Offers for calcined needle coke were heard as high as Yuan 6,700/mt ex-works Shandong.

The Platts assessment for uncalcined needle coke DDP China was equivalent to $559/mt DDP China on an import-parity basis, excluding a 13% value added tax, port and logistics costs and factoring in the yuan-dollar exchange rate.

The US dollar was assessed against the yuan at 7.1896 at 4:30 pm Singapore time (0830 GMT) Dec. 10.

Platts is part of S&P Global Commodity Insights.

— Vincent Khoo

US alloy-grade cobalt flat in sparse spot activity

- Activity expected to remain subdued until there is clarity on tariffs
- Consumers seen buying on as-needed basis

Prices of US alloy-grade cobalt were flat Dec. 10 in a spot market largely void of activity.

The Platts assessment for 99.9% alloy-grade cobalt was unchanged at $15.20-$16/lb delivered, duty-paid, Dec. 10.

No business was reported and the majority of bid-offer indications were at $15.50-$16/lb, but the overall spread of indications was $15-$16.20.

Market participants said there were no spot inquiries and did not report any active bids or offers.

Business for a 5 mt lot of aerospace cobalt, concluded Dec. 6 was said to be connected to a fast turnaround, with the consumer in the market this week for other metals needed to make an alloy.

"Year-end pressures might cause some on the sell side to lower their prices, but it's not going to generate demand," said a consumer source. "If as a supplier you're long of cobalt and the demand isn't there, you're still long of cobalt. It's the spot demand that's lacking, not the long-term demand."

Several participants said last December saw a more active spot market compared with this year. A consumer source said there were a lot of quick turnaround orders last December.

A trader also thought last December was more active. "Prices had got down on alloy grade and there were a few of these quick-turnaround orders, next-day delivery, melt and out to a customer within a few days," the trader said. "Last December was busy for December, but you would otherwise call it quiet, but it's not dead, which this December is."

A second trader also said last December had been more active. "I think we're really done for the year, so, nothing to say about the market for the rest of the year, or tariffs, without repeating myself," the trader said.

Market participants said the spot market in cobalt may remain quiet until there is some clarity on the incoming Trump administration's policy on import tariffs, unless a consumer needed metal before then.

"If a consumer needs to buy, they will come to the market when they need to, regardless of the threat of tariffs," said a third trader. "If they can melt before the year-end, or just want to make sure there is something there on 1st of January to melt, or 2nd of January, they'll do what they have to do."

Platts is part of S&P Global Commodity Insights.

— Anthony Poole

Copper

Chile court overturns rejection of Dominga copper-iron ore project

- Government last year annulled license for $3 billion project
- If built, mine would nearly double Chile's iron ore output
- Ministers have 15 days to issue new ruling

Chile's First Environment Court has cleared the way for the controversial Dominga copper and iron ore project in the north of the country, opening a new chapter for one of the country's longest permitting odysseys.

In a Dec. 9 decision, the Antofagasta-based court overturned last year's ruling by the Committee of Ministers stripping the project of its license for its likely impact on local marine life.

The judges said the committee, in theory Chile's highest-ranking body for environment decision-making, had acted illegally by ruling on complaints from local people that had already resolved by the court three years earlier. The ministers had also breached the principle of impartiality, having previously expressed opinions on the subject, the court found.

The ministers now have 15 days to issue a new ruling that complies with the court's criteria.

Andes Iron, owner of the Dominga mine, first applied for the license in 2013 but has faced successive rebuttals due to the port's location near an important sanctuary for marine life.

If built, the $3 billion project could produce 12 million mt/year of iron ore, almost doubling Chile's current output, and 150,000 mt/year of copper.

The project has also drawn attention for its political links. Former center-right president and businessman Sebastian Piñera, who died earlier this year, was an early investor but sold his stake to banker Carlos Alberto Delano, who has spent time in jail over illegal political financing.

The latest court ruling was celebrated by business leaders.

"It is quite clear that the Dominga project is perfectly feasible in all its environmental aspects," said Jorge Riesco, president of national mining association SONAMI. "The number and depth of the defects that the ruling recognizes in the contested decision is striking and call us to reflect on the misuse that is being made of a legislation that, although we have agreed that it should be revised, could be applied correctly."

The government, which had blocked the project, is currently pushing legislation through Congress to significantly reduce permitting times in order to unlock badly needed investment.

— Tom P Azzopardi

China copper concs TC/RCs edge up on narrower contango, more offers

- More spot offers heard available through week so far
- Split views for 2025 shipments

Platts assessed CIF China clean copper concentrate treatment and refining charges at $5.20/mt and 0.52 cent/lb, respectively, Dec. 10, up by 70 cents/mt and 0.07 cent/lb from Dec. 9.

Tradable values were heard at $11-$13/mt on an M+5 pricing basis or $10/mt on an M+4 pricing basis for February-loading clean copper concentrates, from trader to smelter, normalized to $3.40-$5.40/mt by considering a $47.75/mt contango between May and July, or normalized to $6.10/mt by considering a $24.25/mt contango between May and June.

Platts assessed producer-to-trader copper concentrate TC/RC differentials at minus $9.10/mt and minus 0.91 cent/lb, respectively, Dec. 10, down by 40 cents/mt and 0.04 cent/lb from Dec. 9.

Smelters has observed an increase in available offers through the week so far, especially from producers.

Trades were done at $10/mt between a producer and smelters for January-February loading of clean copper concentrates, with M+3 pricing. Some traders were heard making offers at $10/mt for January-loading clean copper concentrates on an M+5 pricing basis.

Several producers were heard still offering December-loading shipments during the week of Dec. 6.

Although ample demand was heard for shipments loading in the first quarter, large-sized smelters still insisted on double-digit rates for spot shipments.

"Especially [since] December-loading shipments were traded at mid-$10s/mt earlier, smelters won't accept a big drop for January spot [prices]," a smelter source said.

Tradable values were heard at $10-$12/mt on an M+4 pricing basis and $11-$13/mt on an M+5 basis for January-February shipments.

Meanwhile, many term contracts shipments were reportedly concluded on an index basis, with sellers and buyers holding split views on pricing and contract terms.

Smelters anticipate a greater production cut in 2025, with a significant potential for a correction in the spot market. Conversely, traders expect spot TC/RCs to remain low due to the expanding smelting capacity of state-owned smelters.

At the same time, more spot offers were heard available for copper concentrates with high arsenic content. Copper concentrates with 0.5%-1% arsenic content were heard offered by a trader at index plus $25/mt for January loading.

Platts is part of S&P Global Commodity Insights.

— Lu Han

US copper scrap spread widens slightly on reported sales, bids

- Platts bare bright widens to March COMEX minus 15 cents/lb delivered
- Platts regular No. 2 holds at March COMEX minus 40 cents/lb delivered FAS

Discount spreads for high grades of copper scrap sold in the US widened slightly for the week ended Dec. 10 on reported small-volume sales and bid indications.

The Platts spread for No. 1 bare bright wire widened to March COMEX minus 15 cents/lb, delivered Midwest, from March COMEX minus 14 cents/lb, delivered Midwest, the previous week.

A Midwest recycler/processor said he could sell at March COMEX minus 15 cents/lb, delivered, while a recycler/processor in the eastern Midwest heard a mill bid at March COMEX minus 16 cents/lb, delivered Midwest.

The eastern Midwest recycler/processor also sold for export at March COMEX minus 18 cents/lb, delivered FAS Minneapolis.

Because of its high purity, some wire mills can use bare bright as a substitute for exchange-traded cathode.

The Platts spread for No. 1 berry/candy widened to March COMEX minus 27 cents/lb, delivered Midwest, from March COMEX minus 26 cents/lb, delivered Midwest, the week prior.

The Midwest recycler/processor characterized the No. 1 market as "tough" due to a lack of demand, and cited a bid from a large mill in the upper Midwest at March COMEX minus 27 cents/lb delivered.

The eastern Midwest recycler/processor heard a mill paid in the March COMEX minus 25 cents/lb, delivered, range, which was later revised to March COMEX minus 27 cents/lb, delivered.

Brass and tube mills normally consume No. 1 berry/candy wire and tubing, but demand often depends on the health of the building and construction sector.

A Midwest dealer of scrap and cathode noted that mill purchasing managers often buy the scrap and cathode needed for the end of the year in October. Purchasing and inventory is then usually controlled by accountants intent on working down inventory for year-end tax and accounting purposes, the dealer said.

The Platts export spread for No. 2 birch/cliff remained at March COMEX minus 40 cents/lb delivered FAS main ports, unchanged from the previous week.

The eastern Midwest recycler/processor said he sold standard-grade No. 2 for export at March COMEX minus 40 cents/lb, delivered FAS Midwest, but saw indicative offers for China grade at March COMEX minus 36-37 cents/lb, delivered FAS.

China-grade No. 2 commands a premium over standard grade due to restrictions on the amount of debris and non-metal material in shipping containers.

The recycler/processor added that bids from a large US mill in the upper Midwest were heard in a range of March COMEX minus 48-50 cents/lb, delivered.

Nonetheless, the Midwest recycler/processor felt he could sell standard-grade for export at March COMEX minus 38 cents/lb, delivered FAS.

No. 2 birch/cliff with its 96%-97% copper content is used to make a variety of copper and brass products.

Platts is part of S&P Global Commodity Insights.

— Nick Jonson

Ferroalloys and Steel

Outokumpu says its low-carbon steel slashes emissions for its users

- Outokumpu eyes 95% recycling rate
- Demand for green steel seen rising

European and Asian companies using Outokumpu's low-carbon stainless steel have collectively reduced carbon emissions by more than 50,000 mt, it said Dec. 10.

The Finnish company launched its Outokumpu Circle Green low-carbon stainless steel two years ago. The product has a carbon footprint equivalent to 7% of the global average, according to the company.

"Our efforts on achieving 95% recycling rate in our production, using low-emission electricity and producing our own ferrochrome underline the leadership position in sustainability," Jorg Müller, head of sales for Stainless Europe at Outokumpu said. "The frontrunner companies have seen the business value of offering Circle Green to their customers through their solutions … We are confident that the growth will continue, and we are currently working on extending our low-emission stainless steel portfolio to be available early next year."

Outokumpu's public reference customers for Circle Green are Fiskars, Fissler, Zwilling, Siemens, Alfa Laval, Stahl Krebs, Purem, Boysen, Klockner, thyssenkrupp Materials Processing Europe, Lemvigh-Müller, Sermeta, Tetra Pak, Roba Metals, Schmidt Edelstahl, Meiller Aufzugsturen GmbH, Edilcam, Nordic Steel, Sverdrup Steel, OSTP, Ormazabal, Stala Tube, V-ZUG, Norder Band, Jye Chi, HH Stainless and Mori2A.

Outokumpu anticipates a substantial increase in demand for green steel in the coming years but says the global transition to greener practices must accelerate to mitigate the industry's climate impact.

This surge in demand is fueled by several key factors: more stringent environmental regulations such as carbon pricing, advancements in green steel production technologies, and an increasing interest in low-emission solutions across various industries driven by ambitious climate goals. Notably, the automotive, heavy industry, energy and consumer goods sectors are particularly significant for stainless steel in this context.

"Challenges still remain in scaling up green steel production, such as the high initial investment costs, the availability of renewable energy sources, and the sufficiency of recycled steel as raw material," Muller said. "We are eager to further develop the demand for green steel together with our stakeholders."

Platts, part of S&P Global Commodity Insights, European 18-8 stainless steel scrap solids at Eur1,240/mt on Dec. 6 on a CIF Rotterdam basis, stable week on week.

— Annalisa Villa

Lead and Zinc

US lead acid batteries inch back up on week

The Platts assessment for US spot 50% lead starter ignition recovered from the slight loss taken last week and was assessed at 31-32 cents/lb, picked-up US Midwest, rising slightly over its assessment of 30.5-31 cents/lb Dec. 3. The price for the material, picked-up Northeast was assessed unchanged at 32-34 cents.

A battery maker was both buying and selling lead acid batteries at 31-34 cents, picked-up Midwest and 32-34 cents, picked-up Northeast.

"There is not a lot of change, and I know that's been the theme and I've been saying that for three or four months," the battery maker said, adding that there have been a few outliers in the Midwest closer to 34 cents, picked-up, but noting those buyers were strategically buying toward the end of the year.

While exporters attempted to push prices south Thanksgiving week, there was little success, according to the battery maker.

"I have heard the exporters tried to lower their price with the LME coming down, but they didn't get any volume through Thanksgiving, so they wanted to lower it, but that didn't work," the battery maker said.

A trader reported paying 31-32 cents for lead acid batteries picked-up Midwest and 31.5-34 cents, picked-up Northeast.

"This week, we went back up 0.5 cent across the board. The LME went back up, so our pricing did as well," the trader said.

A smelter buyer saw prices steady and reported paying 32-34 cents, picked-up Midwest and Northeast.

A scrap dealer sold spot spent batteries at 31 cents, picked-up Northeast, and indicated the price for the material Midwest was holding at 31-32 cents.

The battery maker said that most tolling agreements for 2025 have been signed.

"Most of our guys are inked," the battery maker said, adding: "It seems like the tolling agreements are the same as last year."

Pure lead holds, smelter sees some strength

The Platts weekly assessment for 99.97% lead was assessed unchanged at 15 cents/lb, delivered Midwest,

The smelter source said he was seeing premiums for pure lead "solidly at 15-15.5 cents and up."

Platts is part of S&P Global Commodity Insights.

— Meghann Mcdonell

Commodities

RHI Magnesita and Euromines pledge to the EC to include magnesia on CRM list

- Magnesia is a catalyst for over half of strategic raw materials for refractories
- Europe's limited magnesia production makes it heavily reliant on imports
- UK's updated Critical Minerals List has 34 elements, including Fe, excluding Cu, Pd

The global producer of refractory products, RHI Magnesita, and the European Metals and Mining Industry urged the European Commission to recognize magnesite and magnesia as critical raw materials, or CRMs, as the UK has already done. The country has also enlisted iron, which the EU does not see as strategic because it has expanded its approach to assessing the criticality of minerals.

Their joint pledge to the European Commission was based on the findings by the University of Leoben, Austria, which highlight how magnesite is indispensable to the EU's efforts to achieve raw material security and accelerate its Clean Industrial Deal, according to a statement on Dec. 9.

Magnesia, derived from magnesite, is the backbone of refractories required for critical raw material processing and decarbonization efforts , said Stefan Borgas, CEO of RHI Magnesita.

"Magnesia is essential, particularly in steelmaking, cement, and glass production. It is a catalyst for over 50% of strategic raw materials for refractories and 30% of critical raw materials," Borgas said. "Recognizing its importance is essential to strengthening Europe's resilience and leadership in the green transition."

Magnesia, which is processed from raw magnesite, is vital to producing key technologies for Europe's green and digital future, such as electric vehicles, next-generation batteries, green steel and energy storage solutions, but Europe's limited magnesia production makes it reliant on external suppliers, with high dependency on imports from China, which accounts for nearly 65% of global production.

Despite this, magnesite and magnesia remain excluded from the EU's Critical Raw Materials list, according to RHI Magnesita.

The UK has already taken a step by recognizing the strategic importance of magnesia and magnesite, and it's time for the EU to do the same, the company said.

The UK has recently completed the update of its own Critical Minerals List and the latter has considerably expanded, Gavin Mudd, Director of the Critical Minerals Intelligence Centre charged with the job, said at the Resourcing Tomorrow conference held in London Dec. 3-5.

The Centre that provides advice for the UK government has tripled the amount of materials assessed this year and doubled the UK's Critical Minerals List, which now comprises 34 elements.

"That's normal because not only do we need more quantities of different minerals, we need a wider variety of minerals too," Mudd said. "We could look at a smartphone, at technologies, all sorts of things; everything is getting more complex, and we need more of it."

The first such assessment done three years ago looked at 26 materials and mostly from the viewpoint of what's needed for energy-related technologies, and 18 were designated as critical back then.

The UK government has since established the Critical Minerals Intelligence Center based at the British Geological Survey, and during its latest eight-month refresh project, the Centre has zoomed out of the energy transition angle making a comprehensive criticality assessment of all that the UK needs instead.

"With the new industrial strategy that's being developed by the government, there is now recognition that all of the eight targeted industrial sectors require critical minerals directly or indirectly, including, for example, agriculture that needs things like fertilizers," according to Mudd.

"We can see things like iron get picked up, and some people go: 'Well, why iron is critical?' No one has listed iron before, except the

US Department of Energy, specifically for electrical-grade steel in energy technologies, but national assessments, including by the EU, have never done so," said Mudd. "Iron ore is well supplied from Australia and a few other countries, so it never meets that global supply risk criteria, but with the volume and the activity in the steel sector, it's the highest value sector for the UK, so therefore, it's that highest vulnerability that put iron on the list."

On the contrary, copper, which is on the EU's Critical Raw Materials list, doesn't plot above that threshold for the UK as it is widely mined from countries like Australia and Chile, which have reasonable ESG scores, and has a modest value for the UK's economy. This makes copper not critical compared to minerals that have higher supply risk combined with economic vulnerability.

Palladium has dropped out of the UK's list despite 40% of it globally is coming from Russia because the platinum group metals flow together in some of the technologies, and the UK has a strong presence, thanks to British specialty chemicals company Johnson Matthey, in that sector anyway, noted Mudd.

— Katya Bouckley

Aurubis inaugurates new recycling plant in Olen, Belgium

- New hydrometallurgical plant to recover nickel, copper from electrolyte streams
- Increases Aurubis' recycling capacity, circular economy contribution
- It enables Aurubis to optimally process valuable metals from dynamic input materials

Multimetal producer Aurubis has inaugurated a new innovative recycling plant at its site in Olen, Belgium to recover more valuable metals, it announced Dec. 10.

It said in a statement that the Eur85 million ($89.45 million) energy-efficient hydrometallurgical bleed treatment plant, which would increase its recycling capacity for nickel and copper, was a part of its strategic roadmap and would add to its international smelter network.

The plant, referred to as BOB, or Bleed treatment Olen Beerse, used a hydrometallurgical process to recover valuable metals, such as nickel and copper, contained in the electrolyte streams generated in the tankhouses during metal production at the Beerse and Olen sites, it said.

A company spokesperson told S&P Global Commodity Insights that the new facility had the capacity to treat up to 100,000 mt/year of bleed, which was the part of tankhouse electrolyte that was continuously being purged.

Aurubis explained in an information sheet on Bob that some metals dissolved in electrorefining tankhouse electrolyte, so purging was required to keep the level of metals stable and under control. It added a mixture of water and sulfuric acid to the electrolyte to make up for the volume purged, with BOB allowing copper, nickel and impurities to be removed from the bleed.

Once the metals had been recovered from the bleed, a mixture of mostly water and 60%-70% sulfuric acid — called black acid — remained once the metals had been recovered, which might then be diluted with water to be used again as electrolyte for the electrolysis process in the tankhouse.

Aurubis Managing Director Hans Van de Water said in the statement that the new recycling plant enabled the company to cover the full production cycle in-house.

"With this facility, we are taking recycling to the next level, as it allows us to optimally process the valuable metals from dynamic and continuously changing input materials and recycling markets," Aurubis COO Multimetal Recycling Inge Hofkens said.

"With BOB, we are strengthening our core business and further contributing to the European circular economy," she added.

At the beginning of September, Aurubis opened the new advanced sludge processing by Aurubis (ASPA) facility at its Beerse plant.

Platts, part of S&P Global Commodity Insights, assessed the daily clean copper concentrate price at $2,345/mt CIF China Dec. 10, up 12% since the start of 2024.

— Jacqueline Holman

Critical raw material supply gaps threaten EU clean energy goals: report ...from page 1

This was particularly true for copper, lithium and graphite, with demand forecast to exceed supply from existing and newly announced mines by 40%, 110%, and 80%, respectively, according to the report.

Platts, part of S&P Global Commodity Insights, assessed both battery grade lithium carbonate at $10,750/mt and hydroxide at $9,700/mt CIF Europe on Dec. 9, down 32% and 39%, respectively, since the start of 2024.

Another key global challenge was the heavily concentrated global CRM supply chains, with around 40% of global nickel mining in Indonesia, around 70% of cobalt mining in the Democratic Republic of Congo, and China dominating the global production of all CRMs.

EU mining, refining output down

Focusing on the EU, the report identified key challenges, including a decline in the region's mining and refining output from 25% to under 7% over the past 40 years, leading to increased reliance on imports.

"While there is an established industry for copper, nickel and cobalt mining and refining, the EU has virtually no existing domestic capacity for lithium, graphite and REEs production at scale. The EU is therefore virtually entirely import-dependent for these CRMs," it said.

The report also said that the EU was off track to meet its Critical Raw Materials Act (CRMA) mining and refining targets for several key materials.

The CRMA entered into force earlier in 2024 and set targets for the EU's domestic share of CRM mining (10% of annual consumption), processing (40%) and recycling (25%) by 2030. It also imposed a limit on the total annual consumption of any strategic raw materials sourced from a single external country to 65%.

The report noted that most EU CRM projects announced in recent years were still in the early development stage, struggling with local opposition and permitting challenges.

"Copper is the only CRM for which the EU appears on track to meet its targets based on existing output and announced new projects," it said, adding that there was a large pipeline of prospective lithium mining and refining projects, but these faced significant uncertainty.

It noted that the current average timeline for new mines and refineries to come online after feasibility studies was around five years, meaning new projects would need to be expedited to be ready by 2030.

New technologies

To address these global and EU challenges, the report suggested that new technologies, such as scaling primary sulfide leaching, geothermal direct lithium extraction and novel synthetic graphite production, could significantly boost supply by 2035 from planned and new projects.

It also identified several tools to stimulate supply-side innovation in the EU, including innovation support programs like Horizon Europe, the ERA-MIN network, the European Technology Platform on Sustainable Mineral Resources (ETP SMR), and EIT Raw Materials.

Project financing was another tool, it said, such as directing greater investment for commercial deployment of new technologies, enhancing production-based support like tax credits and expanding loan guarantees through the InvestEU program and including mining/refining CRMs within target investment areas of the STEP initiative and a new European sovereignty fund.

Additionally, the report addressed offtake and price volatility, suggesting support for innovators in securing offtake agreements that offer price stability for domestically produced materials, as well as providing loans to downstream sectors, introducing incentives for domestically produced CRMs and establishing mandates for these materials at the downstream sector or country level.

It noted that CRMs were subject to highly volatile prices and increasing trade restrictions as resistance to free trade and geopolitical concerns had grown.

Enabling environment

The report called for an enabling environment, saying the administrative process and facilitate coordination should be streamlined to fast-track high-impact projects.

It also emphasized the need to enforce CRMA provisions to limit permitting timelines for projects deploying innovative technologies, implement coordinated action to build integrated downstream value chains and include responsible mining/refining of CRMs within the EU taxonomy for sustainable activities.

Furthermore, it called for international competitiveness, advocating that EU production should be promoted through targeted trade measures where necessary, while fostering innovative technologies in partner countries.

The report said technology and skills transfer from foreign investors were required to EU partners when investing in CRMs or downstream value chains and the EU should also promote piloting and scaling innovations that reduce environmental footprint in partner countries through Strategic Partnerships and the Minerals Security Partnership.

— Jacqueline Holman

Assessment rationales

Platts Alumina Australia Daily Rationale

Platts assessed the benchmark daily FOB Australia alumina price down $10/mt on the day at $750/mt FOB Dec. 10, in line with tradable levels, indicative bids or offers in the market.

Prospective sellers and buyers saw tradable levels ranging between $740-$770/mt for spot alumina cargoes aligned with Platts specifications.

Indicative bids were generally heard below $750/mt while indicative offers were generally heard above $760/mt, basis FOB Australia.

Exclusions: No data was excluded from the Platts Market on Close assessment process.

Platts is part of S&P Global Commodity Insights.

This rationale applies to the market symbol MMWAU00.

Platts CCC Clean Copper Concentrates CIF China Rationale

Platts assessed CIF China clean copper concentrate treatment and refining charges at $5.20/mt and 0.52 cent/lb, respectively, Dec. 10, up by 70 cents/mt and 0.07 cent/lb from Dec. 9.

Tradable values were heard at $11-$13/mt on an M+5 pricing basis or $10/mt on an M+4 pricing basis for February-loading clean copper concentrates, from trader to smelter, normalized to $3.40-$5.40/mt by considering a $47.75/mt contango between May and July, or normalized to $6.10/mt by considering a $24.25/mt contango between May and June.

Platts assessed producer-to-trader copper concentrate TC/RC differentials at minus $9.10/mt and minus 0.91 cent/lb, respectively, Dec. 10, down by 40 cents/mt and 0.04 cent/lb from Dec. 9.

Tradable values were heard at $0/mt on an M+4 pricing basis for February-loading clean copper concentrates, from producer to trader, normalized to minus $3.90/mt by considering a $24.25/mt contango between May and June.

Platts is part of S&P Global Commodity Insights.

The above rationale applies to market data symbol(s): <PCCCB00>, <PCCCC0>.

Platts Japan CIF Spot Aluminum Premium Assessment Rationale

Platts assessed the CIF main Japanese ports spot premium for 99.7% P1020/1020A aluminum ingot steady on the day at $193/mt plus London Metal Exchange cash Dec. 10.

Tradable indications ranged from $190/mt to $200/mt CIF Japan.

No firm offers, bids or trades were heard on the day.

Exclusions: No data was excluded from the Platts Market on Close assessment process.

Platts is part of S&P Global Commodity Insights.

This rationale applies to the market data symbol MMANA00.

Platts Global Molybdenum Oxide Daily Rationale

The Platts Daily Dealer Molybdenum Oxide assessment was $21.66/lb Mo Dec. 10, down from the previous assessment on Dec. 9 at $21.675/lb Mo.

The assessed range on Dec. 10 was $21.60-$21.72/lb Mo.

A deal was reported at $21.60/lb Mo in-warehouse Tianjin.

Deals were reported between $21.70-$21.72/lb Mo in-warehouse Busan.

No data was excluded from assessment.

Platts is part of S&P Global Commodity Insights.

Platts US MW Aluminum Transaction Premium Assessment Daily Rationale

The Platts spot 99.7% P1020 US Aluminum Transaction Premium was assessed at 21.95 cents/lb plus LME cash, delivered Midwest, net-30-day payment terms, Dec. 10, up from 21.90 cents/lb, on higher indicative values and bullish sentiment.

The most competitive offer left open at the close in the Platts Market on Close assessment process, reported by Gunvor SA, was 21.75 cents/lb over LME average Dec. 17-Jan. 9, 250 mt, delivery via truck or rail Dec. 17-Jan. 9, non-Russian LME-deliverable t-bar/low-profile sow shape at seller's option, net-cash payment terms. Platts normalized this offer to 22.75 cents/lb for net-30-day payment terms.

The most competitive bid left open at the close in the MOC, reported by Gunvor SA, was 20.25 cents/lb over LME average Dec. 17-Jan. 9, 250 mt, delivery via truck Dec. 17-Jan. 9, non-Russian LME-deliverable t-bar/low-profile sow shape at seller's option, net-cash payment terms. Platts normalized this bid to 21.25 cents/lb for net-30-day payment terms.

The range of indicative values heard on the day rose to 19.5-23 cents/lb, net-30-day payment terms.

Platts is part of S&P Global Commodity Insights.

This rationale applies to the market data symbol MMAKE00.

No market data was excluded from the Dec. 10 assessment.

Platts EMEA Aluminum IW Rotterdam Premiums Daily Rationale

The Platts Daily Aluminum Duty Paid In-Warehouse Rotterdam Premium was assessed at $350-$375/mt Dec. 10, with a midpoint of $362.50/mt, stable on the day.

Tradable levels were heard at $345-$380/mt Duty Paid IW Rotterdam. The repeatability of the lower and upper ends of the range could not be determined by assessment close.

No deal, bids, or offers were heard on the day for the Duty Paid IW Rotterdam assessment.

The Platts Daily Aluminum Duty Unpaid In-Warehouse Rotterdam Premium was assessed at $300-$315/mt Dec. 10, with a midpoint of $307.50/mt, stable on the day.

No deal, bids, offers, or tradables were heard on the day for the Duty Unpaid IW Rotterdam assessment.

No data was excluded from the assessments.

Platts is part of S&P Global Commodity Insights.

This rationale applies to symbols AALVE00 and AALVI00.

Platts EMEA Cobalt Metal Daily Rationale

Platts assessed European Cobalt Metal 99.8% mixed-use basket A IW Rotterdam at $10.10/lb on Dec. 10, unchanged from the previous assessment on Dec. 9.

A deal for 10 mt of Chinese cut-cathodes was heard at $10.10/lb IW Rotterdam and a second deal, also for 10 mt of Chinese cut-cathodes, was heard at $10.50/lb IW Rotterdam.

Platts assessed European Cobalt Metal 99.8% mixed-use basket B IW Rotterdam at $11/lb on Dec. 10, stable from the previous assessment on Dec. 9.

Platts assessed European Cobalt Metal 99.8% alloy-use IW Rotterdam at $14/lb on Dec. 10, stable from the previous assessment on Dec. 9.

The European spot market was heard to be quiet on Dec. 10.

Exclusions: No market data was excluded from the assessments.

Platts is part of S&P Global Commodity Insights.

This rationale applies to symbol(s) <ECMCG00, MMAIK00, ECMAG00>.

Marketplace

Nonferrous Heards

Below is a sampling of Heards previously published by Platts, part of S&P Global Commodity Insights, throughout each trading day. To view heards in real time, please access live-feed fixed pages or Platts Connect: https://plattsconnect.spglobal.com/.

Dec. 10

Platts Aluminum: US: 99.7% P1020 LCAP: Delivered US Midwest: Indicative value heard at 0 cents/lb premium over Platts Midwest Transaction price, spot delivery, net-30: trader

Platts Aluminum: US: 99.7% P1020: CIF US NOLA: Indicative value at $320/mt over LME cash settlement, spot delivery, net-30: trader

Platts Aluminum, US: 99.7% P1020: Delivered US Midwest: Indicative value heard at 21.9 cents/lb over LME cash settlement, spot delivery, net-30: consumer

Platts Aluminum, US: 99.7% P1020: Delivered US Midwest: Quote heard at 22.15 cents/lb over LME cash settlement, spot delivery, net-30: consumer

Platts Aluminum, US: 99.7% P1020: Delivered US Midwest: Indicative value heard at 22.75-23 cents/lb over LME cash settlement, spot delivery, net-30: trader

Platts Aluminum, P1020/P1020A Good Western: Indicative Offer Dec. 10 for Q1 loading at $>200/mt CIF Japan (Q1 QP): trader

Platts Aluminum, P1020/P1020A Good Western: Tradable Value Dec. 10 for Jan loading at $190-200/mt CIF Japan (Jan QP): trader

Platts Aluminum, P1020/P1020A Good Western: Tradable Value Dec. 10 for Q1 loading at $>190/mt CIF Japan (Q1 QP): trader

Platts Alumina : FOB Brazil to FOB Australia differential heard at premium of $15-20/mt, 30-35kt : trader

Platts Alumina : FOB Australia: Indicative Bid heard Dec 10 at <$750/mt, 30-35kt, Jan loading, net-30 : producer

Platts Alumina : FOB Australia: Indicative Offer heard Dec 10 at >$760/mt, 30-35kt, Dec-Jan-Feb loading, net-30 : consumer

Platts Alumina : FOB Australia: Indicative Bid heard Dec 10 at <$730/mt, 30-35kt, Dec-Jan-Feb loading, net-30 : consumer

Platts Alumina : FOB Australia: Tradable levels heard Dec 10 at $760-770/mt, 30-35kt, Dec-Jan loading, net-30 : producer

Platts molybdenum, Mo oxide powder: Deal reported on Dec. 10 at $21.60/lb Mo, 20 mt, in-warehouse Tianjin, prompt delivery: seller source;

Platts molybdenum, Mo oxide powder: Offer reported on Dec. 10 at $21.90/lb Mo, in-warehouse Rotterdam, cited as non-conclusive: trader source

Platts molybdenum, Mo oxide powder: Second-hand deal reported on Dec. 10 at $21.85/lb Mo, in-warehouse Rotterdam: trader source

Platts molybdenum, Mo oxide powder: Tradable values reported on Dec. 10 at $21.60-$21.72/lb Mo, in-warehouse Tianjin: trader source

Platts Molybdenum, Mo oxide powder: Tradable reported Dec 10 at $21.7/lb Mo, in-warehouse Busan, prompt, seller source

Subscriber Notes

S&P Global Commodity Insights' Mexican metals publishing schedule for Dec. 12

Please note that S&P Global Commodity Insights' Mexico City, Mexico, office will be closed on Dec. 12 in observance of the Banker's Holiday.

Commodity Insights will not publish Platts price assessments, rationales or market commentaries for Mexican aluminum, steel, and ferrous scrap that day.

Normal publishing for Mexican metals will resume on Dec. 13.

For full details of Commodity Insights' publishing schedule and services affected, refer to here.

Platts aligns mixed hydroxide precipitate CIF North Asia payable assessments to two decimal places

- MHP daily payables assessments to reflect two decimal places
- Change aligns fixed pages, publications with Platts price database
- Monthly average calculations to move to two decimal places from whole numbers

Platts, part of S&P Global Commodity Insights, has aligned its daily mixed hydroxide precipitate (MHP) CIF North Asia assessments on a payable basis to be published to two decimal places across its price database, fixed pages and PDF publications, effective Dec. 9.

Platts is additionally increasing the number of decimal places reflected in its monthly average calculations to two, from zero currently, having observed a growing number of daily MHP payables from spot transactions, bids and offers reported with decimal places in recent months. December will be the first month to reflect the change in monthly average values.

The affected assessments and related symbols are as follows:

Assessment	Symbol
MHP CIF North Asia, payables basis to LME nickel	BATMD00
MHP CIF North Asia, payables basis Platts nickel sulfate DDP China	BATMB00
MHP CIF North Asia Payable Basis LME Nickel	BATMD03 (Monthly Average)
MHP CIF North Asia, payables basis Platts nickel sulfate DDP China	BATMB03 (Monthly Average)

The assessment specifications remain unchanged.

The assessments are published on MTL/PMA8880 and MTL/PMA8888 in Platts Metals Alert and Platts Non-Ferrous Metals Alert, as well as in the Metals Daily and Platts Battery Metals Market Report publications.

Please send any feedback, comments or questions to battery_metals@spglobal.com and pricegroup@spglobal.com.

For written comments, please provide a clear indication if they are not intended for publication by Platts for public viewing. Platts will consider all comments received and will make those not marked as confidential available upon request.

Christmas, New Year's publishing schedules for Platts Asia Metals

The S&P Global Commodity Insights office in Singapore will be closed on Dec. 25, 2024, and Jan. 1, 2025, and there will be no daily iron ore, coking coal, steel, ferrous scrap, alumina, aluminum, battery materials, copper, ferroalloys and other nonferrous metals assessments published from Singapore on those days.

Weekly assessments that fall on these days will be published on Dec. 24, 2024, and Dec. 31, 2024.

Additionally, Platts, part of Commodity Insights, will close its Platts Market on Close assessment process in Asia early on Dec. 24 and Dec. 31, and all assessments will be basis 12:30 pm Singapore time (0430 GMT).

Normal Singapore publishing schedules will resume on Dec. 26, 2024, and Jan. 2, 2025.

For full details of the Platts publishing schedule and the services affected, refer to https://www.spglobal.com/platts/en/our-methodology/holiday.

For queries, please contact support@platts.com.

Platts to reshape China steel billet assessment coverage for seaborne market

- Platts to launch daily FOB China assessment
- Platts to discontinue existing CFR China assessment
- Refocus responds to changing trade flows

Platts, part of S&P Global Commodity Insights, will publish a daily steel billet FOB China spot price assessment, and discontinue publishing its assessment for steel billet CFR China (CBLCA00), effective Feb. 3, 2025, in reflection of changes to trade flows and spot market liquidity.

The decision to reshape seaborne coverage follows a period of market feedback and responds to a gradual rebound in Chinese billet exports, alongside Platts' observation of reduced spot trading of billet on an import basis.

China's semi-finished steel exports rose threefold between 2022 and 2023, rising 219% from 1.03 million in 2022 to 3.28 million in 2023, while its imports fell 49% over the same period, from 6.39 million mt in 2022 to 3.27 million mt in 2023, according to the China Iron and Steel Association (CISA). Most of the semi-finished steel traded is understood to comprise square billet.

The new assessment will have the following specifications:

The assessment will reflect a 5:30 pm Singapore timestamp and follow the Singapore holiday calendar.

The assessment will consider market information reported to Platts and published throughout the day, including firm bids and offers, transactions and indications, as well as any other data deemed relevant to the assessment process.

The discontinuation will affect the following:

Symbol	Assessment Description
CBLCA00	Billet CFR China
CBLCA03	Billet CFR China MAvg

Full details of Platts Billet CFR China specifications can be found here: **https://www.spglobal.com/commodityinsights/PlattsContent/_assets/_files/en/our-methodology/methodology-specifications/steel-ferrous-methodology.pdf**

Platts China billet assessments are published on fixed page STL0795 of the real-time Platts Steel Alert, in Steel Price Report and in the Platts price database. The FOB China assessment will additionally be published on STL1215. The first monthly average calculations will be updated on March 1, reflecting the average of daily assessments published throughout February.

Platts initially proposed the reshaping of assessment coverage on Nov. 4 in a subscriber note available at **https://www.spglobal.com/commodityinsights/en/our-methodology/subscriber-notes/110424-platts-proposes-to-reshape-china-steel-billet-assessment-coverage-for-seaborne-market.**

Please send all comments, feedback, and questions to **pl_asia_steel@spglobal.com** and **pricegroup@spglobal.com.**

For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing.

Platts will consider all comments received and will make comments not marked as confidential available to the public upon request.

Description	Daily Symbol	Monthly Average	Quality	Quantity	Dimensions	Location	Timing	Payment Terms	UOM
Billet FOB China	CBLCB00	CBLCB03	3SP	5,000 mt	150x150mm sectional dimensions, Length 12m	FOB Jingtang, China	Loading 4-8 weeks forward	At sight	$/mt

Primary Aluminum

	Symbol		Change	Date assessed
Alumina				
PAX FOB Australia ($/mt)	MMWAU00	750.000	-10.000	10-Dec
PAX FOB Brazil-Aus differential ($/mt)	MMWAD04	20.000	0.000	05-Dec
PAX CIF China (Yuan/mt)	MMACA00	5559.000	-70.940	10-Dec
PAX CIF China ($/mt)	MMALZ00	773.200	-10.150	10-Dec
China Ex-works (Yuan/mt)	MMXCY00	5820.000	-30.000	10-Dec
China Ex-works ($/mt)	MMXWC00	809.500	-4.470	10-Dec
Dry bulk freight: Aus-China Handysize ($/mt)	MMACH00	23.200	-0.150	10-Dec
Aluminum				
MW US Transaction premium (¢/lb)	MMAKE00	21.950	0.050	10-Dec
MW US Transaction premium ($/mt)	MMATP00	483.914	1.102	10-Dec
MW US Transaction (¢/lb)	MMAAF10	137.752	-0.086	10-Dec
US Aluminum all-in (basis CME) (¢/lb)	ALINA00	136.176	-0.234	10-Dec
US Aluminum all-in (basis CME) ($/mt)	ALINB00	3002.163	-5.159	10-Dec
US-LCAP Transaction (All-in) (¢/lb)	ALCRB00	137.752	-0.086	10-Dec
US-LCAP Transaction (All-in) ($/mt)	ALCRE00	3036.908	-1.896	10-Dec
US-LCAP All-in (Basis CME) (¢/lb)	ALCRC00	136.176	-0.234	10-Dec
US-LCAP All-in (Basis CME) ($/mt)	ALCRF00	3002.163	-5.159	10-Dec
MW US Net-Cash premium (¢/lb)	MMACN00	20.950	0.050	10-Dec
US P1020 Duty Freight Factor ($/mt)	AFLSA00	120.000	0.000	10-Dec
US P1020 Duty Freight Factor (¢/lb)	AFLSB00	5.443	0.000	10-Dec
US P1020 Import Duty (¢/lb)	MMOEU00	12.028	-0.008	10-Dec
MW US Transaction premium (implied duty-unpaid) (¢/lb)	MMOFU00	9.922	0.058	10-Dec
MW US Transaction price (implied duty-unpaid) (¢/lb)	MMOGU00	125.724	-0.078	10-Dec
MW US Market (¢/lb)	MMAAE00	138.750	0.750	10-Dec
CIF New Orleans duty-unpaid premium ($/mt)	MMODU00	320.000	0.000	10-Dec
CIF New Orleans duty-unpaid premium (¢/lb)	MMNDU00	14.515	0.000	10-Dec
NOLA-MW premium diff (¢/lb)	MMNOL00	7.435	0.050	10-Dec
Duty unpaid in-warehouse Rotterdam premium ($/mt)	AALVI00	300.000-315.000	0.000/0.000	10-Dec
Duty paid in-warehouse Rotterdam premium ($/mt)	AALVE00	350.000-375.000	0.000/0.000	10-Dec
Billet 6060/6063 DDP Germany ($/mt)	ABGEA04	580.000	0.000	10-Dec
Billet 6060/6063 DDP Italy ($/mt)	ABITA04	575.000	0.000	10-Dec
Aluminum CFR China All-in Import Price ($/mt)	MMBAA00	3120.000	1.410	10-Dec
CIF Japan premium ($/mt)	MMANA00	193.000-193.000	0.000/0.000	10-Dec
CIF Japan premium Q4 ($/mt)	AAFGA00	175.000-175.000	0.000/0.000	10-Dec
CIF Japan Fixed Price Equivalent ($/mt)	MMJAL00	2749.00-2749.00	1.00/1.00	10-Dec
CIF Japan Quarter Fixed Price Equivalent ($/mt)	MMJAQ00	2731.00-2731.00	1.00/1.00	10-Dec
CIF Major Asian Port (MAP) P1020 Premium	AAFGG00	186.00	1.00	10-Dec
Japan delivered (current month) ($/mt)	MMALU00	2729.200-2748.990	1.200/1.050	10-Dec
Japan delivered (2 months out) ($/mt)	MMALX00	2711.190-2730.980	1.210/1.050	10-Dec
Low-Emissions/Carbon-Accounted Aluminum				
Low-carbon Aluminum price duty unpaid in-warehouse Rotterdam ($/mt)	LALVI00	330.000-345.000	0.000/0.000	10-Dec
LCAP duty unpaid in-warehouse Rotterdam ($/mt)	LCARB00	30.00	0.00	10-Dec
Zero-carbon Aluminum price duty unpaid in-warehouse Rotterdam ($/mt)	ZALVI00	390.000-405.000	0.000/0.000	10-Dec
ZCAP duty unpaid in-warehouse Rotterdam ($/mt)	LCARD00	90.00	0.00	10-Dec
Low-carbon Aluminum price duty paid in-warehouse Rotterdam ($/mt)	LALVE00	370.000-395.000	0.000/0.000	10-Dec
LCAP duty paid in-warehouse Rotterdam ($/mt)	LCARA00	20.00	0.00	10-Dec
Zero-carbon Aluminum price duty paid in-warehouse Rotterdam ($/mt)	ZALVE00	430.000-455.000	0.000/0.000	10-Dec
ZCAP duty paid in-warehouse Rotterdam ($/mt)	LCARC00	80.00	0.00	10-Dec
Low-carbon 6060/6063 Billet DDP Germany ($/mt)	LCABG00	590.00	0.00	10-Dec
Low-carbon 6060/6063 Billet DDP Italy ($/mt)	LCABI00	585.00	0.00	10-Dec
MW US Transaction-A380 Spread (¢/lb)	ALUMB00	NA	NA	10-Dec
MW US Transaction-Mill MLCCs Spread (¢/lb)	ALUMC00	NA	NA	10-Dec
MW US Transaction-UBCs Spread (¢/lb)	ALUMA04	NA	NA	10-Dec
US Low-Carbon Premium (US-LCAP) (¢/lb)	ALCRA00	0.000	NA	10-Dec
US Low-Carbon Premium (US-LCAP) ($/mt)	ALCRD00	0.000	NA	10-Dec

Weekly/monthly prices

Calcined Petroleum Coke				
FOB US Gulf Coast ($/mt)	MMXEV00	385.000-405.000	5.000/5.000	27-Nov
Caustic Soda				
FOB NE Asia ($/mt)	AAVSE04	439.000-441.000	-5.000/-5.000	10-Dec
CFR SE Asia ($/mt)	AAVSF04	509.000-511.000	-10.000/-10.000	10-Dec
Domestic East China Ex-works (Yuan/mt)	AAXDE00	949.000-951.000	-30.000/-30.000	10-Dec
FOB NWE ($/mt)	AANTF00	508.000-512.000	10.000/10.000	10-Dec
CFR Med ($/mt)	ACSMA04	560.000	10.000	10-Dec
FOB US Gulf ($/mt)	AANTI00	465.000-475.000	-20.000/-20.000	10-Dec
Aluminum				
US Six-Months P1020 premium (¢/lb)	MMANJ04	23.500	0.000	05-Dec

Primary Aluminum (continued)

	Symbol		Change	Date assessed
US 6063 Billet Upcharge (¢/lb)	MMAKC00	9.000-10.000	0.000/0.000	05-Dec
CIF Brazil premium duty-unpaid ($/mt)	MMABP04	250.000	0.000	06-Dec
Brazil DDP Southeast premium, low ICMS ($/mt)	MMABS04	280.000	0.000	06-Dec
Brazil DDP Southeast premium, high ICMS ($/mt)	ABRAA04	160.000	-10.000	06-Dec

Secondary Aluminum

	Symbol		Change	Date assessed
US Old Cast (¢/lb)	AAFBJ00	80.000-82.000	1.000/1.000	09-Dec
US Old Sheet (¢/lb)	AAFBL00	86.000-88.000	0.000/0.000	09-Dec
US Mill-Grade MLCCs (¢/lb)	AAFBP00	101.000-103.000	-1.000/-1.000	09-Dec
US MW Transaction-Mill MLCCs Spread (¢/lb)	ALUMC00	NA	NA	10-Dec
US Smelter-Grade MLCCs (¢/lb)	AAFBT00	84.000-86.000	0.000/0.000	09-Dec
US HG Auto Shreds (¢/lb)	AASSP00	89.000-91.000	-1.000/-1.000	09-Dec
US LG Auto Shreds (¢/lb)	AASSO00	84.000-86.000	1.000/1.000	09-Dec
US Turnings (¢/lb)	AAFCA00	80.000-82.000	1.000/1.000	09-Dec
US clean aluminum wheels (¢/lb)	ACLEA00	107.000	0.000	10-Dec
US UBCs (used beverage cans) (¢/lb)	AAFCD00	106.000-108.000	2.000/2.000	05-Dec
US MW Transaction-UBCs Spread (¢/lb)	ALUMA04	NA	NA	10-Dec
US Painted Siding (¢/lb)	AASNW02	102.000-104.000	-1.000/-1.000	05-Dec
US 6063 New Bare Extrusion Scrap discount (¢/lb)	AAFCE00	16.000-19.000	1.000/1.000	05-Dec
US 6063 New Bare Extrusion Scrap (¢/lb)	AAFCF00	118.752-121.752	-0.086/-0.086	10-Dec
US 6022 New Bare Scrap discount (¢/lb)	AAXVM04	17.000-20.000	0.000/0.000	05-Dec
US 6022 New Bare Scrap (¢/lb)	AAXVM00	117.752-120.752	-0.086/-0.086	10-Dec
US 5052 New Bare Scrap discount (¢/lb)	ABSDB04	8.000-11.000	-3.000/-3.000	05-Dec
US 5052 New Bare Scrap (¢/lb)	ABSDA00	126.752-129.752	-0.086/-0.086	10-Dec
Brazilian UBCs (Real/kg)	SB01018	11.000-11.500	0.200/0.300	09-Dec
Brazilian Castings (Real/kg)	SB01020	11.000-12.000	0.000/0.000	09-Dec
Brazilian Profile Scrap (Real/kg)	SB01022	15.000-16.000	0.000/0.500	09-Dec
Old cast delivered NE Mexico (pesos/kg)	AAXXA04	40.000-41.000	0.000/0.000	05-Dec
– ¢/lb conversion	AAXUA04	89.631-91.872	0.907/0.930	05-Dec
Old sheet delivered NE Mexico (pesos/kg)	AAXXB04	37.000-38.000	0.000/0.000	05-Dec
– ¢/lb conversion	AAXUB04	82.908-85.149	0.839/0.862	05-Dec
UBCs delivered NE Mexico (pesos/kg)	AAXXC04	41.500-42.500	0.000/0.000	05-Dec
– ¢/lb conversion	AAXUC04	92.992-95.233	0.941/0.964	05-Dec
6063 new bare delivered NE Mexico (pesos/kg)	AAXXD04	45.000-46.000	0.000/0.000	05-Dec
– ¢/lb conversion	AAXUD04	100.835-103.075	1.021/1.043	05-Dec
MW US A380 (¢/lb)	MMAAD00	133.500-135.000	-0.500/0.000	09-Dec
US MW Transaction-A380 Spread (¢/lb)	ALUMB00	NA	NA	10-Dec
MW US 319 (¢/lb)	MMAAC00	142.000-144.000	1.000/1.000	09-Dec
MW US Sec 356 (¢/lb)	MMAAB00	158.000-160.000	0.000/0.000	09-Dec
MW US A356.2 Upcharge (¢/lb)	AUMIA00	22.000	0.000	10-Dec
MW US A356.2 (All-in) (¢/lb)	AUMIB00	159.752	-0.086	10-Dec
MW US F132 (¢/lb)	MMAAA00	150.000-152.000	0.000/0.000	09-Dec
MW US A413 (¢/lb)	MMWUS00	164.000-166.000	0.000/0.000	09-Dec
MW US B390 (¢/lb)	FAALB00	184.000-186.000	1.000/1.000	09-Dec
ADC12 FOB China ($/mt)	AAVSJ00	2400.000-2410.000	-10.000/-10.000	10-Dec
ADC12 Ex-works China ($/mt)	AAVSI00	2767.890-2781.800	3.850/3.870	10-Dec
Alloy 226 delivered European Works (Eur/mt)	AALVT00	2200.000-2280.000	10.000/20.000	06-Dec
Alloy 231 DDP Germany (Eur/mt)	ABLVT04	2300.000-2380.000	10.000/20.000	06-Dec
European Aluminum Scrap High Grade Auto Shreds (Eur/mt)	ANICC00	1710.000	0.000	10-Dec

Light Metals

	Symbol		Change	Date assessed
Weekly prices				
Magnesium				
MW Magnesium 93% Alloy DDP US (¢/lb)	MMAHR00	200.000-300.000	0.000/0.000	04-Dec
MW Magnesium 99.8% DDP US (¢/lb)	MMAHQ00	300.000-350.000	0.000/0.000	04-Dec
European Free Market ($/mt)	MMAIZ00	2505.000-2560.000	0.000/0.000	04-Dec
Silicon				
553 Grade delivered US Midwest (¢/lb)	MMAJM00	135.000-145.000	0.000/0.000	04-Dec
553 Grade IW EU (Eur/mt)	AAIUT00	2060.000-2120.000	0.000/0.000	04-Dec
Manganese				
Electrolytic 99.7% FOB China ($/mt)	MMAIX00	1670.000-1690.000	0.000/0.000	06-Dec
Titanium				
US Turnings 9064 (¢/lb)	MMAJZ00	2.000-2.500	0.000/0.000	05-Dec
Europe Turnings 9064 (¢/lb)	MMAJY00	2.100-2.500	0.000/0.000	05-Dec

Battery Metals

Daily prices

	Symbol		Change	Date assessed
Lithium Carbonate				
CIF North Asia ($/mt)	BATLC04	10500	+0	10-Dec
Recycled CIF North Asia ($/mt)	BATNA00	9500	+0	10-Dec
DDP China ($/mt)	BATAM00	10501	-4	10-Dec
DDP China (Yuan/mt)	BATCA04	75500	+0	10-Dec
Recycled DDP China (Yuan/mt)	BATCN00	74500	+500	10-Dec
CIF North Asia Import Parity (Yuan/mt)	BATCP04	85515	+31	10-Dec
CIF Europe ($/mt)	LCCIF00	10500	-250	10-Dec
DDP US ($/mt)	ALTHA00	11400	+0	10-Dec
FOB Lithium Triangle - LiT ($/mt)	BATLA00	10000	+0	10-Dec
Lithium Hydroxide				
CIF North Asia ($/mt)	BATLH04	8800	-200	10-Dec
DDP China ($/mt)	BATBM00	9555	+24	10-Dec
DDP China (Yuan/mt)	BATHY04	68700	+200	10-Dec
CIF Europe ($/mt)	LHCIF00	9400	-300	10-Dec
DDP US ($/mt)	ALTHB00	11500	+0	10-Dec
Lithium Spodumene				
5.5% Li2O CIF China ($/mt)	BATLS00	738	+0	10-Dec
6% Li2O FOB Australia ($/mt)	BATSP03	765	+0	10-Dec
0.1% differential to Spodumene 6% FOB Australia ($/mt)	BATSS00	12.75	+0.00	10-Dec
Cobalt Sulfate				
CIF North Asia ($/mt)	BATCO04	4000	+0	10-Dec
DDP China ($/mt)	BATCM00	3644	-1	10-Dec
DDP China (Yuan/mt)	BATCS04	26200	+0	10-Dec
Cobalt Hydroxide				
CIF China ($/lb)	BATCH04	6.00	+0.00	10-Dec
CIF China ($/mt)	BATCT04	13227.72	+0.00	10-Dec
Cobalt Metal				
IW Rotterdam 99.8% mixed-use basket A ($/lb)	ECMCG00	10.100	+0.000	10-Dec
IW Rotterdam 99.8% mixed-use basket B ($/lb)	MMAIK00	11.000	+0.000	10-Dec
IW Rotterdam 99.8% alloy use ($/lb)	ECMAG00	14.000	+0.000	10-Dec
99.8% US Spot Cathode ($/lb)	MMAEO00	15.600	+0.000	10-Dec
Nickel Sulfate				
DDP China (Yuan/mt)	BATNS04	25000	-500	10-Dec
DDP China ($/mt)	BATNU00	3477	-71	10-Dec
Nickel Sulfate premium CIF Northeast Asia ($/mt)	BATNB00	1850	+0	10-Dec
Nickel Sulfate calculated price CIF Northeast Asia ($/mt)	BATNC00	3877	-39	10-Dec
Europe Nickel Sulfate premium IW Rotterdam ($/mt)	ANICA00	2350	+0	10-Dec
Europe Nickel Sulfate calculated price IW Rotterdam ($/mt)	ANICB00	3988	-39	10-Dec
Nickel Sulfate premium CIF US ($/mt)	ANIPB00	2800	+0	10-Dec
Nickel Sulfate calculated price CIF US ($/mt)	ANIPC00	4088	-39	10-Dec
MHP CIF North Asia basis Nickel Sulfate ($/mt)	BATME00	12474	-255	10-Dec
MHP CIF North Asia basis Nickel Sulfate (Yuan/mt)	BATMA00	89686	-1794	10-Dec
MHP CIF North Asia payable basis Nickel Sulfate (%)	BATMB00	80.00	+0.00	10-Dec
MHP CIF North Asia basis LME Nickel ($/mt)	BATMC00	12590	+0	10-Dec
MHP CIF North Asia payable basis LME Nickel (%)	BATMD00	80.00	+0.00	10-Dec
Manganese Sulfate				
DDP China (Yuan/mt)	BATMS00	6080	+30	10-Dec
DDP China ($/mt)	BATMT00	846	+4	10-Dec
Black Mass				
LFP black mass DDP China percent Lithium (Yuan/mt)	LBMCA00	2750	+0	10-Dec
Ni-Co Black Mass DDP China Lithium payables (%)	NBMCA00	73	+0	10-Dec
Ni-Co Black Mass DDP China Cobalt payables (%)	NBMCB00	73	+0	10-Dec
Ni-Co Black Mass DDP China Nickel payables (%)	NBMCC00	73	+0	10-Dec
Ni-Co Black Mass DDP China calculated price (Yuan/mt)	NBMCD00	23188	-196	10-Dec
Ni-Co Black Mass EXW Europe Lithium payables (%)	NBMEA00	0.00	NA	10-Dec
Ni-Co Black Mass EXW Europe Cobalt payables (%)	NBMEB00	66.00	+0.00	10-Dec
Ni-Co Black Mass EXW Europe Nickel payables (%)	NBMEC00	66.00	+0.00	10-Dec
Ni-Co Black Mass EXW Europe calculated price ($/MT)	NBMED00	1965	-14	10-Dec
Ni-Co Black Mass DDP US Lithium payables (%)	NBNEC00	0.00	NA	10-Dec
Ni-Co Black Mass DDP US Cobalt payables (%)	NBNEB00	67.00	+0.00	10-Dec
Ni-Co Black Mass DDP US Nickel payables (%)	NBNEA00	67.00	+0.00	10-Dec
Ni-Co Black Mass DDP US calculated price ($/mt)	NBNED00	2193	-12	10-Dec
Graphite				
Natural Flake Graphite 94-95% C, FOB China ($/mt)	BATAA00	405	+5	10-Dec
Natural Flake Graphite 94-95% C, CIF Northeast Asia ($/mt)	BATBA00	435	+5	10-Dec

Battery Metals (continued)

	Symbol		Change	Date assessed
Spherical Graphite 99.95% C, FOB China ($/mt)	BATAB00	1780	+5	10-Dec
Spherical Graphite 99.95% C, CIF Northeast Asia ($/mt)	BATBB00	1810	+5	10-Dec
Uncalcined Needle Coke DDP China (Yuan/mt)	BATCC00	4750	-50	10-Dec
Uncalcined Needle Coke DDP China (Import Parity) ($/mt)	BATIP00	559	-6	10-Dec

Copper

	Symbol		Change	Date assessed
Daily prices				
CIF China premium ($/mt)	MMAMK00	45.00-45.00	0.00/0.00	10-Dec
Top Brand ER differential	ACTBA00	5.00	0.00	10-Dec
SX-EW differential	ACTBB00	-5.00	0.00	10-Dec
COMEX Spot (¢/lb)	CMAAD10	422.35	0.00	10-Dec
Clean Copper Concentrates ($/mt)	PCCCA00	2345.00	-10.00	10-Dec
Clean Copper Concentrate Treatment Charge ($/mt)	PCCCB00	5.20	0.70	10-Dec
Clean Copper Concentrate Refining Charge (¢/lb)	PCCCC00	0.52	0.07	10-Dec
Clean Copper Concentrate Producer-Trader Treatment Charge Differential ($/mt)	PCCCG00	-9.10	-0.40	10-Dec
Clean Copper Concentrate Producer-Trader Refining Charge Differential (¢/lb)	PCCCH00	-0.91	-0.04	10-Dec
Weekly prices				
NY Dealer premium cathodes (¢/lb)	MMACP00	11.00-14.00	0.00/0.00	10-Dec
MW No.1 Burnt Scrap Disc (Scrap) (¢/lb)	MMACJ10	27.00	1.00	10-Dec
MW No.1 Bare Bright Disc (Scrap) (¢/lb)	MMACL10	15.00	1.00	10-Dec
MW No.2 Scrap Disc (¢/lb)	MMACN10	40.00	0.00	10-Dec

Bulk Ferroalloys

	Symbol		Change	Date assessed
Daily prices				
Nickel Ore				
Low-grade Nickel Ore CIF China ($/wmt)	ANINO00	36.50	-0.80	10-Dec
High-grade Nickel Ore CIF China ($/wmt)	ANIOC00	60.00	0.00	10-Dec
Nickel Pig Iron (NPI)				
NPI FOB Indonesia ($/mtu)	ANIPA00	114.500	-0.500	10-Dec
Weekly prices				
Manganese Ore				
36% Mn Ore CIF Tianjin ($/dmtu)	AAXRX00	3.900	0.000	06-Dec
44% Mn Ore CIF Tianjin ($/dmtu)	AAWER00	4.200	0.000	06-Dec
Iron Differential per 1% (\> 40% Mn Ore)	FAWER04	0.030	0.000	06-Dec
Silica Differential per 1% (\> 40% Mn Ore)	SAWER04	-0.020	0.000	06-Dec
Ferrochrome				
Charge Chrome 48-52% in-warehouse US (¢/lb)	MMAEX00	130.000-140.000	0.000/0.000	04-Dec
Charge Chrome 52% DDP Europe (¢/lb)	MMAIP00	105.000-125.000	0.000/0.000	04-Dec
Charge Chrome 48-52% CIF China (¢/lb)	CCXIC04	82.000-84.000	-5.500/-4.500	04-Dec
65% High Carbon in-warehouse US (¢/lb)	MMAFA00	135.000-150.000	-5.000/-5.000	04-Dec
65%-68% High Carbon DDP Europe (¢/lb)	MMAIQ00	110.000-155.000	0.000/0.000	04-Dec
60%-65% High Carbon Spot CIF Japan (¢/lb)	MMAEW00	94.000-95.000	-1.000/-1.000	04-Dec
58%-60% High Carbon CIF China (¢/lb)	SB01103	82.000-84.000	-5.500/-4.500	04-Dec
Low Carbon 0.10% in-warehouse US (¢/lb)	MMAIM00	255.000-260.000	0.000/0.000	04-Dec
Low-Carbon 0.10% C, 65-70% Cr DDP NWE (¢/lb)	MMAIL00	230.000	0.000	04-Dec
Low-Carbon 0.10% C, 60-64.99% Cr DDP NWE (¢/lb)	FLCDA00	205.000	0.000	04-Dec
Low Carbon 0.15% in-warehouse US (¢/lb)	MMANR00	230.000-240.000	0.000/0.000	04-Dec
Low Carbon 0.05% in-warehouse US (¢/lb)	MMAFC00	305.000-310.000	0.000/0.000	04-Dec
Ferromanganese				
High Carbon 76% in-warehouse US ($/long ton)	MMAFH00	1220.000-1250.000	-5.000/-75.000	04-Dec
High Carbon 76% DDP NW Europe (Eur/mt)	AFERA04	990.000-1050.000	15.000/0.000	04-Dec
Medium Carbon 85% in-warehouse US (¢/lb)	MMAFK00	117.000-120.000	0.000/0.000	04-Dec
Silicomanganese				
65% Mn in-warehouse US (¢/lb)	MMAGR00	61.000-63.000	1.000/-2.000	04-Dec
65% Mn CIF Japan ($/mt)	MMAJG00	880.000-890.000	10.000/0.000	04-Dec
65:16 DDP NW Europe (Eur/mt)	AAITQ00	990.000-1040.000	0.000/0.000	04-Dec
Ferrosilicon				
75% Si in-warehouse US (¢/lb)	MMAFT00	115.000-130.000	-10.000/-5.000	04-Dec
75% Si CIF Japan ($/mt)	MMAJP00	1220.000-1240.000	-10.000/-10.000	04-Dec
75% Si FOB China ($/mt)	MMAKB00	1200.000-1220.000	-10.000/-10.000	04-Dec
75% Std DDP NW Europe (Eur/mt)	AAIUR00	1300.000-1400.000	-20.000/35.000	04-Dec

Noble Alloys

	Symbol		Change	Date assessed
Daily prices				
Molybdenum				
Daily Dealer Oxide ($/lb)	MMAYQ00	21.600-21.720	0.050/-0.080	10-Dec
Ferromolybdenum				
MW European 65% Ferromolybdenum ($/kg)	MMAFO00	50.500-50.750	0.200/0.150	10-Dec
Weekly prices				
Molybdenum				
Oxide Daily Dealer Wkl Avg.($/lb)	MMAGQ00	21.370-21.670	-0.020/0.004	06-Dec
MW US FeMo ($/lb)	MMAFQ00	23.700-23.900	-0.100/0.000	05-Dec
60% Ferromolybdenum FOB China ($/kg)	MMAFP00	52.300-52.800	-1.600/-1.300	05-Dec
60% Ferromolybdenum CIF Asia ($/kg)	MMAFM00	49.800-50.300	-0.200/-0.200	05-Dec
Ferrovanadium				
US Free Market V205 ($/lb)	MMAGD00	9.000-10.000	0.000/0.000	05-Dec
US Ferrovanadium, 80% V ($/lb)	MMAFY00	13.500-13.800	-0.100/-0.300	05-Dec
Europe Ferrovanadium, 80% V ($/Kg)	MMAYY04	26.000-26.250	0.000/0.000	05-Dec
Titanium				
MW US Turnings 9064 ($/lb)	MMAJZ00	2.000-2.500	0.000/0.000	05-Dec
Europe Turnings 9064 ($/lb)	MMAJY00	2.100-2.500	0.000-0.000	05-Dec
Ferrotitanium				
MW US Ferrotitanium 70% Ti ($/lb)	MMAJX00	3.500-3.600	0.300/0.100	05-Dec
Europe Ferrotitanium 70% Ti ($/kg)	MMAJW00	4.000-5.500	0.000/0.000	05-Dec

Other Steel Inputs

	Symbol		Change	Date assessed
Weekly prices				
Nickel				
NY Dealer Cathode ($/lb)	MMAAQ00	NA-NA	NA/NA	10-Dec
NY Dealer Melt ($/lb)	MMAAS00	NA-NA	NA/NA	10-Dec
NY Dealer Plate ($/lb)	MMAAU00	NA-NA	NA/NA	10-Dec
Cathode premium Spot US (¢/lb)	MMAZM04	53.500	-0.500	05-Dec
Melt premium US (¢/lb)	MMAZI04	53.500	-0.500	05-Dec
Plate premium Spot US (¢/lb)	MMAZK04	26.000	1.000	05-Dec
Plating Grade premium IW Rotterdam ($/mt)	MMAYO04	300.000-400.000	0.000/0.000	06-Dec
Uncut Cathode IW Rotterdam ($/mt)	MMAYP04	100.000-250.000	0.000/0.000	06-Dec
Briquette premium IW Rotterdam ($/mt)	AALWJ00	250.000-350.000	0.000/0.000	06-Dec
Stainless Steel Scrap				
Scrap NA Free Market 18-8 ($/lt)	AALDQ00	1190.000-1210.000	-20.000/—22.000	05-Dec
EU CIF Rotterdam 18-8 (Eur/mt)	CASSR00	1225.000	-10.000	10-Dec
EU CIF Rotterdam 18-8 ($/mt)	CASSS00	1287.110	-19.770	10-Dec
Manganese				
Electrolytic 99.7% FOB China ($/mt)	MMAIX00	1670.000-1690.000	0.000/0.000	06-Dec

Other Base Metals

	Symbol		Change	Date assessed
Daily prices				
Lead				
North American Market (¢/lb)	MMALF01	107.397	-1.179	10-Dec
Twice weekly prices				
Tin				
Tin MW Dealer (¢/lb)	MMAAW10	1374.000	32.000	09-Dec
Weekly prices				
Zinc				
MW SHG premium (¢/lb)	MMAYH00	17.500	0.000	05-Dec
MW Galv. premium (¢/lb)	MMAYI00	17.500	0.000	05-Dec
MW Alloy No. 3 premium (¢/lb)	MMAYJ00	40.500	0.000	05-Dec
Lead				
North American Premium (¢/lb)	MMXCD00	15.000	0.000	10-Dec
Used lead-acid batteries US Midwest (¢/lb)	MMLAA04	31.000-32.000	0.500/0.000	10-Dec
Used lead-acid batteries US Northeast (¢/lb)	MMLAB04	32.000-34.000	0.000/0.000	10-Dec

Minor Metals

	Symbol		Change	Date assessed
Daily prices				
Cobalt				
IW Rotterdam 99.8% mixed-use basket A ($/lb)	ECMCG00	10.100	0.000	10-Dec
IW Rotterdam 99.8% mixed-use basket B ($/lb)	MMAIK00	11.000	0.000	10-Dec
IW Rotterdam 99.8% alloy use ($/lb)	ECMAG00	14.000	0.000	10-Dec
99.8% cathode DDP US ($/lb)	MMAEO00	15.200-16.000	0.000/0.000	10-Dec

Precious Metals assessments

	Symbol		Change	Date assessed
Weekly prices				
NY Dealer Platinum ($/oz)	MMAHX00	935.000-965.000	10.000/-10.000	05-Dec
NY Dealer Palladium ($/oz)	MMABV00	960.000-1000.000	-10.000/-46.000	05-Dec
NY Dealer Rhodium ($/oz)	MMAID00	4475.000-4525.000	0.000/-50.000	05-Dec
NY Dealer Iridium ($/oz)	MMAIJ00	4300.000-4400.000	0.000/-50.000	05-Dec
NY Dealer Ruthenium ($/oz)	MMAIH00	400.000-440.000	-20.000/-10.000	05-Dec

Exchange-Traded Data and Third Party Data

	Symbol		Date assessed
COMEX Settlements			
Copper Spot (¢/lb)	CMAAD10	422.350	10-Dec
Copper 2 months out (¢/lb)	CMAAE10	425.350	10-Dec
Copper One Year out (¢/lb)	CMAAF10	435.800	10-Dec
Silver Spot (¢/oz)	CMAAJ10	3236.300	10-Dec
Silver 2 months out (¢/oz)	CMAAK10	3261.200	10-Dec
Silver 1 year out (¢/oz)	CMAAL10	3386.200	10-Dec
Gold Spot ($/oz)	CMAAG10	2697.600	10-Dec
Gold 1 year ($/oz)	CMAAH10	2821.100	10-Dec
Aluminum Spot ($/mt)	CMALI01	2518.25	10-Dec
Aluminum M2 ($/mt)	CMALI02	2533.25	10-Dec
Aluminum M3 ($/mt)	CMALI03	2549.00	10-Dec
Aluminum M4 ($/mt)	CMALI04	2565.00	10-Dec
NYMEX Settlements			
Platinum Active ($/oz)	XMAAB10	949.100	10-Dec
Palladium Active ($/oz)	XMAAA10	981.600	10-Dec
COMEX Closing Stocks			
Daily Copper Stocks (lb)	CMAAO10	93540.000	10-Dec
Daily Silver Stocks (oz)	CMAAM10	307615537.000	10-Dec
Daily Gold Stocks (oz)	CMAAN10	18081802.000	10-Dec
Precious Metals			
London Gold AM Fix ($/oz)	MMABM10	2670.450	10-Dec
London Gold PM Fix ($/oz)	MMABL10	2689.600	10-Dec
Gold H&H ($/oz)	MMABK10	2689.600	10-Dec
Gold Engelhard Unfabricated ($/oz)	MMABN10	2688.000	10-Dec
London Silver Fix, US (¢/tr oz)	MMACF10	3190.000	10-Dec
London Silver Fix, Pence (p/tr oz)	MMACE10	2500.000	10-Dec
London Silver Price ($/tr oz)	MMAXD00	31.900	10-Dec
Silver H&H (¢/oz)	MMACD10	3199.600	10-Dec
Silver Engelhard Unfabricated (¢/oz)	MMACH10	3200.000	10-Dec
Platinum J.Matthey Base NA ($/oz)	LMABW10	940.000	10-Dec
Platinum J.Matthey Base Asia ($/oz)	AMACH00	946.000	10-Dec
Platinum J.Matthey Base Europe ($/oz)	LMABV10	948.000	10-Dec
Platinum Engelhard Unfabricated ($/oz)	MMAHH10	943.000	10-Dec
Platinum Engelhard Asia ($/oz)	AMACM00	943.000	10-Dec
Palladium J.Matthey Base NA ($/oz)	LMABS10	973.000	10-Dec
Palladium J.Matthey Base Asia ($/oz)	AMACI00	985.000	10-Dec
Palladium J.Matthey Base Europe ($/oz)	LMABR10	983.000	10-Dec
Palladium Engehlard Unfabricated ($/oz)	MMABW10	980.000	10-Dec
Palladium Engelhard Asia ($/oz)	AMACN00	985.000	10-Dec
Rhodium J.Matthey Base NA ($/oz)	LMACA10	4575.000	10-Dec
Rhodium J.Matthey Base Asia ($/oz)	AMACJ00	4575.000	10-Dec
Rhodium J.Matthey Base Europe ($/oz)	LMABZ10	4575.000	10-Dec
Rhodium Engelhard ($/oz)	MMAHY10	4575.000	10-Dec
Rhodium Engelhard Asia ($/oz)	AMACO00	4575.000	10-Dec
Iridium J.Matthey Base North America ($/oz)	MMABP10	4475.000	10-Dec
Iridium Engelhard Unfabricated ($/oz)	MMABO10	4550.000	10-Dec
Iridium Engelhard Asia ($/oz)	AMACP00	4550.000	10-Dec

Molybdenum Dealer Oxide Weekly Averages ($/lb)

Week ended 06-Dec

	Symbol	Low	High	Midpoint
Weekly average		21.370	21.670	21.520
Daily Assessment Recap				
Mon,02-Dec	MMAYQ00	21.300	21.650	21.475
Tue,03-Dec	MMAYQ00	21.350	21.600	21.475
Wed,04-Dec	MMAYQ00	21.400	21.750	21.575
Thu,05-Dec	MMAYQ00	21.400	21.650	21.525
Fri,06-Dec	MMAYQ00	21.400	21.700	21.550
Tonnage Volume (mt)				
Total	MWTVT00	508		
By region				
Europe	MWTVE00	168		
Japan	MWTVJ00	0		
South Korea	MWTVK00	220		
India	MWTVI00	0		
United States	MWTVU00	0		
China	MWTVC00	120		

Platts
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Commodity Insights

Metals Week

A Weekly Supplement to Platts Metals Daily

Daily prices

	Symbol	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	Week avg
Alumina							
PAX FOB Australia ($/mt)	MMWAU00	787.000	787.000	805.000	805.000	780.000	792.800
PAX CIF China ($/mt)	MMALZ00	810.800	810.500	828.600	828.550	803.500	816.390
PAX China Ex-works ($/mt)	MMXWC00	807.070	812.550	813.250	813.870	814.220	812.192
DBF Aus-China Handysize ($/mt)	MMACH00	23.800	23.500	23.600	23.550	23.500	23.590
Aluminum							
MW US Transaction (¢/lb)	MMAAF10	137.474	138.041	138.313	140.314	137.343	138.297
MW US Transaction premium (¢/lb)	MMAKE00	21.150	21.150	21.150	21.450	21.450	21.270
US Aluminum all-in (basis CME) (¢/lb)	ALINA00	137.224	138.653	140.229	140.031	137.071	—
US Aluminum all-in (basis CME) ($/mt)	ALINB00	3025.268	3056.772	3091.517	3087.151	3021.895	—
US Low-Carbon Premium (US-LCAP) (¢/lb)	ALCRA00	0.000	0.000	0.000	0.000	0.000	—
US Low-Carbon Premium (US-LCAP) ($/mt)	ALCRD00	0.000	0.000	0.000	0.000	0.000	—
US-LCAP Transaction (All-in) (¢/lb)	ALCRB00	137.474	138.041	138.313	140.314	137.343	—
US-LCAP Transaction (All-in) ($/mt)	ALCRE00	3030.779	3043.279	3049.276	3093.391	3027.891	—
US-LCAP All-in (Basis CME) (¢/lb)	ALCRC00	137.224	138.653	140.229	140.031	137.071	—
US-LCAP All-in (Basis CME) ($/mt)	ALCRF00	3025.268	3056.772	3091.517	3087.151	3021.895	—
MW US Net-Cash premium (¢/lb)	MMACN00	19.850	19.850	19.850	20.150	20.150	19.970
US P1020 Import Duty (¢/lb)	MMOHUOO	12.003	12.054	12.079	12.261	11.991	12.078
MW US Transaction premium (implied duty-unpaid) (¢/lb)	MMOFU00	9.147	9.096	9.071	9.189	9.459	9.192
MW US Transaction price (implied duty-unpaid) (¢/lb)	MMOGU00	125.471	125.987	126.234	128.053	125.352	126.219
MW US Market (¢/lb)	MMAAE00	138.000	138.750	140.250	140.250	138.500	139.150
CIF New Orleans duty-unpaid premium ($/mt)	MMODU00	320.000	320.000	320.000	320.000	320.000	320.000
CIF New Orleans duty-unpaid premium (¢/lb)	MMNDU00	14.515	14.515	14.515	14.515	14.515	14.515
CIF NOLA-MW premium differential (¢/lb)	MMNOL00	6.635	6.635	6.635	6.935	6.935	6.755
MW US A380 Alloy (¢/lb)	MMAAD00	134.000/135.000	NA/NA	NA/NA	134.000/135.000	NA/NA	134.500
US MW Transaction-A380 Spread (¢/lb)	ALUMB00	2.970	NA	NA	5.810	NA	—
MW US 319 (¢/lb)	MMAAC00	141.000/143.000	NA/NA	NA/NA	141.000/143.000	NA/NA	142.000
MW US Sec 356 (¢/lb)	MMAAB00	158.000/160.000	NA/NA	NA/NA	158.000/160.000	NA/NA	159.000
MW US A356.2 Upcharge (¢/lb)	AUMIA00	23.000	23.000	22.000	22.000	22.000	22.400
MW US A356.2 (All-in) (¢/lb)	AUMIB00	160.474	161.041	160.313	162.314	159.343	160.697
MW US F132 (¢/lb)	MMAAA00	150.000/152.000	NA/NA	NA/NA	150.000/152.000	NA/NA	151.000
MW US A413 (¢/lb)	MMWUS00	164.000/166.000	NA/NA	NA/NA	164.000/166.000	NA/NA	165.000
MW US B390 (¢/lb)	FAALB00	183.000/185.000	NA/NA	NA/NA	183.000/185.000	NA/NA	184.000
US Old Cast (¢/lb)	AAFBJ00	80.000/82.000	NA/NA	NA/NA	79.000/81.000	NA/NA	80.500
US Old Sheet (¢/lb)	AAFBL00	85.000/87.000	NA/NA	NA/NA	86.000/88.000	NA/NA	86.500
US Mill-grade MLCCs (¢/lb)	AAFBP00	100.000/102.000	NA/NA	NA/NA	102.000/104.000	NA/NA	102.000
US MW Transaction-Mill MLCCs Spread (¢/lb)	ALUMC00	36.470	NA	NA	37.310	NA	—
US Smelter-grade MLCCs (¢/lb)	AAFBT00	83.000/85.000	NA/NA	NA/NA	84.000/86.000	NA/NA	84.500
US HG Auto Shreds (¢/lb)	AASSP00	89.000/91.000	NA/NA	NA/NA	90.000/92.000	NA/NA	90.500
US LG Auto Shreds (¢/lb)	AASSO00	83.000/85.000	NA/NA	NA/NA	83.000/85.000	NA/NA	84.000
US Turnings (¢/lb)	AAFCA00	79.000/81.000	NA/NA	NA/NA	79.000/81.000	NA/NA	80.000
US clean aluminum wheels (¢/lb)	ACLEA00	106.000	106.000	107.000	107.000	107.000	106.600
US 6063 New Bare Extrusion Scrap (¢/lb)	AAFCF00	119.474/122.474	120.041/123.041	120.313/123.313	121.314/124.314	118.343/121.343	121.397
US 6022 New Bare Scrap (¢/lb)	AAXVM00	117.474/120.474	118.041/121.041	118.313/121.313	120.314/123.314	117.343/120.343	119.797
US 5052 New Bare Scrap (¢/lb)	ABSDA00	123.474/126.474	124.041/127.041	124.313/127.313	129.314/132.314	126.343/129.343	126.997
Aluminum CFR China All-in Import Price ($/mt)	MMBAA00	3134.980	3128.450	3142.590	3149.380	3191.760	3149.432
Japan del (current mo) ($/mt)	MMALU00	2742.930/2762.890	2736.540/2756.530	2749.040/2768.980	2755.000/2775.020	2792.540/2812.490	2765.198
Japan del (2 mos. out) ($/mt)	MMALX00	2726.960/2746.920	2719.480/2739.470	2732.080/2752.030	2737.990/2758.010	2775.580/2795.530	2748.408
CIF Japan premium ($/mt)	MMANA00	191.000/191.000	192.000/192.000	192.000/192.000	192.000/192.000	192.000/192.000	191.800
CIF Japan premium Q3 ($/mt)	AAFGA00	175.000/175.000	175.000/175.000	175.000/175.000	175.000/175.000	175.000/175.000	175.000
CIF Japan Fixed Price Equivalent ($/mt)	MMJAL00	2763.00/2763.00	2756.50/2756.50	2769.00/2769.00	2775.00/2775.00	2812.50/2812.50	
CIF Japan Quarter Fixed Price Equivalent ($/mt)	MMJAQ00	2747.00/2747.00	2739.50/2739.50	2752.00/2752.00	2758.00/2758.00	2795.50/2795.50	
CIF Major Asian Port (MAP) P1020 Premium	AAFGG00	185.00	185.00	185.00	185.00	185.00	—
Duty paid in-warehouse R'dam premium ($/mt)	AALVE00	350.000/370.000	350.000/370.000	350.000/375.000	350.000/375.000	350.000/375.000	361.500
Duty unpaid in-warehouse R'dam premium ($/mt)	AALVI00	300.000/310.000	300.000/310.000	300.000/310.000	300.000/310.000	300.000/315.000	305.500
Billet 6060/6063 DDP Germany ($/mt)	ABGEA04	570.000	570.000	570.000	570.000	580.000	572.000
Billet 6060/6063 DDP Italy ($/mt)	ABITA04	575.000	575.000	575.000	575.000	575.000	575.000
European Aluminum Scrap High Grade Auto Shreds (Eur/mt)	ANICC00	1710.000	1710.000	1710.000	1710.000	1710.000	—

Daily prices (continued)

	Symbol	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	Week avg
Low Emissions Aluminum							
Low-carbon Aluminum price duty unpaid in-warehouse Rotterdam ($/mt)	LALVI00	330.000/340.000	330.000/340.000	330.000/340.000	330.000/340.000	330.000/345.000	335.500
LCAP duty unpaid in-warehouse Rotterdam ($/mt)	LCARB00	30.00	30.00	30.00	30.00	30.00	30.000
Zero-carbon Aluminum price duty unpaid in-warehouse Rotterdam ($/mt)	ZALVI00	393.400/403.400	393.400/403.400	393.400/403.400	391.400/401.400	390.000/405.000	397.820
ZCAP duty unpaid in-warehouse Rotterdam ($/mt)	LCARD00	93.40	93.40	93.40	91.40	90.00	92.320
Low-carbon Aluminum price duty paid in-warehouse Rotterdam ($/mt)	LALVE00	370.000/390.000	370.000/390.000	370.000/395.000	370.000/395.000	370.000/395.000	381.500
LCAP duty paid in-warehouse Rotterdam ($/mt)	LCARA00	20.00	20.00	20.00	20.00	20.00	20.000
Zero-carbon Aluminum price duty paid in-warehouse Rotterdam ($/mt)	ZALVE00	433.400/453.400	433.400/453.400	433.400/458.400	431.400/456.400	430.000/455.000	443.820
ZCAP duty paid in-warehouse Rotterdam ($/mt)	LCARC00	83.40	83.40	83.40	81.40	80.00	82.320
Low-carbon 6060/6063 Billet DDP Germany ($/mt)	LCABG00	580.000	580.000	580.000	580.000	590.000	582.000
Low-carbon 6060/6063 Billet DDP Italy ($/mt)	LCABI00	585.000	585.000	585.000	585.000	585.000	585.000
Copper							
COMEX HG 1st Position (¢/lb)	CMAAD10	407.550	414.600	414.200	413.500	413.850	412.740
COMEX HG 2nd Position (¢/lb)	CMAAE10	411.350	418.450	418.300	417.450	417.850	416.680
COMEX HG 3rd Position (¢/lb)	CMAAF10	422.850	429.300	429.700	428.700	428.700	427.850
COMEX inventories (st)	CMAAO10	90963	91035	92502	92371	92929	——-
US Transaction (¢/lb)	MMCUT00	420.050	427.100	426.700	426.000	426.350	425.240
Zinc							
MW North America SHG (¢/lb)	MMABD10	157.456	157.161	157.071	158.068	156.390	157.229
MW North America GAL (¢/lb)	MMABI10	157.456	157.161	157.071	158.068	156.390	157.229
MW Alloyer No. 3 (¢/lb)	MMABH10	180.456	180.161	180.071	181.068	179.390	180.229
Lead							
North American Market (¢/lb)	MMALF01	107.533	107.125	108.168	108.712	108.962	108.100
Tin							
MW NY Dealer (¢/lb)	MMAAW10	1335.000	NA	NA	1342.000	NA	1338.500
Cobalt							
99.8% mixed-use basket A IW Rotterdam ($/lb)	ECMCG00	10.000	10.000	10.000	10.000	10.050	
99.8% mixed-use basket B IW Rotterdam ($/lb)	MMAIK00	10.700	10.700	10.700	11.000	11.000	10.820
99.8% alloy grade IW Rotterdam ($/lb)	ECMAG00	14.000	14.000	14.000	14.000	14.000	
99.8% Cathode DDP US ($/lb)	MMAEO00	15.550	15.400	15.400	15.400	15.400	
Molybdenum/Ferromolybdenum							
Daily Dealer Oxide ($/lb)	MMAYQ00	21.300/21.650	21.350/21.600	21.400/21.750	21.400/21.650	21.400/21.700	21.520
MW Europe 65% Ferromolybdenum ($/kg)	MMAF000	50.000/50.200	50.200/50.400	50.200/50.400	50.200/50.400	50.200/50.500	50.270
Gold							
COMEX 1st Position ($/tr oz)	CMAAG10	2634.900	2644.700	2653.800	2626.600	2638.600	2639.720
COMEX 2nd Position ($/tr oz)	CMAAH10	2759.800	2769.000	2776.200	2747.300	2758.500	2762.160
Comex Inventories (tr oz)	CMAAN10	17940748	17874357	17829095	17833337	17845154	
Engelhard Unfabricated ($/tr oz)	MMABN10	2649.000	2656.000	2648.000	2649.000	2633.000	2647.000
Handy & Harman ($/tr oz)	MMABK10	2642.150	2640.650	2648.650	2640.150	2637.300	2641.780
London Final ($/tr oz)	MMABL10	2642.150	2640.650	2648.650	2640.150	2637.300	2641.780
London Initial ($/tr oz)	MMABM10	2637.250	2645.350	2642.050	2649.150	2636.500	2642.060
Battery Metals							
Lithium							
Carbonate CIF North Asia ($/mt)	BATLC04	10400.000	10400.000	10600.000	10600.000	10600.000	10520.00
Recycled Carbonate CIF North Asia ($/mt)	BATNA00	9400	9400	9600	9600	9600	—
Hydroxide CIF North Asia ($/mt)	BATLH04	8800.000	9000.000	9400.000	9600.000	9600.000	9280.00
Carbonate CIF North Asia Import Parity (Yuan/mt)	BATCP04	84666.000	84820.000	86373.000	86307.000	86307.000	85687.20
Carbonate DDP China (Yuan/mt)	BATCA04	76500.000	76000.000	75500.000	76000.000	75500.000	75900.00
Recycled Carbonate DDP China (Yuan/mt)	BATCN00	75000	74500	74000	74500	74000	—
Hydroxide DDP China (Yuan/mt)	BATHY04	70000.000	70000.000	69500.000	69500.000	69000.000	69600.00
Carbonate CIF Europe ($/mt)	LCCIF00	10650.000	10650.000	10650.000	10650.000	10750.000	—
Hydroxide CIF Europe ($/mt)	LHCIF00	9250.000	9250.000	9500.000	9700.000	9900.000	—
Carbonate DDP US ($/mt)	ALTHA00	11300.00	11300.00	11300.00	11400.00	11400.00	—
Hydroxide DDP US ($/mt)	ALTHB00	11400	11400	11400	11500	11500	—
Lithium Triangle - LiT FOB ($/mt)	BATLA00	10000	10000	10000	10000	10000	—
Lithium Spodumene FOB Australia ($/mt)	BATSP03	810	810	780	770	760	—
Lithium Spodumene 0.1% differential to Spodumene 6% FOB Australia ($/mt)	BATSS00	13.50	13.50	13.00	12.83	12.67	—

Daily prices (continued)

	Symbol	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	Week avg
Cobalt							
Sulfate CIF North Asia ($/mt)	BATCO04	4300.000	4300.000	4000.000	4000.000	4000.000	4120.00
Hydroxide CIF China ($/mt)	BATCT04	13007.260	13007.260	13007.260	12786.800	13007.260	12963.17
Hydroxide CIF China ($/lb)	BATCH04	5.900	5.900	5.900	5.800	5.900	5.88
Sulfate DDP China (Yuan/mt)	BATCS04	26000.000	26000.000	26000.000	26000.000	26200.000	26040.00
Nickel							
Sulfate DDP China (Yuan/mt)	BATNS04	25200.000	25200.000	25200.000	25200.000	25200.000	25200.00
Sulfate DDP China ($/mt)	BATNU00	3507	3500	3503	3506	3507	3505
Nickel Sulfate premium CIF Northeast Asia ($/mt)	BATNB00	1800	1800	1850	1850	1850	—
Nickel Sulfate calculated price CIF Northeast Asia ($/mt)	BATNC00	3868	3907	3927	3930	3936	—
Europe Nickel Sulfate premium IW Rotterdam ($/mt)	ANICA00	2350	2350	2350	2350	2350	—
Europe Nickel Sulfate calculated price IW Rotterdam ($/mt)	ANICB00	3990	4029	4038	4041	4045	—
Nickel Sulfate premium CIF US ($/mt)	ANIPB00	2800	2800	2800	2800	2800	—
Nickel Sulfate calculated price CIF US ($/mt)	ANIPC00	4090	4129	4138	4142	4145	—
MHP CIF North Asia basis Nickel Sulfate ($/mt)	BATME00	12737	12714	12725	12734	12740	—
MHP CIF North Asia basis Nickel Sulfate (Yuan/mt)	BATMA00	91534	91534	91534	91534	91534	—
MHP CIF North Asia payable basis Nickel Sulfate (%)	BATMB00	81	81	81	81	81	—
MHP CIF North Asia basis LME Nickel ($/mt)	BATMC00	12590	12590	12590	12590	12590	—
MHP CIF North Asia payable basis LME Nickel (%)	BATMD00	80	80	80	80	80	—
Manganese							
Sulfate DDP China (Yuan/mt)	BATMS00	6100.000	6100.000	6050.000	6050.000	6050.000	6070
Sulfate DDP China ($/mt)	BATMT00	849	847	841	842	842	844
Black Mass							
LFP Black Mass DDP China percent Lithium (Yuan/mt)	LBMCA00	2750	2750	2750	2750	2750	—
Ni-Co Black Mass DDP China Lithium payables (%)	NBMCA00	73	73	73	73	73	—
Ni-Co Black Mass DDP China Cobalt payables (%)	NBMCB00	73	73	73	73	73	—
Ni-Co Black Mass DDP China Nickel payables (%)	NBMCC00	73	73	73	73	73	—
Ni-Co Black Mass DDP China calculated price (Yuan/mt)	NBMCD00	23346	23288	23231	23288	23266	—
Ni-Co Black Mass EXW Europe Lithium payables (%)	NBMEA00	0.00	0.00	0.00	0.00	0.00	—
Ni-Co Black Mass EXW Europe Cobalt payables (%)	NBMEB00	63.00	63.00	63.00	63.00	66.00	—
Ni-Co Black Mass EXW Europe Nickel payables (%)	NBMEC00	63.00	63.00	63.00	63.00	66.00	—
Ni-Co Black Mass EXW Europe	NBMED00	1870	1883	1886	1887	1983	—
Ni-Co Black Mass DDP US Lithium payables (%)	NBNEC00	0.00	0.00	0.00	0.00	0.00	—
Ni-Co Black Mass DDP US Cobalt payables (%)	NBNEB00	67.00	67.00	67.00	67.00	67.00	—
Ni-Co Black Mass DDP US Nickel payables (%)	NBNEA00	67.00	67.00	67.00	67.00	67.00	—
Ni-Co Black Mass DDP US calculated price ($/mt)	NBNED00	2190	2190	2193	2194	2195	—
Graphite							
Natural Flake Graphite 94-95% C, FOB China ($/mt)	BATAA00	395	395	395	395	395	—
Natural Flake Graphite 94-95% C, CIF Northeast Asia ($/mt)	BATBA00	425	425	425	425	425	—
Spherical Graphite 99.95% C, FOB China ($/mt)	BATAB00	1750	1750	1770	1770	1770	—
Spherical Graphite 99.95% C, CIF Northeast Asia ($/mt)	BATBB00	1780	1780	1800	1800	1800	—
Uncalcined Needle Coke DDP China (Yuan/mt)	BATCC00	4900	4850	4850	4800	4800	—
Uncalcined Needle Coke DDP China (Import Parity) ($/mt)	BATIP00	578	570	571	565	565	—
PGMs							
Palladium							
Nymex Nearby ($/tr oz)	XMAAA10	995.200	987.700	994.100	975.400	965.600	983.600
J.Matthey Base NA ($/tr oz)	LMABS10	994.000	990.000	989.000	978.000	965.000	983.200

Daily prices (continued)

	Symbol	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	Week avg
J.Matthey Base Asia ($/tr oz)	AMACI00	990.000	999.000	976.000	985.000	978.000	985.600
J.Matthey Base Europe ($/tr oz)	LMABR10	982.000	1008.000	980.000	990.000	982.000	988.400
Engelhard Unfabricated ($/tr oz)	MMABW10	1000.000	1005.000	990.000	987.000	980.000	992.400
3-month borrow rate (%)		NA	NA	NA	NA	NA	NA
Engelhard Industrial Asia ($/tr oz)	AMACN00	982.000	988.000	979.000	990.000	1007.000	989.200
Platinum							
Nymex Nearby ($/tr oz)	XMAAB10	950.400	960.200	953.300	941.600	933.800	947.860
J.Matthey Base N ($/tr oz)	LMABW10	950.000	962.000	946.000	943.000	935.000	947.200
J.Matthey Base Asia ($/tr oz)	AMACH00	958.000	956.000	955.000	949.000	943.000	952.200
J.Matthey Base Europe ($/tr oz)	LMABV10	950.000	967.000	957.000	960.000	948.000	956.400
Engelhard Unfabricated ($/tr oz)	MMAHH10	945.000	958.000	945.000	945.000	939.000	946.400
3-month borrow rate (%)		NA	NA	NA	NA	NA	NA
Engelhard Industrial Asia ($/tr oz)	AMACM00	945.000	945.000	957.000	948.000	946.000	948.200
Iridium							
J.Matthey Base NA ($/tr oz)	MMABP10	4550.000	4550.000	4550.000	4550.000	4550.000	4550.000
Engelhard Unfabricated ($/tr oz)	MMABO10	4550.000	4550.000	4550.000	4550.000	4550.000	4550.000
Engelhard Industrial Asia ($/tr oz)	AMACP00	4575.000	4550.000	4550.000	4550.000	4550.000	4555.000
Rhodium							
J.Matthey Base Asia ($/tr oz)	AMACJ00	4575.000	4575.000	4575.000	4575.000	4575.000	4575.000
J.Matthey Base Europe ($/tr oz)	LMABZ10	4575.000	4575.000	4575.000	4575.000	4575.000	4575.000
J.Matthey Base NA ($/tr oz)	LMACA10	4575.000	4575.000	4575.000	4575.000	4575.000	4575.000
Engelhard Unfabricated ($/tr oz)	MMAHY10	4575.000	4575.000	4575.000	4575.000	4575.000	4575.000
Engelhard Industrial Asia ($/tr oz)	AMACO00	4600.000	4575.000	4575.000	4575.000	4575.000	4580.000
Ruthenium							
J.Matthey Base NA ($/tr oz)	MMAIF10	470.000	470.000	470.000	470.000	470.000	470.000
Engelhard Unfabricated ($/tr oz)	MMAIE10	470.000	470.000	470.000	470.000	470.000	470.000
Engelhard Industrial Asia ($/tr oz)	AMACQ00	470.000	470.000	470.000	470.000	470.000	470.000
Silver							
COMEX 1st Position (¢/tr oz)	CMAAJ10	3044.900	3107.700	3150.500	3113.400	3118.600	3107.020
COMEX 2nd Position (¢/tr oz)	CMAAK10	3074.200	3136.300	3178.600	3140.600	3146.200	3135.180
COMEX 3rd Position (¢/tr oz)	CMAAL10	3202.900	3265.900	3303.800	3268.500	3272.200	3262.660
Comex Inventories (tr oz)	CMAAM10	307975038	306719643	306541101	306557563	306673678	
Handy & Harman (¢/tr oz)	MMACD10	3048.200	3104.500	3131.000	3119.800	3116.800	3104.060
Engelhard Unfabricated (¢/tr oz)	MMACH10	3065.000	3120.000	3110.000	3150.000	3125.000	3114.000
London Fix, Pence (p/tr oz)	MMACE10	2396.000	2441.000	2432.000	2462.000	2437.000	2433.600
London Fix, US (¢/tr oz)	MMACF10	3045.500	3090.500	3083.500	3134.500	3111.000	3093.000
London Silver Price ($/tr oz)	MMAXD00	30.455	30.905	30.835	31.345	31.110	30.930

Exchange rates

Platts Exchange Rates							
USD.GBP London close	GBPUS00	1.264600	1.266100	1.271400	1.275600	1.274700	1.270000
USD.AUD Singapore close	AUDUS00	0.649600	0.649800	0.642800	0.645300	0.642600	0.646000
USD.JPY Singapore close	JPYUS00	0.006700	0.006700	0.006600	0.006700	0.006700	0.007000
USD.EUR London close	EURUS00	1.049100	1.050800	1.053100	1.057100	1.057100	1.053000

Weekly prices

Major Metals

Alumina

	Symbol		Change/ date assessed
PAX FOB Brazil-Aus differential ($/mt)	MMWAD04	20.000	05-Dec

Aluminum

	Symbol		Change/ date assessed
US Six-Months P1020 (¢/lb)	MMANJ04	23.500	05-Dec
US 6063 Billet Upcharge (¢/lb)	MMAKC04	9.000 / 10.000	05-Dec / 05-Dec
US UBCs (¢/lb)	AAFCD00	106.000 / 108.000	+2.000 / +2.000
US MW Transaction-UBCs Spread (¢/lb)	ALUMA04	33.310	+0.270
US Painted Siding (¢/lb)	AASNW02	102.000 / 104.000	-1.000 / -1.000
US 6063 New Bare Extrusion Scrap discount (¢/lb)	AAFCE00	16.000 / 19.000	+1.000 / +1.000
US 6022 New Bare Scrap discount (¢/lb)	AAXVM04	17.000 / 20.000	05-Dec / 05-Dec
US 5052 New Bare Scrap discount (¢/lb)	ABSDB04	8.000 / 11.000	-3.000 / -3.000
Old cast delivered NE Mexico (pesos/kg)	AAXXA04	40.000 / 41.000	05-Dec / 05-Dec
– ¢/lb conversion	AAXUA04	89.631 / 91.872	+0.907 / +0.930
Old sheet delivered NE Mexico (pesos/kg)	AAXXB04	37.000 / 38.000	05-Dec / 05-Dec
– ¢/lb conversion	AAXUB04	82.908 / 85.149	+0.839 / +0.862
UBCs delivered NE Mexico (pesos/kg)	AAXXC04	41.500 / 42.500	05-Dec / 05-Dec
– ¢/lb conversion	AAXUC04	92.992 / 95.233	+0.941 / +0.964
6063 new bare del NE Mexico (pesos/kg)	AAXXD04	45.000 / 30.500	05-Dec / -0.500
– ¢/lb conversion	AAXUD04	100.835 / 103.075	+1.021 / +1.043
CIF Brazil premium duty-unpaid ($/mt)	MMABP04	250.000	06-Dec
DDP SE Brazil premium, low ICMS ($/mt)	MMABS04	280.000	06-Dec
DDP SE Brazil premium, high ICMS ($/mt)	ABRAA04	160.000	-10.000
Alloy 226 delivered European works (Eur/mt)	AALVT00	2200.000 / 2280.000	+10.000 / +20.000
Alloy 231 DDP Germany (Eur/mt)	ABLVT04	2300.000 / 2380.000	+10.000 / +20.000
ADC12 FOB China ($/mt)	AAVSJ00	2410.000 / 2420.000	03-Dec / 03-Dec
ADC12 ex-works China (Yuan/mt)	AAVSI00	19900.000 / 20000.000	03-Dec / 03-Dec

Caustic Soda

	Symbol		Change/ date assessed
FOB NE Asia ($/mt)	AAVSE04	444.000 / 446.000	03-Dec / 03-Dec
CFR SE Asia ($/mt)	AAVSF04	519.000 / 521.000	03-Dec / 03-Dec
Domestic East China Ex-works ($/mt)	AAXDE00	979.000 / 981.000	-40.000 / -40.000
FOB NWE ($/mt)	AANTF00	498.000 / 502.000	-15.000 / -15.000
CFR Med ($/mt)	ACSMA04	550.00	-45.00
FOB US Gulf ($/mt)	AANTI00	485.000 / 495.000	03-Dec / 03-Dec
FOB US Plant ($/mt)	AANTH00	525.000 / 535.000	03-Dec / 03-Dec
US Contract ($/mt)	AANTJ00	785.000 / 795.000	03-Dec / 03-Dec

Copper

	Symbol		Change/ date assessed
MW No.1 Burnt Scrap Disc (¢/lb)	MMACJ10	26.000	+1.000
MW No.1 Bare Bright Disc (¢/lb)	MMACL10	14.000	+1.000
MW No.2 Scrap Disc (¢/lb)	MMACN10	40.000	+1.000
NY Dealer Premium cathodes range (¢/lb)	MMACP00	11.000 / 14.000	03-Dec / 03-Dec
NY Dealer Prem cathodes mean (¢/lb)	MMACP00	12.500	03-Dec
Clean Copper Concentrate ($/mt)	PCCCA04	2319.40	+18.80
Clean Copper Concentrate TC ($/mt)	PCCCB04	5.24	-1.36
Clean Copper Concentrate RC (¢/lb)	PCCCC04	0.52	-0.14
Clean Copper Concentrate Producer-Trader TC Differential ($/mt)	PCCCH04	-0.86	-0.15
Clean Copper Concentrate Producer-Trader RC Differential (¢/mt)	PCCCG04	-8.56	-1.46

Lead

	Symbol		Change/ date assessed
North American Premium (¢/lb)	MMXCD00	15.000	03-Dec
Used lead-acid batteries US Midwest (¢/lb)	MMLAA04	30.500 / 32.000	-0.500 / 03-Dec
Used lead-acid batteries US Northeast (¢/lb)	MMLAB04	32.000 / 34.000	03-Dec / 03-Dec

Nickel

	Symbol		Change/ date assessed
NY Dealer/Cathode ($/lb)	MMAAQ00	7.688 / 7.690	+0.040 / +0.040
NY Dealer/Melting ($/lb)	MMAAS00	7.688 / 7.690	+0.040 / +0.040
NY Dealer/Plating ($/lb)	MMAAU00	7.413 / 7.415	+0.055 / +0.055
NY Dealer/cathode Premium (¢/lb)	MMAZM04	53.500	-0.500
NY Dealer/Melting Premium (¢/lb)	MMAZI04	53.500	-0.500
NY Dealer/plating Premium (¢/lb)	MMAZK04	26.000	+1.000
Plating Grade Prem IW R'dam ($/mt)	MMAYO04	300.000 / 400.000	06-Dec / 06-Dec
Uncut Cathode IW R'dam ($/mt)	MMAYP04	100.000 / 250.000	06-Dec / 06-Dec
Briquette Premium IW R'dam ($/mt)	AALWJ00	250.000 / 350.000	06-Dec / 06-Dec

Zinc

	Symbol		Change/ date assessed
MW SHG Premium (¢/lb)	MMAYH00	17.500	05-Dec
MW Galv. Prem. (¢/lb)	MMAYI00	17.500	05-Dec
MW Alloy #3 Prem. (¢/lb)	MMAYJ00	40.500	05-Dec

Precious Metals

Iridium

	Symbol		Change/ date assessed
MW NY Dealer ($/tr oz)	MMAIJ00	4300.000 / 4400.000	05-Dec / -50.000

Palladium

	Symbol		Change/ date assessed
MW NY Dealer ($/tr oz)	MMABV00	960.000 / 1000.000	-10.000 / -46.000

Platinum

	Symbol		Change/ date assessed
MW NY Dealer ($/tr oz)	MMAHX00	935.000 / 965.000	+10.000 / -10.000

Rhodium

	Symbol		Change/ date assessed
MW NY Dealer ($/tr oz)	MMAID00	4475.000 / 4525.000	05-Dec / -50.000

Ruthenium

	Symbol		Change/ date assessed
MW NY Dealer ($/tr oz)	MMAIH00	400.000 / 440.000	-20.000 / -10.000

Light Metals

Magnesium

	Symbol		Change/ date assessed
MW Magnesium 93% Alloy DDP US (¢/lb)	MMAHR00	200.000 / 300.000	04-Dec / 04-Dec
MW Magnesium 99.8% DDP US (¢/lb)	MMAHQ00	300.000 / 350.000	04-Dec / 04-Dec
Europe Free Market ($/mt)	MMAIZ00	2505.000 / 2560.000	04-Dec / 04-Dec

Silicon

	Symbol		Change/ date assessed
553 Grade Delivered US Midwest (¢/lb)	MMAJM00	135.000 / 145.000	04-Dec / 04-Dec
553 Grade, In-warehouse EU (Eur/mt)	AAIUT00	2060.000 / 2120.000	04-Dec / 04-Dec

Titanium

	Symbol		Change/ date assessed
MW US 70% Ferrotitanium ($/lb)	MMAJX00	3.500 / 3.600	+0.300 / +0.100
Eur. 70% Ferrotitanium ($/kg)	MMAJW00	4.000 / 5.500	05-Dec / 05-Dec
MW US Turning 0.5% ($/lb)	MMAJZ00	2.000 / 2.500	05-Dec / 05-Dec
Eur. Turning .5% ($/lb)	MMAJY00	2.100 / 2.500	05-Dec / 05-Dec

Ferroalloys

Ferrochrome

	Symbol		Change/ date assessed
Charge Chrome 48-52% in-warehouse US (¢/lb)	MMAEX00	130.000 / 140.000	04-Dec / 04-Dec
65% High Carbon in-warehouse US (¢/lb)	MMAFA00	135.000 / 150.000	-5.000 / -5.000
Low Carbon 0.05% in-warehouse US (¢/lb)	MMAFC00	305.000 / 310.000	04-Dec / 04-Dec
Low Carbon 0.10% in-warehouse US (¢/lb)	MMAIM00	255.000 / 260.000	04-Dec / 04-Dec
Low Carbon 0.15% in-warehouse US (¢/lb)	MMANR00	230.000 / 240.000	04-Dec / 04-Dec
Charge Chrome 52% DDP NWE (¢/lb)	MMAIP00	105.000 / 125.000	04-Dec / 04-Dec
65% 6-8% High-Carbon DDP NWE (¢/lb)	MMAIQ00	110.000 / 155.000	04-Dec / 04-Dec
Low-Carbon 0.10% C, 65-70% Cr DDP NWE (¢/lb)	MMAIL00	230.000	04-Dec
Low-Carbon 0.10% C, 60-64.99% Cr DDP NWE (¢/lb)	FLCDA00	205.000	04-Dec
Charge Chrome 48-52% CIF China (¢/lb)	CCXIC04	82.000 / 84.000	-5.500 / -4.500
58-60% High Carbon CIF China (¢/lb)	SB01103	82.000 / 84.000	-5.500 / -4.500
60-65% Spot CIF Japan (¢/lb)	MMAEW00	94.000 / 95.000	-1.000 / -1.000

Ferromanganese

	Symbol		Change/ date assessed
High Carbon 76% in-warehouse US ($/gt)	MMAFH00	1220.000 / 1250.000	-5.000 / -75.000
High Carbon 76% DDP NWE (Eur/mt)	AFERA04	990.000 / 1050.000	+15.000 / 04-Dec
Medium Carbon 85% Mn in-warehouse US (¢/lb)	MMAFK00	117.000 / 120.000	04-Dec / 04-Dec

Ferromolybdenum

	Symbol		Change/ date assessed
MW US FeMo ($/lb)	MMAFQ00	23.700 / 23.900	-0.100 / 05-Dec
60% Ferromolybdenum FOB China ($/kg)	MMAFP00	52.300 / 52.800	-1.600 / -1.300
60% Ferromolybdenum CIF Japan ($/kg)	MMAFM00	49.800 / 50.300	-0.200 / -0.200

Ferrosilicon

	Symbol		Change/ date assessed
75% Si in-warehouse US (¢/lb)	MMAFT00	115.000 / 130.000	-10.000 / -5.000
75% Si CIF Japan ($/mt)	MMAJP00	1220.000 / 1240.000	-10.000 / -10.000
75% Si FOB China ($/mt)	MMAKB00	1200.000 / 1220.000	-10.000 / -10.000
75% Std DDP NWE (Eur/mt)	AAIUR00	1300.000 / 1400.000	-20.000 / +35.000

Weekly prices (continued)

	Symbol		Change/ date assessed
Ferrovanadium			
Free Market V205 ($/lb)	MMAGD00	9.000 / 10.000	05-Dec / 05-Dec
US Ferrovanadium ($/lb)	MMAFY00	13.500 / 13.800	-0.100 / -0.300
Europe Ferrovanadium ($/kg)	MMAYY04	26.000 / 26.250	05-Dec / 05-Dec
Manganese			
Electrolytic 99.7% FOB China ($/mt)	MMAIX00	1670.000 / 1690.000	06-Dec / 06-Dec
44% Manganese Ore CIF Tianjin ($/dmtu)	AAWER00	4.200	06-Dec
36% Manganese Ore CIF Tianjin ($/dmtu)	AAXRX00	3.900	06-Dec
Iron Differential per 1% (\> 40% Mn Ore)	FAWER04	0.030	06-Dec
Silica Differential per 1% (\> 40% Mn Ore)	SAWER04	-0.020	06-Dec

	Symbol		Change/ date assessed
Silicomanganese			
65% Mn in-warehouse US (¢/lb)	MMAGR00	61.000 / 63.000	+1.000 / -2.000
65% Mn CIF Japan ($/mt)	MMAJG00	880.000 / 890.000	+10.000 / 04-Dec
65:16 DDP NWE (Eur/mt)	AAITQ00	990.000 / 1040.000	04-Dec / 04-Dec
Stainless Scrap			
NA FREE MKT 18-8 ($/lt)	AALDQ00	1190.000 / 1210.000	-20.000 / -22.000

Monthly prices

	Symbol		Change/ date assessed
Calcined Petroleum Coke			
FOB US Gulf Coast ($/mt)	MMXEV00	385.000 / 405.000	27-Nov / 27-Nov

Monthly averages November 2024

	Symbol		Last month	% Change	Last year	% Change	2024 High	2024 Low
Major Metals								
Alumina								
PAX FOB Australia ($/mt)	MMWAU03	757.81	640.41	18.3	329.10	130.3	787.000	350.000
PAX FOB Brazil-Aus differential ($/mt)	MMWAD03	25.50	26.80	-4.9	21.00	21.4	45.000	16.000
PAX CIF China ($/mt)	MMALZ03	782.414	666.352	17.4	352.538	121.9	810.800	373.300
PAX China Ex-works ($/mt)	MMXWC03	777.297	635.204	22.4	418.755	85.6	806.930	449.340
DBF Aus-China Handysize ($/mt)	MMACH03	24.605	25.943	-5.2	23.443	5.0	29.750	20.550
Caustic Soda								
FOB NE Asia ($/mt)	AAVSE03	458.750	424.000	8.2	348.500	31.6	466.000	324.000
CFR SE Asia ($/mt)	AAVSF03	528.750	499.000	6.0	412.500	28.2	556.000	389.000
Aluminum								
MW US Transaction (¢/lb)	MMAAF02	138.622	137.009	1.2	118.744	16.7	142.143	114.065
MW US Transaction premium (¢/lb)	MMAKE03	21.450	19.148	12.0	18.852	13.8	22.050	17.450
US Aluminum all-in (basis CME) (¢/lb)	ALINA03	137.074	135.188	1.4	119.139	15.1	137.074	116.547
US Aluminum all-in (basis CME) ($/mt)	ALINB03	3021.959	2980.374	1.4	2626.561	15.1	3021.959	2569.417
US Low-Carbon Premium (US-LCAP) (¢/lb)	ALCRA03	0.000	0.000	NA	NA	NA	0.000	0.000
US Low-Carbon Premium (US-LCAP) ($/mt)	ALCRD03	0.000	0.000	NA	NA	NA	0.000	0.000
US-LCAP Transaction (All-in) (¢/lb)	ALCRB03	138.622	137.009	1.2	NA	NA	138.622	116.989
US-LCAP Transaction (All-in) ($/mt)	ALCRE03	3056.083	3020.529	1.2	NA	NA	3056.083	2579.167
US-LCAP All-in (Basis CME) (¢/lb)	ALCRC03	137.076	135.188	1.4	NA	NA	137.076	116.529
US-LCAP All-in (Basis CME) ($/mt)	ALCRF03	3021.998	2980.374	1.4	NA	NA	3021.998	2569.014
MW US Net-Cash premium (¢/lb)	MMACN03	20.548	18.393	11.7	17.952	14.5	20.548	17.090
US P1020 Import Duty (¢/lb)	MMOHU03	12.107	11.961	1.2	10.300	17.5	12.107	10.141
MW US Transaction premium (implied duty-unpaid) (¢/lb)	MMOFU03	9.343	7.187	30.0	8.552	9.2	9.343	7.176
MW US Transaction price (implied duty-unpaid) (¢/lb)	MMOGU03	126.515	125.048	1.2	108.444	16.7	126.515	106.849
MW US Market (¢/lb)	MMAAE03	138.940	136.848	1.5	119.011	16.7	0.00	0.00
CIF NOLA duty-unpaid prem (¢/lb)	MMNDU03	14.515	12.642	14.8	9.072	60.0	14.515	6.804
CIF NOLA-MW premium differential (¢/lb)	MMNOL03	6.935	6.506	6.6	9.780	-29.1	12.246	5.192
CIF NOLA duty-unpaid prem ($/mt)	MMODU03	320.000	278.696	14.8	200.000	60.0	320.000	150.000
Duty paid IW R'dam mid ($/mt)	AALVH03	349.11	339.35	2.9	209.55	66.6	362.50	240.00
Duty paid IW R'dam low ($/mt)	AALVH03	337.98	328.70	2.8	199.09	69.8	350.00	230.00
Duty paid IW R'dam high ($/mt)	AALVH03	360.24	350.00	2.9	220.00	63.7	375.00	250.00
Duty unpaid IW R'dam mid ($/mt)	AALVK00	299.05	294.89	1.4	145.34	105.8	305.00	165.00
Duty unpaid IW R'dam low ($/mt)	AALVK00	291.91	289.78	0.7	134.09	117.7	300.00	150.00
Duty unpaid IW R'dam high ($/mt)	AALVK00	306.19	300.00	2.1	156.59	95.5	310.00	180.00
Low-carbon 6060/6063 Billet DDP Germany ($/mt)	LCABG03	589.43	603.91	-2.4	377.16	56.3	630.00	370.00
Low-carbon 6060/6063 Billet DDP Italy ($/mt)	LCABI03	589.76	601.74	-2.0	376.82	56.5	625.00	360.00
Billet 6060/6063 DDP Germany ($/mt)	ABGEA03	579.43	601.30	-3.6	377.16	53.6	630.00	370.00
Billet 6060/6063 DDP Italy ($/mt)	ABITA03	579.76	599.13	-3.2	376.82	53.9	625.00	360.00
CIF Japan premium ($/mt)	AAMDP00	170.810	160.136	6.7	76.476	123.4	175.000	90.000
CIF Japan Fixed Price Equivalent ($/mt)	MMJAL03	2756.167	2757.114	0.0	2282.238	20.8	2757.114	2271.286
CIF Japan Quarter Fixed Price Equivalent ($/mt)	MMJAQ03	2760.357	2771.432	-0.4	2302.762	19.9	2771.432	2276.100
CIF Major Asian Port (MAP) P1020 Premium	AAFGG03	173.714	155.318	11.8	99.952	73.8	173.714	101.636
CIF Brazil premium ($/mt)	MMABP03	250.000	250.000	0.0	250.000	0.0	250.000	250.000
Brazil DDP SE Prem, low ICMS ($/mt)	MMABS03	284.000	283.750	0.1	265.000	7.2	295.000	250.000
Brazil DDP SE Prem, high ICMS ($/mt)	ABRAA03	178.000	183.750	-3.1	200.000	-11.0	200.000	165.000
Alloy 226 del Eur (Eur/mt)	AALVU00	2214.000	2153.750	2.8	2201.250	0.6	2470.000	2110.000
Alloy 231 DDP Germany (Eur/mt)	ABLVT03	2312.000	2238.750	3.3	2270.000	1.9	2513.750	2202.500
European Aluminum Scrap High Grade Auto Shreds (Eur/mt)	ANICC03	1686.670	1616.960	4.3	NA	NA	1873.500	1616.960
MW A-380 Alloy (¢/lb)	MMAAD02	134.429	135.139	-0.5	127.500	5.4	138.000	126.000
US MW Transaction-A380 Spread (¢/lb)	ALUMB03	4.123	1.889	118.3	-8.638	-147.7	4.123	-12.534
MW 319 (¢/lb)	MMAAC02	142.429	143.944	-1.1	143.938	-1.0	149.000	140.000
MW 356 (¢/lb)	MMAAB02	159.571	160.167	-0.4	146.875	8.6	163.000	145.000
MW US A356.2 Upcharge (¢/lb)	AUMIA03	23.105	26.913	-14.1	NA	NA	28.000	16.000
MW A356.2 (All-in) (¢/lb)	AUMIB03	161.831	163.922	-1.3	NA	NA	168.143	130.565
MW F132 (¢/lb)	MMAAA02	151.143	150.722	0.3	148.250	2.0	153.000	146.000
MW US A413 (¢/lb)	MMWUS03	165.429	166.667	-0.7	164.125	0.8	171.000	164.000
MW US B390 (¢/lb)	FAALB03	185.143	186.167	-0.6	188.313	-1.7	188.000	185.143
US Old Cast (¢/lb)	AAFFN00	81.500	79.222	2.9	71.875	13.4	87.000	72.000
US Old Sheet (¢/lb)	AAFBO00	85.643	86.500	-1.0	72.813	17.6	90.000	73.000
US Mill-grade MLCCs (¢/lb)	AAFBR00	100.143	100.500	-0.4	76.875	30.3	106.000	75.000
US MW Transaction-Mill MLCCs Spread (¢/lb)	ALUMC03	38.409	36.528	5.1	41.988	-8.5	44.679	31.805
US Smelter-grade MLCCs (¢/lb)	AAFBV00	83.000	85.778	-3.2	68.000	22.1	88.000	68.000

Monthly averages (continued)

	Symbol		Last month	% Change	Last year	% Change	2024 High	2024 Low
US HG Auto Shreds (¢/lb)	AASSP03	89.000	89.000	0.0	85.063	4.6	98.000	86.000
US LG Auto Shreds (¢/lb)	AASSO03	82.429	82.000	0.5	74.500	10.6	88.000	74.000
US Turnings (¢/lb)	AAFCC00	79.357	77.444	2.5	62.375	27.2	86.000	65.000
US Clean Aluminum Wheels (¢/lb)	ACLEA03	106.579	106.457	0.1	NA	NA	115.000	101.000
US 6063 Billet Upcharge (¢/lb)	AAMDO00	9.500	9.900	-4.0	10.200	-6.9	11.500	7.500
US 6063 New Bare Extrusion Scrap discount (¢/lb)	AAMCZ00	17.500	15.700	11.5	18.800	-6.9	21.000	9.000
US 6063 New Bare Ext Scrap (¢/lb)	AAXVZ03	121.704	122.378	-0.6	99.747	22.0	130.143	93.558
US 6022 New Bare Scrap discount (¢/lb)	AAXVM03	18.500	20.500	-9.8	29.900	-38.1	30.000	17.000
US 6022 New Bare Scrap (¢/lb)	AAXVX03	120.122	116.074	3.5	88.744	35.4	124.916	84.558
US 5052 New Bare Scrap discount (¢/lb)	ABSDB03	15.500	14.700	5.4	16.200	-4.3	20.000	10.000
US 5052 New Bare Scrap (¢/lb)	ABSDA03	122.979	122.335	0.5	102.176	20.4	129.143	96.558
US Painted Siding (¢/lb)	AASNW03	103.750	102.400	1.3	78.400	32.3	106.000	76.000
US UBCs (¢/lb)	AAMDC00	105.125	101.200	3.9	70.200	49.8	108.000	73.000
US MW Transaction-UBCs Spread (¢/lb)	ALUMA03	33.393	35.706	-6.5	48.264	-30.8	43.185	32.415
Old cast, del NE Mexico (¢/lb)	AAXUA03	89.591	91.917	-2.5	94.794	-5.5	97.487	87.758
Old sheet, del NE Mexico (¢/lb)	AAXUB03	83.446	83.400	0.1	73.463	13.6	86.404	75.853
UBCs, del NE Mexico (¢/lb)	AAXUC03	91.815	90.753	1.2	61.995	48.1	92.931	64.135
6063 scrap del NE Mexico (¢/lb)	AAXUD03	100.471	100.390	0.1	97.671	2.9	103.993	94.303
Old cast, del NE Mexico (pesos/kg)	AAXXA03	40.125	40.000	0.3	36.400	10.2	40.625	34.500
Old sheet, del NE Mexico (pesos/kg)	AAXXB03	37.375	36.300	3.0	28.200	32.5	37.875	28.625
UBCs, del NE Mexico (pesos/kg)	AAXXC03	41.125	39.500	4.1	23.800	72.8	41.625	24.200
6063 scrap del NE Mexico (pesos/kg)	AAXXD03	45.000	43.700	3.0	37.500	20.0	45.500	35.000
Low Emissions Aluminum								
LC price paid IW R'dam mid ($/mt)	LALVE03	369.107	359.348	2.7	235.000	57.1	369.107	280.286
LC price paid IW R'dam low ($/mt)	LALVE03	357.976	348.696	2.7	224.545	59.4	357.976	270.333
LC price paid IW R'dam high ($/mt)	LALVE03	380.238	370.000	2.8	245.455	54.9	380.238	290.238
LC price unpaid IW R'dam mid ($/mt)	LALVI03	322.381	314.891	2.4	170.795	88.8	322.381	210.357
LC price unpaid IW R'dam low ($/mt)	LALVI03	315.238	309.783	1.8	159.545	97.6	315.238	203.571
LC price unpaid IW R'dam high ($/mt)	LALVI03	329.524	320.000	3.0	182.045	81.0	329.524	217.143
ZC price paid IW R'dam mid ($/mt)	ZALVE03	434.536	428.383	1.4	237.611	82.9	434.536	326.286
ZC price paid IW R'dam low ($/mt)	ZALVE03	423.405	417.730	1.4	227.156	86.4	423.405	316.333
ZC price paid IW R'dam high ($/mt)	ZALVE03	445.667	439.035	1.5	248.065	79.7	445.667	336.238
ZC price unpaid IW R'dam mid ($/mt)	ZALVI03	387.810	383.926	1.0	173.406	123.6	387.810	256.357
ZC price unpaid IW R'dam low ($/mt)	ZALVI03	380.667	378.817	0.5	162.156	134.8	380.667	249.318
ZC price unpaid IW R'dam mid ($/mt)	ZALVI03	394.952	389.035	1.5	184.656	113.9	394.952	263.143
LCAP paid IW R'dam ($/mt)	LCARA03	20.000	20.000	0.0	NA	NA		
LCAP unpaid IW R'dam ($/mt)	LCARB03	23.333	20.000	16.7	NA	NA		
ZCAP paid IW R'dam ($/mt)	LCARC03	85.429	89.035	-4.1	NA	NA		
ZCAP unpaid IW R'dam ($/mt)	LCARD03	88.762	89.035	-0.3	NA	NA		
Copper								
COMEX HG 1ST Pos (¢/lb)	CMAAD02	417.455	438.463	-4.8	371.836	12.3	511.900	368.600
COMEX HG 2ND Pos (¢/lb)	CMAAE02	420.625	442.443	-4.9	373.779	12.5	510.600	369.250
COMEX HG 3RD Pos (¢/lb)	CMAAF10	433.215	454.796	-4.7	385.248	12.5	500.150	377.950
MW No.1 Burnt Scrap (¢/lb)	MMACJ02	26.000	25.600	1.6	16.750	55.2	29.000	13.000
MW No.1 Bare Bright (¢/lb)	MMACL02	13.500	14.200	-4.9	9.000	50.0	17.000	8.000
MW No.2 Scrap (¢/lb)	MMACN02	42.000	44.200	-5.0	29.750	41.2	46.000	28.000
NY Dlr Prem Cath (¢/lb)	MMACP03	11.000	11.000	0.0	7.375	49.2	14.000	7.500
US Transaction (¢/lb)	MMCUT03	430.450	450.963	-4.5	379.836	13.3	522.400	377.100
Clean Copper Concentrate ($/mt)	PCCCA03	2351.333	2465.818	-4.6	1979.762	18.8		
Clean Copper Concentrate TC ($/mt)	PCCCB03	8.414	8.023	4.9	77.729	-89.2		
Clean Copper Concentrate RC (¢/lb)	PCCCC03	0.841	0.802	4.9	7.773	-89.2		
Lead								
North American Market (¢/lb)	AADDN00	104.980	106.784	-1.7	112.613	-6.8	119.418	100.909
Used lead-acid batteries USMW (¢/lb)	MMLAB04	31.375	31.200	0.6	21.625	45.1	33.000	19.000
Used lead-acid batteries USNE (¢/lb)	MMLAB03	33.000	32.100	2.8	24.000	37.5	34.000	21.000
Tin								
MW NY Dealer (¢/lb)	MMAAW02	1416.857	1508.222	-6.1	1153.625	22.8	1667.000	1159.000
Zinc								
MW NA SHG (¢/lb)	MMABD02	153.441	158.203	-3.0	140.520	9.2	163.851	122.669
MW NA GAL (¢/lb)	MMABI02	153.441	158.203	-3.0	140.520	9.2	163.851	122.669
MW Alloyer NO. 3 (¢/lb)	MMABH02	176.202	181.355	-2.8	164.338	7.2	186.851	149.169

Precious Metals

	Symbol		Last month	% Change	Last year	% Change	2024 High	2024 Low
Gold								
COMEX 1ST Pos ($/tr oz)	CMAAG02	2649.815	2688.904	-1.5	1985.371	33.5	2788.5	1990.3
COMEX 2ND Pos ($/tr oz)	CMAAH02	2761.905	2806.522	-1.6	2086.067	32.4	2905.8	2093.4

Monthly averages (continued)

	Symbol		Last month	% Change	Last year	% Change	2024 High	2024 Low
Engelhard Unfab ($/tr oz)	MMABN02	2656.789	2679.261	-0.8	1985.150	33.8	2785.0	1991.0
Handy& Harman ($/tr oz)	MMABK02	2651.129	2690.078	-1.4	1984.115	33.6	2777.8	1985.1
London Final ($/tr oz)	MMABL02	2650.683	2690.078	-1.5	1985.273	33.5	2777.8	1985.1
London Initial ($/tr oz)	MMABM02	2656.086	2690.050	-1.3	1983.745	33.9	2784.0	1990.8
Iridium								
NY Dealer mean ($/tr oz)	MMAIJ03	4506.250	4555.000	-1.1	4890.000	-7.8	5000.0	4300.0
Palladium								
JM Base NA ($/tr oz)	LMABS02	1015.381	1078.739	-5.9	1061.182	-4.3	1252.0	859.0
Engelhard Unfab ($/tr oz)	MMABW02	1022.158	1079.913	-5.3	1063.150	-3.9	1249.0	865.0
NYMEX EX NEARBY ($/tr oz)	XMAAA02	1006.275	1074.717	-6.4	1058.838	-5.0	1228.3	826.1
NY Dealer mean ($/tr oz)	MMABV03	1015.500	1077.000	-5.7	1062.700	-4.4	1175.0	880.0
NY Dealer low ($/tr oz)	MMABV03	964.500	1026.200	-6.0	1018.600	-5.3	1105.0	830.0
NY Dealer high ($/tr oz)	MMABV03	1066.500	1127.800	-5.4	1106.800	-3.6	1245.0	930.0
Platinum								
JM Base NA ($/tr oz)	LMABW02	968.095	1005.826	-3.8	913.909	5.9	1074.0	879.0
Engelhard Unfab ($/tr oz)	MMAHH02	970.263	1003.913	-3.4	911.100	6.5	1069.0	875.0
NYMEX EX NEARBY ($/tr oz)	XMAAB02	967.280	1009.622	-4.2	912.157	6.0	1090.0	878.2
NY Dealer mean ($/tr oz)	MMAHX03	964.875	1001.600	-3.7	908.900	6.2	1095.0	868.0
NY Dealer low ($/tr oz)	MMAHX03	938.750	974.600	-3.7	880.800	6.6	1020.0	868.0
NY Dealer high ($/tr oz)	MMAHX03	991.000	1028.600	-3.7	937.000	5.8	1095.0	905.0
Rhodium								
NY Dealer mean ($/tr oz)	MMAID03	4575.000	4688.500	-2.4	4225.000	8.3	4750.0	4250.0
NY Dealer low ($/tr oz)	MMAID03	4537.500	4650.000	-2.4	4020.000	12.9	4700.0	4175.0
NY Dealer high ($/tr oz)	MMAID03	4612.500	4727.000	-2.4	4430.000	4.1	4800.0	4325.0
JM Base N. AMERI ($/tr oz)	LMACA02	4633.333	4739.130	-2.2	4376.136	5.9	4825.0	4325.0
Engelhard Unfab ($/tr oz)	MMAHY02	4640.789	4738.043	-2.1	4401.250	5.4	4825.0	4500.0
Ruthenium								
NY Dealer mean ($/tr oz)	MMAIH03	440.625	456.000	-3.4	384.500	14.6	500.0	320.0
Silver								
COMEX 1ST Pos (¢/tr oz)	CMAAJ02	3108.295	3241.891	-4.1	2352.100	32.1	3483.1	2209.6
COMEX 2ND Pos (¢/tr oz)	CMAAK02	3132.025	3265.235	-4.1	2370.338	32.1	3504.1	2226.6
COMEX 3RD Pos (¢/tr oz)	CMAAL02	3243.355	3385.635	-4.2	2465.000	31.6	3636.8	2324.9
Handy& Harman (¢/tr oz)	MMACD02	3109.395	3241.561	-4.1	2348.780	32.4	3456.5	2211.9
Engelhard Unfab (¢/tr oz)	MMACH02	3129.316	3259.565	-4.0	2361.250	32.5	3460.0	2200.0
London Fix, Pence (pence/tr oz)	MMACE02	2442.762	2482.913	-1.6	1883.909	29.7	2659.000	1746.000
London Fix, US (¢/tr oz)	MMACF02	3113.452	3241.413	-3.9	2338.977	33.1	3451.0	2208.5
London Silver Price ($/tr oz)	MMAXD02	31.135	32.414	-3.9	23.390	33.1	34.5	22.1

Light Metals

	Symbol		Last month	% Change	Last year	% Change	2024 High	2024 Low
Magnesium								
MW Magnesium 93% Alloy DDP US (¢/lb)	MMAHR03	250.000	250.000	0.0	355.000	-29.6	325.000	200.000
MW Magnesium 99.8% DDP US (¢/lb)	MMAHQ03	325.000	325.000	0.0	427.000	-23.9	425.000	300.000
Silicon								
553 Grade Del US Midwest (¢/lb)	MMAJM03	147.000	160.800	-8.6	142.100	3.4	210.000	135.000
Titanium								
MW US 70% Ferro ($/lb)	MMAJX03	3.350	3.350	0.0	3.500	-4.3	4.000	3.000
MW US Turning 0.5% ($/lb)	MMAJZ03	2.250	2.250	0.0	2.250	0.0	2.500	2.000

Battery Metals

	Symbol		Last month	% Change	Last year	% Change	2024 High	2024 Low
Lithium Carbonate CIF North Asia ($/mt)	BATLC03	10376	10195	1.8	21024	-51.5	15000	10000
Recycled Lithium Carbonate CIF North Asia ($/mt)	BATNA03	9448	9695	-2.5	NA	NA	12000	9000
Lithium Hydroxide CIF North Asia ($/mt)	BATLH03	8829	9818	-10.1	21162	-58.3	15200	8300
Lithium Carbonate CIF North Asia Import Parity (Yuan/mt)	BATCP03	84314	81800	3.1	170228	-50.5	120702	80420
Lithium Carbonate DDP China (Yuan/mt)	BATCA03	77600	73755	5.2	139190	-44.2	114000	70500
Recycled Lithium Carbonate DDP China (Yuan/mt)	BATCN03	76457	72623	5.3	NA	NA	90000	69500
Lithium Hydroxide DDP China (Yuan/mt)	BATHY03	68690	68795	-0.2	133333	-48.5	107000	65800
Lithium Carbonate CIF Europe ($/mt)	LCCIF03	10448	10183	2.6	21377	-51.1	15800	10000
Lithium Hydroxide CIF Europe ($/mt)	LHCIF03	9164	9943	-7.8	21807	-58.0	15900	8500
Lithium Carbonate DDP US ($/mt)	ALTHA03	11611	12074	-4	NA	NA	15500	11611
Lithium Hydroxide DDP US ($/mt)	ALTHB03	11711	12170	-3.8	NA	NA	12170	11711
Lithium Triangle - LiT FOB ($/mt)	BATLA03	9953	9843	1	NA	NA	9953	9843
Lithium Spodumene 6% FOB Australia ($/mt)	BATSP05	798	745	7	NA	NA	1162	739
Lithium Spodumene 0.1% differential to Spodumene 6% FOB Australia ($/mt)	BATSS03	13.31	12.41	7.25	NA	NA	19.37	12.31

Monthly averages (continued)

	Symbol		Last month	% Change	Last year	% Change	2024 High	2024 Low
Cobalt Sulfate CIF North Asia ($/mt)	BATCO03	4387	4786	-8.3	6560	-33.1	5900	4280
Cobalt Hydroxide CIF China ($/mt)	BATCT03	13080.75	13267.80	-1.41	16944.08	-22.80	15873.26	12786.80
Cobalt Hydroxide CIF China ($/lb)	BATCH03	5.93	6.02	-1.50	7.69	-22.89	7.20	5.80
Cobalt Sulfate DDP China (Yuan/mt)	BATCS03	26324	26986	-2.5	35024	-24.8	33200	25800
Cobalt Metal 99.8% Mixed-Use Basket A IW Rotterdam ($/lb)	ECMCG03	9.895	9.911	-0.161	NA	NA	10.064	9.895
Cobalt Metal 99.8% Mixed-Use Basket B IW Rotterdam ($/lb)	MMAIK03	10.933	11.104	-1.540	16.494	-33.715	17.500	10.250
Cobalt Metal 99.8% Alloy Use IW Rotterdam ($/lb)	ECMAG03	13.881	13.652	1.677	NA	NA	14.381	13.652
99.8% US Spot cath mean ($/lb)	MMAEO03	15.680	15.904	-1.4	18.835	-16.8	19.150	14.750
Nickel Sulfate DDP China (Yuan/mt)	BATNS03	25938	27007	-4	29286	-11	33000.000	24500.000
Nickel Sulfate DDP China ($/mt)	BATNU03	3616	3813	-5	4094	-12	4642.000	3446.000
Nickel Sulfate premium CIF Northeast Asia ($/mt)	BATNB03	1686	1460	15.5	NA	NA	1800	1200
Nickel Sulfate calculated price CIF Northeast Asia ($/mt)	BATNC03	3886	4086	-4.9	NA	NA	4275	3760
Europe Nickel Sulfate premium IW Rotterdam ($/mt)	ANICA03	2350	2350	0	NA	NA	2650	2243
Europe Nickel Sulfate calculated price IW Rotterdam ($/mt)	ANICB03	4033	4270	-6	NA	NA	4926	4033
Nickel Sulfate premium CIF US ($/mt)	ANIPB03	2800	2724	2.8	NA	NA	2800	2650
Nickel Sulfate calculated price CIF US ($/mt)	ANIPC03	4133	4354	-5.1	NA	NA	4597	4034
MHP CIF North Asia basis Nickel Sulfate ($/mt)	BATME03	13135	13967	-6	14397	-9	17278	11488
MHP CIF North Asia basis Nickel Sulfate (Yuan/mt)	BATMA03	94215	98922	-5	102997	-9	122825	81667
MHP CIF North Asia payable basis Nickel Sulfate (%)	BATMB03	81	82	-1	79	3	83	75
MHP CIF North Asia basis LME Nickel ($/mt)	BATMC03	13512	13019	4	14060	-4	15418	11631
MHP CIF North Asia payable basis LME Nickel (%)	BATMD03	80	81	-1	77	4	83	71
Manganese Sulfate DDP China (Yuan/mt)	BATMS03	6153	6157	0	5095	21	6450.000	4100.000
Manganese Sulfate DDP China ($/mt)	BATMT03	858	869	-1	712	21	905.000	576.000
LFP Black Mass DDP China percent Lithium (Yuan/mt)	LBMCA03	2733	2732	0	5526	-51	4800	2550
Ni-Co Black Mass DDP China Lithium payables (%)	NBMCA03	73	72	1	71	3	78	59
Ni-Co Black Mass DDP China Cobalt payables (%)	NBMCB03	73	72	1	71	3	78	59
Ni-Co Black Mass DDP China Nickel payables (%)	NBMCC03	73	73	0	71	3	78	59
Ni-Co Black Mass DDP China calculated price (Yuan/mt)	NBMCD03	23915	23782	1	51261	-53	51893	22644
Ni-Co Black Mass EXW Europe Lithium payables (%)	NBMEA03	0.00	0.00	NA	0.00	NA	0.00	0.00
Ni-Co Black Mass EXW Europe Cobalt payables (%)	NBMEB03	62.19	58.59	6.14	70.00	-11.16	63.00	50.00
Ni-Co Black Mass EXW Europe Nickel payables (%)	NBMEC03	62.19	58.59	6.14	70.00	-11.16	63.00	50.00
Ni-Co Black Mass EXW Europe calculated price ($/mt)	NBMED03	1853	1820	2	4922	-62	3646	1711
Ni-Co Black Mass DDP US Lithium payables (%)	NBNEC00	0.00	1.52	-100.00	1.50	-100.00	10.00	0.00
Ni-Co Black Mass DDP US Cobalt payables (%)	NBNEB00	66.58	66.00	0.88	60.00	10.97	70.00	51.00
Ni-Co Black Mass DDP US Nickel payables (%)	NBNEA00	66.58	66.00	0.88	60.00	10.97	70.00	51.00
Ni-Co Black Mass DDP US calculated price ($/mt)	NBNED00	2198	2292	-4	2315	-5	2615	2057
Natural Flake Graphite 94-95% C, FOB China ($/mt)	BATAA03	378	362	4	NA	NA	421	362
Natural Flake Graphite 94-95% C, CIF Northeast Asia ($/mt)	BATBA03	408	392	4	NA	NA	469	392
Spherical Graphite 99.95% C, FOB China ($/mt)	BATAB03	1729	1719	1	NA	NA	1893	1719
Spherical Graphite 99.95% C, CIF Northeast Asia ($/mt)	BATBB03	1759	1749	1	NA	NA	1940	1749
Uncalcined Needle Coke DDP China (Yuan/mt)	BATCC03	4945	5110	-3.2	NA	NA	5500	4900
Uncalcined Needle Coke DDP China (Import Parity) ($/mt)	BATIP03	584	612	-4.6	NA	NA	657	577

Monthly averages (continued)

	Symbol		Last month	% Change	Last year	% Change	2024 High	2024 Low
Ferroalloys								
Ferrochrome								
65% High Carbon IW US mean (¢/lb)	MMAFA03	147.500	154.500	-4.5	195.000	-24.4	202.500	
65% High Carbon IW US low (¢/lb)	MMAFA03	140.000	149.000	-6.0	190.000	-26.3	200.000	
65% High Carbon IW US high (¢/lb)	MMAFA03	155.000	160.000	-3.1	200.000	-22.5	205.000	
Low Carbon .10% IW US mean (¢/lb)	MMAIM03	257.500	260.500	-1.2	337.500	-23.7	307.500	
Low Carbon .10% IW US low (¢/lb)	MMAIM03	255.000	257.000	-1.2	335.000	-23.7	305.000	
Low Carbon .10% IW US high (¢/lb)	MMAIM03	260.000	264.000	-1.2	340.000	-23.5	310.000	
Low Carbon .05% IW US mean (¢/lb)	MMAFC03	307.500	307.500	0.0	436.000	-29.5	390.000	
Low Carbon .05% IW US low (¢/lb)	MMAFC03	305.000	305.000	0.0	431.000	-29.2	385.000	
Low Carbon .05% IW US high (¢/lb)	MMAFC03	310.000	310.000	0.0	441.000	-29.7	395.000	
60-65% High Carbon CIF Japan (¢/lb)	MMAEW03	96.000	99.500	-3.5	103.800	-7.5	113.500	
Ferromanganese								
Med Carbon 85% Mn IW US mean (¢/lb)	MMAFK03	118.500	118.500	0.0	111.000	6.8	118.500	
Med Carbon 85% Mn IW US low (¢/lb)	MMAFK03	117.000	117.000	0.0	110.000	6.4	117.000	
Med Carbon 85% Mn IW US high (¢/lb)	MMAFK03	120.000	120.000	0.0	112.000	7.1	120.000	
High Carbon 76% IW US mean ($/gt)	MMAFH03	1365.000	1538.000	-11.2	1175.000	16.2	1575.000	
High Carbon 76% IW US low ($/gt)	MMAFH03	1311.250	1506.000	-12.9	1150.000	14.0	1550.000	
High Carbon 76% IW US high ($/gt)	MMAFH03	1418.750	1570.000	-9.6	1200.000	18.2	1600.000	
Ferromolybdenum								
US FeMo mean ($/lb)	MMAFQ03	23.863	23.765	0.4	20.935	14.0	25.400	22.300
Europe 65% mean ($/lb)	MMAFO03	51.185	51.153	0.1	43.767	16.9	57.100	45.150
Stainless scrap								
NA FREE MKT 18-8 ($/lt)	AALDS00	1221.000	1265.800	-3.5	1061.760	15.0	1971.000	672.000
EU CIF Rotterdam 18-8 (Eur/mt)	CASSR03	1225.238	NA	NA	NA	NA	1225.238	1225.238
EU CIF Rotterdam 18-8 ($/mt)	CASSS03	1300.950	NA	NA	NA	NA	1300.950	1300.950
Ferrosilicon								
75% Si IW US mean (¢/lb)	MMAFT03	130.000	131.500	-1.1	100.600	29.2	145.000	
75% Si IW US low (¢/lb)	MMAFT03	125.000	128.000	-2.3	95.000	31.6	140.000	
75% Si IW US high (¢/lb)	MMAFT03	135.000	135.000	0.0	106.200	27.1	150.000	
75% CIF Japan ($/mt)	MMAJP03	1252.500	1312.500	-4.57	1290.000	-2.91		
75% FOB China ($/mt)	MMAKB03	1233.750	1295.000	-4.73	1275.000	-3.24		
Ferrovanadium								
US Ferrovanadium ($/lb)	MMAFY03	14.031	13.200	6.3	14.020	0.1	14.300	12.350
Manganese								
44% Mn Ore CIF Tianjin ($/dmtu)	AAWER03	4.070	4.125	-1.3	4.175	-2.5	8.433	4.070
36% Mn Ore CIF Tianjin	AAXRX03	3.820	3.700	3.2	3.588	6.5	6.175	3.700
Iron Differential per 1% (\> 40% Mn Ore)	FAWER03	0.042	0.043	-2.3	0.125	-66.4	0.092	0.020
Silica Differential per 1% (\> 40% Mn Ore)	SAWER03	-0.020	-0.033	-39.4	-0.025	-20.0	-0.020	-0.088
Molybdenum								
Dealer Oxide Midpoint/mean ($/lb)	MMAYQ03	21.784	21.938	-0.7	17.410	25.1	24.125	
Dealer Oxide low ($/lb)	MMAYQ03	21.693	21.864	-0.8	17.191	26.2	23.900	
Dealer Oxide high ($/lb)	MMAYQ03	21.875	22.013	-0.6	17.630	24.1	24.350	
Nickel								
NY Dealer Cathode mean ($/lb)	MMAAQ03	7.680	8.091	-5.1	8.421	-8.8	9.506	7.495
NY Dealer Cathode low ($/lb)	MMAAQ03	7.679	8.089	-5.1	8.418	-8.8	9.500	7.494
NY Dealer Cathode high ($/lb)	MMAAQ03	7.681	8.093	-5.1	8.423	-8.8	9.511	7.496
NY Dealer Melt mean ($/lb)	MMAAS03	7.680	8.091	-5.1	8.401	-8.6	9.506	7.495
NY Dealer Melt low ($/lb)	MMAAS03	7.679	8.089	-5.1	8.398	-8.6	9.500	7.494
NY Dealer Melt high ($/lb)	MMAAS03	7.681	8.093	-5.1	8.403	-8.6	9.511	7.496
Silicomanganese								
65% Mn IW US mean (¢/lb)	MMAGR03	66.625	69.200	-3.7	56.250	18.4	70.000	
65% Mn IW US low (¢/lb)	MMAGR03	65.000	68.600	-5.2	55.700	16.7	69.000	
65% Mn IW US high (¢/lb)	MMAGR03	68.250	69.800	-2.2	56.800	20.2	71.000	
65% CIF Japan ($/mt)	MMAJG03	880.000	918.750	-4.22	863.000	1.97		

Platts Exchange Rates

USD.GBP London close	GBPUS03	1.274400	1.304530	-2.3	1.242841	2.5	1.341200	1.233500
USD.AUD Singapore close	AUDUS03	0.653295	0.671841	-2.8	0.649743	0.5	0.692400	0.641800
USD.JPY Singapore close	JPYUS03	0.006519	0.006691	-2.6	0.006671	-2.3	0.007200	0.006200
USD.EUR London close	EURUS03	1.062014	1.089652	-2.5	1.081491	-1.8	1.119200	1.039500