Global Alumina and Aluminium Market Review and Outlook

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Abstract

In 2025, the global aluminium market is shaped by moderating economic growth, policy-driven interventions, and shifting supply chains. China remains the core of global production but faces capacity and environmental limits, while Indonesia is emerging as a new supply hub with strong Chinese investment and rising operational risks. On the demand side, consumption is moving toward high-value sectors such as EVs, renewable energy, and data centres. The near-term outlook points to modest surpluses, but structural deficits may re-emerge after 2029 as supply growth slows and demand from advanced industries strengthens.

Keywords: Aluminium, Alumina, Supply, Demand, Fundamentals.

1. Macro Backdrop and Policy Landscape

In 2025, global growth is moderating. The U.S. Federal Reserve is widely expected to cut interest rates (with markets pricing over 90 % probability for an October move), putting downward pressure on the U.S. dollar. Meanwhile, geopolitical tensions, supply-chain disruptions, and energy volatility inject uncertainty into commodity markets.

China continues to use targeted fiscal and monetary tools to stabilize growth: at the Two Sessions, the government set a 5 % GDP growth target, ~2 % CPI goal, and approved issuance of 1.3 trillion RMB (180 GUSD approx.)) in ultra-long-term special bonds to support consumption and green industrial investment. These measures help anchor domestic demand in the face of external headwinds.

In addition, the global trade regime is under strain. U.S. import tariffs on aluminium have been raised, and discussions of a Global Arrangement on Sustainable Steel and Aluminum (GSA) aim to coordinate multilateral policies toward “green” steel/aluminium trade.

Overall, the policy framework globally is tilted toward intervention, de-risking, and protection of strategic sectors, which could amplify volatility in commodity pricing.

2. China: From Upstream Dominance to Supply Constraints

China remains the backbone of the global aluminium and alumina chain. Key features are:

- Bauxite supply trends: China continues to import significant volumes of bauxite, especially from Guinea. Fastmarkets anticipates Chinese bauxite imports in 2025 reaching 191 million tonnes, a raise of more than 30 million tonnes over 2024, potentially creating a surplus of more than 20 million tonnes and softening raw material prices.

- Alumina export pivot: In 2024, China transitioned into a net exporter of alumina, aided by strong domestic output growth and favourable arbitrage between domestic and international prices.

- New capacity under development: Across multiple provinces, new alumina refineries and expansions are underway. New alumina capacity coming online alongside traditional production will keep market supply under pressure. The interplay between production costs and profit margins is expected to increase volatility in alumina output, while the overall "net export" position may tighten somewhat.

- Primary aluminium cap nearing limit: In 2025, China's primary aluminium output is expected to rise 1.7 % year-on-year, reaching 44.1 million tonnes. China's aluminium market balance is expected to reach a deficit of 1.5 million tonnes in 2025.

3. Indonesia Rising: New Supply Frontier with Opportunity and Risk

Indonesia is rapidly emerging as a central node in the global alumina and aluminium chain. Key developments:

- Capacity buildup: Seven alumina refineries are under construction in Indonesia. In 2026, new Indonesian alumina capacity could be commissioned at multi-million-tonnes scale.

- Closed-loop ambition: Some projects (e.g. East Hope's plan in West Kalimantan) aim to integrate bauxite mining, alumina refining, and aluminium smelting in a single jurisdiction to reduce logistics and regulatory risk.

- Accelerated expansion: We predict Indonesian alumina capacity might reach double-digit millions of tonnes by 2029, signalling a structural shift in the supply map.

- Chinese capital influx: Chinese conglomerates are actively investing in Indonesian aluminium and alumina assets, mirroring their earlier successes in nickel.

However, the path is not without risks: funding constraints, dependence on coal power (raising carbon/emissions concerns), mining and environmental permitting, and political/regulatory stability all remain as potential bottlenecks.

4. Demand Evolution: China's Internal Shift and Global Trends

On the demand side, several structural shifts are under way:

- China's consumption rebalancing: Aluminium use is migrating away from heavy reliance on construction (which has seen share drop to ~30.1 %) toward transportation, electric vehicles, machinery, and consumer durables. Transportation sector now commands over 23 % of aluminium consumption.

- AI, data centres and power demand interplay: The expansion of data centres (AI, cloud computing, big data) will exert upward pressure on aluminium demand – by 2030, they could add one million tonnes of demand via power infrastructure and cabling. But this competes directly with aluminium smelters for electricity, particularly in energy-constrained regions.

- Global end-use diversification: Beyond traditional sectors (construction, packaging), growth in electric vehicles, aerospace, renewable energy infrastructure, and high-end electronics is strengthening medium-to-high-end aluminium demand.

This means future demand growth is likely to be more stable and less cyclical, rooted in structural upgrades rather than just real estate cycles.

5. Market Balance, Price Trajectory and Forecast Risks

5.1 Global Supply-Demand Outlook

- We are forecasting a surplus for the global aluminium market in 2025–2027, with the surplus in 2025 being 332 kt.

- Supply-side risks (e.g. energy constraints, environmental closures, smelter curtailments) could tighten supply more than expected, especially in Europe where some smelters are already under pressure.

5.2 Price Drivers and Volatility Factors

- Energy and electricity: Power scarcity remains a key risk, particularly for smelters competing with data centres or in jurisdictions with weak grids.
- Raw materials and arbitrage: Rising Indonesian supply may weigh on global alumina prices.
- Policy and trade shifts: Tariffs, carbon border mechanisms, and strategic decarbonization policy moves may cause sudden swings in trade flows.
- Sentiment and inventory dynamics: Low inventory levels on LME and SHFE could amplify short-term price volatility.

Over the longer term (2029 onwards), the balance tilts toward a structural deficit, particularly as Chinese expansion slows.

Conclusion

The aluminium industry is undergoing structural transformation – from expansion-led growth to efficiency- and sustainability-driven development. China's maturing supply base and Indonesia's rapid ascent will redefine global trade flows, while decarbonization and electrification trends reshape demand patterns. Market volatility will remain high, yet the long-term fundamentals support a gradual tightening cycle, rewarding producers and investors aligned with low-carbon, high-efficiency growth strategies.