



Indonesia's 2025 Nickel Policy | Battery Metals and Trade Flows

How Jakarta's resource nationalism is reshaping EV supply chains, LME pricing, and the geopolitics of critical minerals — and where capital should be positioned

CORE INVESTMENT THEMES

1 **Indonesia has structurally re-priced the entire nickel complex.** The 2020 ore export ban, now reinforced by 2025 royalty reforms, FX repatriation rules, and mining law amendments, has permanently shifted where nickel is processed. Jakarta is no longer a raw material exporter — it is a competing industrial power in cathode precursor and battery-grade nickel production.

2 **The surplus is real, the pain is not uniform.** A 209kt 2025 surplus has collapsed LME nickel to six-year lows (~\$15,000/t). But the pain is concentrated in high-cost Western and Filipino producers. Indonesian integrated HPAL operators — at \$9,800/t C1 — remain profitable at any price above \$12,000/t. This creates a survivor-takes-all dynamic.

3 **LFP battery growth is a structural headwind — but not a death blow.** NMC's share of Chinese EV battery installations fell from 25% to 18% in 9M 2025 as LFP dominates cost-sensitive segments. However, NMC remains essential for premium EVs, energy storage systems, and aerospace — preserving a \$12–15bn/year demand floor for Class 1 battery-grade nickel.

01 INDONESIA'S POLICY ARCHITECTURE: FROM ORE EXPORTER TO INDUSTRIAL POWER

1.1 The 2009–2025 Policy Timeline

Year	Policy Milestone	Impact
2009	Mining Law No. 4/2009	Required progressive domestic processing; set 5-year transition window for ore exporters.
2012	Regulation 7/2012	Mandated minimum processing thresholds for nickel ore exports; initial non-compliance widespread.
2017	First Export Suspension	Temporary halt to low-grade nickel ore exports; triggered surge in Chinese NPI investment in Sulawesi.
2019	Export Ban Announced	Government advanced ban to January 2020 (from original 2022); shocked global markets; LME nickel spiked.
Jan 2020	Full Nickel Ore Export Ban	Zero nickel ore exports permitted; all domestic ore must be processed in country before export.
2022	WTO Ruling vs. Indonesia	WTO appellate panel ruled export ban violated trade agreements; Indonesia appealed; enforcement blocked.
2024	First EV Battery Cell Plant	Hyundai/LG Energy Solution opened Indonesia's first EV battery cell manufacturing plant.
Feb 2025	FX Repatriation Mandate	Foreign exchange earnings from minerals must remain in domestic banking system for 12 months.
Mar 2025	Progressive Royalty Reform	Nickel ore royalties to rise from 10% to 14–19% on sliding scale tied to benchmark prices.
2025	Mining Law Amendments	Prioritises domestic mineral use; expands mining rights for companies building processing facilities.
2025	40% Production Cut Proposal	Government floated quota cuts to tighten market and support prices; partial implementation expected.

02 GLOBAL SUPPLY DOMINANCE: A 62% MARKET SHARE AND RISING

Indonesia's share of global nickel mine supply has risen from approximately **15% in 2015** to an estimated **62–66% in 2025**, a concentration rarely seen in any major commodity market. For context, Saudi Arabia's share of global crude oil production has never exceeded 15%. Indonesia's nickel dominance is structurally unprecedented in the critical minerals era.

2.1 Production by Class and Process Technology

Product Type	2022A	2023A	2024A	2025E	YoY Change
Nickel Pig Iron (NPI) — kt Ni	1,450	1,750	1,850	~2,000	+8% YoY
Mixed Hydroxide Precipitate (MHP) — kt Ni	115	240	325	~482	+48% YoY
Ferronickel — kt Ni	320	380	390	~410	+5% YoY
Nickel Matte — kt Ni	80	130	150	~160	+7% YoY
Total Indonesia — kt Ni equivalent	1,965	2,500	2,715	~3,052	+12% YoY
Indonesia Global Share (%)	~48%	~55%	~62%	~64%	+2pp YoY
Global Primary Nickel Supply — kt	~4,100	~4,545	~4,380	~4,769	+9% YoY

The **MHP surge is the most significant structural development of 2025**. Mixed hydroxide precipitate — the key intermediate product from HPAL (High-Pressure Acid Leach) processing — is directly battery-ready after sulphate conversion. Indonesia's MHP output is projected to reach 482,000 tonnes of nickel metal equivalent in 2025, up 48% from 2024. Argus forecasts Indonesia's HPAL capacity to **nearly double** in 2026 as multiple projects commission. This single product stream is set to reshape global cathode precursor supply chains.

The geographic concentration of Indonesian production is also notable: **Morowali Industrial Park (Sulawesi)** and **Weda Bay Industrial Park (Halmahera)** together host the overwhelming majority of smelting and HPAL capacity. Both are Chinese-financed and Chinese-operated, with Tsingshan and Jiangsu Delong as the dominant operators controlling an estimated 70%+ of installed smelting capacity.

2.2 The Cost Curve Advantage

Indonesian operators command a structural cost advantage that makes them nearly impossible to displace at current technology levels:

Production Route	Location	C1 Cash Cost (\$/t Ni)	Profitable at \$15K/t?	Key Characteristic
HPAL → MHP (battery grade)	Indonesia	~\$9,800	YES ✓	Cobalt by-product credit; lowest cost globally
NPI Smelting (rotary kiln EF)	Indonesia (Chinese ops)	~\$11,500	YES ✓	Scale; captive ore; cheap coal power
Laterite RKEF (older plants)	Indonesia / Philippines	~\$13,500	MARGINAL	Older technology; higher energy intensity
Sulphide mining + smelting	Canada / Russia / Australia	~\$16,000–\$22,000	NO ✗	Premium ore grade; high labour & energy costs
Open-cut laterite (Philippines)	Philippines	~\$18,000–\$24,000	NO ✗	Ore export only; no processing margin capture

The implication is stark: **at \$15,000/t LME nickel, only Indonesian operators and a handful of sulphide producers are economically viable**. Western nickel miners — BHP Nickel West, Vale's Canadian operations, Wyloo's Eagle Mine — are operating at or below breakeven. This is leading to a wave of curtailments and care-and-maintenance decisions that will ultimately rebalance the market, but the timeline is uncertain.

03 PRICE DYNAMICS: SURPLUS REALITY AND THE PATH TO REBALANCING

The LME nickel market has been in surplus for multiple consecutive years, driven by Indonesia's supply growth outpacing global demand, compounded by a battery chemistry shift away from nickel-intensive cathodes. This has created one of the most challenged commodity pricing environments in the post-COVID era.

Metric	2022A	2023A	2024A	2025E	2026E
LME Nickel Price (avg, \$/t)	\$25,700	\$21,500	\$16,800	~\$15,000	~\$15,250
Global Supply — kt Ni	3,260	3,450	3,590	3,780	3,960
Global Demand — kt Ni	3,100	3,120	3,260	3,571	3,672
Market Balance (surplus) — kt	(160)	(330)	(330)	(209)	(288)
LME Inventories — kt	~55	~75	~160	~210	~260E
Indonesia Supply Growth (kt)	+120	+535	+215	+337	+300E
Ex-Indonesia Supply Growth (kt)	+80	(335)	(75)	(147)	(120)E

The data reveals a crucial split: **total global supply is growing, but ex-Indonesia supply is now in decline** as high-cost operations curtail. Western mines are already responding — BHP's Nickel West entered care-and-maintenance in 2024, and multiple Philippine ore exporters have suspended operations due to sub-economic prices. This is the beginning of the rebalancing process, though the timeline to equilibrium remains 2027–2028 at the earliest given Indonesia's HPAL pipeline.

Indonesia's own 2025 proposal to implement a **40% production cut quota** is significant — it signals Jakarta recognises that an oversupplied market hurts its own industry even if individual operators are profitable. If implemented, this could accelerate price recovery by 12–18 months. We assign a **35% probability** to meaningful implementation of cuts above 20%.

3.1 The 2022 LME Crisis: A Cautionary Reminder

Investors must account for the extraordinary volatility precedent set in **March 2022**, when LME nickel prices spiked to over **\$100,000 per tonne** over two trading sessions following a short-squeeze linked to Chinese NPI producer Xiang Guangda (Tsingshan). The LME controversially suspended trading and cancelled trades, permanently damaging institutional trust in the nickel derivatives market.

The 2022 episode has had lasting structural effects: **institutional hedging activity has reduced materially**, reducing market depth and increasing sensitivity to supply/demand imbalances. This means that when a rebalancing catalyst emerges — Indonesia quota cuts, Western mine closures accelerating, EV demand recovery — price responses may be faster and larger than historical norms would suggest.

04 TRADE FLOWS & GEOPOLITICAL FAULT LINES

The export ban has fundamentally redirected nickel trade flows. What was once a simple ore-to-destination model has become a complex web of semi-processed product flows, predominantly routed through Chinese intermediaries and subject to escalating geopolitical tension.

4.1 The China Dependency Equation

Chinese firms now control an estimated **75% of Indonesia's refining capacity**, with Tsingshan Holding Group and Jiangsu Delong Nickel Industry dominating the NPI and ferronickel landscape. In 2025, CATL and partners broke ground on a **~\$6 billion integrated battery project** spanning mining, processing, cell manufacturing, and recycling — the most ambitious foreign direct investment project in Indonesia's industrial history.

This creates a paradox at the heart of Western critical mineral strategy: **the more successful Indonesia's downstreaming policy is, the more deeply Chinese capital is embedded in the supply chain**. Indonesia has successfully captured value-added processing, but that value accrues primarily to Chinese operators and their shareholders — not Indonesian workers or domestic capital.

Trade Flow	Volume / Value	Strategic Implication
Indonesia NPI → China (stainless steel)	~1.2 Mt Ni eq. (2025E)	China remains dominant buyer; stainless steel demand is the largest single nickel use case globally at ~70% of consumption.
Indonesia MHP → China battery precursor	~340 kt Ni eq. (2025E)	CNGR, Huayou Cobalt, and GEM import MHP for PCAM (precursor cathode active material) production. MHP export +55% YoY.
China refined nickel → Global (arbitrage)	China nickel cathode exports +55% YoY (10M 2025)	China is re-exporting value-added products globally, effectively becoming a nickel re-refiner. This competes with LME-grade nickel.
Indonesia → EU (battery precursor)	Sub-scale; EU Battery Regulation barriers	EU battery passport and carbon footprint requirements create non-tariff barriers to Indonesian coal-powered refining.
Philippines ore → LME spot (declining)	Down ~30% YoY on closures	Philippines ore exports collapsing as sub-\$15k/t prices make export-only model uneconomic.

4.2 The WTO Battlefield

The **WTO dispute (DS592)** — initiated by the European Union in 2019 over Indonesia's ore export restrictions — represents the most consequential trade law case in the critical minerals era. A WTO panel ruled against Indonesia in November 2022, finding the export ban and domestic processing requirements violated GATT Article XI:1 (prohibition on export restrictions).

Jakarta's response has been defiant. Rather than comply, Indonesia appealed to the WTO Appellate Body — which remains effectively non-functional due to the US veto on Appellate Body appointments. This limbo has allowed Indonesia to maintain its policy with no legal consequence. **The dispute has become a case study in how developing nations can leverage broken multilateral trade architecture to pursue industrial policy.**

4.3 The US Geopolitical Position

The United States, through the **Inflation Reduction Act (IRA)** and the **Minerals Security Partnership (MSP)**, has sought to build alternative nickel supply chains outside Chinese-influenced networks. Key initiatives include:

- IRA "**foreign entity of concern (FEOC) restrictions** — which exclude nickel from Chinese-controlled Indonesian operations from EV tax credit qualification from 2025 onwards
- Bilateral mineral agreements with **Indonesia, the Philippines, and Canada** to qualify supplies for IRA benefits
- Investment in **Montana sulphide nickel** (Sibanye-Stillwater) and **Minnesota's Talon Metals** (Cornucopia project) — high-cost but FEOC-compliant

The IRA's FEOC rules create a **two-tier nickel market**: Indonesian-Chinese production satisfying Asian demand, and a premium "green-corridor" supply chain serving US and EU battery mandates at structurally higher costs. This bifurcation has profound implications for nickel pricing and corporate strategy.

05 BATTERY CHEMISTRY: THE LFP CHALLENGE AND NICKEL'S DEMAND FLOOR

The most significant demand-side threat to nickel's battery market thesis is the **global adoption of lithium iron phosphate (LFP) chemistry**, which eliminates nickel and cobalt entirely. Understanding the LFP-NMC dynamic is critical to any investment thesis in battery-grade nickel.

5.1 The Chemistry Battle: LFP vs. NMC

Attribute	LFP (LiFePO ₄)	NMC 811 (Ni-rich)	Investment Implication
Energy Density (Wh/kg)	~170–200	~250–300	NMC wins range; LFP sufficient for urban EVs
Cell Cost (\$/kWh)	~\$60–\$75	~\$85–\$110	LFP ~25–30% cheaper; dominant in budget EVs
Cycle Life (full cycles)	3,000–5,000	1,500–2,500	LFP wins stationary storage; NMC for vehicles
Thermal Stability / Safety	Superior	Lower (thermal runaway risk)	Safety regulations in some markets favour LFP
Nickel Content	ZERO	~45–55 kg Ni / 100 kWh	Structural demand headwind for nickel in EVs
Cold Weather Performance	Weaker	Superior	NMC favoured in Nordic / North American markets
Dominant Market Segment	China budget EV; ESS globally	Premium EV globally; US market	Market segmentation diverging

In China — the world's largest EV market — LFP's market share of EV battery installations rose from approximately 50% in 2022 to an estimated **75–80% in 2025**. Correspondingly, NMC's share fell from 25% to ~18% in 9M 2025. This shift is primarily occurring in the mass-market EV segment (sub-\$25,000 vehicles) dominated by BYD, Wuling, and Chery.

However, the narrative requires nuance. NMC adoption is **accelerating** in premium EVs globally (Mercedes EQS, BMW i7, Tesla Model S/X), energy storage for aviation and marine, and increasingly in the stationary grid storage segment where energy density justifies the cost premium. The US EV market — though severely impacted by the elimination of the EV tax credit (US EV sales down 46% in Q4 2025) — remains NMC-dominant due to range requirements in lower-density urban geographies.

5.2 The Demand Floor Model

Demand Segment	2024A (kt Ni)	2027E (kt Ni)	2030E (kt Ni)	Trend
Stainless Steel (NPI dominates)	~2,200	~2,350	~2,450	Steady; China construction recovery key
EV Batteries (NMC only)	~440	~560	~720	Growing but capped by LFP share gains
Energy Storage Systems (ESS)	~55	~120	~240	Strong growth; LFP dominant but NMC ESS grows
Aerospace / Defence	~90	~100	~115	Stable; NMC preferred for energy density
Industrial / Other	~475	~490	~505	Steady; electroplating, chemicals, alloys
TOTAL Nickel Demand — kt	~3,260	~3,620	~4,030	+24% 2024–2030E (CAGR ~3.6%)

The stainless steel sector — accounting for ~67% of global nickel demand — provides a floor that is entirely insensitive to battery chemistry shifts. This is the key point lost in most battery-focused nickel narratives: even in a scenario where LFP achieves **90% of EV market share globally**, total nickel demand still grows at ~2.5% per year through 2030, driven by stainless steel in infrastructure and emerging markets.

06 INVESTMENT IMPLICATIONS: POSITIONING FOR THE SECOND-ORDER EFFECTS

Direct nickel price exposure through LME derivatives or mining equities is a **late-cycle, mean-reversion trade** best suited for specialist commodity funds. For generalist institutional investors, we believe the more compelling opportunity is in the **second and third-order effects** of Indonesia's policy — companies that benefit from supply chain restructuring, Indonesian industrial development, and the geopolitical re-routing of critical mineral flows.

6.1 The Survivor Trade: Lowest-Cost Producers

THEME: LONG LOWEST-COST OPERATORS — Short Western High-Cost Assets

At \$15,000/t nickel, integrated HPAL and NPI operators in Indonesia remain profitable while most ex-Indonesia producers bleed cash. This is not a temporary dislocation — it is the **new steady-state competitive equilibrium** until the Western cost curve forces sufficient curtailments to rebalance the market. Key investment considerations:

- **Vale Indonesia (INCO.JK):** The highest-quality listed exposure to Indonesian nickel production, with a ~65-year mining history in Sulawesi. Vale's matte/HPAL operations have lower carbon intensity than Chinese NPI — a critical EU Battery Regulation compliance advantage. Trades at ~12x forward EV/EBITDA. K2C View: **OVERWEIGHT**.
- **Harita Nickel (NCKL.JK):** The fastest-growing Indonesian HPAL operator, having commissioned its first HPAL plant in 2023. Vertically integrated from ore to MHP. Listed on Jakarta Stock Exchange in 2023. K2C View: **OVERWEIGHT** (high-risk/high-reward; liquidity limited).
- **Nickel Industries (NIC.ASX):** ASX-listed; partnered with Tsingshan for Sulawesi NPI operations. Highest direct exposure to Indonesian NPI margins within a liquid, Western-listed vehicle. K2C View: **OVERWEIGHT**.
- **Short / Avoid — Western Sulphide Miners:** BHP Nickel West (entering care-and-maintenance), First Quantum (nickel division non-core), Panoramic Resources (suspended). At current prices, return to profitability requires \$20,000+/t — we do not forecast this until 2027E at the earliest.

6.2 The Geopolitical Premium Trade: FEOC-Compliant Supply

THEME: LONG "GREEN CORRIDOR" NICKEL — IRA & EU-Compliant Supply

IRA FEOC rules and the EU Battery Regulation create a **structural premium market** for nickel produced outside Chinese-controlled networks. This "green corridor" supply commands 10–25% price premiums over LME in long-term offtake contracts with OEMs. The companies positioned to capture this premium:

- **Wyloo Metals / Noront Resources (Canada):** Eagle's Nest deposit in Ontario — one of the highest-grade sulphide nickel deposits globally, with no Chinese involvement. Premium positioning for US/EU OEM offtake. Pre-production; 2027–2028 timeline.
- **Talon Metals (TLO.TSX) — Cornucopia, Minnesota:** Direct US domestic supply; IRA-maximum compliant; binding LOI with Tesla for supply from Cornucopia. K2C View: **SPECULATIVE BUY** (pre-revenue; macro-dependent).
- **Glencore (GLEN.LN):** The most liquid FEOC-compliant nickel exposure via Canadian and Australian operations. Integrated trading arm captures arbitrage between LME and premium OEM contracts. K2C View: **NEUTRAL** (base metal conglomerate; nickel ~8% of EBIT).

6.3 The Indonesia Industrial Ecosystem

Beyond direct nickel exposure, Indonesia's **broader industrial buildout** creates infrastructure, construction, and service investment opportunities:

- **PT Unilever Indonesia / consumer staples:** As Indonesian per-capita income rises on resource revenues, domestic consumer spending is a secondary beneficiary of hilirisasi policy.
- **Indonesian banking (BBRI, BMRI):** Industrial park development, miner financing, and infrastructure lending generate substantial loan growth for national banks.
- **Renewable energy infrastructure:** Coal-powered smelting is Indonesia's greatest ESG vulnerability. Mandated decarbonisation of nickel processing (targeting 2035) creates a massive solar and geothermal construction opportunity — particularly for Jasa Marga, PLN, and renewable developers.

6.4 Conviction Summary Table

Company / Theme	Ticker	K2C View	Time Horizon	Key Driver	Key Risk
Vale Indonesia	INCO.JK	OVERWEIGHT	12–24M	EU premium pricing; HPAL ramp	LFP demand loss; regulatory risk
Nickel Industries	NIC.ASX	OVERWEIGHT	12–24M	Low-cost NPI; Indo exposure	China/Tsingshan counterparty risk
Harita Nickel	NCKL.JK	OVERWEIGHT	18–36M	HPAL ramp; MHP demand surge	Liquidity; execution risk
Talon Metals	TLO.TSX	SPEC. BUY	36–60M	IRA compliance; Tesla offtake	Pre-revenue; commodity price
Glencore	GLEN.LN	NEUTRAL	12–24M	Trading arm premium capture	Coal division ESG drag
BHP / Nickel West	BHP.ASX	AVOID	N/A	N/A — in C&M	Price recovery too uncertain
LFP cathode (via CATL/BYD)	Structural Short on NMC share	CAUTIOUS	Ongoing	LFP market share	NMC energy density resilience

07 KEY RISKS TO THE THESIS

Risk Factor	Assessment
↓ LFP Achieves >85% Global EV Market Share	If LFP captures the majority of Western EV markets (currently ~30–40%), battery-grade nickel demand growth stalls. This compresses the premium for FEOC-compliant supply and slows HPAL project economics.
↓ Indonesia Policy Reversal / WTO Compliance	A new administration or WTO enforcement mechanism could force partial restoration of ore exports, dismantling the processing investment ecosystem. Low probability (<10%) but high impact.
↓ Chinese NPI / MHP Oversupply Accelerates	If Indonesian HPAL capacity additions commission faster than demand grows, the surplus extends beyond 2027, keeping prices below \$15,000/t and triggering additional Western mine closures — but also hurting Indonesian operators' margins.
↓ US EV Demand Collapse Persists	US EV sales fell 46% QoQ in Q4 2025 following EV credit elimination. A sustained demand downturn in the US reduces the addressable market for premium NMC supply, weakening the FEOC-compliance premium.
↑ Indonesia Production Quota Implementation	If Jakarta implements the mooted 40% production cut, the market could rebalance 12–18 months ahead of our base case, driving LME nickel toward \$18,000–\$20,000/t and creating significant upside for all Indonesian producers.
↑ EU Battery Passport Enforcement	Stricter carbon footprint reporting requirements could exclude coal-powered Indonesian NPI/MHP from EU battery supply chains, creating a scarcity premium for low-carbon sources (Vale Indonesia, Canadian sulphides).
↑ Solid-State Battery Commercialisation	Next-generation solid-state batteries using nickel-rich cathodes could increase per-kWh nickel intensity by 20–30% vs. current NMC811, adding a demand surge not in current forecasts.

08 CONCLUSION: SOVEREIGNTY, SURPLUS, AND THE SURVIVOR TRADE

Indonesia's 2025 nickel policy represents the most consequential act of **sovereign resource nationalism** in the critical minerals era. Jakarta has successfully leveraged a geological endowment — the world's largest nickel reserve base — into a comprehensive industrial policy that is reshaping global supply chains, challenging the WTO's authority, and creating a new axis of Chinese-Indonesian industrial power in the Pacific.

For investors, the central tension is between the **short-term price headwind** (oversupply, LFP chemistry shift, depressed LME) and the **long-term structural opportunity** (battery metals demand, FEOC supply scarcity, Indonesia infrastructure buildout). Our view is that these dynamics are separable: **be short the price, long the stack.**

The clearest trade remains: **overweight lowest-cost Indonesian operators** (Vale Indonesia, Nickel Industries, Harita) that will survive and gain market share through the trough, while building selective exposure to **FEOC-compliant, green-corridor supply** (Talon Metals, Canadian sulphides) for the premium market that US and EU OEM mandates will create. Avoid high-cost Western assets until price recovery is evident in futures curves above \$19,000/t.

K2 Capital — Theme Scorecard		K2C Catalyst Watch	
Indonesia Nickel / Battery Metals			
Supply Chain Disruption Potential:		Q1 2026:	Indonesia quota cut implementation signal
Price Recovery Visibility:		Q2 2026:	EU Battery Regulation enforcement update
Geopolitical Complexity:		H1 2026:	Multiple HPAL plant commissioning dates
FEOC Premium Trade Conviction:		2026E:	US IRA FEOC guidance finalization
ESG / Carbon Risk Severity:		2027E:	Indonesia royalty reform full implementation

IMPORTANT DISCLOSURES & ANALYST CERTIFICATION

Ratings Definitions

- OVERWEIGHT / BUY: Expected total return of 15%+ over 12 months.
- NEUTRAL / HOLD: Expected return between -10% and +15% over 12 months.
- AVOID / SELL: Expected total return below -10% or structural deterioration in investment thesis.
- SPECULATIVE BUY: High-conviction long-term thesis; pre-revenue or high binary risk; position sizing accordingly.

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