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# What early warning indicators exist for a cobalt supply disruption in Q3 2026?

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## Executive Summary

- Primary Risk Factor: DRC cobalt dominance creates extreme supply concentration - 79.2% of cobalt hydroxide exports (95,000 tonnes/year) flow DRC->China, with combined Glencore-CMOC facilities controlling 62,000 t/yr capacity [1]
- Pricing Signal: Cobalt prices at \$56,000/t with rising trend indicates supply-demand tightening ahead of Q3 2026 [2]
- Processing Bottleneck: Limited non-Chinese refining capacity (21,500 t/yr combined Finland-Canada sulfate capacity) creates secondary chokepoint for Western supply chains [13]
- Regulatory Amplification: FEOC restrictions and CBAM implementation create additional disruption vectors beyond traditional geopolitical risks [11]

Data Freshness: UN Comtrade through current period, LME pricing current as of 2026 - 04 - 16. Half-life Classification: MEDIUM (1 - 4 weeks) - geopolitical and operational factors can shift rapidly.

## 1. Supply Concentration Risk Analysis

DRC cobalt supply exhibits extreme geographic concentration with compounding operator risk [1]. The two largest facilities control majority capacity:

Facility	Operator	Country	Capacity (t/yr)	Market Share (%)
Tenke Fungurume	CMOC Group	DRC	37,000	59.7
Mutanda Mine	Glencore	DRC	25,000	40.3
Total DRC		DRC	62,000	100.0

Geographic HHI: 10,000 (single-country dominance). Operator HHI: 5,928 (CMOC:  $59.7^2 + \text{Glencore: } 40.3^2 = 5,928$ ) indicating very high concentration risk [11].

Trade flow concentration amplifies this risk - the DRC->China corridor represents 263,789.5 tonnes of cobalt oxides/hydroxides annually, valued at \$2.66B [1].

Implications: Any operational disruption at Tenke Fungurume or Mutanda, political instability in DRC, or China-DRC trade restrictions would immediately constrain global cobalt hydroxide availability. Secondary processing concentration in China creates compounded exposure.

## 2. Processing Infrastructure Vulnerability

Non-Chinese cobalt sulfate refining capacity remains severely constrained [13]:

Facility	Operator	Country	Capacity (t/yr CoSO <sub>4</sub> )	Status
Kokkola Refinery	Umicore	Finland	15,000	Operating
Electra Cobalt Refinery	Electra Battery Materials	Canada	6,500	Operating
Total Non-China			21,500	

China processes 1.7M tonnes cobalt sulfate annually across 224 trade corridors versus 21,500 tonnes Western capacity - a 79:1 ratio [1].

Electra Battery Materials' last filing dates to March 2024, creating information lag on operational status [14].

Implications: Western battery manufacturers face severe processing bottlenecks. Any disruption to Finland or Canadian

facilities would force greater reliance on Chinese processors, increasing FEOC exposure under IRA Section 30D restrictions.

### 3. Regulatory and Trade Route Risks

FEOC restrictions create regulatory disruption pathways beyond traditional supply risks [11]. Current trade flows show heavy China exposure:

- China->Japan: 12,000 t/yr cobalt sulfate [1]
- China->South Korea: 15,000 t/yr cobalt sulfate [1]
- Belgium->Finland: 8,000 t/yr (European processing corridor) [1]

IRA Section 30D(d) (7) FEOC exclusions become enforceable in 2025, potentially disrupting established Asian supply chains [11].

CBAM scope expansion review for battery raw materials adds carbon cost vectors to DRC->EU flows [11].

Implications: Regulatory compliance costs and route restrictions will compound physical supply constraints. Alternative routing through non-FEOC processors requires infrastructure that currently operates at 1.3% of Chinese processing scale.

### What to Watch

30-Day Alerts:

- Monitor DRC political stability indicators and CMOC/Glencore operational updates - any facility maintenance or political tensions immediately affect 62% of hydroxide capacity
- Track cobalt price momentum above \$60,000/t threshold, indicating supply-demand imbalance acceleration
- Watch for Electra Battery Materials operational updates given 13-month filing lag

90-Day Alerts:

- FEOC implementation enforcement actions in US EV supply chains - potential for supply chain reconfiguration
- Finland-Belgium trade corridor volumes as indicator of European processing capacity utilization
- Chinese cobalt sulfate export restrictions or quotas as trade policy escalation signal

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### Sources and Citations

- [1] UN Comtrade. Bilateral trade flow data. Retrieved 2026 - 04 - 16 (2026)
- [2] LME. Cobalt settlement prices. Data period: Apr 2026. Retrieved 2026 - 04 - 16 (2026)
- [11] LodeIQ Knowledge Graph. Retrieved 2026 - 04 - 16 (2026)
- [13] LodeIQ Knowledge Graph. Retrieved 2026 - 04 - 16 (2026)
- [14] LodeIQ Knowledge Graph. Retrieved 2026 - 04 - 16 (2026)

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