

# Internal Memo: EU CBAM and Carbon Pricing Schemes Impact Analysis

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**Category:** Memos

**Model:** MEMO-CARBON-2025

**Description:** This internal memo analyzes EU Carbon Border Adjustment Mechanism (CBAM) and other carbon pricing schemes affecting Mega Minerals' operations. It includes tables with estimated carbon costs per tonne of iron ore, potential pass-through clauses, and contractual clauses affected by these schemes. It discusses how these regulations could alter pricing strategies and contractual renegotiations.

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# 1. Introduction and Purpose

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This document provides a comprehensive analysis of the European Union's Carbon Border Adjustment Mechanism (CBAM) and related carbon pricing schemes as they pertain to Mega Minerals' iron ore operations. The primary goals are to:

- Assess the current and projected impact of carbon tariffs and taxes on the company's cost structure and pricing strategies.
- Identify contractual clauses that may be affected or require renegotiation due to evolving regulations.
- Provide detailed examples of contractual provisions, including pricing formulas and clause language, that incorporate or are sensitive to carbon costs.
- Illustrate how internal ESG and Scope 3 emissions policies intersect with external regulatory frameworks.

The analysis aims to support strategic decision-making, compliance planning, and contractual negotiations as part of Mega Minerals' sustainability and market adaptation efforts.

## 2. Overview of EU CBAM and Carbon Pricing Schemes

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The European Union introduced the Carbon Border Adjustment Mechanism (CBAM) to prevent carbon leakage by placing a carbon fee on imports of specific goods, including steel and mineral products, into the EU market. CBAM applies to imported iron ore and semi-finished steel, among other commodities, impacting global supply chains and pricing models.

### Key Aspects of EU CBAM

- **Scope:** Initially applies to steel and iron-related products, expanding over time.
- **Reporting Requirements:** Importers must report emissions embedded in their products, verified through EU-approved procedures.
- **Carbon Price:** The scheme levies a charge based on the actual or benchmarked carbon content of imported goods, aligned with EU carbon permit prices.

In parallel, several EU member states impose national carbon taxes and

pricing schemes that influence overall costs. Notable schemes include:

- EU Emissions Trading System (EU ETS) Continual allowance pricing.
- National tax measures enacted by Germany, France, and the Netherlands targeting industrial emissions.
- Voluntary internal carbon pricing that companies implement as part of ESG strategies.

### **Implications for Importers and Domestic Producers**

- Increased costs for imported raw materials, prompting renegotiation of supply contracts.
- Potential to pass through carbon costs onto customers via contractual clauses.
- Need for enhanced emission reporting and compliance procedures.

## **3. Impact on Mega Minerals Operations**

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The implementation of EU CBAM and related schemes directly influences Mega Minerals' operational cost structure, especially for iron ore exports to the EU market. Estimated carbon costs per tonne of iron ore are now an integral element of pricing strategies. Specific impacts include:

- Increased landed costs for EU-bound shipments due to carbon tariffs.
- Necessity to quantify embedded emissions in supply chain and product specifications.
- Potential contractual renegotiations incorporating carbon-related clauses.
- Enhanced internal policies on Scope 3 emission accounting to meet regulatory and investor expectations.

Table 1 provides preliminary estimates of carbon costs per tonne of iron ore based on current carbon market prices and embedded emission factors.

## **4. Long-term Offtake Agreements**

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Mega Minerals has historically engaged in long-term offtake agreements with key customers to stabilize revenues and ensure steady market share. These contracts include detailed clauses for pricing, volume commitments, quality specifications, and other terms that are sensitive to evolving carbon regulations.

## 4.1. Sample Contract with Dragon Steel

**Contract ID:** DM-2022-IRON-008

**Parties:** Mega Minerals (Supplier) and Dragon Steel (Buyer)

### Key Clauses:

1. **Pricing Formula:** Base price indexed to the Platts Iron Ore Index (IOI), with adjustments for freight and currency exchange rates.
2. **Volume Commitments:** 2 million tonnes annually, with quarterly delivery schedules.
3. **Laycan Window and Demurrage:** Delivery window of 15 days post-notice, with demurrage charges of \$5,000 per day beyond laycan.
4. **Quality Specifications:** Fe content  $\geq 62\%$ , moisture  $\leq 8\%$ ,  $\text{SiO}_2 \leq 3.0\%$ ,  $\text{Al}_2\text{O}_3 \leq 2.5\%$ , P  $\leq 0.1\%$ .
5. **Carbon Tax Pass-through:** Clause 5.4 stipulates that if EU CBAM or similar schemes impose a carbon tax exceeding \$10/tonne, the Buyer can request a price adjustment.
6. **Price Re-opener Clause:** An annual review allowing adjustment if carbon costs increase by more than 15% compared to baseline pricing.

### Additional Considerations:

- Contract includes provisions for voluntary emission reporting and compliance with EU standards.
- Dispute Resolution: Arbitration under Singapore International Arbitration Centre (SIAC).

## 4.2. Sample Contract with Nippon Metals

**Contract ID:** NM-2023-IRON-015

**Parties:** Mega Minerals and Nippon Metals

### Highlights:

1. Pricing based on a fixed premium over the cost-plus formula, with adjustments based on index movement and carbon cost escalation.
2. Volume commitments: 1.5 million tonnes/year.
3. Inclusion of a 'carbon tax pass-through clause' with thresholds set at \$8/tonne; if exceeded, the Seller can invoice an additional fee.
4. Automatic index adjustment for FX fluctuations based on the USD/EUR rate published by the ECB.

**Special Highlights:**

- Clause 6.2 states that if EU CBAM becomes applicable, the contractual price shall include an estimate of carbon costs; actual adjustments follow after verification.
- Renewal provisions include review of applicable emission schemes and potential renegotiation terms.

**4.3. Sample Contract with EuroSteel**

**Contract ID:** ES-2021-IRON-023

**Parties:** Mega Minerals and EuroSteel

**Contract Features:**

1. Pricing formula incorporates a quality premium linked to Fe content; includes a clause for carbon cost pass-through if EU CBAM affects fees.
2. Volume: 3 million tonnes over three years.
3. Demurrage rules: 7 days free, thereafter \$4,000/day.
4. Price Adjustment Mechanism: Clause 4.5 allows for quarterly renegotiation if carbon costs escalate beyond 20% per annum.

**Additional Contract Elements:**

- Environmental compliance clause requiring adherence to EU emissions standards.
- Dispute resolution via ICC arbitration.

## 5. Internal ESG Policies and Scope 3 Emissions

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Mega Minerals maintains comprehensive ESG policies that underpin its operational and reporting commitments. Key aspects pertaining to Scope 3 emissions include:

- Scope 3 emissions accounting for supply chain activities, including emissions embedded in purchased goods and services, transportation, and waste disposal.
- Thresholds for reporting: If Scope 3 emissions exceed 50% of total corporate emissions, additional reporting and disclosure are triggered.
- Guidelines align with the Greenhouse Gas Protocol Corporate Standard and EU taxonomy requirements.

Scope 3 Reporting Responsibilities:

- Procurement teams to gather supplier emission data.
- Quarterly emissions audits integrating data from shipping, logistics, and raw material suppliers.
- External verification audits required annually for emission disclosures.

6. Sustainability Reports and Decarbonization Pathways

Mega Minerals publishes annual sustainability and climate reports outlining decarbonization strategies, progress metrics, and future commitments. Highlights include:

- Carbon intensity reduction targets: 20% decrease by 2030.
- Transition to renewable energy sources at processing facilities.
- Innovative use of carbon capture and storage (CCS) technology to reduce Scope 1 emissions.
- Supply chain engagement programs aimed at incentivizing low-carbon practices among suppliers.

Pathways Document Extract:

Pathway	Description	Projected Impact
Renewable Energy Adoption	Switching to solar and wind power at all facilities.	Estimated 15% reduction in Scope 2 emissions by 2028.
Process Efficiency Improvements	Upgrades in beneficiation and grinding operations for energy efficiency.	Reduction of 10% in Scope 1 emissions.
Carbon Capture	Implementation in key processing units.	Potential capture of 30% of residual emissions by 2035.

7. Internal Memo: EU CBAM and Carbon Costs

This internal memo consolidates recent analysis on the financial impact of EU CBAM and other carbon pricing schemes on Mega Minerals. It includes example calculations of carbon costs based on current market prices and

embedded emission factors.

### 7.1. Example Carbon Cost Table

Table 1: Estimated Carbon Costs per Tonne of Iron Ore

Year	Carbon Price (\$/tonne CO <sub>2</sub> e)	Embedded Emissions (tonnes CO <sub>2</sub> e/tonne ore)	Total Carbon Cost (\$/tonne ore)
2023	50	0.05	\$2.50
2024	70	0.05	\$3.50
2025	100	0.05	\$5.00

Notes: Assumes an embedded emission factor of 0.05 tonnes CO<sub>2</sub>e per tonne of ore for calculation purposes. Carbon prices are projections based on current market conditions.

## 8. Contract Clauses Affected by Carbon Pricing Schemes

The evolution of EU CBAM and national carbon taxes has led to specific contractual clauses that address the implications of these schemes on commercial terms. These clauses can be integrated or adapted into existing and new offtake agreements.

### 8.1. Pricing Formula and Index Reference

The primary mechanism for incorporating carbon costs is through the pricing formula, which references external indices such as the Platts Iron Ore Index and the EU Carbon Permits Price (EUA). An example clause is as follows:

"Price per tonne shall be calculated as the base index plus adjustments for freight, currency, and embedded carbon costs, as per the formula:

$$\text{Price} = \text{Base Index} + \text{Freight Adjustment} + \text{FX Adjustment} +$$

The clause further specifies that the embedded emissions factor is based on verified data, with adjustments made following quarterly reviews.

### 8.2. Pass-through Clauses and Price Re-opener

To address potential fluctuations in carbon costs, contracts often include pass-through clauses and periodic re-opener provisions:

Pass-through Clause:

"If government-imposed carbon taxes or CBAM fees exceed USD 10 per tonne of CO<sub>2</sub>e, Seller shall have