Mega Minerals Internal Memo on EU CBAM and Carbon Cost Inclusion in Contracts

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1. Introduction

This memorandum provides an in-depth analysis of how the European Union's Carbon Border Adjustment Mechanism (CBAM) and associated carbon costs are integrated into Mega Minerals' contractual frameworks and pricing strategies. As climate policies tighten globally, particularly within the European Union, it becomes imperative for Mega Minerals to adapt its commercial practices to ensure compliance, competitiveness, and transparency. This document details the calculation of carbon costs, contractual clauses accommodating these costs, and strategic

considerations for future renegotiations, thus serving as a comprehensive guide for internal stakeholders and legal teams.

2. Scope and Purpose

The primary purpose of this memo is to outline the technical and contractual implications of EU CBAM and carbon taxation on Mega Minerals' iron ore supply contracts. It is intended for use by sales, legal, procurement, and compliance teams, providing clear procedures, examples, and contractual language for incorporating environmental costs. The document covers:

- The specifics of EU CBAM regulations and their scope
- Methodologies for calculating associated carbon costs per tonne of iron ore
- Impacts on existing and future supply contracts
- Potential contractual clauses for cost pass-through and price adjustments
- Internal policies related to Scope 3 emissions reporting

3. EU CBAM and Carbon Pricing Schemes

3.1 Overview of EU CBAM

The EU CBAM was introduced to prevent carbon leakage by imposing a carbon cost on imported goods, including bulk commodities like iron ore. Starting in 2025, importers will be required to purchase certificates corresponding to the embedded emissions in their products. The key features include:

- **Scope:** Certain industrial goods, including iron ore and processed steel.
- **Distribution:** Cost of certificates passed through to importers and ultimately to buyers.
- **Implementation timeline:** Phased implementation beginning in 2025, with full compliance expected by 2026.

3.2 Carbon Pricing and Tax Schemes

Beyond CBAM, the EU's Emissions Trading System (EU ETS) and national carbon taxes contribute additional costs. For example:

- **EU ETS:** Approximately €80 per tonne of CO2 equivalent in 2024.

- **National Carbon Taxes:** Variable rates, e.g., €50-€100 per tonne, depending on jurisdiction.

Table 1 illustrates typical carbon costs per tonne of iron ore embedded emissions, based on current and projected market rates.

Calculation Parameter	Estimated Cost (€ per tonne)
Carbon Content (kg CO2e per tonne)	20
EU CBAM Certificate Price	€30
Additional EU ETS/Tax	€50
Total Estimated Carbon Cost	**€100**

4. Carbon Cost Calculation Methodology

4.1 Emissions Factors

To determine the embedded carbon in iron ore, Mega Minerals employs a standardized emissions factor approach, based on lifecycle assessment data:

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Carbon Content (kg CO₂e per tonne) = Emissions Factor × Ore
Example:
Emissions Factor = 20 kg CO₂e per tonne of ore
Adjustment = based on specific ore impurities and processing
```

4.2 Calculating the Cost per Tonne

The total carbon cost per tonne is calculated as follows:

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Total Carbon Cost (€) = Embedded Emissions (kg CO₂e) × Combi
```

Where:

- Embedded Emissions are obtained from the emissions factors.
- Combined Carbon Price includes CBAM certificate costs and additional taxes.

4.3 Example Calculation

Parameter	Value
Emissions per tonne	20 kg CO_2e
Carbon Price per kg CO_2e	€0.005 (€5 per tonne)
Total Carbon Cost per tonne	20 × 0.005 = €0.10

5. Implications for Contract Pricing and Clauses

5.1 Price Adjustment Mechanisms

Contracts must incorporate mechanisms to reflect fluctuating carbon costs. Common approaches include:

- **Price Re-openers:** Clause enabling periodic adjustment based on carbon price indexation.
- **Fixed Pass-through:** For a defined period, the buyer bears the actual carbon costs incurred.
- **Price Escalation Clauses:** A predetermined formula linking carbon costs to indexable benchmarks like EU ETS prices or CBAM certificate costs.

5.2 Volume Commitments and Price Flexibility

Contract clauses also specify volume commitments and flexibility in pricing for unexpected surcharges due to environmental taxes:

- Minimum and maximum volume thresholds.
- Procedures for renegotiation if carbon costs exceed predefined limits.

5.3 Contract Risk Management

Inclusion of risk-mitigation clauses, such as:

- Force majeure provisions related to regulatory changes.
- Notification periods for cost adjustments.

6. Contractual Clauses and Examples

6.1 Price Pass-through Clause

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Clause 12.5: Price Adjustment for Carbon Costs

"Seller shall be entitled to pass through to Buyer any addit
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6.2 Carbon Cost Reopener Clause

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Clause 14.2: Price Reopener

"Both Parties acknowledge that changes in environmental regu
```

6.3 Future Renegotiation Clause

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Clause 16.1: Renegotiation in Response to Regulatory Changes

"In the event of significant regulatory changes related to E
```

7. Pass-through Mechanisms and Renegotiation Clauses

7.1 Implementation Guidelines

Effective pass-through clauses require:

- Clear documentation of carbon costs incurred.
- Notification obligations to inform the counterparty of adjustments.
- Timeframes for adjustment implementation.

7.2 Negotiation Strategies

Encourage proactive negotiations by including thresholds that trigger

renegotiation discussions and establishing timelines for resolution, ensuring minimal disruption.

7.3 Examples of Renegotiation Triggers

- Increase in carbon cost above €50 per tonne.
- Introduction of new environmental taxes or regulations.

8. Internal ESG Policies and Scope 3 Reporting

8.1 Scope of ESG Policies

Mega Minerals' ESG framework encompasses Scope 1, 2, and 3 emissions, with specific emphasis on:

- Measuring and reporting Scope 3 emissions related to suppliers and customers' product portfolios.
- Establishing emission thresholds (e.g., 5,000 tonnes CO_2e annually) that trigger additional disclosures.

8.2 Emissions Quantification

The company employs Life Cycle Analysis (LCA) tools to quantify scope 3 emissions, focusing on:

- Embodied emissions in raw materials.
- Transport and logistics impacts.
- Processing and delivery emissions.

8.3 Reporting and Transparency

Annual sustainability reports explicitly detail Scope 3 emissions data, progress toward decarbonization targets, and commitments to low-carbon supply chain development.

9. Decarbonization Strategies and Sustainability Commitments

9.1 Roadmap to Low-Carbon Iron Ore Supply

Mega Minerals has outlined its decarbonization pathway:

1. Reducing process emissions through technological upgrades.

2. Increasing use of renewable energy in operations.
3. Engaging suppliers to lower embodied emissions.

9.2 Customer Engagement

Commitments include providing low-carbon alternatives and transparent carbon footprint data, reinforcing Megas Minerals' environmental leadership.

9.3 Certification and Third-Party Verification

Utilization of third-party verification standards to authenticate carbon reduction claims and ensure transparency.

10. Legal Considerations and Interpretation of Scope 3

10.1 Scope and Definitions

Legal guidance emphasizes that Scope 3 encompasses all indirect emissions, including supply chain activities. Contract language must clearly reference applicable standards such as the GHG Protocol framework.

10.2 Contract Interpretation

Legal teams should ensure clarity on the scope of reporting obligations and the extent of pass-through liabilities. For example:

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"Emissions attributable to raw material inputs, including as
```

10.3 Compliance and Risk Management

Regular audits and compliance checks are recommended, alongside contingency plans for potential legal disputes arising from environmental regulation changes.

11. Appendices and Data Tables

11.1 Table of Sample Carbon Costs by Product

Product	Embedded Emissions (kg CO_2e/tonne)	Carbon Cost (€)
Standard Iron Ore	20	€0.10
Premium Low-Carbon Ore	15	€0.075
Processed Iron Concentrate	25	€0.125

11.2 Glossary of Terms

CBAM
: Carbon Border Adjustment Mechanism introduced by the EU to prevent carbon leakage.

Scope 3
: Indirect emissions from the supply chain, including raw material extraction and transportation.

Embodied Emissions
: The total greenhouse gases emitted throughout the lifecycle of a product.

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