

Scope 3 Category 4: Upstream Transportation Emissions Report

Company: ABC company

Report No.: R1765019966483

Date: 2025-12-06

1. Executive Summary

This document presents the greenhouse gas (GHG) emissions for transport chain activities of the above-named company, calculated in accordance with EN 16258:2013 and ISO 14064-1:2018.

Total transport emissions: 0.245 tCO_e

2. Methodology & Factors

- Standard: EN 16258:2013 (Well-to-Wheel, WTW)
- Conversion factors: GLEC Framework v2.0 (2023), aligned with ISO 14083
- GWP values: IPCC AR6 (100-year)
- Formula: $E = \text{mass[kg]} \times \text{distance[km]} \times \text{EF[kg CO}_2\text{/kg}\cdot\text{km]}$
- Boundary: transport leg from supplier gate to recipient gate
- Default mode: Road, Diesel (client can override in app)
- Rows with missing or invalid transport mode default to Road.
- All emission factors from GLEC Framework v2.0 are Well-to-Wheel (WTW) values, including upstream (well-to-tank) emissions.

[Factor source \(GLEC Framework v2.0\)](#)

3. Results

Product	Qty	Unit Weight (kg)	Distance(km)	Mode	Fuel	Total(tCO ₂ e)
A	100	2.5	1200	Sea	Marine Fuel Oil (Residual)	0.0039
B	200	1.2	800	Air	Kerosene	0.1780
C	50	4.0	2000	Road	Diesel	0.0632

Total: 0.245 tCO₂e

Uncertainty: ±22 % (k=2, GLEC 2023)

3.1 Data Quality & Uncertainty

- This report follows GLEC Framework v2.0 (2023) guidance on uncertainty.
- Default combined uncertainty for multimodal freight: $\pm 22\%$ ($k=2$, 95% confidence).
- Source: GLEC Framework v2.0, Section 5.4 – Data Quality and Uncertainty.

Quality Assurance

Prepared by: Automated Calculation Engine

Reviewed by: System Validation Rules

Approval: Not applicable – system-generated report

4. Report Integrity

This report was automatically generated and assigned a unique identifier. A content hash of the emission data is stored to detect any post-generation modification.

Generated by: garylop

Position: Environmental Manager

Date: 2025-12-06

Unique report ID: R1765019966483

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