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Carbon Footprint Report

for qtmyiysmhj

carboncalcpcf.com

17.08 kgCO2e Total

Total Product Footprint

17.08 kgCO2e

Carbon Intensity

17.08 kgCO2e/unit

Based on 1.0 unit

Primary Emission Scope

Scope 3

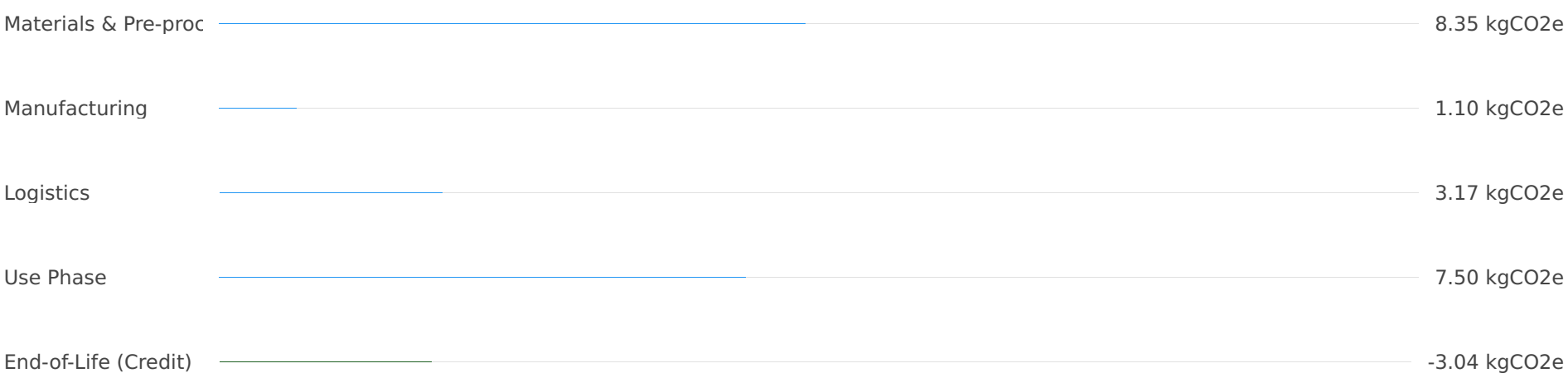
15.98 kgCO2e

System Boundary

Cradle-to-Grave

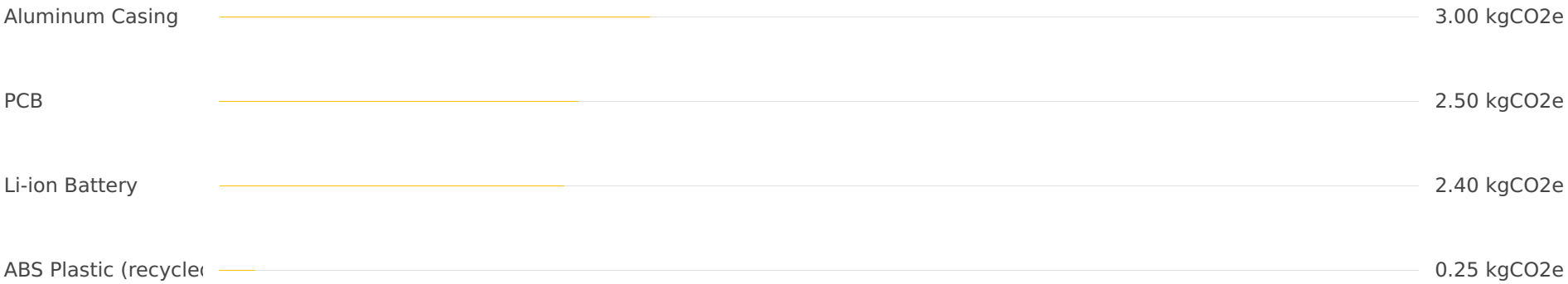
Comprehensive lifecycle

Lifecycle Stage Breakdown



*Percentages shown relative to total positive emissions for visualization.

Top Material Hotspots



*Share of total material emissions (8.35 kgCO2e).

Key Insights & Highlights

- **Material Acquisition Dominates:** Purchased goods and services (Scope 3, Category 1) account for ~48.9% (8.35 kgCO2e) of the total PCF, with electronic components and batteries being significant contributors.
- **Use Phase is a Major Factor:** The product's energy consumption during its 3-year lifespan drives ~43.9% (7.5 kgCO2e) of total emissions, falling under Scope 3, Category 11.
- **Logistics Impact:** Downstream transportation, especially last-mile delivery, contributes approximately 16.9% (2.89 kgCO2e) of the overall footprint.
- **Circular Economy Benefits:** High recyclability (75%) and a take-back program result in a net credit of -3.04 kgCO2e from the End-of-Life phase, demonstrating positive circular economy impact.

Recommendations for Emission Reduction

- **Material Optimization:** Explore lower-carbon materials, increase recycled content, and implement lightweighting to reduce embodied emissions from purchased goods.
- **Energy Efficiency in Use:** Design products for lower energy consumption during their lifespan and encourage energy-efficient user behavior.
- **Logistics Optimization:** Further optimize transport routes and modes, considering shifts to lower-emission alternatives and collaborating with electric/hybrid fleets for last-mile delivery.
- **Circular Economy Enhancement:** Strengthen and expand existing take-back and recycling programs to maximize material circularity and achieve greater emission avoidance.