carboncalcpcf.com

Product Carbon Footprint: qurpnyizfg

Total PCF (per 1 unit)
75.03 kg CO_2e

Total Footprint

75.03 kg CO_2e

Per 1 unit of qurpnyizfg, cradle-to-grave

Dominant Lifecycle Phase

Use Phase

Contributes 83.3% of total emissions

Top Material Hotspot

Aluminum Casing

7.50 kg CO_2e of material impact

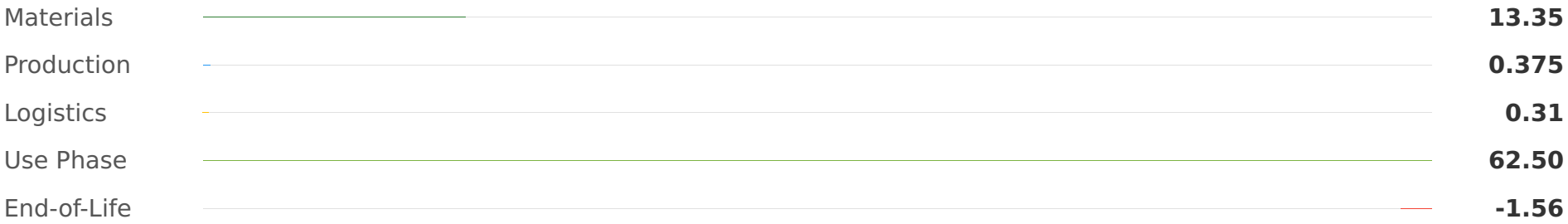
Primary GHG Scope

Scope 3

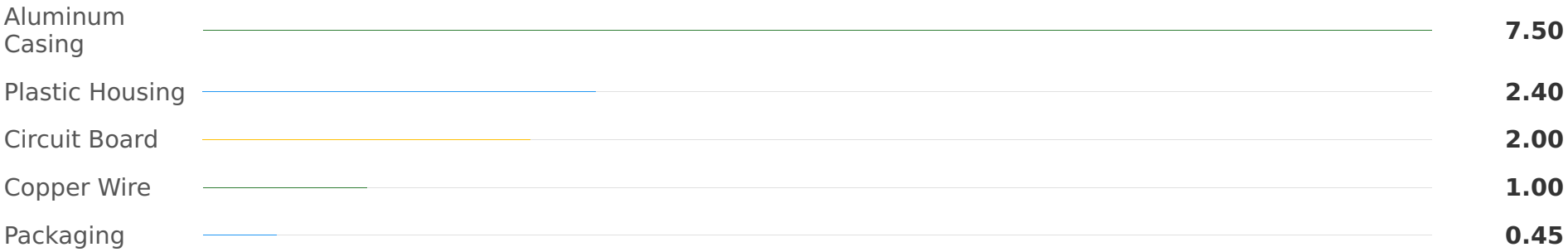
74.66 kg CO_2e from value chain

Emission Breakdown

Lifecycle Stage Contribution (kg CO_2e)



Top Material Carbon Impact (kg CO_2e)



Key Insights

- **Use Phase Dominance:** The product's use phase is the most significant hotspot, contributing approximately 83.3% of the total PCF due to energy consumption over its 5-year lifespan.
- **Material Impact:** Material acquisition and pre-processing account for about 17.8% of emissions, with Aluminum Casing being a major contributor (7.50 kg CO2e).
- **Effective Circularity:** The End-of-Life phase shows a net negative emission (-1.56 kg CO2e), demonstrating that high recyclability (80%) and the product buy-back program effectively reduce overall impact.

Recommendations for Reduction

→ **Optimize Use Phase:** Invest in R&D for drastic improvements in energy efficiency during product use, including low-power modes and smart energy management features.

→ **Innovate Materials:** Explore alternative materials for high-impact components like the Aluminum Casing, focusing on lower embedded emissions or higher recycled content.

→ **Enhance Circularity:** Further strengthen and promote the product buy-back program and increase recyclability, potentially expanding to component reuse and refurbishment.

→ **Supply Chain Engagement:** Collaborate with key suppliers to identify opportunities for reducing emissions in raw material extraction and processing.