html

carboncalcpcf.com

Product Carbon Footprint Dashboard

Product: **esdnmzqfoe** | Company: **qdvelpldhv** | Functional Unit: 1.0 unit | Standard: GHG Protocol

Total PCF: 111.06 kgCO2e

Total Product Footprint

111.06 kgCO2e

Carbon Intensity

111.06 kgCO2e/unit

Top Material Hotspot

Battery

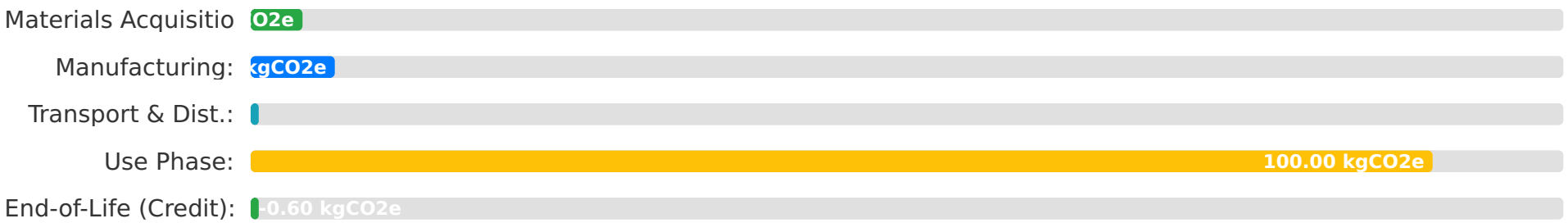
(1.60 kgCO2e)

Primary Emission Scope

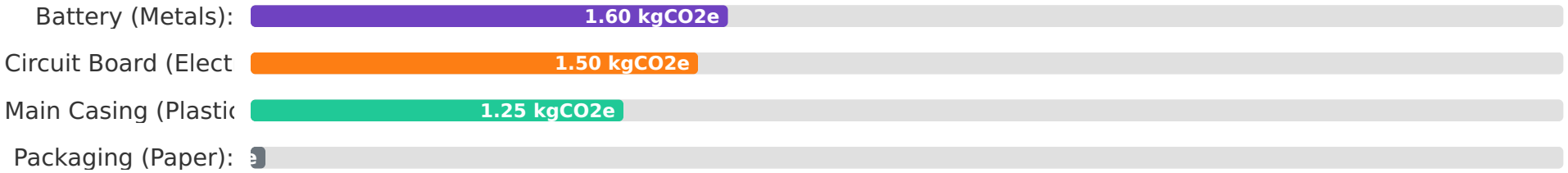
Scope 3 (Downstream)

(Use Phase)

Lifecycle Stage Breakdown



Material Carbon Impact Breakdown



Key Insights & Hotspots

- **Dominant Use Phase Emissions:** The Use Phase accounts for an overwhelming 100.00 kgCO2e, making it the primary driver of the product's overall carbon footprint.
- **Material Hotspots:** Materials Acquisition contributes 4.40 kgCO2e, with the Battery (1.60 kgCO2e) and Circuit Board (1.50 kgCO2e) being the most impactful components.
- **Manufacturing Efficiency:** Despite 75% renewable energy use, manufacturing still adds 7.13 kgCO2e, indicating room for further decarbonization of the remaining non-renewable energy.

Recommendations for Reduction

1. **Enhance Use Phase Energy Efficiency:** Redesign the product for significantly lower energy consumption throughout its 5-year operational lifespan.
2. **Sustainable Material Sourcing:** Prioritize raw materials with lower embodied carbon, especially for high-impact components like batteries and circuit boards.
3. **Increase Renewable Energy in Manufacturing:** Further increase renewable energy procurement or invest in on-site generation at the China manufacturing facility.
4. **Optimize Logistics:** Evaluate and improve transportation routes and modes for both upstream and downstream supply chains to reduce transport emissions.
5. **Strengthen Circularity:** Leverage and expand the existing take-back program to ensure maximum material recovery, reuse, and closed-loop recycling.