

Product Carbon Footprint for ddjffrodvr

Analysis by ziinjpduek for ijxnwlrvs (GHG Protocol)

44.93 **factory_gate**
kgCO₂e / unit System Boundary

carboncalcpf.com

Total Carbon Footprint

44.93

kgCO₂e per unit

Primary Emission Hotspot

Use Phase

(25.00 kgCO₂e)

Top Material Impact

Aluminum Casing

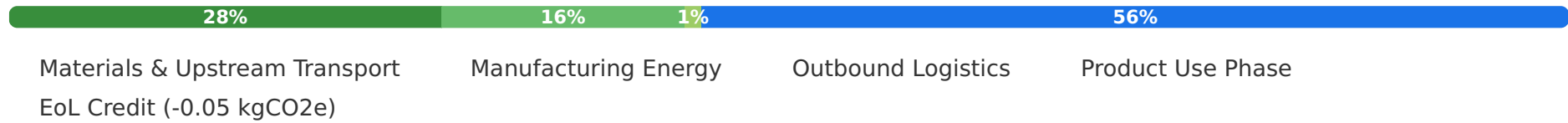
(6.00 kgCO₂e)

Production Country

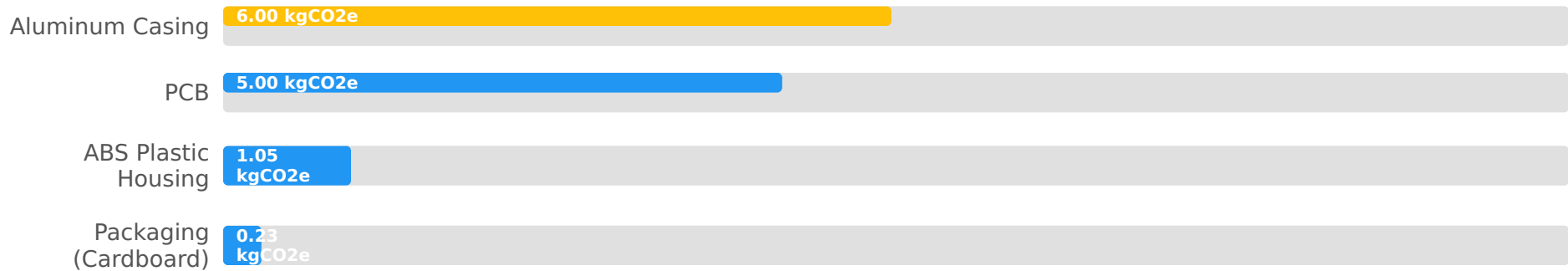
China

Supply Chain Focus: Europe

Lifecycle Stage Breakdown



Material Carbon Impact (Top Contributors)



Highlights: Emission Hotspots

- **Use Phase Dominance:** The product's energy consumption over its 5-year lifespan is the most significant contributor to its footprint (25.0 kgCO₂e).
- **Material Embodied Emissions:** Raw materials, particularly Aluminum Casing and PCB, form a substantial part of the upstream footprint (12.33 kgCO₂e).
- **Manufacturing Energy:** Despite 60% renewable energy use, purchased electricity for manufacturing still accounts for 7.0 kgCO₂e.

Action Plan: How to Reduce Impact

- **Improve Use-Phase Energy Efficiency:** Redesign for lower energy consumption and longer product durability.
- **Sustainable Material Sourcing:** Prioritize lower-carbon materials, increase recycled content, or explore bio-based alternatives.
- **Enhance Renewable Energy Adoption:** Further increase renewable energy sourcing at manufacturing facilities beyond current 60%.
- **Strengthen Circular Economy:** Expand take-back and repair programs to maximize product lifespan and material recovery.