carboncalcpcf.com

Product Carbon Footprint Dashboard

for **luzvigrjkl**

59.45 kg CO_2e

(Total PCF per 1.0 unit)

Standard Applied

GHG Protocol

Global standard for GHG accounting.

Production Country

China

Location of final manufacturing.

System Boundary

Factory Gate + Downstream

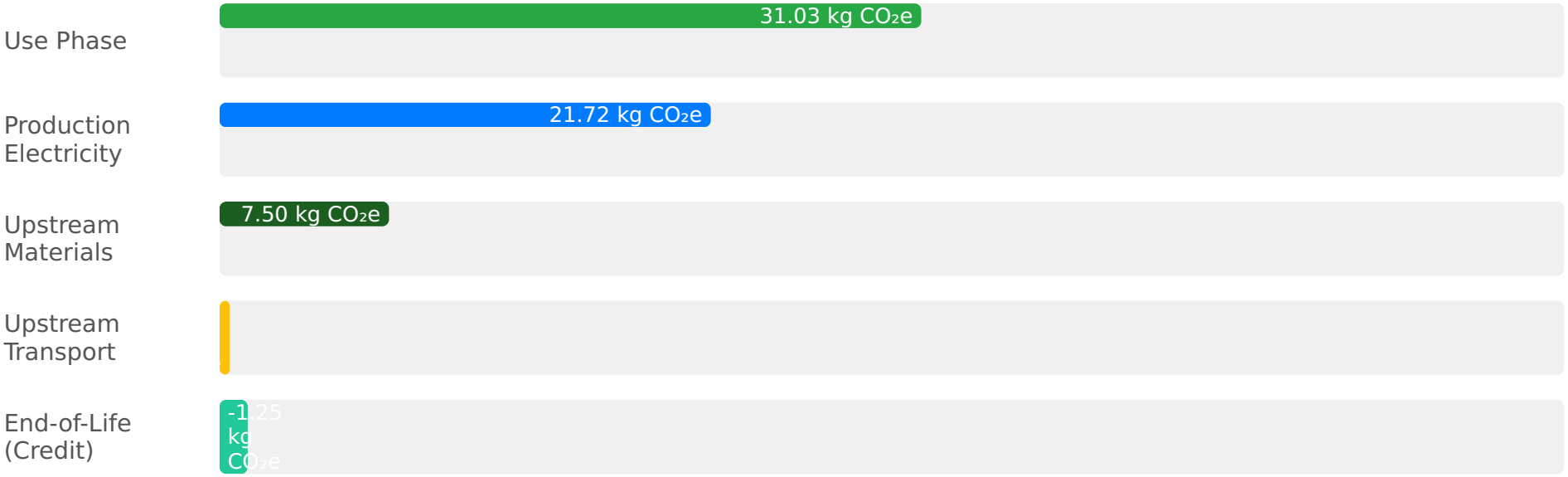
Cradle-to-gate plus Use & End-of-Life.

Top Hotspot

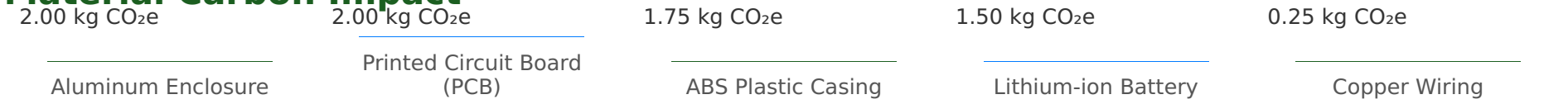
Use Phase

Largest contributor to total emissions.

Lifecycle Stage Emissions Breakdown



Material Carbon Impact



Key Insights & Hotspots

- The **Use Phase** (31.03 kg CO₂e) accounts for over half of the product's total footprint, making energy-efficient design paramount.

- **Purchased Electricity for Manufacturing** (21.72 kg CO_2e) is the second-largest hotspot; increasing renewable energy adoption at the China facility offers significant reduction potential.
- **Upstream Materials** contribute 7.50 kg CO_2e, with Aluminum, PCB, and ABS plastic being the most impactful materials.
- The product benefits from a **net carbon credit at End-of-Life** (-1.25 kg CO_2e) due to high recyclability and circular economy initiatives.

Recommendations for Decarbonization

- **Optimize Use Phase Energy:** Redesign for lower energy consumption during product lifespan.
- **Boost Renewable Energy in Production:** Increase the percentage of renewable energy used at the manufacturing facility in China.
- **Source Sustainable Materials:** Explore lower-carbon alternatives, recycled content, and bio-based materials for components like Aluminum, PCBs, and plastics.
- **Enhance Circularity:** Further develop and promote take-back programs and design for durability and repairability.
- **Engage Supply Chain:** Collaborate with suppliers to collect primary data and drive decarbonization efforts across the value chain.