

frpskppiwh Carbon Footprint Dashboard

carboncalcpcf.com

6.80 kg CO₂e

Total PCF (Net)

PRODUCT NAME

frpskppiwh

Product Identifier

TOTAL FOOTPRINT

6.80

kg CO₂e / unit

PRODUCTION COUNTRY

China

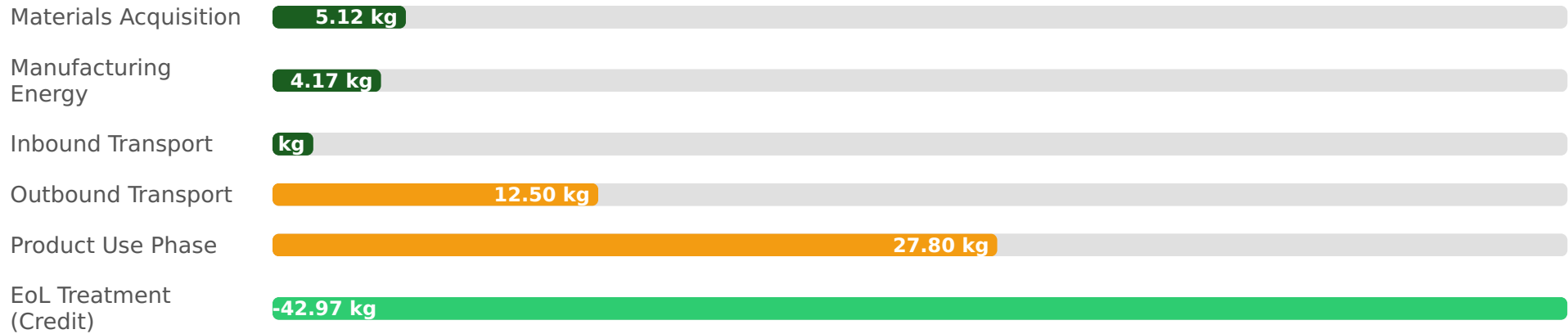
Main Manufacturing Hub

PRIMARY SCOPE

Scope 3

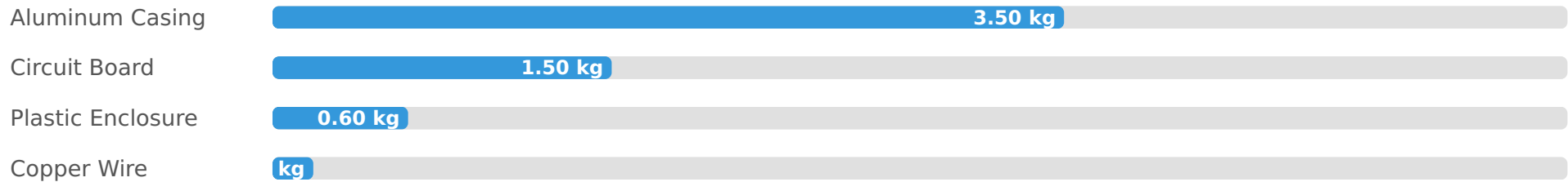
Dominant GHG Scope

Lifecycle Stage Breakdown



* Bars for positive emissions stages represent contribution to gross emissions (49.67 kg CO₂e). End-of-Life is a significant carbon credit.

Material Carbon Impact



* Impact from Bill of Materials, representing 5.725 kg CO₂e of upstream Scope 3 emissions.

Key Carbon Hotspots

- **Product Use Phase (27.80 kg CO2e):** The energy consumption during the 5.0-year lifespan is the largest contributor to gross emissions, highlighting significant opportunities for energy efficiency improvements in product design.
- **Outbound Transport (Last-Mile) (12.50 kg CO2e):** This downstream segment presents a substantial impact, suggesting the need for logistics optimization or a strategic shift to lower-emission delivery methods.
- **Material Acquisition & Processing (5.12 kg CO2e):** Raw materials, particularly Aluminum Casing (3.50 kg CO2e), represent a significant portion of upstream emissions, underscoring the importance of sustainable material selection and optimization.

Recommendations for Impact Reduction

1. Enhance Energy Efficiency in Use Phase:

- Innovate product designs to significantly reduce energy consumption during the 5.0 years of product use.
- Develop and promote user guidance for optimal, energy-saving modes of operation.

2. Logistics Optimization for Outbound Delivery:

- Investigate more efficient last-mile delivery solutions, potentially including electric vehicles, cargo bikes, or optimized route planning.
- Consolidate shipments where possible to increase load factors for outbound logistics.

3. Material Optimization:

- Explore alternative, lower-carbon materials for high-impact components, such as light-weighting designs or substituting materials with higher recycled content.
- Investigate opportunities for increasing the actual uptake of recycled content in manufacturing.

4. Decarbonize Production Energy:

- Increase the percentage of renewable energy usage beyond 60.0% for the production facility in China.
- Implement comprehensive energy efficiency measures within the factory to reduce overall electricity demand.

5. Strengthen Circularity Initiatives:

- Further develop and promote existing circular/take-back programs (lugwsnngxy) to maximize product lifespan extension, reuse, and material recovery at end-of-life.
- Explore modular design principles to facilitate easier repair, refurbishment, and component reuse.