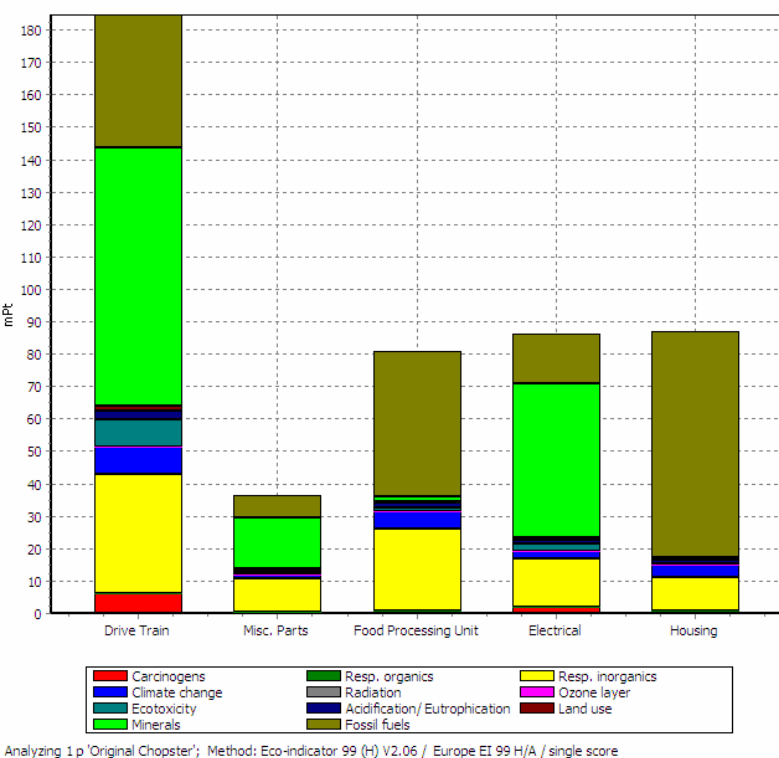




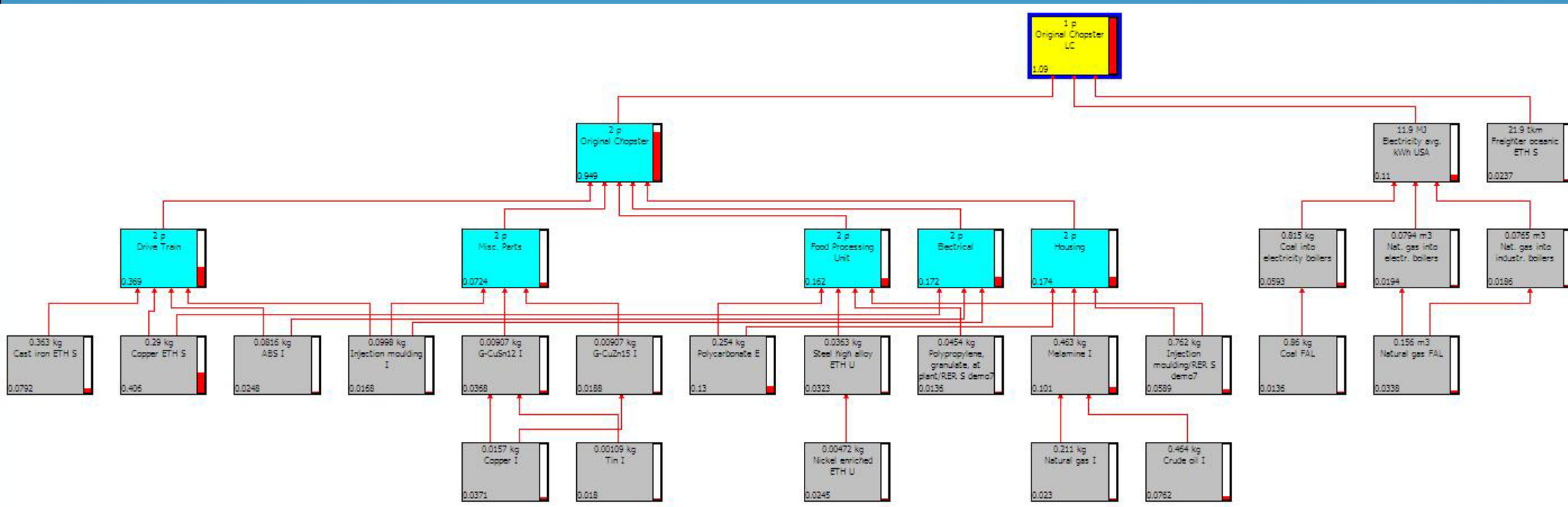
## Comparison of Subassemblies



## Effect of Design Changes:

- Recycled Plastic:** Using recycled pp for the housing instead of melamine actually increased toxicity w/o reducing petroleum need as much as expected
- Glass Bowl:** Making the food container out of glass appears to have reduced toxicity and petroleum use, but may have a positive or negative impact on product life.
- Replaceable Blades:** Attempting to simulate doubling the life of the product showed large improvement by essentially eliminating a product's worth of waste in the lifecycle analysis.
- Hand-powered Chopper:** Since the motor/electrical subassembly of the product had the largest negative impact due to the use of copper, eliminating the need for both by switching to some sort of manually powered chopper had a predictable but significant improvement.

## LifeCycle Flowchart



## Inventory Analysis:

- Copper had the greatest impact. This is most likely due to the severe environmental effects of mining and producing copper material
- Plastics have the next largest impact, consuming a large amount of fossil fuel during production.

## Subassembly Analysis:

- Surprisingly, the motor and electrical components were the worst culprits – more so than plastic. This was mainly due to the effect of copper in the motor and electrical cord.
- Melamine in the housing had a high cost in terms of petroleum, more so than other plastics.

## Product Details:

**Life Estimate:** 6 years at roughly 1 hr/week

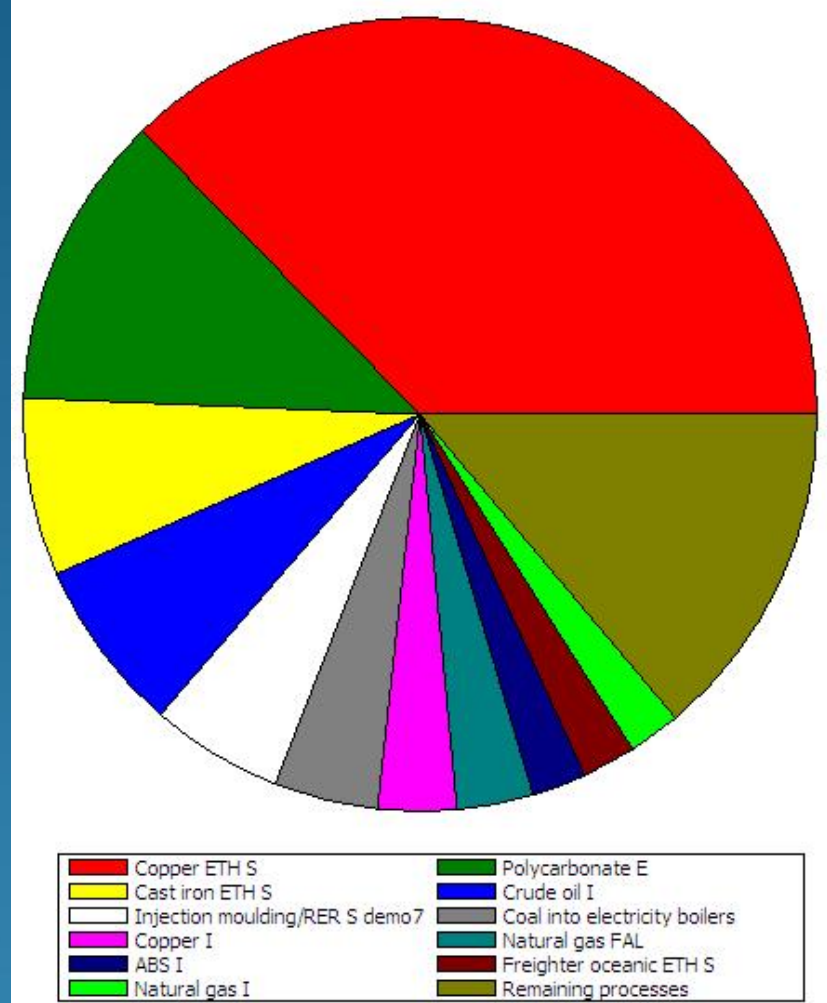
**Functional Unit:** Impacts/hr

## System Boundaries:

Includes transport from Guangzhou, disposal as landfill, electricity, product  
Excludes packaging



## Inventory Analysis



## Comparison of Design Changes

