

Sustainability is More Than Just End of Life

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PLASTICS
RECYCLING CONFERENCE





"safest"

"ultimate in sustainability"



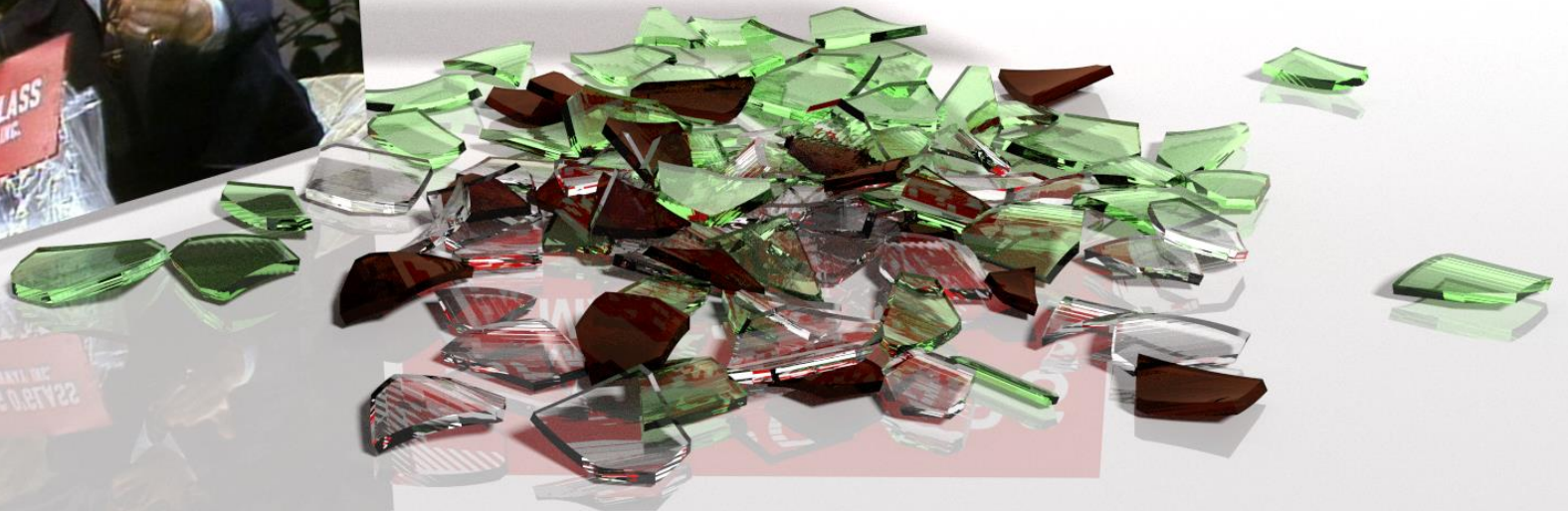
Chicken and Broken Glass



Mainway Toys



BAG O'GLASS
MAINWAY, INC.





Safety Aware



Sustainability Aware



I Choose Sustainable Energy



Energy
CERTIFIED



I Repair Things



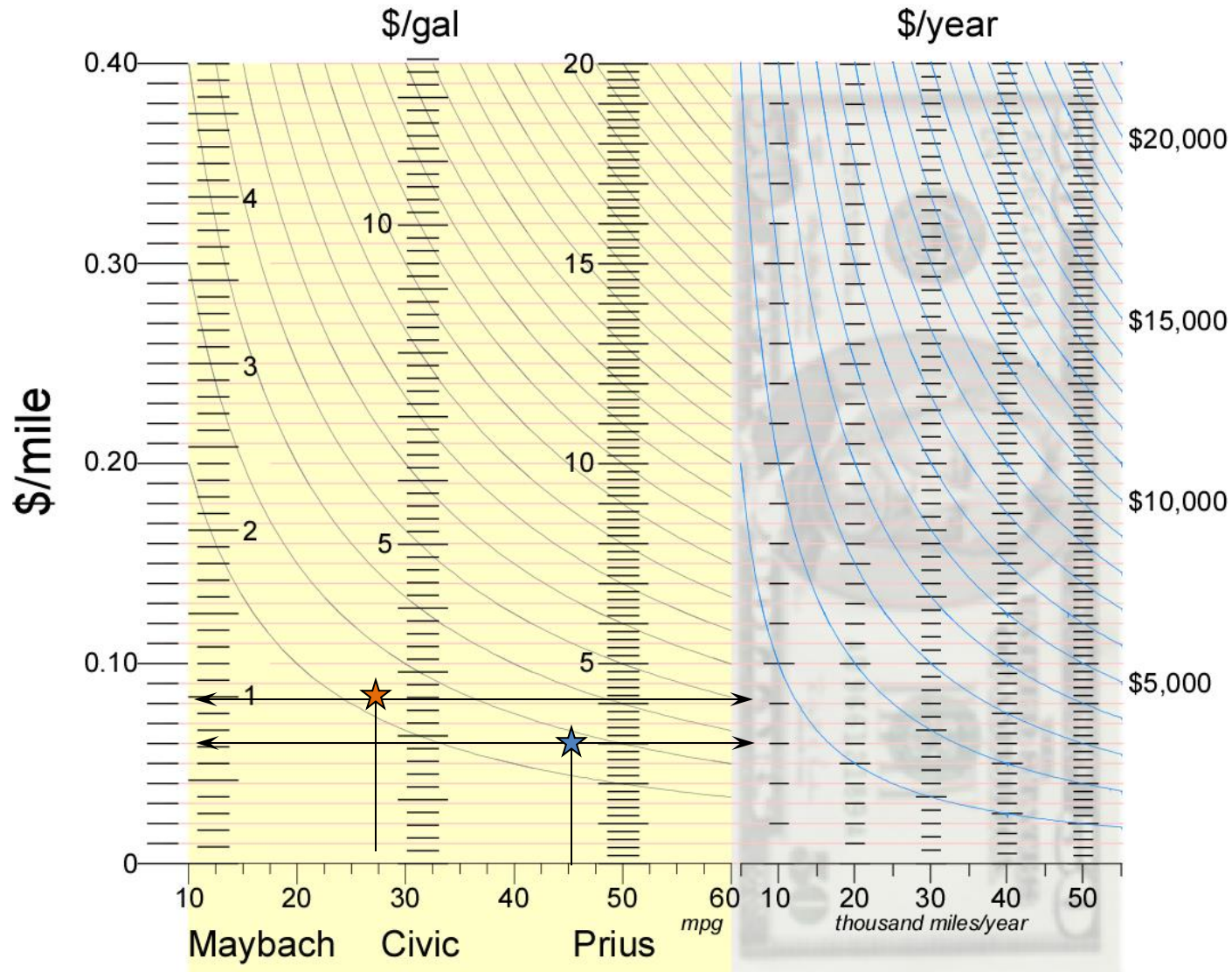
But I Still Use Fossil Fuels



I Make Uneconomical Choices



I Waste Time and Money At Home



*I'm destroying the planet
slower than you are.*



I Waste Time and Money At Home



I Waste Time and Money At Home



My Instincts On Sustainability Can Be Wrong



Embodied Fossil Energy





Which is more sustainable?

A meat-eater in a Prius



A vegan in a Hummer

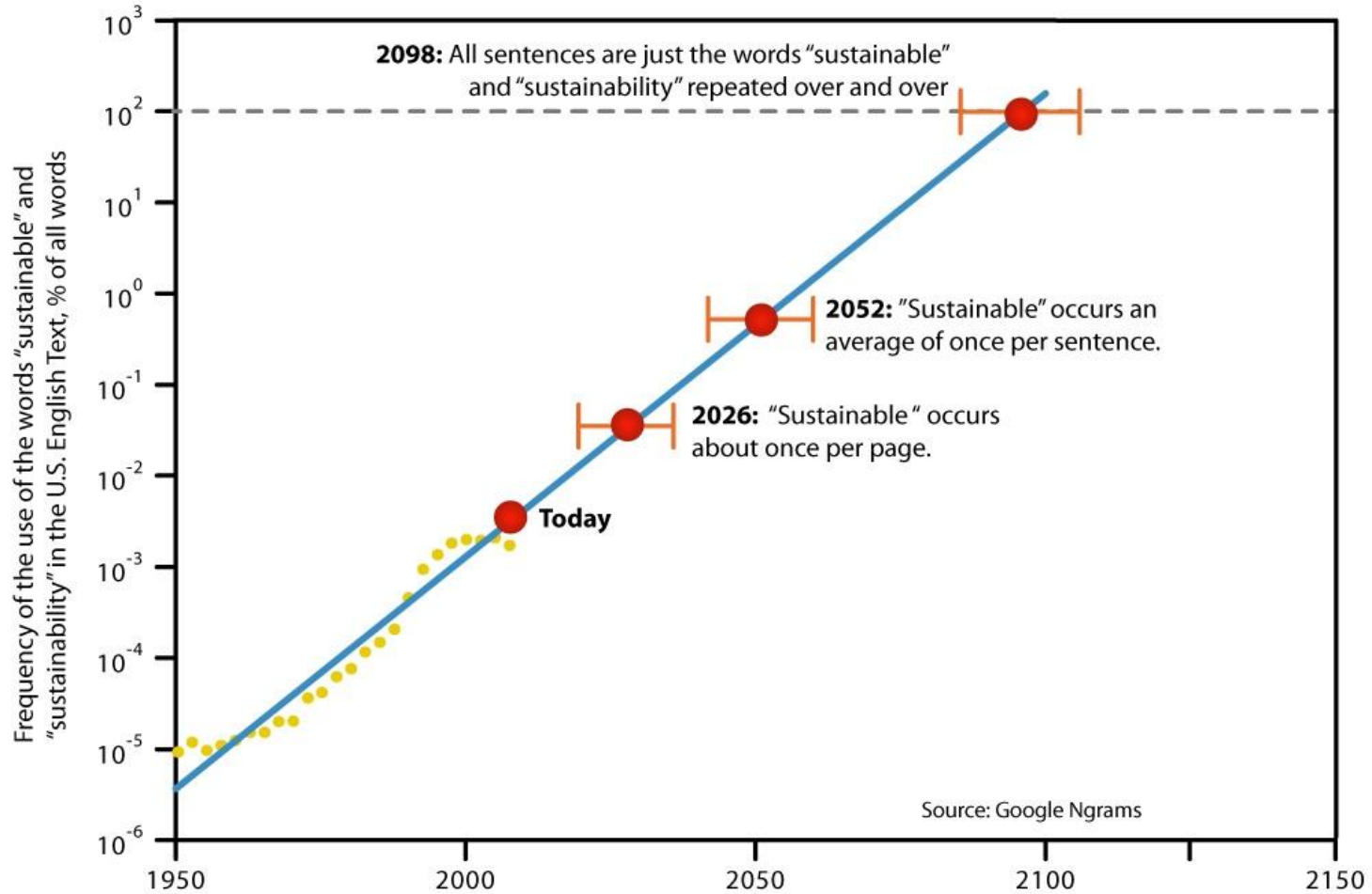
Customer Focus?



Return Shareholder Value

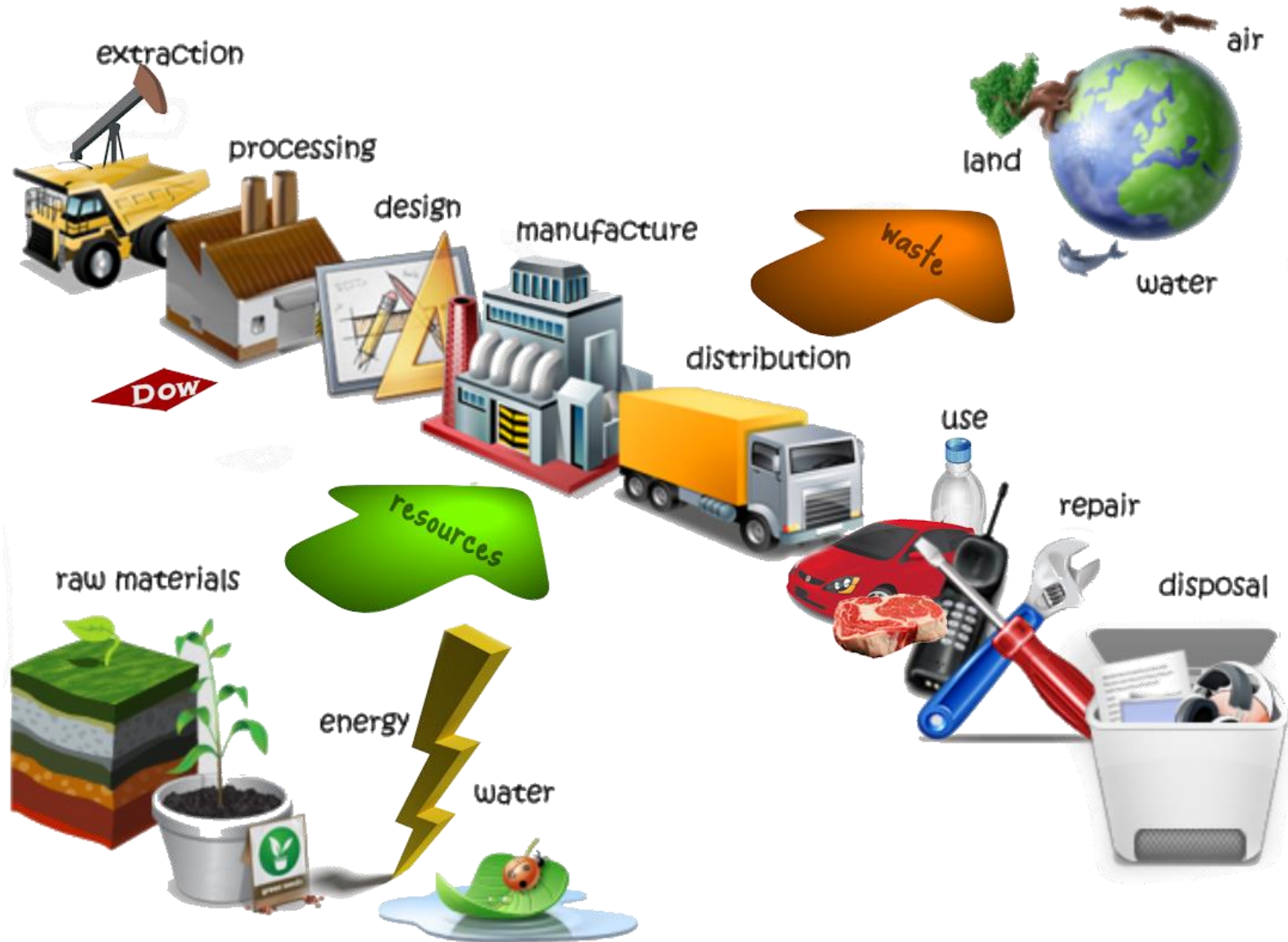
*I can't waste money
and time at work*

Sustainability is Unsustainable?



<http://imgs.xkcd.com/comics/sustainable.png>

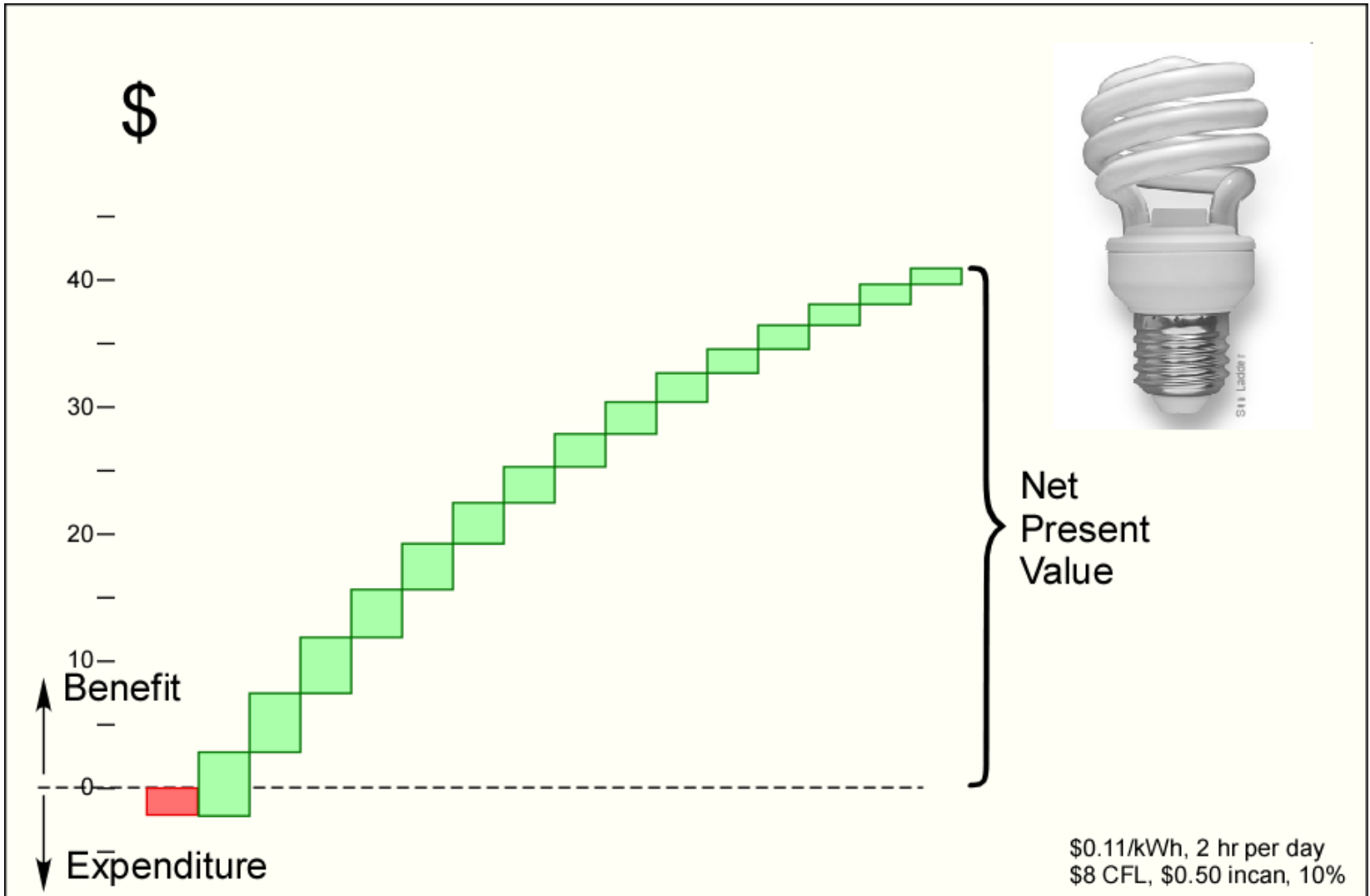
Life Cycle Assessment



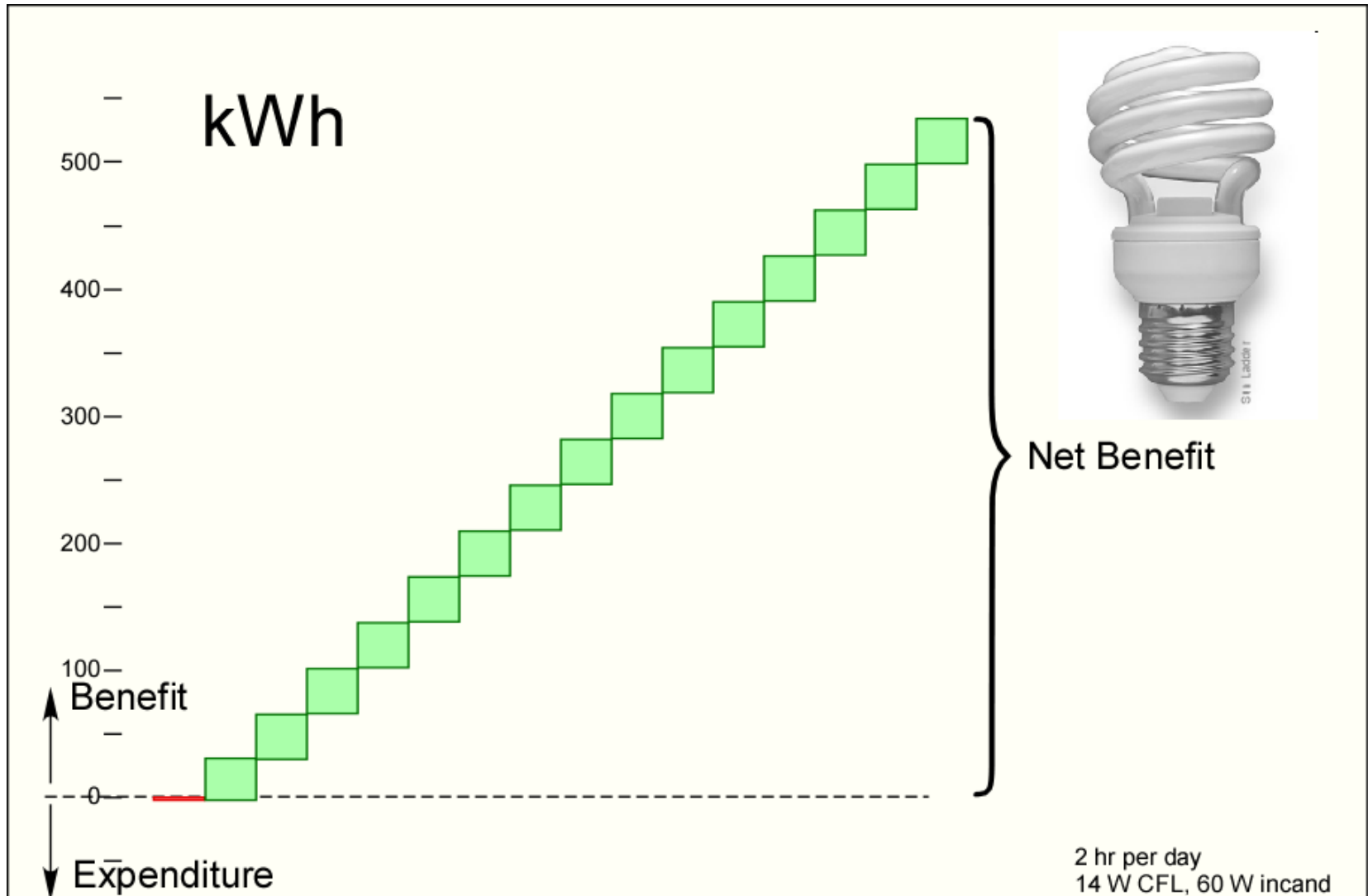
adapted from sustainable-graphic-design.blogspot.com



Financial Way of Looking At Benefit



Why Not Sustainability?



■ Packaging Addresses Global Challenges



30-40% food grown is wasted. Much of it to spoilage.

Stand-up pouch packaging reduces waste and brings energy savings



Package Type	Contents	Impact per 100 oz Cereal		
		Landfill Discards* (g)	Process GHG** (kg CO ₂ Eq)	Total Energy** (MJ)
Paperboard and HDPE Liner	11 oz	380.0	.861	12.1
Stand-Up Pouch	12 oz	117.5	.265	9.25

Reduction vs Box	
Landfill Discards	68%
GHG	69%
Energy	23%

Flexible Packaging Examples



greenerpackage.com



nestle-shop.ch

Food Packaging



Modern agriculture is the use of land to convert petroleum into food.

Al Bartlett

**40 kWh/kg
~22% wasted**

Pimentel and Pimentel, 2003

FAO, 2012

CO₂e

13X bigger for beef

chicken

Benefit



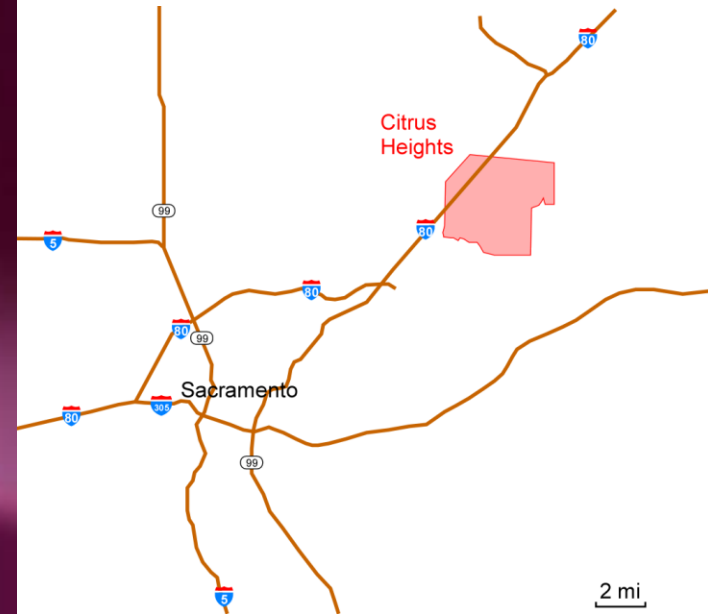
Expenditure



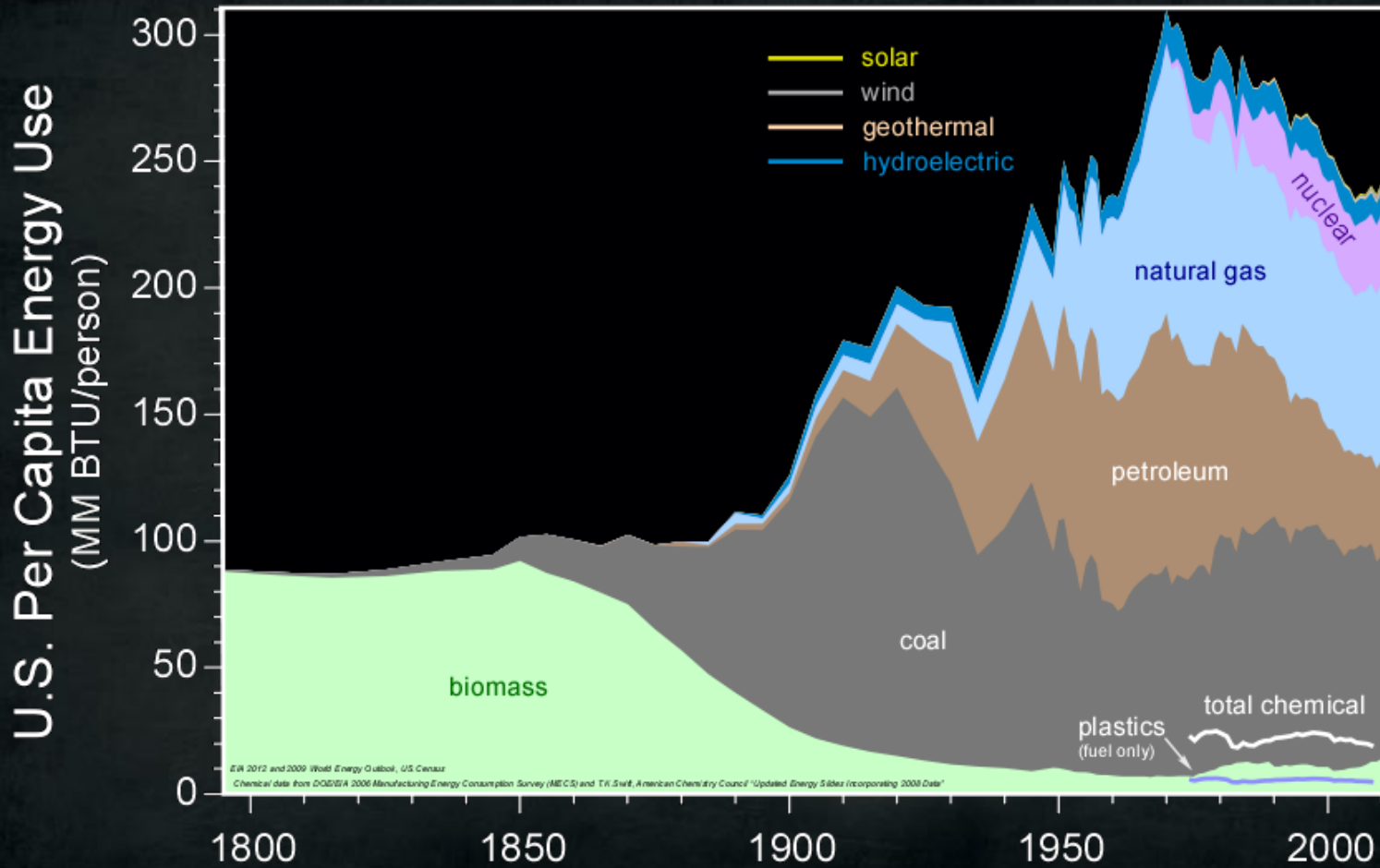
} Avoided Waste?



Explore New End of Life Options



Per Capita Energy Use





The End

Questions?