

# *Sustainable Energy*

## *- The Basics*

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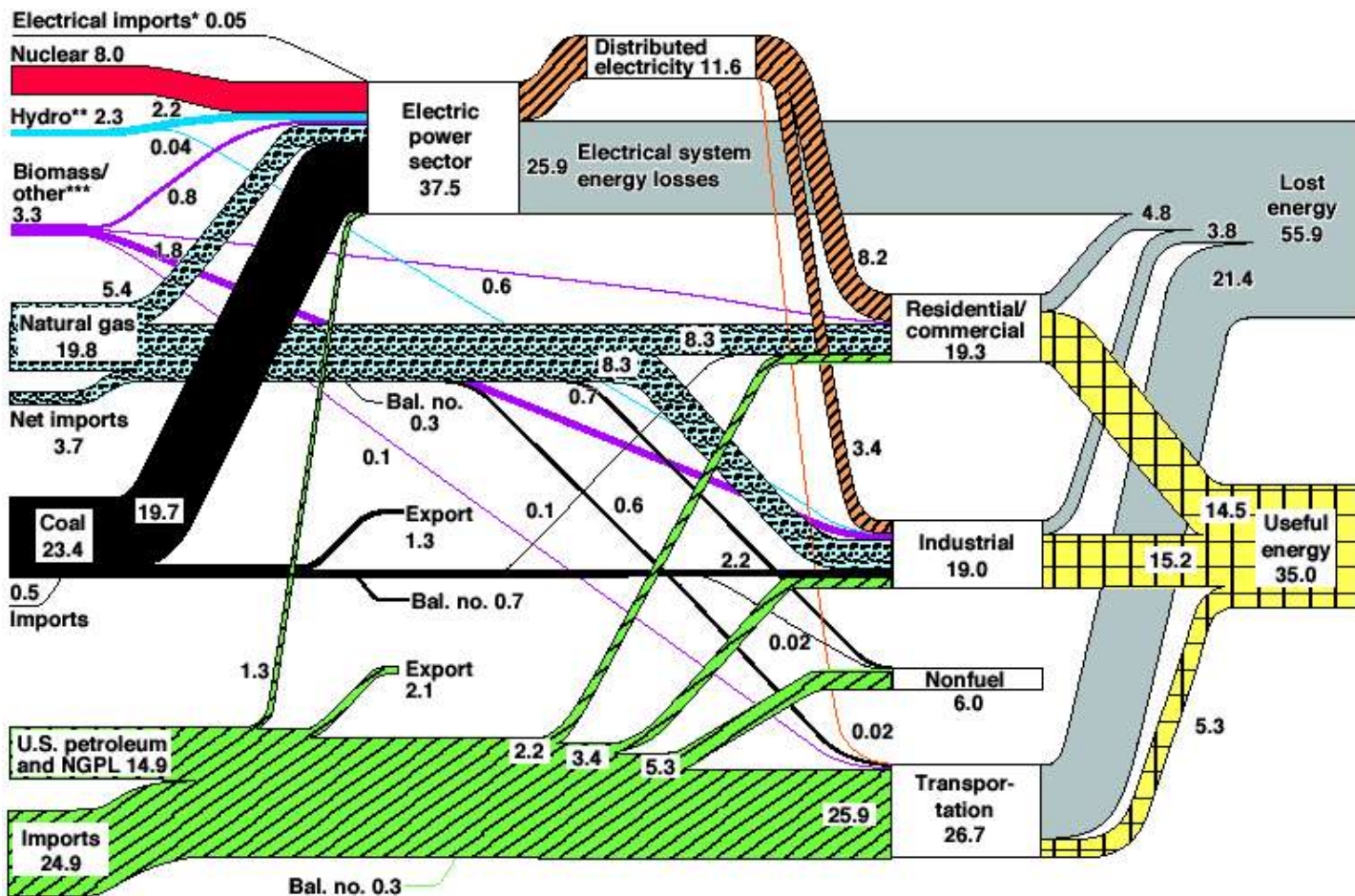
**530-265-2443**

**[www.SustainableEnergyGroup.com](http://www.SustainableEnergyGroup.com)**

# U.S. Energy Overview

## Energy Sources, Uses & Efficiency

U.S. Energy Flow Trends – 2001  
 Net Primary Resource Consumption ~97 Quads



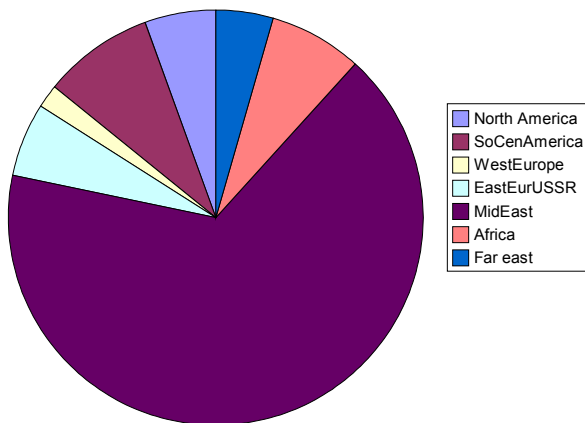
37%

63%

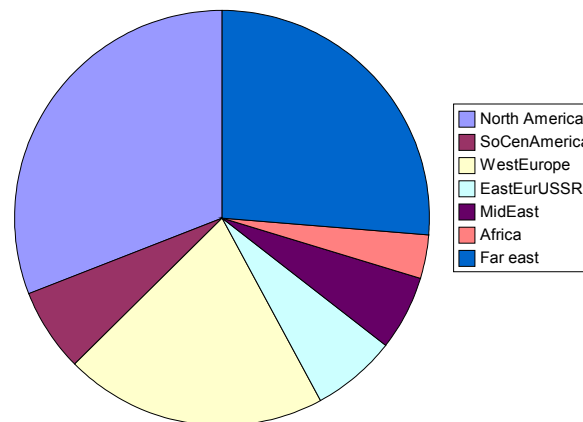
# *Oil - The Big Picture*

## *Who Has It & Who Uses It*

Oil - Who Has It



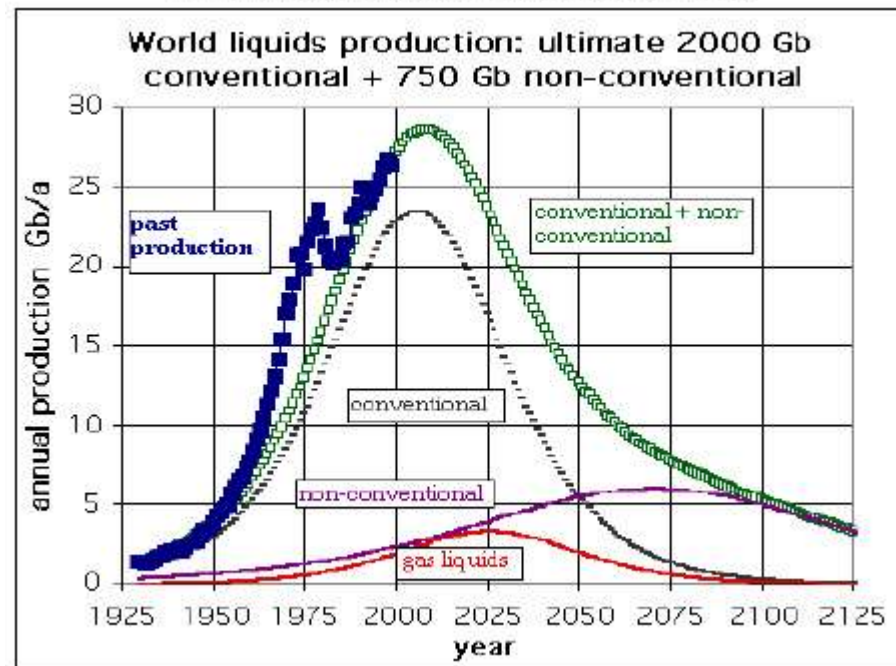
OIL - Who Uses It



# *Oil - The Big Picture*

## *How Much Longer Will It Last?*

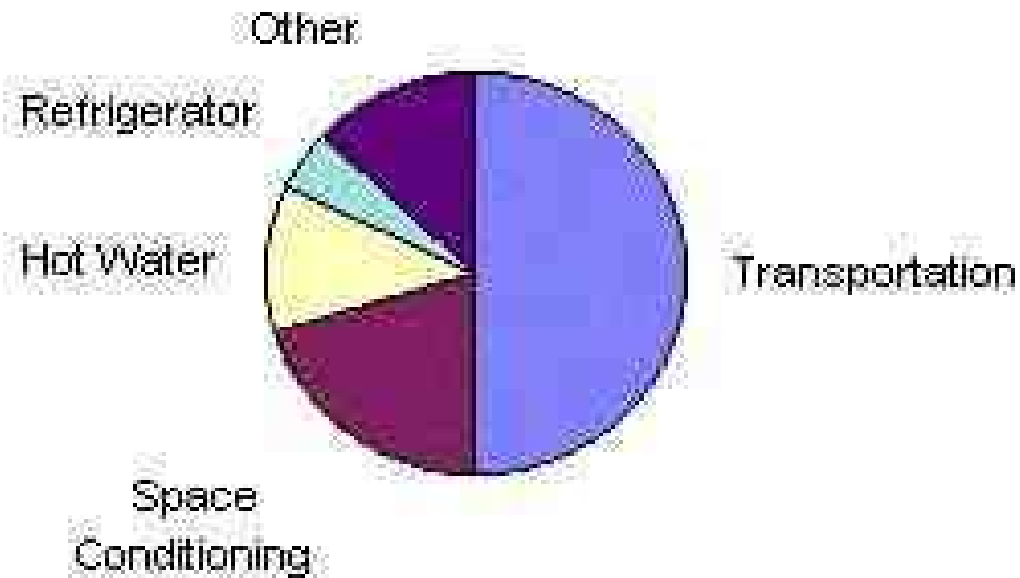
Figure 2. World Oil Production is Projected to Peak (Ref. 8)



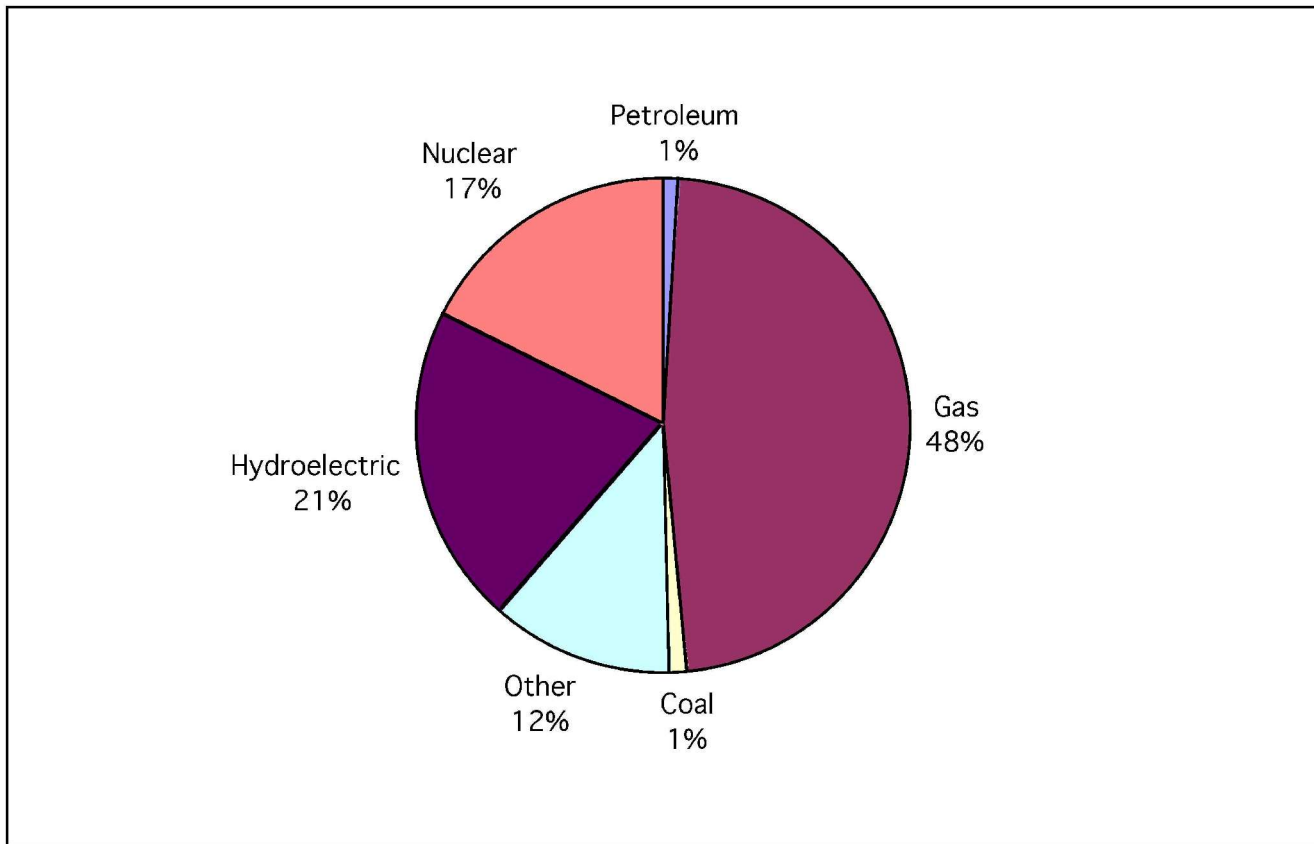
"Figure 2 illustrates the supply peak concept, first espoused by Dr. M. King Hubbert, and now being debated by a number of respected petroleum experts. All of these experts agree that world petroleum supply will peak; the question is when? When the petroleum production peak occurs, the consequences will be severe if import dependent nations have not prepared for it."

# *Household Energy Including Transportation*

## Household Energy



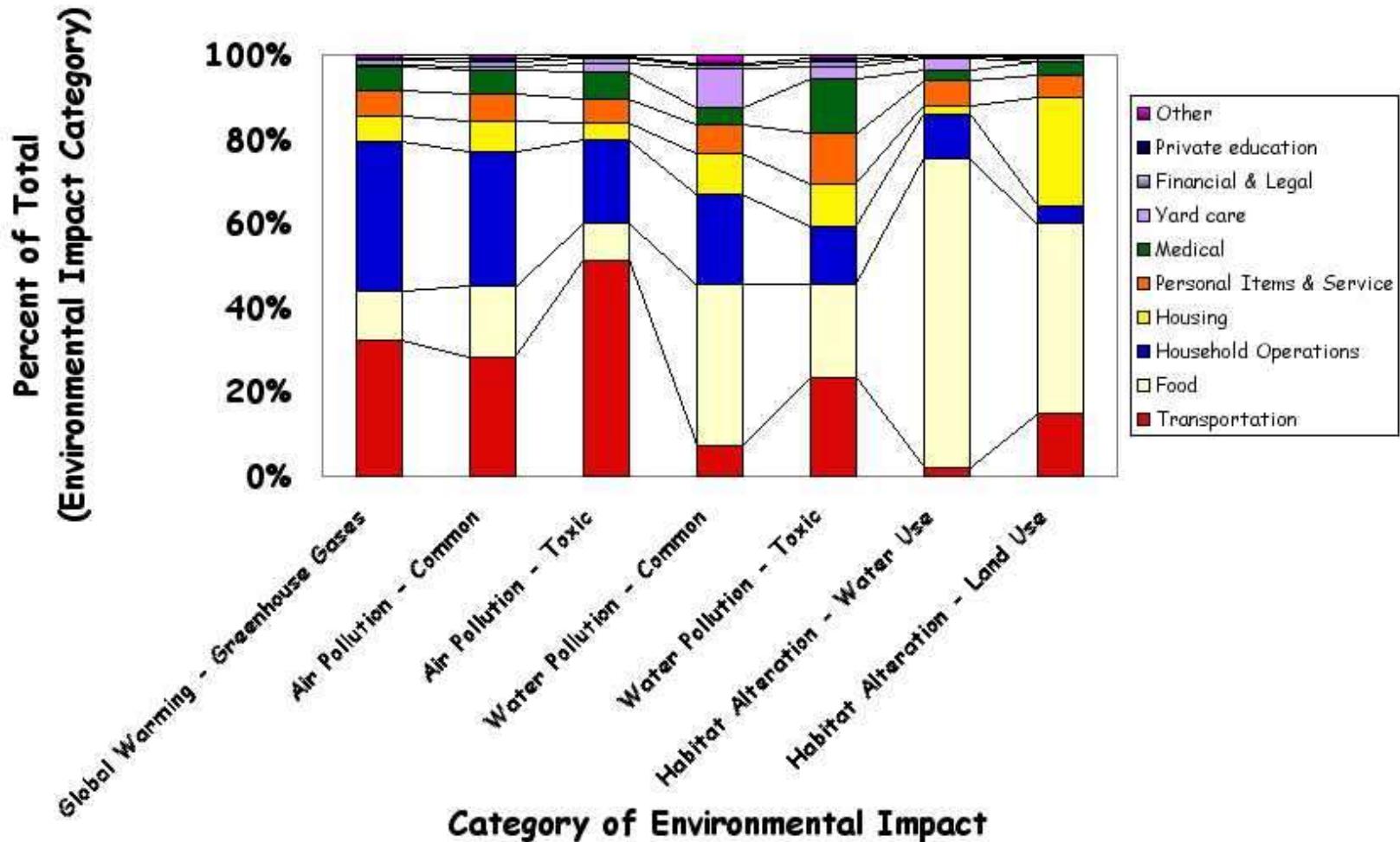
# *California Electricity Fuel Sources Used For Generation*



# *Environmental Impact*

## *(By Category & Percent of Impact)*

Household Environmental Impact - Overall



# *The Top 3 Sustainable Solutions*

## *For Reducing Your Environmental Impact*

- **# 1 - Transportation**

Reduce driving, choose more efficient vehicle and - whenever practical - walk, ride or use public transit.

- **# 2 - Food Production**

Minimize meat consumption and choose organically produced, locally grown products whenever possible.

- **# 3 - Household Operations**

Reduce heating, cooling and water heating energy. Purchase energy-efficient lights and appliances.

# *One Family's Approach To Sustainable Solutions*

- TRANSPORTATION

Two-car family with a 30 mpg station wagon (25,000 miles/yr) and an electric vehicle (15,000 miles/yr) - powered by the sun!

- HEATING & COOLING

Net added cost of energy measures: \$800. Annual savings: \$455/yr. Return on investment: over 200% (tax free).

- WATER HEATING

Installed cost of solar water heating: \$1,750. Annual savings: \$120/yr. Return on investment: 91% (over loan period).

- OTHER

Net added cost of energy measures: \$12,000. Annual savings: \$1,020/yr. Return on investment: 10% (over loan period).

# References

- **U.S. Energy Overview - Energy Sources, Uses and Efficiency**  
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- **Oil - The Big Picture - Who Has It and Who Uses It**  
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- **Oil - The Big Picture - How Much Longer Will It Last? Data from the U.S. Dept. of Energy. Office of Fossil Energy report, available online here:**  
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- **Household Energy - Including Transportation**  
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- **California Electricity - Fuel Sources Used for Generation**  
[http://www.eia.doe.gov/cneaf/electricity/st\\_profiles/california.pdf](http://www.eia.doe.gov/cneaf/electricity/st_profiles/california.pdf)
- **Environmental Impact - By Category and Percent of Impact; Household Operations; Solutions**  
<http://www.ucsusa.org/publication.cfm?publicationID=242>
- **One Family's Approach to Sustainable Solutions**  
<http://www.TheEnergyGuy.com>