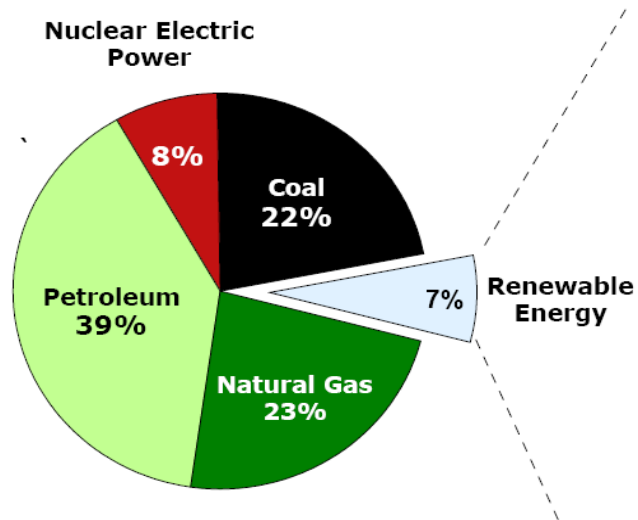
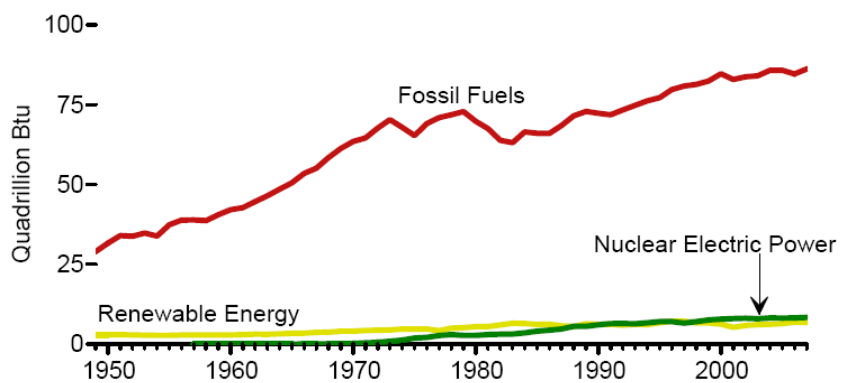


U.S. Energy Consumption, 2007



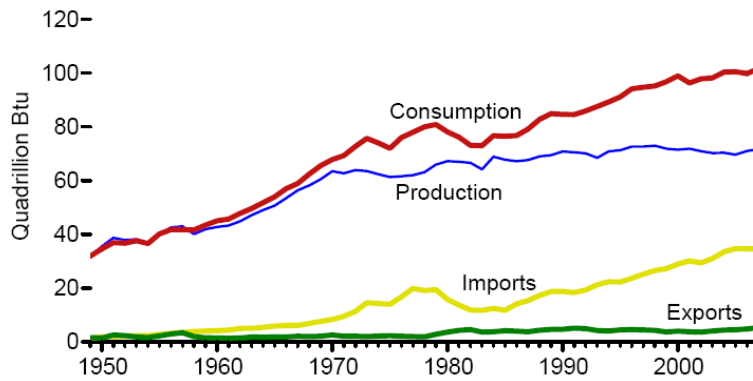
Source: Energy Information Administration / Annual Energy Review 2007

Primary Energy Consumption by Source



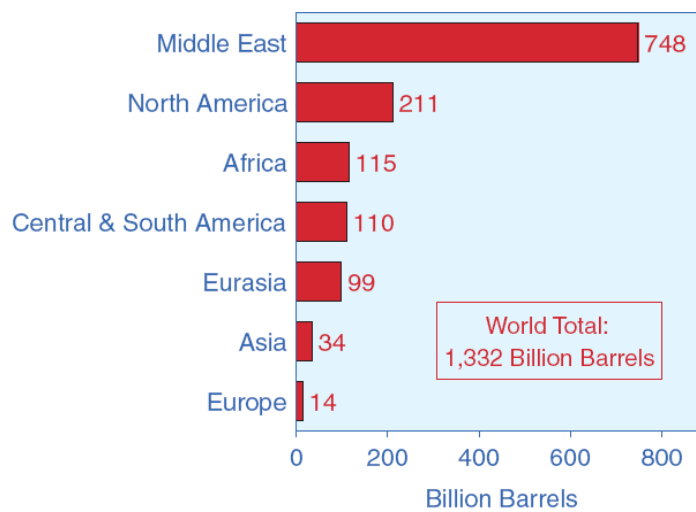
Source: Energy Information Administration / Annual Energy Review 2007

Primary Energy Overview



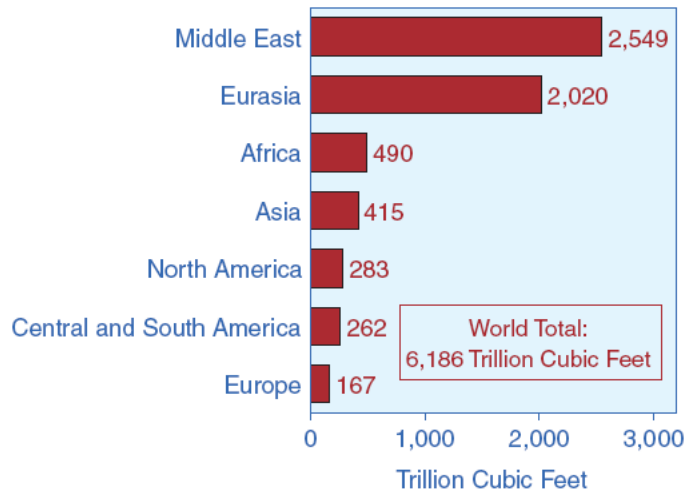
Source: Energy Information Administration / Annual Energy Review 2007

World Proved Oil Reserves by Geographic Region as of January 1, 2008



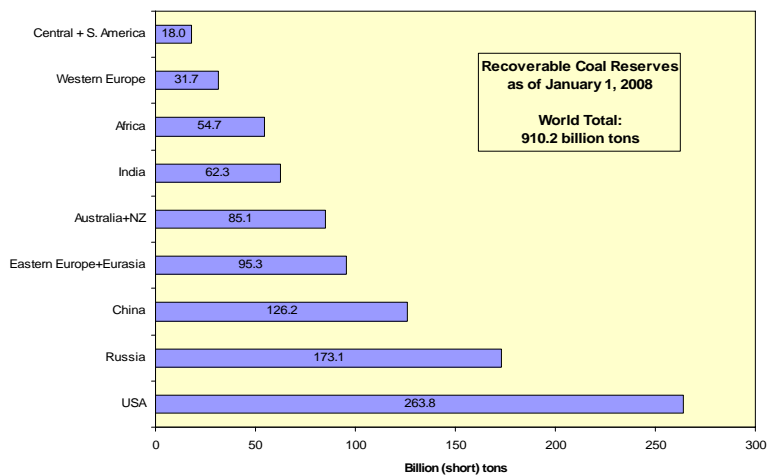
Source: "Worldwide Look at Reserves and Production," Oil & Gas Journal, Vol. 105, No. 48 (December 24, 2007), pp. 24-25.

World Natural Gas Reserves by Geographic Region as of January 1, 2008



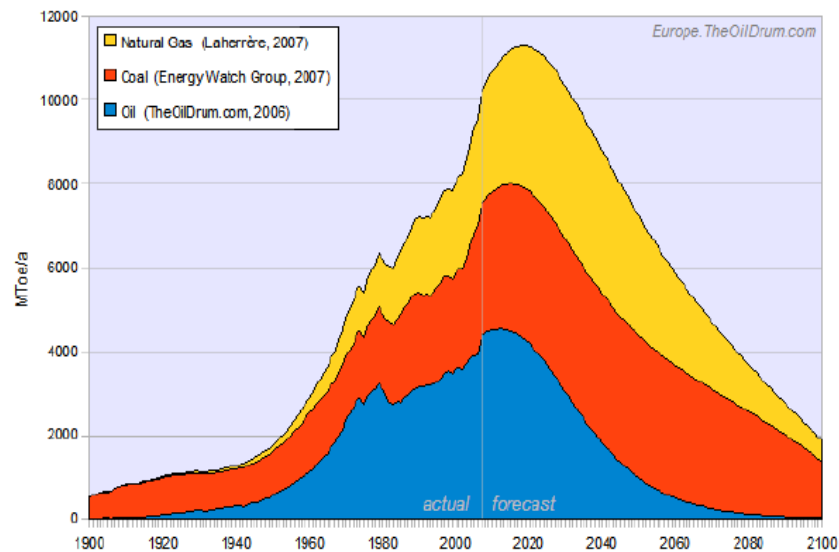
Source: "Worldwide Look at Reserves and Production," Oil & Gas Journal, Vol. 105, No. 48 (December 24, 2007), pp. 24-25.

World Recoverable Coal Reserves by Geographic Region as of January 1, 2008



Sources: World Energy Council, 2007 Survey of Energy Sources, 21st Edition (London, UK: Elsevier, September 2007), and EIA, International Energy Annual 2005 (June-October 2007).

Conventional Fossil Fuels



U.S. Energy Consumption

Quadrillion (10^{15}) Btu

Petroleum ¹ 39.8	39.8 Qbtu petrol
Natural Gas ² 23.6	+ 23.6 Qbtu natural gas
Coal ³ 22.8	+ 22.8 Qbtu coal
Renewable Energy ⁴ 6.8	+ 6.8 Qbtu renewable
Nuclear Electric Power 8.4	+ 8.4 Qbtu nuclear

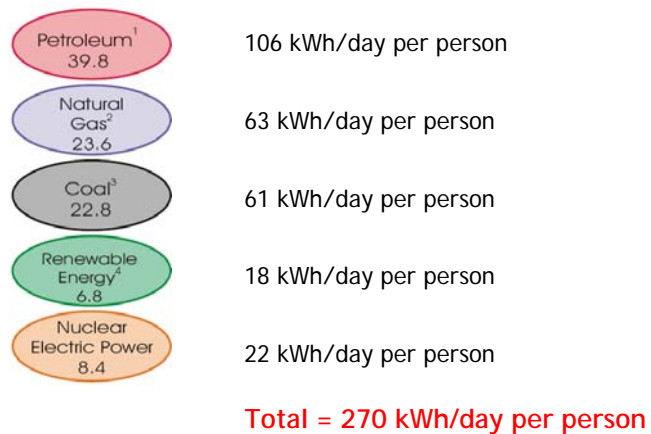
= 101.4 Qbtu total = 29.7 trillion kWh (Annual)

Use Sensible Units

Energy: kWh
eg. boil a kettle = 1kWh
energy from food = 3 kWh/day
shower = 4 kWh
gallon gasoline = 38 kWh
aluminum can = 0.6 kWh

Flux: Watts per sq meter
Population density U.S. = 30380 m² per person
= 4 football fields per person
Population of U.S., 2007 = 301.6 million

U.S. Energy Consumption



Energy Conservation

Currently = 270 kWh/person per day

Europe = 125 kWh/person per day

Conservation, greater efficiency:

higher mpg vehicles

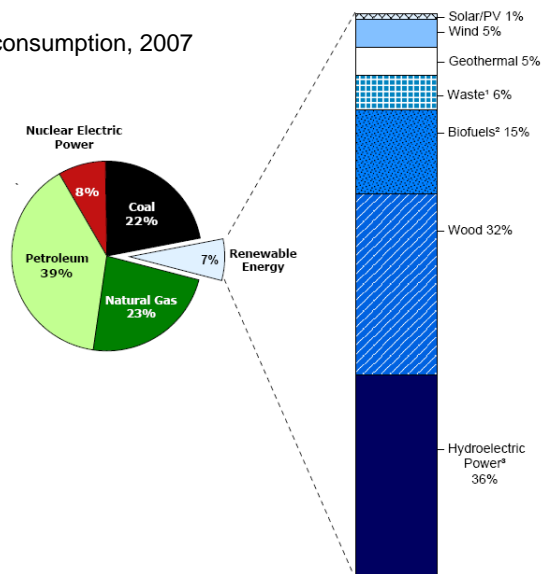
insulate homes

buy less, consume less

more efficient heating and cooling

Our Renewables Today

U.S. Energy consumption, 2007



Source: Energy Information Administration / Annual Energy Review 2007



U.S. Energy Consumption



Wind

2007

0.9 kWh/day



Solar thermal



Solar roof

0.2 kWh/day



PV farm



U.S. Energy Consumption



Geothermal

2007

1 kWh/day



Hydroelectric 6.5 kWh/day



Biofuel 3.7 kWh/day



Wood 5.7 kWh/day

TOTAL 12.3 kWh/day