

Energy Why We Care



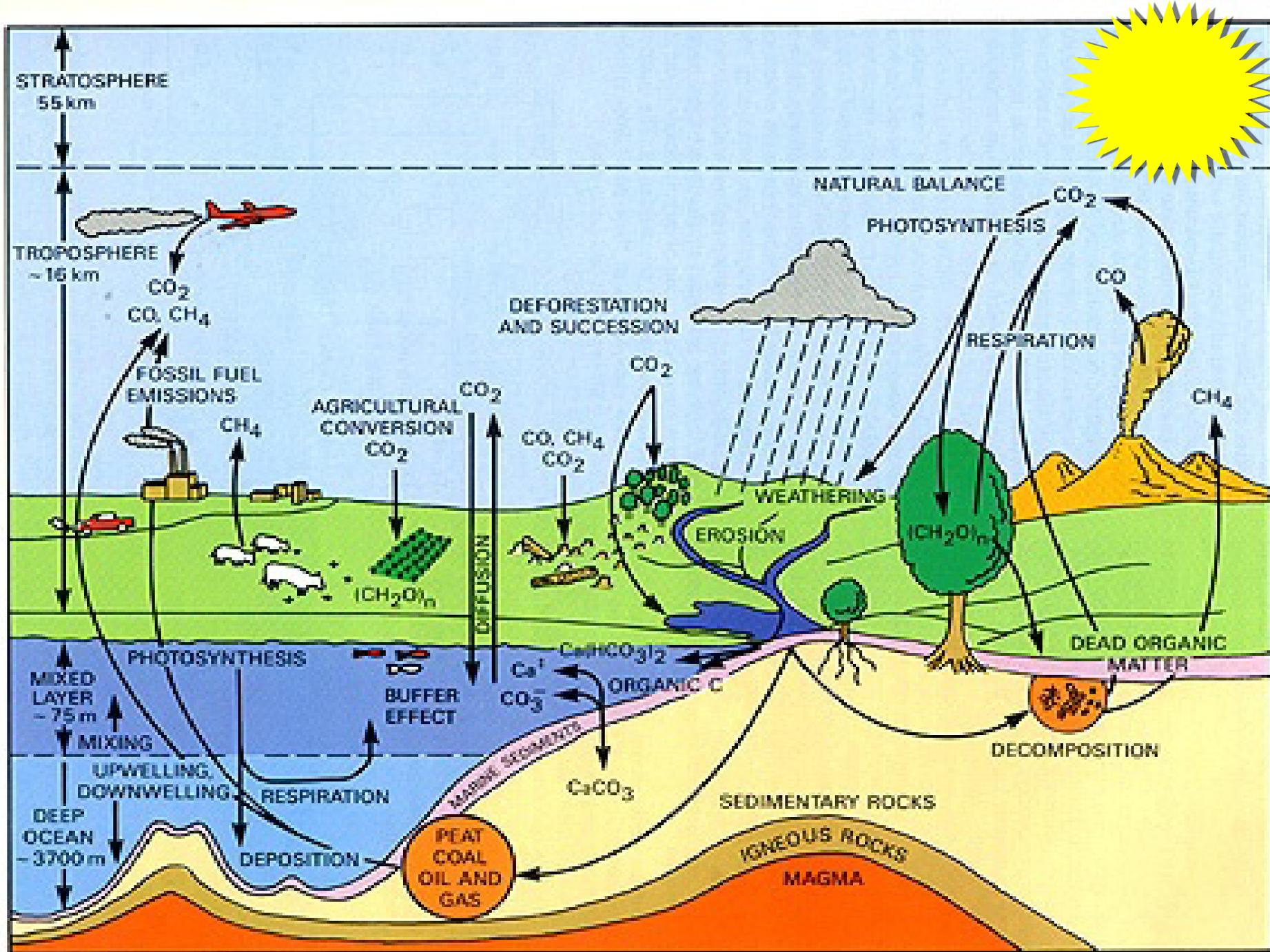
Energy Technology development Team
NRCS-WNTSC



Energy and Conservation

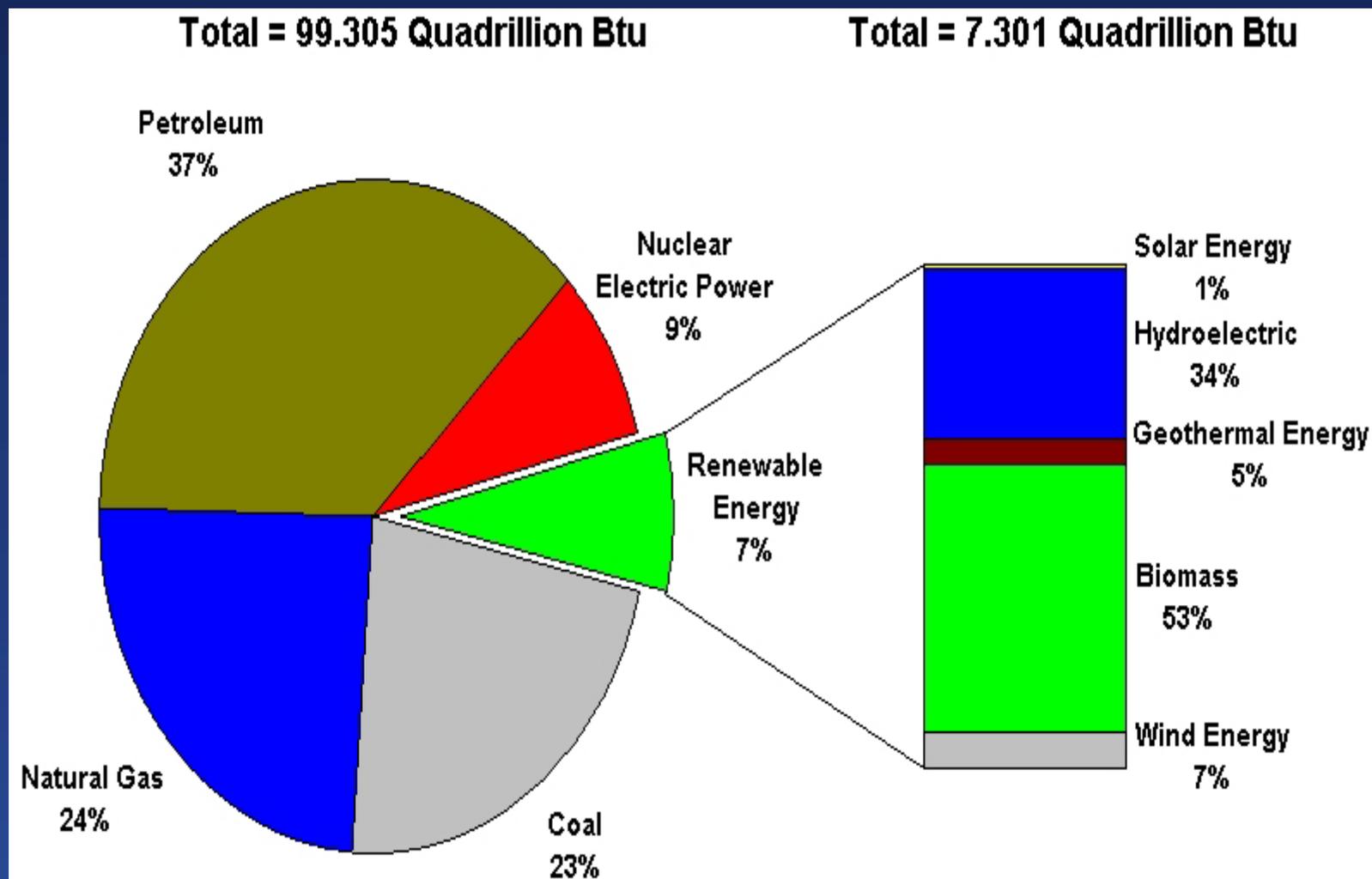
- **Soil**
- **Water**
- **Air**
- **Plants**
- **Animals**
- **Humans**





- The amount of the sun's energy that reaches the surface of the Earth every hour is greater than the total amount of energy that the world's human population uses in a year.
- *Therefore the issue is not how much energy is available. It is instead – the primary forms of energy we use.*

US Energy Use 2008



Energy

Why We Care?

- Economics
- Energy Security
- Environment

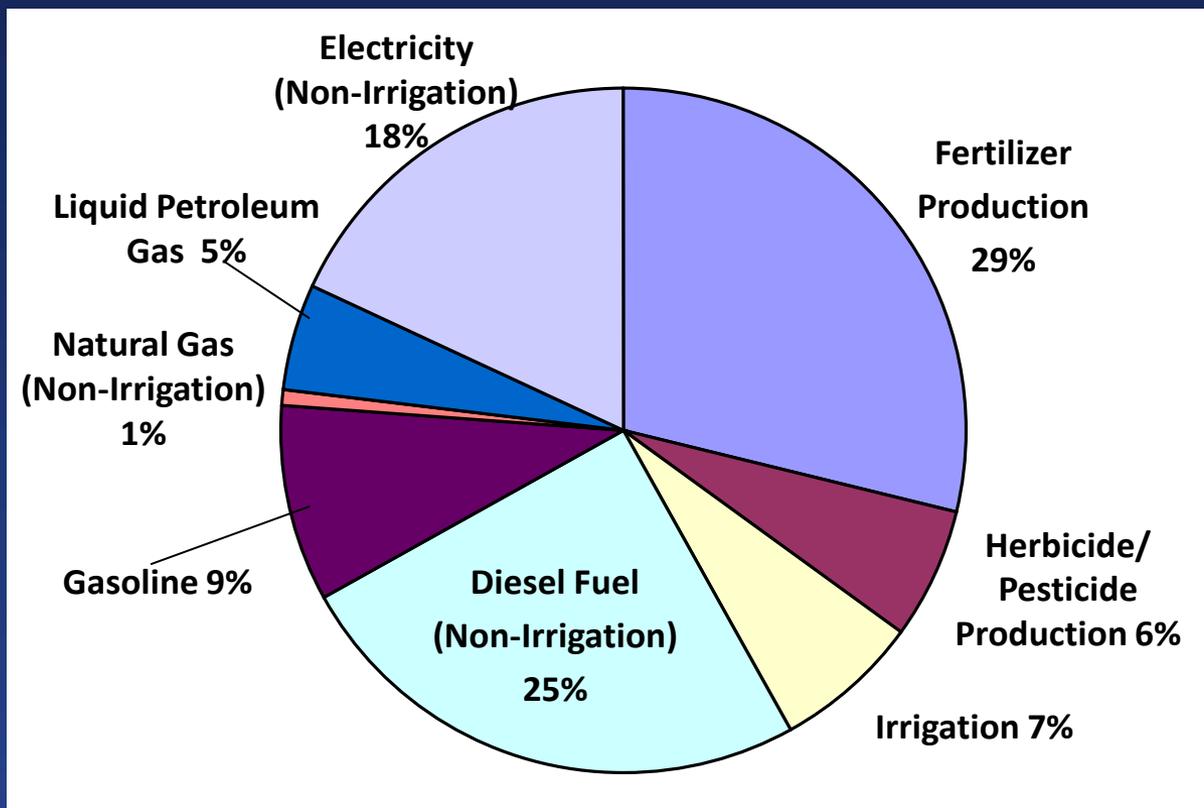
**An adequate energy supply is one of
NRCS' strategic goals**



Economics = Cost



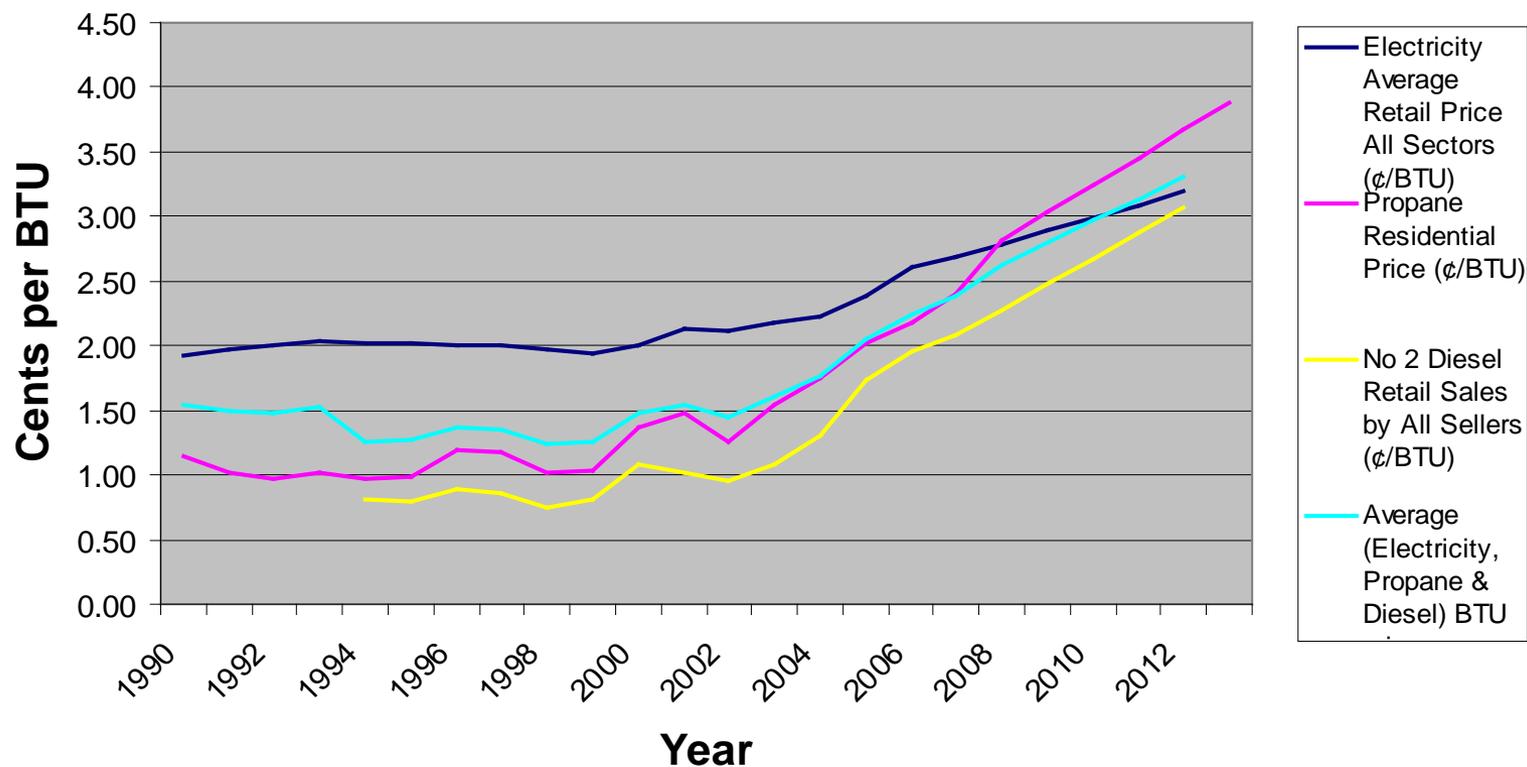
How energy is used in US agriculture (Btu)



Source: John Miranowski, Energy Consumption in US Agriculture. In *Agriculture as a Producer and Consumer of Energy*, CABI Publishing, 2005.

Energy Projections

Historic and Projected US Energy Prices National Average



Data Source: US DOE Energy Information Administration

Major Producers

- Saudi Arabia
- Iraq
- UAE
- Kuwait
- Iran
- Venezuela
- Russia
- Mexico
- Libya
- China
- Nigeria
- U.S.

Major Consumers

- U.S.
- Japan
- China
- Germany
- Russia
- Italy
- France
- S. Korea
- Canada
- England
- Brazil
- India

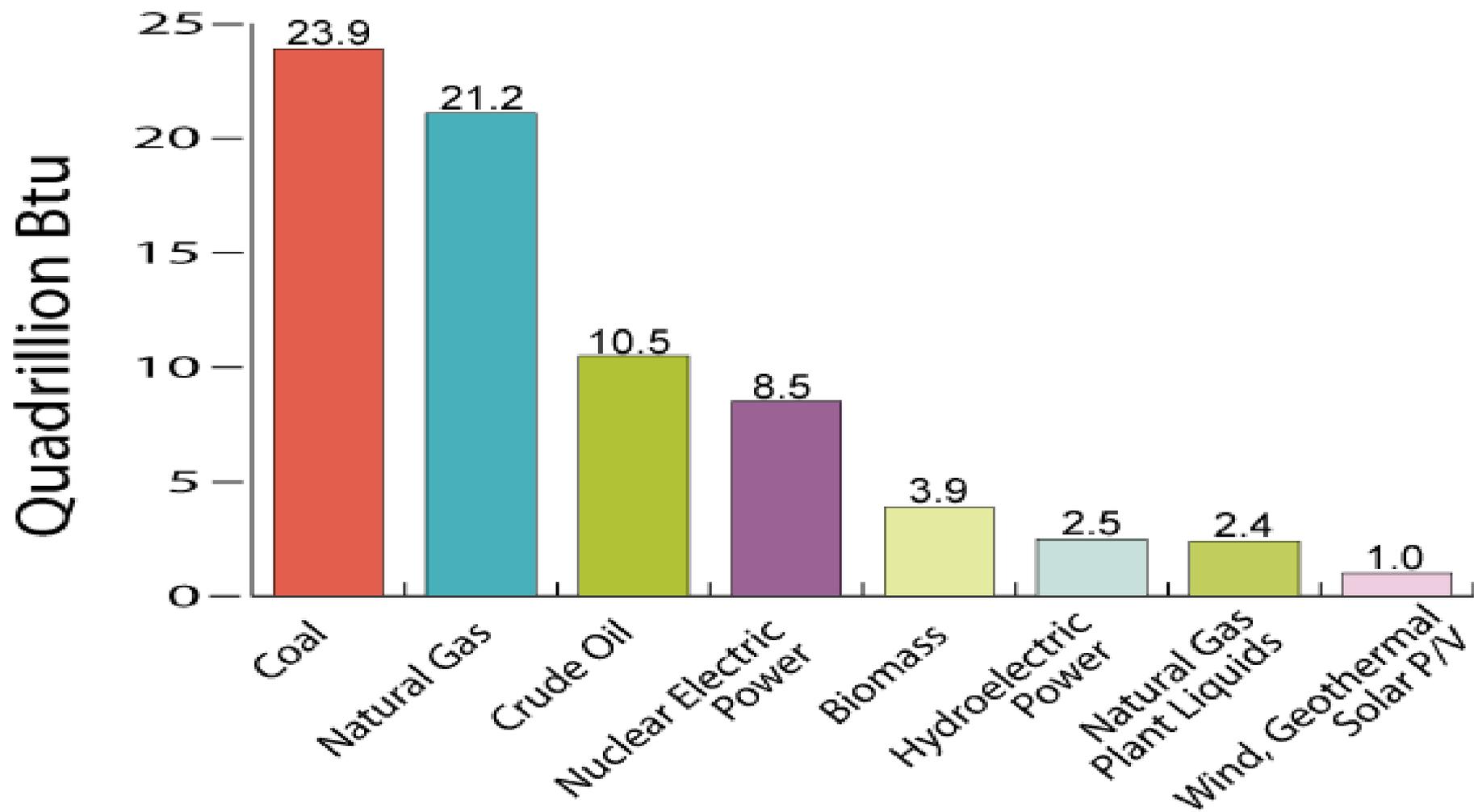
U.S. -- 5% of world's population consumes over 25% of world petroleum

Environmental Concerns





U.S. Primary Energy Production by Major Source (2008)



Source: Energy Information Administration, *Annual Energy Review 2008*, Table 1.2. (June 2009)

- *Coal* - U.S. most abundant domestic energy source and largest contributor to Greenhouse Gas Emissions





Energy and Conservation

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Energy

Why Do We Care?

- Economics
- Energy Security
- Environment

An adequate energy supply is one of NRCS'
strategic goals