

## Chapter 16 Review:

### Energy Efficiency

- Energy conservation
  - Reducing energy waste
- Net energy efficiency
  - Fig 16-4

### Energy Waste

- Cogeneration
- Ways to save energy
  - Recycling materials, updating grid systems, etc
  - Transportation
    - CAFÉ standard
    - Hybrids and plug in hybrid
  - Building design
    - Energy efficient windows
    - Plug leaks
    - Energy efficient appliances-tankless water heater

### Solar Energy

- Passive vs active
- Solar thermal systems
- Photovoltaic cells
- Advantages and disadvantages

### Water Energy

- Methane
- Prolonged drought problems
- Micro-hydropower generations
- Ocean, tidal and current energy

### Wind

- How it works
- What area use the most wind energy
- Advantages and disadvantages
- NIMBY-Cape Cod

### Biomass

- Types
- Advantages and disadvantages
- Biodiesel- video *FUEL*
  - Algae
  - Adv and disadvantages

- Ethanol
  - Biggest producers
  - Advantages and disadvantages

#### Geothermal Energy

- Heat pump
- Hydrothermal reservoirs
- Hot, dry rock
- Two major problems
  - Cost
  - Depletion of sources

#### Hydrogen energy

- Fuel cell
- Sources of hydrogen

#### Sustainable Energy

- Decentralized power
- Supply side vs demand side