

# Alternative Energy

- Current Use of Fossil Fuel
- Renewable Energy Options
- Modification to Kyoto

# Current Use of Fossil Fuel

- Major contributor to GHG emissions
  - 60% of all GHG emissions come from burning of fossil fuels.
- Extraction harmful to environment
- Number one source of energy production
- Cheap and easy to extract and transport

# Renewable Energy Options

- Solar Energy
- Hydropower
- Biomass
- Geothermal
- Wind
- Hydropower

# Solar Energy

- Energy potentially vast
- Clean, abundant and decentralized
  - possible use by individuals and energy utilities
- Non-polluting
- No moving parts
  - low maintenance and operating costs
- Limited sunlight depending on geography
- More expensive than fossil fuels

# Hydropower

- Follows Earth's natural hydrological cycle
- No greenhouse emissions
- Susceptible to changing weather patterns
- Regional draught
- Silt, debris, and vital nutrients are held back, making them inoperable

# Biomass

- Second most used energy source
- Low cost and renewable
- Some emissions
- Can increase deforestation
- Soil exhaustion

# Wind

- Diffuse source
  - many generators required
- Can not be built every where
- Maintenance is costly
- 1990 exceeded 12,000 megawatts
  - enough energy for 5 cities the size of Miami

# Geothermal

- No fossil fuel emissions
- Reliable and decentralized
- Third most used energy source
- Can not be used everywhere

# Modifications to Kyoto Protocol

- Only mention of research and development
- We would like to add specific percentage ranges of use of renewable energy required by all members
- We would like to add a clause for use of renewable energy under the Clean Development Mechanism for help developing countries industrialize

# Sources

- Alternative Energy Institute.  
[www.altenergy.org](http://www.altenergy.org)
- Sierra Club. [www.sierraclub.org](http://www.sierraclub.org)