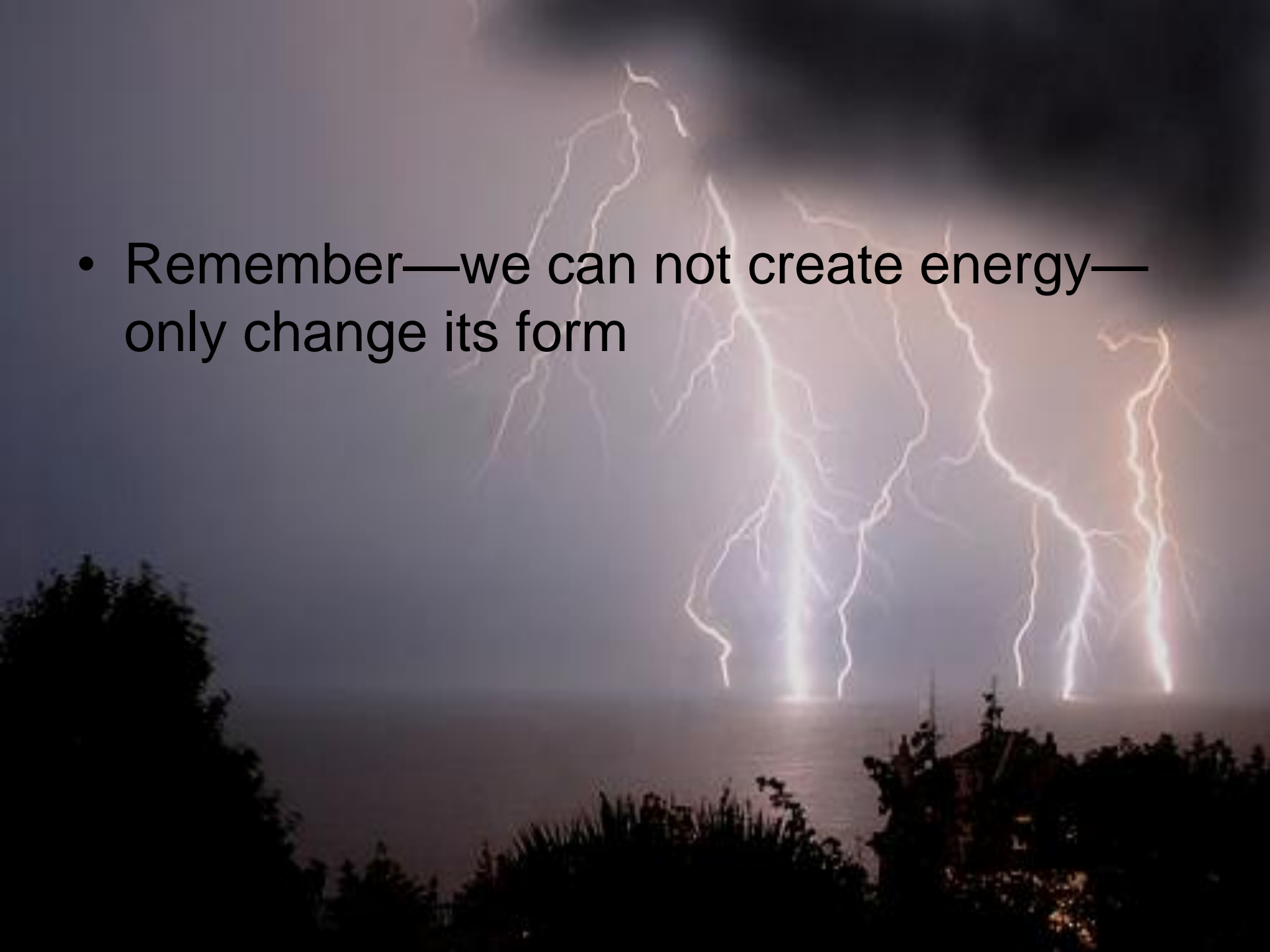




Energy

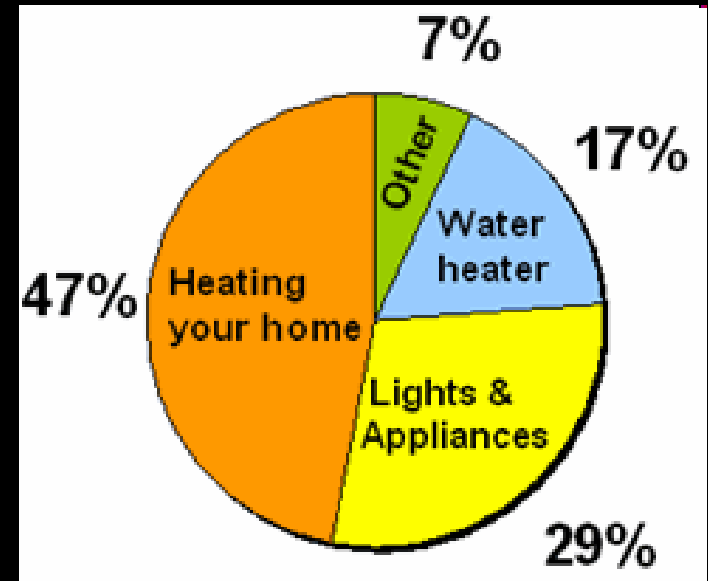
Ability to do work

- Remember—we can not create energy—only change its form



# What do you use energy for?

- Just about everything
  - Heating/cooling your house
  - Lighting
  - Heating water
  - Cooking food
  - Anything that plugs in
  - Anything that has a battery
  - Living
- What doesn't need energy???



# How do we get the energy we need on earth?

## Fossil Fuels (burning—combustion)

- Petroleum products (jet fuel, gasoline, plastics)
- Coal
- Natural Gas
- Solar
- Geothermal
- Wind
- Hydro (potential energy of falling water)

# What are your possible energy sources in space?

- Sun
  - Solar panels
  - Direct heating
- Wind
- “Geo”thermal
  - volcanoes
- Atoms (nuclear)-radioactive decay of isotopes
- Water
  - Potential energy of falling water
  - Fuel cells (create water from H and O)
- Compounds on planets/moons
  - Combustion of hydrocarbons (burning to release chemical energy)
- Other???

# How do we usually harness the energy?

- Convert one type of energy to another
- Examples on earth

- Heating/cooling homes

- Radiators
- Electric heaters
- Furnaces

- Electricity

- Many times we create heat which boils water then turns a turbine to generate electric current

