



BENEFICIAL USES OF RADIATION

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- Medical Diagnoses and Treatment
- Research Application
- Industrial/Manufacturing Applications
- Food Irradiation
- Consumer Products/Safety and Security
- Spacecraft Power Supply
- Electric Power Generation

MEDICAL USES

- DIAGNOSTIC
 - Generally Low Doses
 - Short-term Exposure
 - Radiographs
 - CT Scans
- Therapeutic
 - Generally High Doses
 - Short to Long Time Exposure
 - Nuclear Medicine
 - Locate and Treat Cancers
 - Determine Organ Function

Research Use

- Biological and Genetic Research
- Agricultural Research
- Space Research
- Pharmaceutical Research

Manufacturing Testing and Measurements

- Monitoring Thickness of Materials During production
- Measure Wear on Cutting /Drilling Tools
- Other Measurements
 - Amount of glue on postage stamp
 - Level of Liquid in canned beverages

Industrial Use

- Moisture/Density Gauge
- Radiography
- Sterilization
 - Medical Instruments
 - Cosmetics
 - Food/Spices

Food Irradiation

- Food Treatment Comparable to Pasteurization
 - Kills pest/microorganisms with food degradation
 - Controls Sprouting
- Does not make food radioactive
- FDA Approved
- Food Must Be Labeled

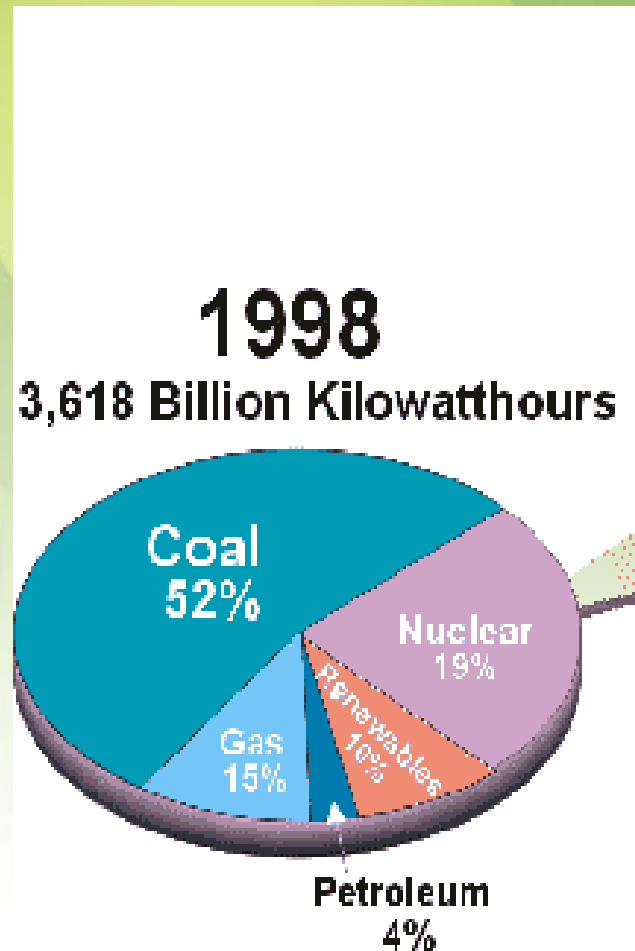
CONSUMER PRODUCTS SAFETY AND SECURITY

- Smoke Detection Equipment
- Self Powered Lighting In Exit Signs
- Lighted Aircraft Instrumentation
- Pharmaceutical Detection
- Bomb/Weapons Detection
- Scanning and Surveillance Equipment
- Theft Deterrent Systems

Spacecraft Power Supplies

- Small radioactive sources have provided heat and electrical power for space probes for years
- Radioactive power supplies have allowed spacecraft to explore the outer solar system, too far from the sun for solar panels to be effective

Electric Power Generation



- Nuclear Power supplies about 20% of the country's electric power
- Unlike fossil fuels, nuclear power does not release greenhouse gasses