

# ENERGY

## 1. ENERGY

**Toss Up: Short Answer**

What is the most common sulfur compound that occurs naturally in natural gas?

**Bonus Answer: HYDROGEN SULFIDE**

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**Bonus: Short Answer**

Earth's core is kept hot by the radioactive decay of several radioactive substances, including Uranium-235 and 238; name the other two heat-producing isotopes which are also significant contributors to the radioactive heat production of the Earth.

**Bonus Answer: POTASSIUM-40 AND THORIUM-232 (Question is very hard?)**

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## 2. ENERGY

**Toss Up: Short Answer**

Who was the Joule named after?

**Bonus Answer: James Joule**

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**Bonus: Short Answer**

Who was the watt named after?

**Bonus Answer: James Watt**

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## 3. ENERGY

**Toss Up: Multiple Choice**

In what bulk form is the most energy stored?

- W) compressed gases
- X) water behind dams
- Y) chemical batteries
- Z) temperature gradients

**Toss Up Answer: X**

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**Bonus: Short Answer**

Which country has the highest amount of solar power per capita?

**Bonus Answer: Germany**

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## 4. ENERGY

**Toss Up: Short Answer**

Order the following fuels by extractable energy per pound, from least to greatest. uranium, thorium, gasoline, coal

**Bonus Answer: coal, gasoline, uranium, thorium**

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**Bonus: Multiple Choice**

Which is the leading source of carbon monoxide emissions in the US?

- W) forest fires
- X) vehicles
- Y) factories
- Z) lightning

**Bonus Answer: X**

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## 5. ENERGY

### Toss Up: Short Answer

Used normally, a 150-watt, 120 volt light bulb requires how many amps of current?

**Bonus Answer: 1.25 Amps**

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### Bonus: Short Answer

If 10 joules of energy are required to move 5 coulombs of charge between two points, the potential difference between the two points is equal to how many volts?

**Bonus Answer: 2 volts**

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## 6. ENERGY

### Toss Up: Multiple Choice

Which material takes the least energy and CO<sub>2</sub> to produce?

W) Wood

X) Aluminum

Y) Glass

Z) HDPE (High Density Polyethylene Plastic)

**Toss Up Answer: W**

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### Bonus: Short Answer

What electrophysical process is behind wireless charging?

**Bonus Answer: Induction**

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## 7. ENERGY

### Toss Up: Short Answer

Which country has the greatest electricity consumption?

**Bonus Answer: China**

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### Bonus: Multiple Choice

What is the most used form of renewable energy in the world?

W) Wind power

X) Geothermal heat

Y) Solar power

Z) Hydroelectricity

**Bonus Answer: Z**

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## 8. ENERGY

### Toss Up: Short Answer

Cadmium and boron are used in a nuclear reactor to absorb which subatomic particle?

**Bonus Answer: Neutron**

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### Bonus: Short Answer

The electrical resistance of a semiconducting wire is least likely to be reduced by a decrease in which two of the following four wire characteristics?

Radius, Melting Point, Length, or Temperature?

**Bonus Answer: Melting Point and Radius**

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## 9. ENERGY

### Toss Up: Multiple Choice

In a typical power plant used to generate electricity in the U.S., the percentage of energy in the fuel that is converted to electricity is about:

W) 60%

X) 90%

Y) 20%

Z) 35%

**Toss Up Answer: Z**

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### Bonus: Short Answer

The Nuclear Waste Policy Act of 1982 and amendments require what

Federal agency to site, construct and operate a geologic repository for disposal of high-level nuclear waste?

**Bonus Answer: U.S. Department of Energy**

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