

Explore the many fuel sources that Georgia Power uses to provide customers with affordable and reliable energy.

WATT'S GENERATION?



Complete the **Word Scramble** to learn how Georgia Power generates **ELECTRICITY!**

Gas and coal both make electricity through **BONCOIMSTU** _____.

ACLO _____ is pulverized into a fine powder or gasified state.

MESAT _____ carries a tremendous force used to turn **BERUTIN** _____ blades that spin electric generators.

Gas is typically used in gas turbine or **NIEDOCBM** _____ cycle plants.

ORYDH _____ plants use water and **VIRATGY** _____ to move turbine blades.

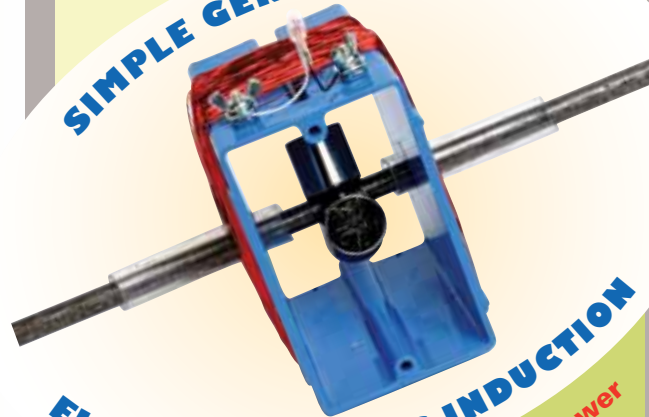
Heat at **ENRULAC** _____ plants comes from the nuclear fission process.

SMOBIAS _____ utilizes waste materials like wood pulp as a fuel.

Sunlight is converted into electricity through **AROLS** _____ cells that absorb the sun's energy.

NUCLEAR power plants do not produce greenhouse gas emissions.

SIMPLE GENERATOR:



ELECTROMAGNETIC INDUCTION

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Electricity is measured in units of electrical energy called **watts**.

HOW IS ELECTRICITY MADE?

Follow the video to find the answers to the following questions!

An example of natural electricity is

- Lightning
- Thunder

An example of man-made electricity is

- Ocean waves
- Light fixtures

What is electricity?

- Moving protons
- Movement of tiny atomic particles called electrons

What are the two main components of the simplest type of generator?

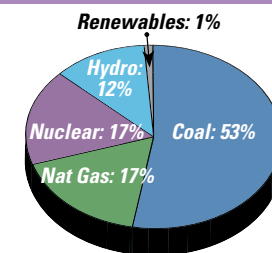
- Rotating magnet (rotor) and stationary coils of copper wire (stator)
- Lamp and electrical outlet

What happens when the rotor rotates through the magnetic field?

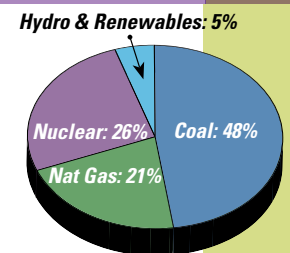
- It causes electrons to jump
- It makes electrons disappear

Georgia Power owns and operates a network of 18 generating facilities and 20 hydroelectric dams, serving 2.3 million customers.

Comparison of U.S. and Georgia Generation (Fuel Mixtures)



U.S. Net Generation 2011



Georgia Net Generation 2011

Watt's Wise?

Study the pie graphs pictured on the right. Based on what you have learned about generation and fuel sources, why is being **ENERGY EFFICIENT** important?

Directions:

1. Red box – What is the pictured energy source?
2. Is the energy source potential (P) or kinetic (K)?
3. Describe the transformation of energy from the energy source to a useable form of energy, such as electricity.
4. Is the energy source renewable (R) or non-renewable (NR)?



NON-RENEWABLE OR POTENTIAL
RENEWABLE KINETIC

Transformation of Energy:



NON-RENEWABLE OR POTENTIAL
RENEWABLE KINETIC



NON-RENEWABLE OR POTENTIAL
RENEWABLE KINETIC



NON-RENEWABLE OR POTENTIAL
RENEWABLE KINETIC



Energy Sources

Transformation of Energy:



NON-RENEWABLE OR POTENTIAL
RENEWABLE KINETIC



NON-RENEWABLE OR POTENTIAL
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Transformation of Energy: