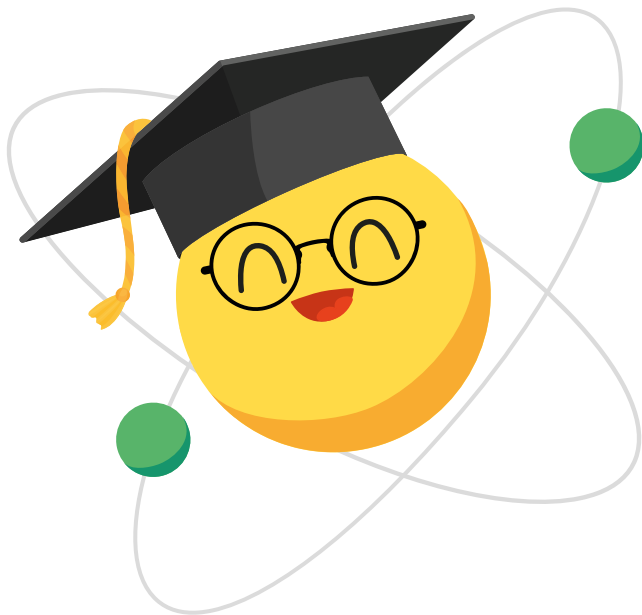


Who is BGE?

BGE has a history of more than 200 years of service as the first gas utility in the U.S. Its roots can be traced to 1816 when artist Rembrandt Peale used gas to light his museum and gallery in Baltimore City and then founded the Gas Light Company of Baltimore, which today is known as BGE. BGE is Maryland's largest natural gas and electric utility, delivering power to more than 1.25 million electric customers and more than 650,000 natural gas customers in central Maryland.

Who is Lumi?

Hi! I'm Lumi, your virtual energy coach. I know all about energy. I can tell you where it comes from, how it's made and all the ways you use energy every single day. One of my most important jobs is to help you save energy by showing you that simple changes can make a BIG impact. Are you ready to go on an energy adventure with me?



What is Energy?

Electricity begins with atoms. You can't see atoms, but they are tiny little particles that make up everything around us. The center of every atom contains things called protons, neutrons, and electrons.

Electrons are very active—moving quickly around the center of the atom. Power plants can force electrons to move between different atoms. This movement of electrons from atom to atom creates electricity—and that's the energy that you ultimately use to turn on your lights and cool your homes.

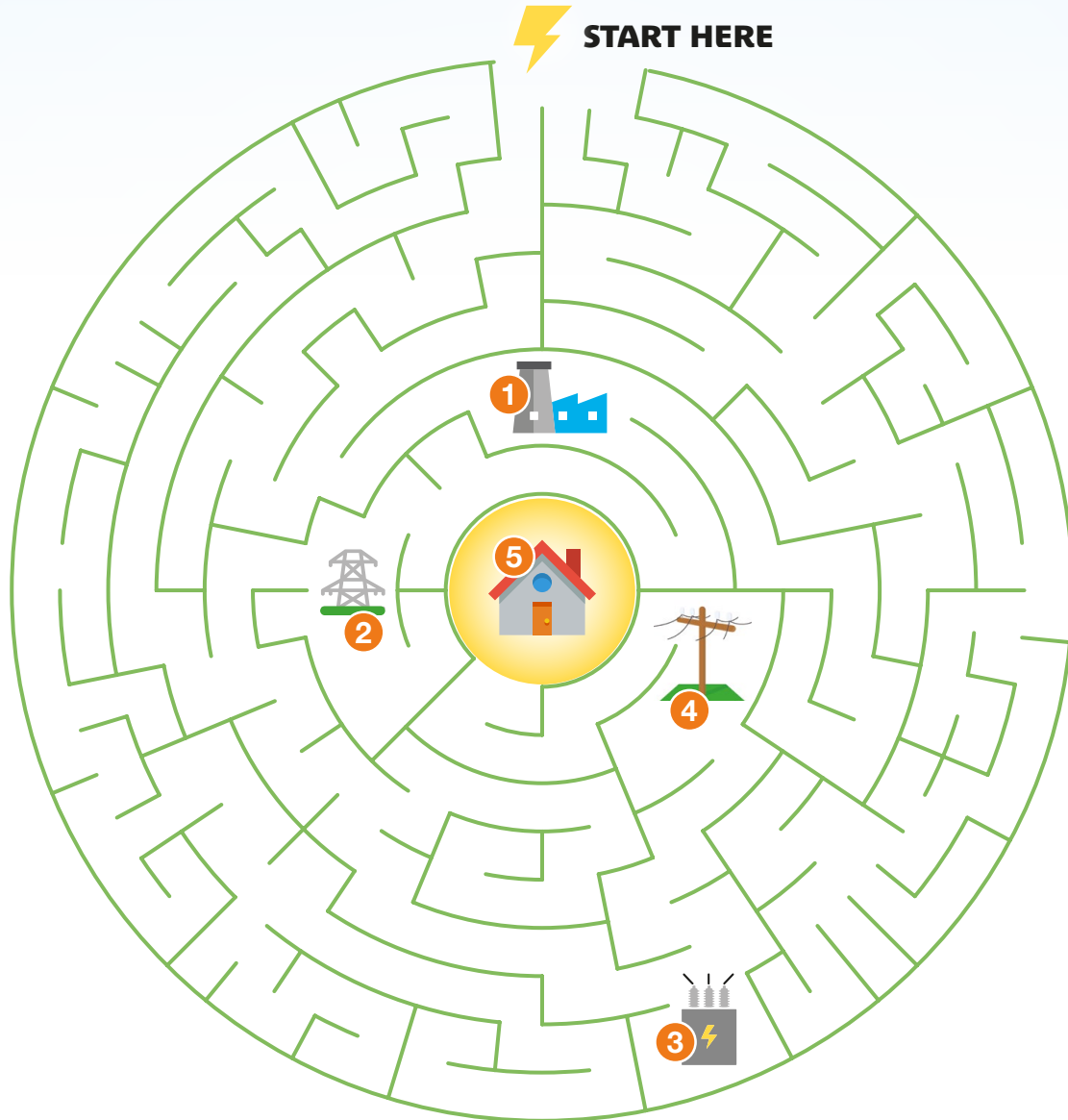
Saving energy is easy!

Did you know that almost everything in your home needs electricity to work? That's why saving energy is so important! How can you help save energy at home?

- A. Turn off lights when leaving a room
- B. Close door behind you
- C. Unplug electronics when not using them
- D. All of the above

Follow the Energy!

Ready to find out how energy gets into your home? Follow energy as it makes its way into your home.



1 Power Plant – Things that make energy like natural gas, coal, wind, or hydropower are brought to the power plant and transformed into heat and steam. This causes electrons to bounce around really fast. That creates electricity.

2 Transmission Tower – The electricity leaves the power plant as **high voltage**, which means it is very powerful, like lightning! The high voltage energy is transferred from the power plant to the transmission towers either over our heads through power lines or under the ground through cables.

3 Substation – When the high voltage electricity reaches the substation it is converted to **low voltage**, which is the kind of energy we use in our homes.

4 Power Line – Low voltage electricity is carried through the power lines to its final destination in our homes, schools, and businesses!

5 Home – Turn on a light. You just completed the process of energy from the earth making its way into your home. Now don't forget to turn it off to save energy!

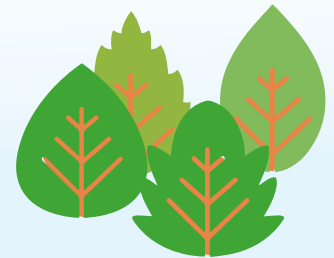
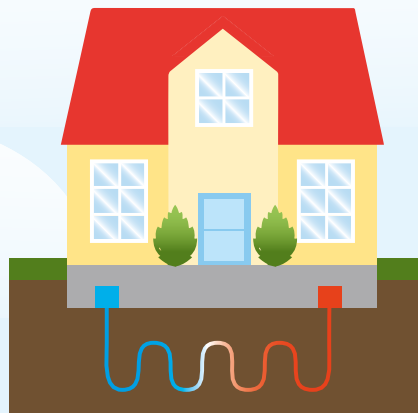
STEM

Each and every day BGE uses the principles of STEM — **S**cience, **T**echnology, **E**ngineering and **M**ath — to safely deliver electricity and natural gas to more than one million customers. Through your studies in STEM, you have the power to become an innovator, educator, researcher and leader...or anything else you dream to be. Now, that's smart energy!

Science

What is renewable energy?

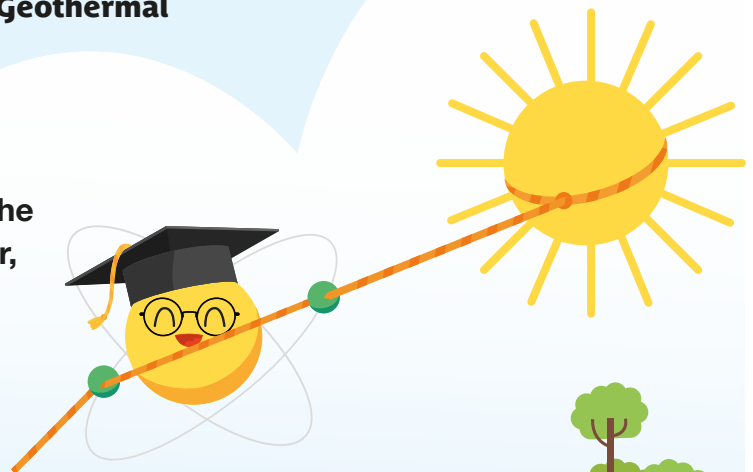
Renewable resources can reproduce or are capable of being replenished by a natural process.



Technology

Fun Fact:

If you could harness the energy from all the sunlight that falls on the Earth in one hour, you would have enough energy to supply the world for a year.





Engineering

Can you find all the words we learned about energy?

- Lumi
- Water
- Energy
- Electric
- Turbine
- Photosynthesis
- Sun
- Wind
- Save
- Geothermal
- Biomass
- Environment
- Light
- Adventure
- Gas
- Phantom
- Watt
- Home
- Air Conditioning
- Power
- Earth
- Circuit
- Impact
- BGE



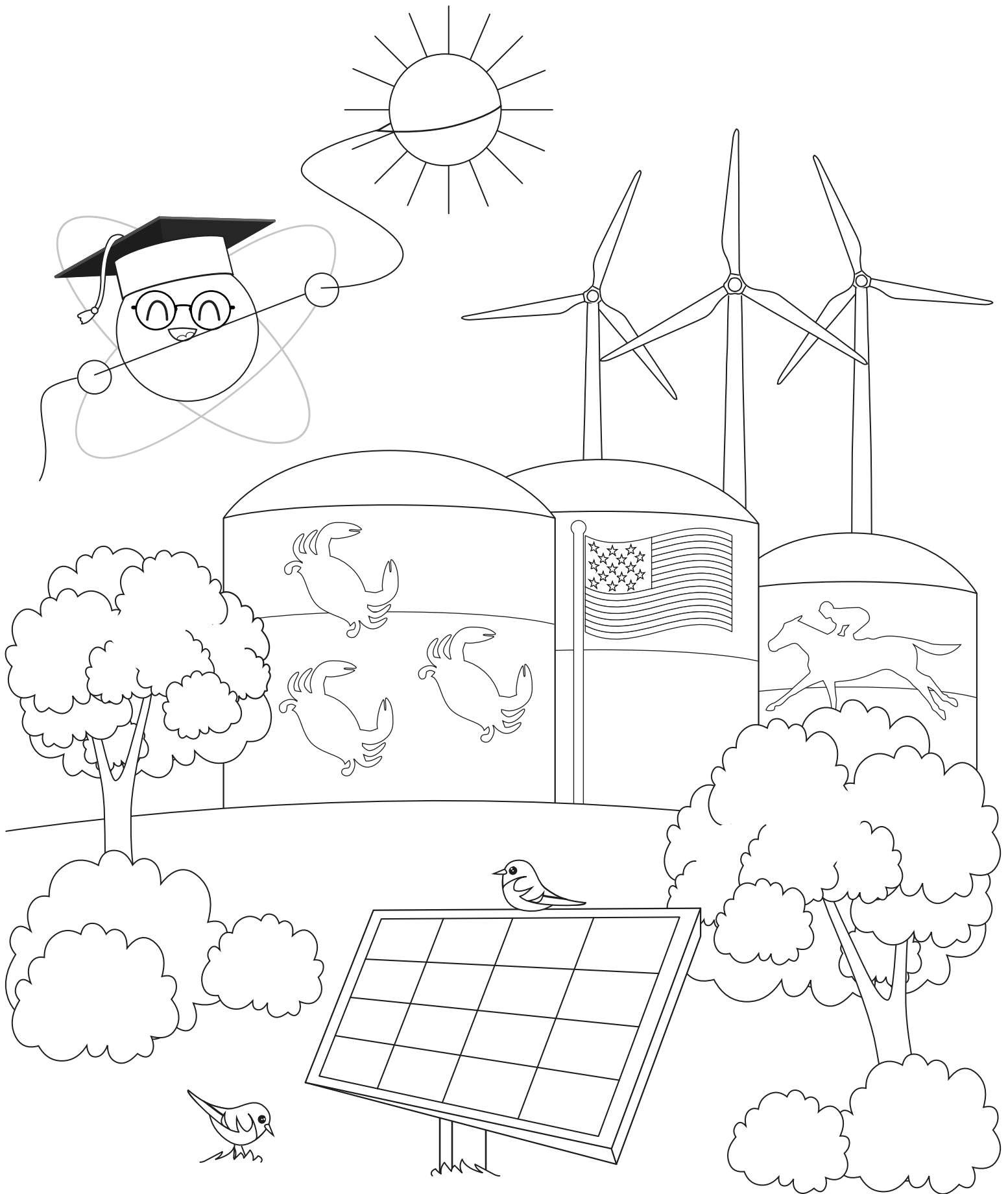
Math

Electrical power is measured in watts. One light bulb uses 60 watts per hour.

How many watts do 5 light bulbs use in one hour? _____

Fun Fact: 1000 watts is called a KILOWATT.





EmPOWER Maryland programs are funded by a charge on your energy bill. EmPOWER programs can help you reduce your energy consumption and save you money. To learn more about EmPOWER and how you can participate, go to BGESmartEnergy.com.