Natural Gas

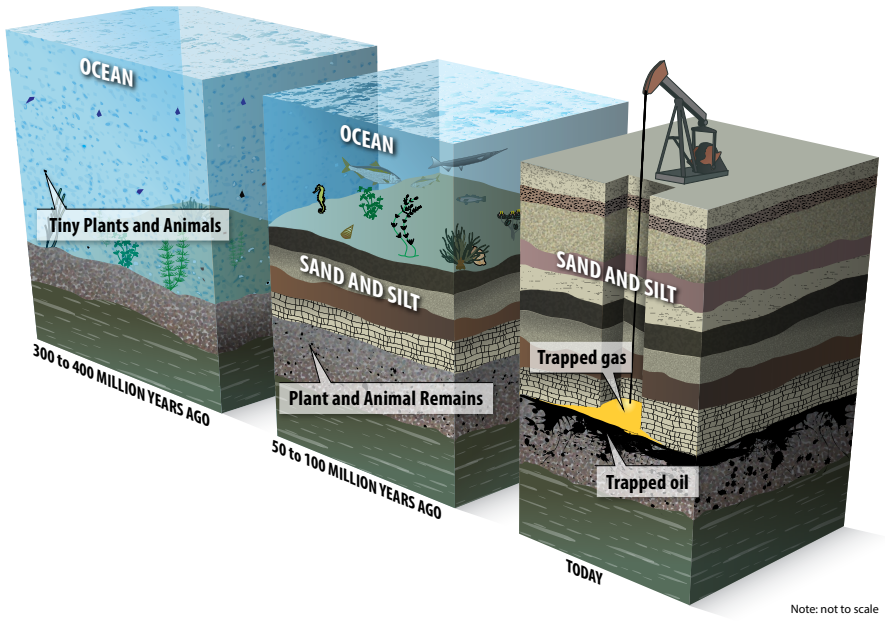
Natural gas is similar to air—it is a mixture of gases you can't see, smell, or taste. But it is different, too. It has a lot of energy in it. You can burn it to make heat. The early Chinese burned natural gas for heat to separate salt from sea water.

Natural Gas Is Often a Fossil Fuel

Natural gas was formed in the Earth long before the dinosaurs lived. Oceans filled with tiny sea plants and animals covered much of the Earth.

When the plants and animals died, they sank to the bottom and were covered by sand. Layers of dead plants, animals and sand built up over time and turned into **sedimentary rock**.

Heat from the Earth and pressure from the rock layers above turned the remains of the plants and animals into natural gas and petroleum. Since natural gas is made from the fossilized remains of plants and animals, it is called a **fossil fuel**.



The plants and animals received their energy from the sun when they were alive. It was stored in them when they died. This is the energy in natural gas.

Most Natural Gas Is Nonrenewable

Most of the natural gas we use today took hundreds of millions of years to form. That's why we call it a **nonrenewable** energy source. We can't make more in a short time.

Garbage sometimes produces **methane**, the main gas in natural gas. Methane from rotting garbage is a **renewable** energy source because there will always be garbage and waste.

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Drilling for Natural Gas

Natural gas is found underground in pockets of rock. We drill **wells** into the ground to reach the gas so that it can flow to the surface. Some wells are a mile or more deep!

The natural gas is piped from the wells to machines that clean it and remove any water. A chemical called mercaptan is added so the gas smells like rotten eggs. This is how leaks are first detected.



Image courtesy of SDF_QWE/Adobe Stock
Natural gas is transported through pipelines.

Transporting Natural Gas

We move natural gas from one place to another in **pipelines**. There are more than three million miles of pipeline all across the United States moving natural gas from wells to processing plants to our homes, factories, and buildings.

Did you know?
If connected end to end, natural gas pipelines in the U.S. would be long enough to stretch from the Earth to the moon twelve times!

We Use Natural Gas Every Day

Almost everyone uses natural gas. Natural gas provides 36 percent of U.S. energy. Most homes use natural gas for heat. So do schools and hospitals. Many stoves and water heaters use natural gas, too.

Factories burn natural gas to make products like paper and cement. Natural gas is also an ingredient in paints, glues, fertilizers, plastics, medicines, and many other products. Industries like these use 32 percent of U.S. natural gas.



Image courtesy of Hanyou23 via Wikimedia Commons
Some city buses are fueled by natural gas.

Power plants burn natural gas to make **electricity**. Natural gas is our number-one source for electricity and is often used in new power plants. Over 40 percent of our electricity comes from natural gas. Natural gas can be used to run cars, trucks, and buses.

Natural Gas and the Environment

Natural gas is the cleanest-burning fossil fuel. It doesn't pollute the air as much as coal or oil. That's why it is a better fuel for heating our homes and making electricity. However, natural gas releases carbon dioxide when it is burned, and methane and carbon dioxide are contributing to climate change.