

The energy we get from coal today originated from the energy that plants absorbed from the sun millions of years ago. Trees that existed 300 million years ago, during the Carboniferous period, were very different from the trees we see today. They were able to reach great heights, but had very shallow root systems, making it easy for them to uproot and fall. As they fell, they stacked on top of each other and began to decay. This decaying organic matter would stack into layers and eventually create peat, but over time pressure on the deeply buried peat began forming what is known as lignite, the lowest quality coal.

Coal is a chemically complex fuel. It is mostly carbon, but also contains hydrogen, sulfur, oxygen and nitrogen. It was the dominant power source in the U.S. in the late 1800s and early 1900s and remains a significant source of energy even today. Coal supplies about a quarter of the world's primary energy and two fifths of its electricity. Unfortunately, mining and burning enough coal to meet the needs of the world's growing population takes a heavy toll on the environment. Of all the fossil fuels, coal puts out the most carbon dioxide per unit of energy, and its heavy use has increased atmospheric carbon dioxide levels which contributes to global climate change.

Today, many of the effects of coal burning have been reduced significantly. With government pressures, coal burning utilities have cut pollutants such as sulfur dioxide and nitrogen oxides by installing specialty equipment. However, there is still much work to be done as society prepares to transition away from the older energy sources of yesterday into the more renewable energy sources of tomorrow.



<https://www.nationalgeographic.org/encyclopedia/coal/>



<https://www.earth.com/news/coal-plant-emissions-higher/>