

What's the Deal With Fossil Fuels?



Vocabulary for Students

- **Carbon dioxide (CO₂):** A chemical compound composed of two oxygen atoms bonded on either side of a carbon atom.
- **Coal:** A type of solid fossil fuel formed mainly from fossilized plant matter that is burned to generate electricity and for other energy uses.
- **Emissions:** The release of something, like pollution from a car's tailpipe.
- **Energy efficiency:** Using less energy to provide the same service.
- **Fossil fuel:** An energy-rich substance such as petroleum, coal, or natural gas formed from the remains of ancient organisms.
- **Greenhouse effect:** a natural, environmental phenomenon by which the sun's thermal energy is absorbed by atmospheric greenhouse gases and re-radiated towards the planet's surface. This increases the planet's average surface temperature. Scientists hypothesize that Earth would be much cooler without the Greenhouse effect.
- **Greenhouse gases¹:** Gases in Earth's atmosphere that absorb infrared radiation and trap heat. Some greenhouse gases are naturally occurring compounds (like water vapor, carbon dioxide, methane, and nitrous oxide), while others are human-made (like gases used for aerosols).
- **Hydrocarbon:** A compound made up of the elements hydrogen and carbon.
- **Natural gas:** A type of gaseous fossil fuel that is burned to produce energy for heating, cooking, and generating electricity, as well as for powering certain kinds of vehicles.
- **Nonrenewable resource:** A natural resource that is consumed faster than it can be replaced naturally.
- **Ocean acidification²:** the process by which atmospheric carbon dioxide dissolves in seawater, causing a decrease in the water's pH and an increase in the ocean's acidity.
- **Peat:** A dark-brown soil-like material composed of decaying plant matter that, under the right temperature and pressure conditions and over a long period of time, can turn into coal.
- **Petroleum/oil³:** Fossil fuels that can be transformed into gasoline for cars, diesel oil for trucks and buses, and other fuels that can be used to power things. Petroleum is also made into goods like plastics.
- **Sustainable:** Meets the needs of the present without compromising the ability of future generations to meet their own needs

¹ [Take a deeper dive into greenhouse gases with the U.S. Environmental Protection Agency.](#)

² [Learn more about the chemical reactions involved in ocean acidification with the California Academy of Sciences.](#)

³ [What's the difference between oil and petroleum? The U.S. Energy Information Administration has an answer.](#)

