



FREQUENTLY ASKED QUESTIONS (FAQS)



How much carbon dioxide is produced when different fuels are burned?

Different fuels emit different amounts of carbon dioxide (CO₂) in relation to the energy they produce when burned. To analyze emissions across fuels, compare the amount of CO₂ emitted per unit of energy output or heat content.

Pounds of CO₂ emitted per million British thermal units (Btu) of energy for various fuels

Coal (anthracite)	228.60
Coal (bituminous)	205.40
Coal (lignite)	216.24
Coal (subbituminous)	214.13
Diesel fuel and heating oil	163.45
Gasoline (without ethanol)	155.77
Propane	138.63
Natural gas	116.65

The amount of CO₂ produced when a fuel is burned is a function of the carbon content of the fuel. The [heat content](#), or the amount of energy produced when a fuel is burned, is mainly determined by the carbon (C) and hydrogen (H) content of the fuel. Heat is produced when C and H combine with oxygen (O) during combustion. Natural gas is primarily methane (CH₄), which has a higher energy content relative to other fuels, and thus, it has a relatively lower CO₂-to-energy content. Water and various elements, such as sulfur and noncombustible elements in some fuels, reduce their heating values and increase their CO₂-to-heat contents.

Learn more:

[What are the greenhouse gas and air pollutant emissions factors for fuels and electricity?](#)

[Carbon dioxide emissions per physical unit and million Btu for numerous fuels](#)

[Why do carbon dioxide emissions weigh more than the original fuel?](#)

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- [How much of U.S. carbon dioxide emissions are associated with electricity generation?](#)
- [What are the energy-related carbon dioxide emissions from fossil fuels for the United States and the world?](#)
- [What are greenhouse gases and how do they affect the climate?](#)
- [Why do carbon dioxide emissions weigh more than the original fuel?](#)
- [Is ozone a greenhouse gas?](#)
- [How much carbon dioxide is produced from U.S. gasoline and diesel fuel consumption?](#)
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On This Page:

- [Coal](#)
- [Conversion & Equivalents](#)
- [Diesel](#)
- [Electricity](#)
- [Environment](#)
- [Gasoline](#)
- [General Energy](#)
- [Natural Gas](#)
- [Nuclear](#)
- [Oil/Petroleum](#)
- [Prices](#)
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[Consumption](#)
[Total Energy](#)

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