



## FREQUENTLY ASKED QUESTIONS (FAQS)

### What are Ccf, Mcf, Btu, and therms? How do I convert natural gas prices in dollars per Ccf or Mcf to dollars per Btu or therm?

**Btu**—British thermal unit(s)  
**Ccf**—the volume of 100 cubic feet (cf)  
**M**—one thousand (1,000)  
**MM**—one million (1,000,000)  
**Mcf**—the volume of 1,000 cubic feet  
**MMBtu**—1,000,000 British thermal units  
**Therm**—One therm equals 100,000 Btu, or 0.10 MMBtu

In the United States, natural gas can be priced in units of dollars per therm, dollars per MMBtu, or dollars per cubic feet.<sup>1</sup> The heat content of natural gas per physical unit (such as Btu per cubic foot) is needed to convert these prices from one price basis to another. In 2020, the U.S. annual [average heat content of natural gas](#) delivered to consumers was about 1,037 Btu per cubic foot. Therefore, 100 cubic feet (Ccf) of natural gas equals 103,700 Btu, or 1.037 therms. One thousand cubic feet (Mcf) of natural gas equals 1.037 MMBtu, or 10.37 therms.

You can convert natural gas prices from one price basis to another with these formulas (assuming a heat content of natural gas of 1,037 Btu per cubic foot):  
 \$ per Ccf divided by 1.037 equals \$ per therm  
 \$ per therm multiplied by 1.037 equals \$ per Ccf  
 \$ per Mcf divided by 1.037 equals \$ per MMBtu  
 \$ per Mcf divided by 10.37 equals \$ per therm  
 \$ per MMBtu multiplied by 1.037 equals \$ per Mcf  
 \$ per therm multiplied by 10.37 equals \$ per Mcf

The heat content of natural gas may vary by location and by type of natural gas consumer, and it may vary over time. Consumers and analysts should contact natural gas distribution companies or natural gas suppliers for information on the heat content of the natural gas they supply to their customers. Some natural gas distribution companies or utilities may provide this information on customers' bills.

<sup>1</sup> The U.S. Energy Information Administration reports natural gas in volumes of cubic feet through 1964 at a pressure base of 14.65 psia (pounds per square inch absolute) at 60° Fahrenheit. Beginning in 1965, the pressure base is 14.73 psia at 60° Fahrenheit.

Learn more:  
[Average annual and monthly heat content of natural gas consumed by state](#)  
[Newly released heat content data allow for state-to-state natural gas comparisons](#)  
[Natural gas conversion calculator](#)

Last updated: June 1, 2021

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