

Forecasting Natural Gas Prices

Audience Questions and Answers

1. How do companies handle the missing natural gas prices when the stock markets are closed?

Answer: When the stock markets are closed, the natural gas prices from the last trading day are used. For example, Friday's prices are carried forward for Saturday, Sunday, and the Monday holiday and Wednesday's prices are inserted for Thanksgiving through the holiday weekend.

2. What are the different forms of natural gas?

Answer: Natural gas naturally occurs in a gaseous state, but when cooled to -260 degrees Fahrenheit, Liquefied Natural Gas (LNG) is produced.

3. How is natural gas produced?

Answer: The remains of plants and animals are built up in thick layers on the earth's surface and ocean floors. As time passed, these layers were buried under sand, silt, and rock; the resulting pressure and heat changed the materials into natural gas. Natural gas remained in underground pockets until coming to the surface by natural means or by drilling.

4. How is natural gas transported to homes?

Answer: Natural gas is cleaned and processed after extraction from the ground. It then travels through thousands of miles of pipeline to the local distribution companies. From there, it goes through local pipelines to homes and businesses.

5. What are some of the services providing information on natural gas pricing?

Answer: In North America, Platts is the leading publisher of natural gas indices fueled by ICE (Intercontinental Exchange) data for physical natural gas transactions. The prices are provided as a daily and monthly assessment.

6. What are some of the major natural gas pipeline trading points?

Answer: Major trading points or hubs are collection points for major pipeline systems. Henry Hub in Erath, Louisiana, is the physical delivery point for 11 pipeline systems. Other major natural gas hubs are Agua Dulce, TX; Carthage, TX; Cheyenne, WY; Joliet, IL; Opal, WY; Perryville, LA; and Waha, TX.

7. What are some recent outside forces influencing natural gas prices?

Answer:

- a. Weather events can affect natural gas prices. In the past, significant hurricane activity in the Gulf of Mexico disrupted natural gas production and impacted prices. Today, natural gas is produced outside of the Gulf of Mexico, filling the gap created by a hurricane. Also, the anticipation of a weather event can affect natural gas prices. In November 2018, natural gas prices spiked before the arrival of the polar vortex in January and February of 2019.

- b. Prices are always lower when there is excess natural gas inventory; at that point, production is curtailed to sell the extra inventory and raise prices. Other times, prices are higher when demand outpaces production and reserves.
- c. While not directly affecting the United States, Russia severely curtailed natural gas exports to Europe for supporting Ukraine in its war with Russia. This shortage created a dire situation for the European Union before winter. The United States exported LNG to replace the missing natural gas from Russia.

8. What is the natural gas futures market?

Answer: The natural gas futures market trades contracts for future delivery of natural gas volumes. Most natural gas futures are bought and sold on the New York Mercantile Exchange (NYMEX) and the Intercontinental Exchange (ICE). Futures contracts allow trading participants to minimize their exposure to market volatility by locking in a price today for a future natural gas purchase or sale.

9. How can natural gas that is purchased in advance be stored for future use?

Answer: Natural gas is stored underground in depleted oil and natural gas fields, salt formations, and aquifers that no longer contain water indefinitely until it is needed.

10. Were there any surprises?

Answer: I had always believed that natural gas should be purchased in late spring or summer for use during winter when prices are lower. However, after analyzing the pricing data for the past ten years, I found that prices are not always lower in the summer.

After speaking with a person whose role is to mitigate the risk of spiking natural gas prices, I found that you only purchase enough natural gas to cover unexpected customer demand increases or price spikes. Then, losses would be minimized if the price of natural gas drops during the winter months,