



Natural Gas

Overview

Natural gas is a vital component of the world's supply of energy. It is one of the cleanest, safest, and most useful of all energy sources.

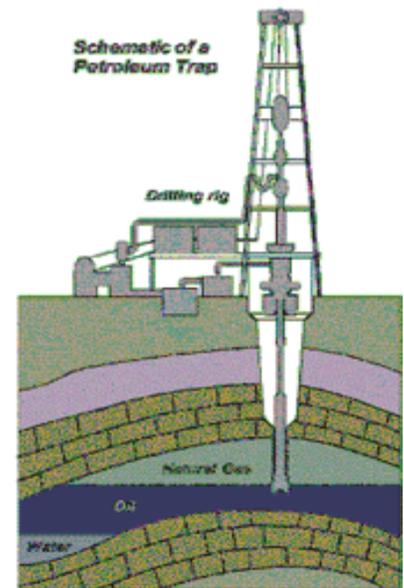
Natural gas, in itself, might be considered an uninteresting gas – it is colorless, shapeless, and odorless in its pure form. Quite uninteresting – except that natural gas is burnable, abundant in the United States, and when burned it gives off a great deal of energy with fewer emissions than many other sources. Compared to other fossil fuels, natural gas is cleaner burning and emits lower levels of potentially harmful byproducts into the air. We require an ever-increasing supply of energy to heat our homes, cook our food, and generate our electricity. It is this need for energy that has elevated natural gas to such a level of importance in our society, and in our lives.

Natural gas is a combustible mixture of hydrocarbon gases. While natural gas is formed primarily of methane, it can also include ethane, propane, butane and pentane.

Although there are several ways that methane, and thus natural gas, may be formed, it is usually found underneath the surface of the earth. As natural gas has a low density, once formed it will rise toward the surface of the earth through loose, shale type rock and other material. Some of this methane will simply rise to the surface and dissipate into the air. However, a great deal of this methane will rise up into geological formations that 'trap' the gas under the ground.

The Henry Hub pipeline is the pricing point for natural gas futures on the New York Mercantile Exchange. The NYMEX contract for deliveries at Henry Hub began trading in 1990 and is deliverable 18 months in the future. The settlement prices at the Henry Hub are used as benchmarks for the entire North American natural gas market.

We will outline in this report the Natural Gas production including the top exporting and importing countries, types of Natural Gas contracts and where do they trade, also we will list the main factors that derives Natural Gas prices up or down, in addition we will talk about the historical prices of Natural Gas with all-time highs and lows and finally we will take a closer look at the technical side and the 2016 Natural Gas forecast.

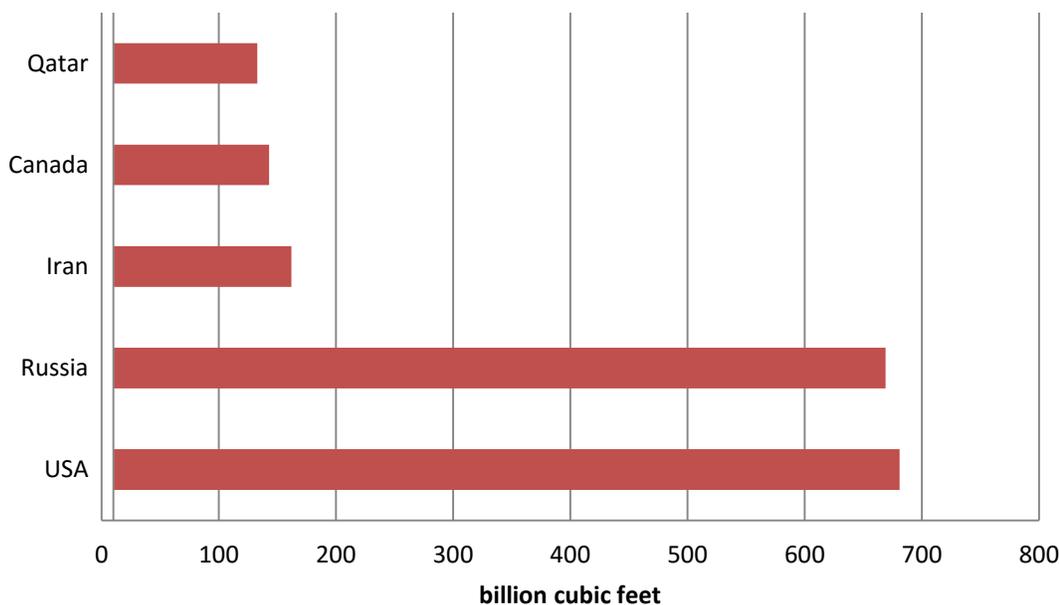


Natural Gas Production

Natural gas is a fossil fuel formed when layers of buried plants, gases, and animals are exposed to intense heat and pressure over thousands of years. The energy that the plants originally obtained from the sun is stored in the form of chemical bonds in natural gas

Below is a chart that expresses the top 5 natural gas producing countries in billion cubic feet.

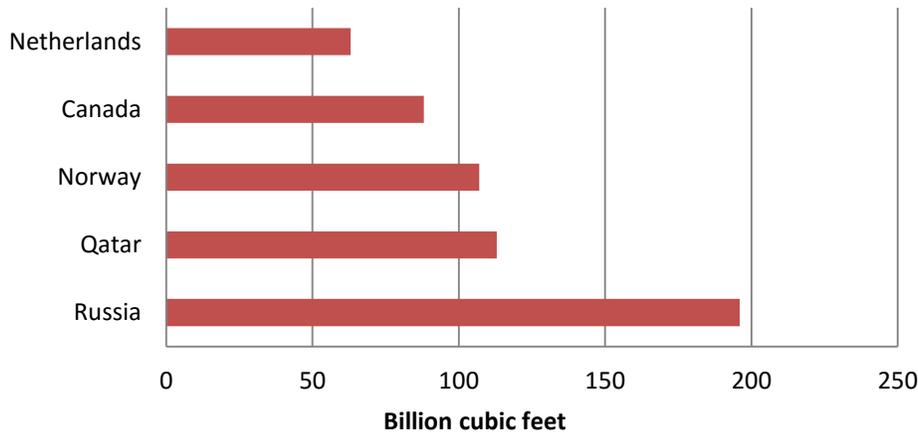
Top 5 Natural Gas Producing Countries



The largest producers of natural gas are USA, Russia, Iran, Canada and Qatar. USA is the largest natural gas producer in the world, the country accounts around 40% of natural gas world production.

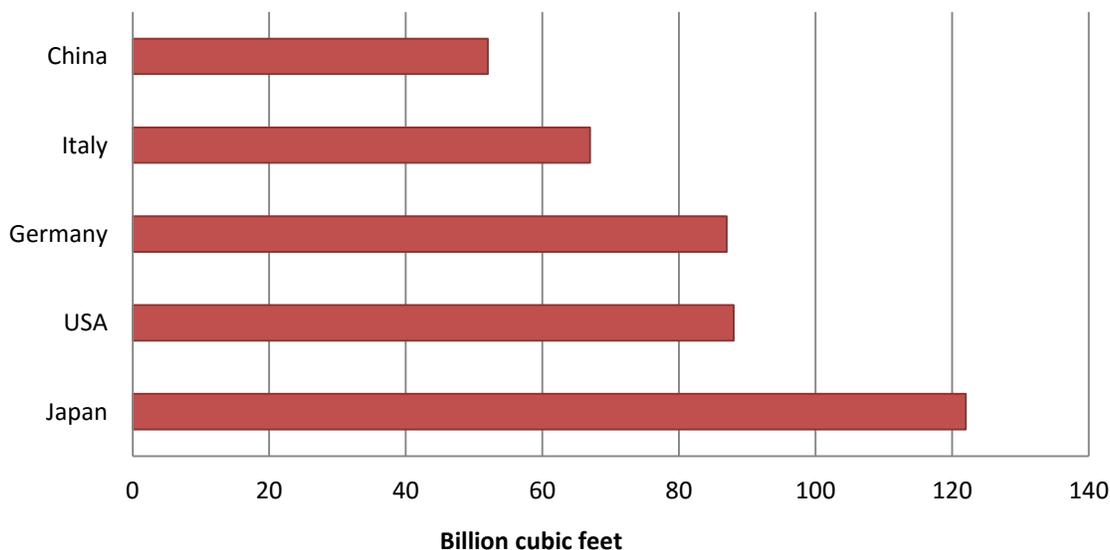
You will be surprised to know that the Qatar is the largest Liquefied natural gas (LNG) exporter in the world. Like other gulf nations energy sector enormously contributes to generate revenues and adds handsome amounts to the nation's economy. The Hydrocarbons earn country more than 60% of the total government revenues. The natural gas sector accounts for nearly 58% of the nation's GDP.

Top 5 Natural Gas exporting countries



The largest exporters of natural gas are Russia, Qatar, Norway, Canada and Netherlands. Russia is the largest natural gas exporter in the world, the country accounts around 35% of natural gas world exports.

Top 5 Natural Gas Importing Countries



Asia Pacific countries are by far the most dependent on NG imports to meet gas demand, more than double the gas supply share in Latin America and Europe. With little to no domestic production or pipeline import capacity, Japan, South Korea and Taiwan – the three most important NG markets in Asia Pacific rely on LNG to meet nearly 100% of gas demand.

Natural Gas Exchanges and contract specifications

Below are the most popular options in the world for trading Natural Gas futures:

- New York Mercantile Exchange: When it comes to U.S. exposure, you will be hard pressed to find a better starting point than the NYMEX. The exchange offers a number of contracts as well as options on Henry Hub futures (the most popular). Investors can trade these contracts in all 12 months of the year, each representing 10,000 million British thermal units (MMBTU). One benefit of these contracts is that they trade Sunday to Friday between the hours of 6:00 p.m. and 5:15 p.m. (CST), meaning that investors can make a play for approximately 23 hours every day (there is a 45-minute break period between each day).
- Intercontinental Exchange: Known as the ICE, this exchange offers both U.K. Natural Gas Contracts and Title Transfer Facility (TTF) futures, which are based out of the Netherlands. These two options allow for a more global perspective on this commodity as it continues to grow in popularity [see also Analyzing Five High Yielding Oil & Gas Pipeline Stocks].
- Multi Commodity Exchange: For those looking invest abroad, the MCX offers exposure based out of India. Contracts are offered for all 12 calendar months with each representing 1,250 MMBTU, The smaller contracts may be a better option for investors with lower capital bases as it will cost much less to establish exposure. Note that the contracts are available Monday through Saturday, with no trading occurring on Sunday.

❖ Contract Specification

Contract Unit	10,000 million British thermal units (mmBtu).
Price Quotation	U.S. dollars and cents per mmBtu.
Trading Hours	Sunday - Friday 6:00 p.m. - 5:00 p.m. (5:00 p.m. - 4:00 p.m. Chicago Time/CT) with a 60-minute break each day beginning at 5:00 p.m. (4:00 p.m. CT)
Minimum Price Fluctuation	\$0.001 per MMBtu
Product Code	CME Globex: NG
Contract Months	All months
Last Trading Day	Trading terminates three business days prior to the first calendar day of the delivery month.
Last Delivery Day	Last business day of the contract month

Factors that influence Natural Gas prices

Natural gas prices are mainly a function of market supply and demand. Because there are limited short-term alternatives to natural gas as a fuel for heating and electricity generation during peak demand periods, changes in supply or demand over a short period may result in large price changes. Prices themselves often act to balance supply and demand

1. Severe weather can disrupt production: Hurricanes and other severe weather can affect the supply of natural gas. For example, in the summer of 2005, hurricanes along the U.S. Gulf Coast shut down about 4% of total U.S. natural gas production between August 2005 and June 2006.
2. Economic growth can affect natural gas demand and prices: During periods of economic growth, the increased demand for goods and services from the commercial and industrial sectors generates an increase in natural gas demand, Declining or weak economic growth tends to have the opposite effect.
3. Winter weather strongly influences residential and commercial demand: During cold months, residential, and commercial end users consume natural gas for heating, which places upward pressure on prices as demand increases.
4. Hot summer weather can increase power plant demand for natural gas: Temperatures can also have an effect on prices during the cooling season. About 27% of U.S. electricity was generated with natural gas in 2014. Warmer than normal temperatures can increase the demand for air conditioning, which increases the power sector's demand for natural gas and can lead to increased prices.
5. The overall supply picture is also influenced by the level of natural gas held in underground storage fields. Storage helps to meet seasonal and sudden increases in demand, which otherwise may not be met by domestic production and imports.
6. Competition with other fuels can influence natural gas prices, some large-volume fuel consumers such as iron, steel, and paper mills and electricity generators can switch between natural gas, coal, and petroleum, depending on the cost of each fuel. When the cost of the other fuels fall, demand for natural gas may decrease, which may lead to lower prices for natural gas.
7. Green friendly people tends to use less natural gas in order to reduce the air and water pollution, so this will reduce the demand for natural gas, which may lead to lower prices for natural gas.

Historical Prices

Historically, Natural gas reached an all-time high of 15.39 in December of 2005 and a record low of 1.02 in January of 1992. Natural gas lost 0.64 USD/MMBtu or 24.33 percent during the last 12 months from 2.63 USD/MMBtu in April of 2015.



If we go back to 2005-2006 period to see the reasons why this huge boom in Natural Gas prices we will see that the troubles caused by hurricanes Katrina and Rita, derives natural gas prices to a record-high levels. Because natural gas is an important energy source for the U.S. economy, there was widespread concern that these high prices might cause a significant slowing in the economy especially among those manufacturing industries that heavily consume natural gas.



Australia Headquarter
Ingot Brokers, Level 25, Aurora Place, Tel: +612 80385040
88 Phillip Street, Sydney 2000 NSW Australia Fax: +612 80385049

Natural Gas Risks

Price movements in the natural gas futures market are sometimes unpredictable and erratic, and have earned natural gas notoriety in the commodity world. Some traders can experience huge losses due to erratic price movements, however there are large profits to be made if futures traders employ smart strategies and carefully hedge the risks mentioned below.

Natural Gas futures trading are accompanied by several risks affecting the underlying commodity. Natural gas is usually limited in its supply range, so its market dynamics in the United States are fairly insulated from world events, specially from the Middle East, which affects several other commodities like crude oil. Natural gas prices in the U.S. are however affected by the health of the U.S. economy, inventory levels, threats from cleaner sources of energy, unexpected weather changes (demand for natural gas used in automobiles, air conditioners can be affected), supply problems, environmental regulations, new discoveries of massive reserves in the U.S., Israel and Australia, etc.

There is one risk in particular that traders should be aware of. Every Thursday, the Energy Information Administration releases a report at 10:30 pm ET with data about the current natural gas storage and inventory. The markets react sharply to such data which allows short term traders an opportunity to profit from price swings whenever new inventory data is released.

There are also the risks typical to financial trading. Natural Gas futures have a lot of leverage, which allows traders to control a large amount of commodities for a small amount of investment. However, it also means that even a small, unfavorable change in the prices of natural gas can drastically impact a traders' entire equity.

Despite these risks, natural gas futures are highly in demand since they are liquid, witness high daily volumes and offer a strong investment factor due to the positive relationship between natural gas prices and the state of the U.S. economy.

Technical Overview



Resistance level 1	Resistance level 2	Resistance level 3
2.837	2.865	2.914
Support level 1	Support level 2	Support level 3
2.76	2.711	2.683

Pivot Point: 2.788

2016 Forecasting

Warmer weather and a large storage buffer of natural gas translate into less natural gas demand, greater natural gas supply, and therefore lower prices. The average household heated primarily with natural gas will pay about \$578 this winter, which is \$63 less than last year, according to the Energy Information Administration's Short-Term Energy and Winter Fuels Outlook.

Various news outlets are uncertain to accept this winter's forecast since global atmospheric conditions could change things in an instant. However, other experts state that a frigid repeat of 2014 weather is not likely. And even if it did, price increases should be moderate and short-lived due to excess storage levels. In the end, it all depends on how the weather conditions actually play out and which consumers are using oil versus natural gas to heat their homes.

Weather can certainly change, but for now, 2016 is looking steady in terms of the natural gas supply and pricing predictability.

Conclusion

Trading natural gas requires a considerable amount of attention and should be left to only the most active of traders. Neglecting your position for even as long as an hour can have a dramatic effect on the outcome of your investment, Weather patterns are the best-known price drivers for this commodity, so be sure to keep an eye on the 10-day forecast as expectations for temperature changes can often shift prices. Finally, it is important to remember that as a primary trading instrument, developing trends in markets and how the majority of traders are behaving can also skew NG prices.

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