

# The three worlds of natural gas prices

By Bill White

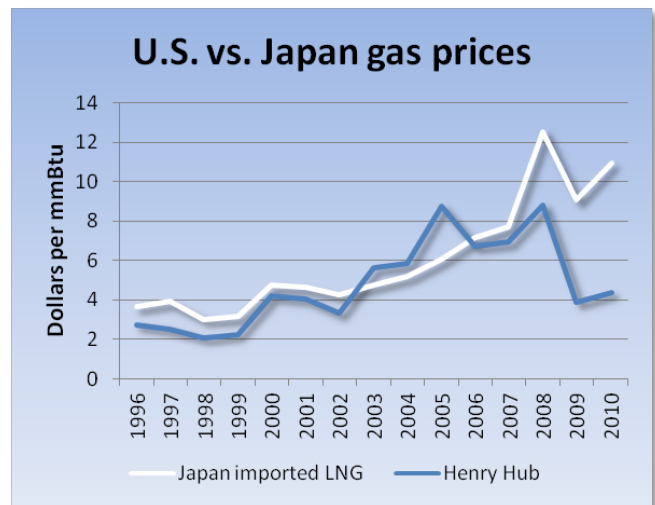
In 2008, about the time tremors shook the global economy, natural gas prices around the world split like a frayed cable, with three strands pointed in different directions.

The upper strand was the price of liquefied natural gas in the prime markets of Japan and South Korea.

The lower strand was the price of pipeline natural gas in the United States, the world's largest gas market.

In between was the price of gas in Europe, where pipelines supply most of the gas, although Europe imports LNG as well.

For many years before 2008, the prices in the three markets basically tracked one another. Prices generally were within \$1 per million Btu,



Source: BP Statistical Review of World Energy

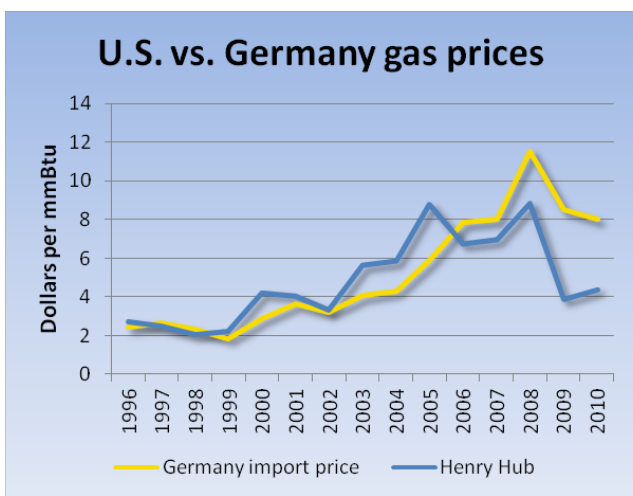
whether the gas price was quoted in the U.S. Lower 48, Japan or Great Britain.

But at one point this fall, here was the spot price of natural gas around the world:

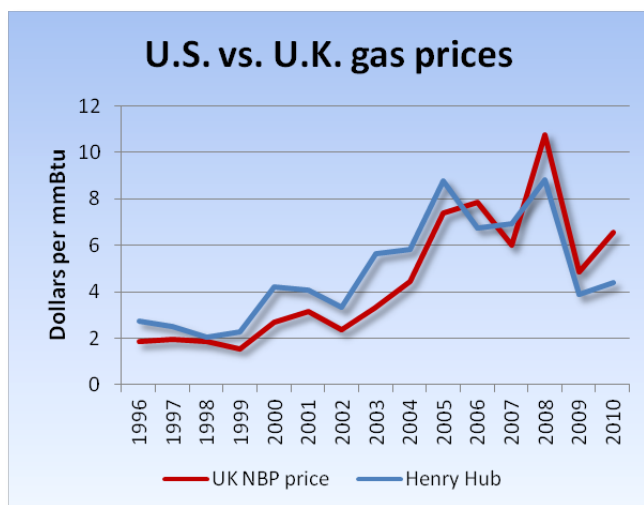
- \$3.64 per million Btu in the Lower 48.
- \$9.89 in Belgium.
- \$10.90 in Spain.
- \$14.44 in India.
- \$16 in Japan and South Korea.

“This year, prices for natural gas have diverged sharply in the main consuming markets, reaching a disparity rarely seen in any commodity market,” Richard Swann, a Platts editor, said in early October.

The recession that started in 2008 explains part of how natural gas prices diverged in different



Source: BP Statistical Review of World Energy

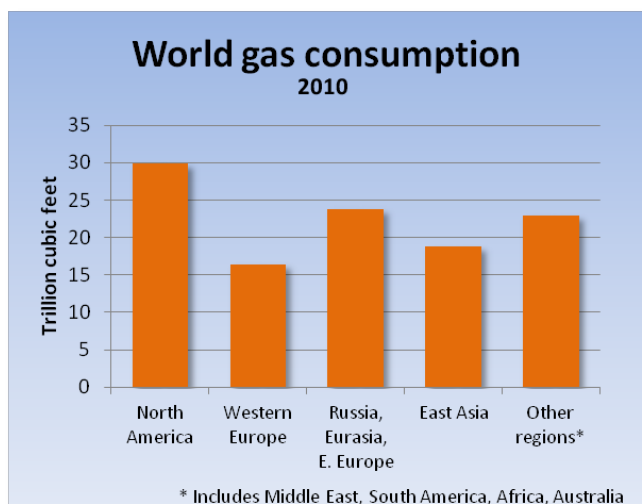


Source: BP Statistical Review of World Energy

areas of the world. The rise of shale gas production in the United States also helps explain why Japanese buyers pay up to four times more for natural gas today than North Americans.

But those factors really just made visible another factor that wasn't readily apparent before: Each market – Asia Pacific, Europe and North America – had separate internal dynamics that dictated their natural gas prices.

Their gas markets have different histories, sources of supply and reliance on imports. As a result, the global economic meltdown, high oil prices and rise of shale gas played differently in each market.



Source: BP Statistical Review of World Energy

Many in the natural gas industry hope that someday a global natural gas market can develop, similar to the one for crude oil, where price differences are explained more by the quality of the oil than where it is sold.

But that day seems far away, although few think the current price disparity will be permanent. If for no other reason, the forces of arbitrage eventually will take hold if the price gaps persist, where traders buy gas in the lower-priced market and sell it in higher-priced markets until the prices everywhere start to converge. (The gas industry lacks the traders, storage, pipeline and liquefaction infrastructure, price indexes and other market features needed to broadly engage in arbitrage globally today.)

For now, natural gas is in a pricing world that energy consultant Simon Bonini, a former gas executive with Britain's largest utility, recently called "very, very, very confusing."

### Prices, not price

When looked at over time – say the past few decades – the price of natural gas around the world tells a consistent story: Prices in North America, Europe and Japan were remarkably similar.

Not identical. Not perfectly correlated. But similar.

For example, from 1989 through 2007, the average difference between the natural gas import price in Germany and the Henry Hub spot price in the United States was 3 cents per million Btu – the German price averaged \$3.53 per million Btu and the U.S. price averaged \$3.56 during those 19 years, according to the BP Statistical Review of World Energy.

From 1996-2007, the average price of LNG in Japan was \$4.86 per million Btu, compared with an average of \$4.60 for U.S. Henry Hub pipeline gas, a 26-cent difference. In three of those 12

years the average U.S. spot price was actually higher than the Japan LNG price – in 2005 the U.S. price averaged \$2.74 per million Btu higher than the LNG price.

Another point worth making is that there isn't a single price for gas in any of the different regions of the world.

The Oct. 17 issue of trade journal Natural Gas Week shows 82 different pricing points in the U.S. and Canada – typically where pipelines intersect – including the well-known Henry Hub in Erath, La. The price ranged from \$2.54 per million Btu at one British Columbia location to \$4.07 in Dracut, Mass., north of Boston. Pipeline shipping costs as well as regional supply-and-demand factors account for the differences.

European nations import pipeline gas from Russia, Norway, Algeria and elsewhere, and the continent has LNG receiving terminals in the United Kingdom, the Netherlands, Belgium, France, Spain, Portugal, Italy and Greece. Each terminal has its own gas price. A handful of these prices commonly get cited as a proxy for the European price, kind of the way the Henry Hub is a proxy for U.S. spot prices: the National Balancing Point, or NBP, in the UK; a similar trading point called the Title Transfer Facility, or TTF, in the Netherlands; and the Zeebrugge LNG port in Belgium. Natural Gas Week reported the September-October spot-price averages as \$8.37 per million Btu at the NBP, \$9.17 at TTF, and \$9.31 at Zeebrugge, a 94-cent range.

The gas price in Asia also isn't a monolith. Japan utilities typically price their LNG buys based on a blend of crude oil prices paid in the country. Indonesia prices are based on a separate blend of oil prices. A rule of thumb is that Taiwan pays \$2 over the European price. China wants to pay as little as possible – and with so many gas suppliers wanting China as a customer, the country has had some success in negotiating lower prices.

The three big gas markets – Asia, Europe and North America – developed different models for how to price natural gas based on their unique circumstances.

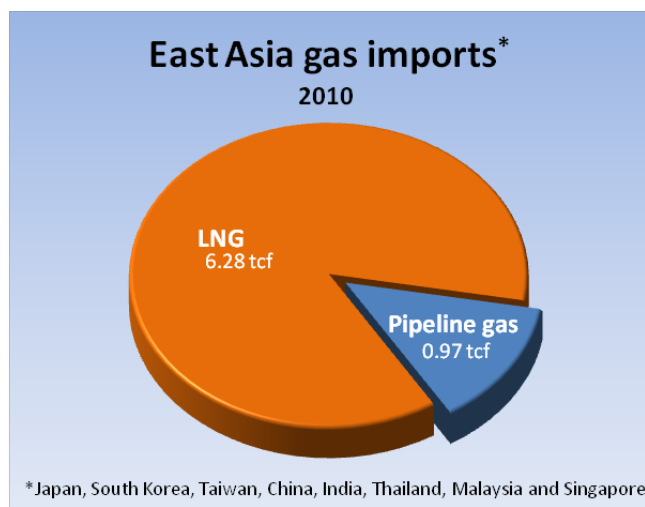
For many years, the prices they paid for gas were remarkably similar.

But now the differences in their pricing models are sending different signals about what the proper natural gas price should be.

## Asia – tight link exists between oil, gas prices

Japan, South Korea and Taiwan have practically no gas production of their own. They are far from the nearest gas pipeline. So they import LNG by tanker.

Together these three nations took 51 percent of the world's LNG supply last year (less than 5 percent of the world's total gas production).



Source: BP Statistical Review of World Energy

Natural gas might be a hassle to obtain for these nations, but gas has an overpowering allure: It's an alternative to oil.

The case of Japan illustrates.

In 1973, Japan got 77 percent of its energy needs from imported oil and 1.5 percent from

natural gas, including LNG from a then-4-year-old plant in Alaska's Cook Inlet.

That year, the Arab oil embargo began as the Organization of Petroleum Exporting Countries flexed its muscles on the world energy stage. Oil consumers such as Japan got double-whammied: oil prices soared and the reliability of their imported oil supplies became questionable.

Japan launched a conscious effort to diversify away from oil as an energy source.

By 1990, natural gas provided 10 percent of Japan's energy and nuclear 9 percent, according to the Petroleum Association of Japan, with oil's market share falling to 57 percent.

By last year, Japan got 40 percent of its energy from imported oil, 17 percent from LNG and 13 percent from nuclear – the nuclear share plunged this year after the Fukushima disaster in March. Interestingly, coal supplied 25 percent last year – yes, Japan is more reliant on coal than natural gas for its energy needs; so is South Korea.

Last year, Japan imported an average of 9 billion cubic feet of gas per day, and Korea imported 4.3 bcf/day.

Like Korea, Japan has a trickle of its own natural gas production – about 6 percent of the gas consumed in Japan. In 2009, the domestic production averaged about 500 million cubic feet a day, over double current production from Alaska's Cook Inlet basin.

To make their big move away from oil toward natural gas, Japanese utilities (and those in South Korea) made some decisions that continue to affect the price paid for gas there today.

### ***Long-term contracts***

One decision involved signing contracts for suppliers to provide natural gas for periods of 20 or 25 years. The early LNG suppliers – Indonesia, Malaysia and Brunei – were endowed with large gas fields, so they could guarantee long-term shipments.

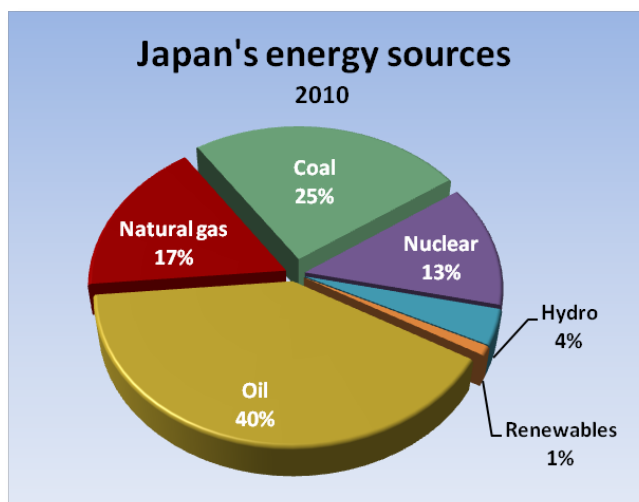
This long-term arrangement helped Japan fulfill a critical national goal: security of supply. LNG makers also got what they needed: long-term customers so they could finance the huge upfront cost of developing gas fields and building liquefaction plants. Most of Japan's LNG imports arrive under long-term contracts.

These long-term deals were satisfactory to all. Buyers assumed the risk that they would need all the volume they were purchasing. Sellers took the risk that prices would remain adequate over time.

LNG tanker companies got into this game, too, locking their ships into these long-term deals, keeping the vessels busy for decades.

### ***Linking gas price to oil***

Another decision linked the LNG price to the price of oil. At the time, gas was replacing oil as a fuel, so the linkage made sense. Japanese buyers typically use a formula that blends prices of various imported crude oils, a blend known in



Source: BP Statistical Review of World Energy

the industry as the “Japanese Crude Cocktail,” or JCC.

Gas is often sold in units of a thousand cubic feet, while oil is sold in units of 42-gallon barrels. Because a thousand cubic feet of gas holds roughly one-sixth the energy of one barrel of oil, a rule of thumb is that a thousand cubic feet of gas might be priced at around one-sixth the JCC price of a barrel. Whether on purpose or by accident, that has been the case. For example, from 1996 through 2007, the average LNG price in Japan was almost exactly one-sixth the price of oil.

The downside of this linkage is evident today, however. Oil prices lurched upward in 2004 and 2005, and kept rising, hitting a peak in the pivotal year of 2008.

Japanese LNG prices soared along with oil, although not quite as fast. This year’s high oil prices – topping \$100 a barrel for most of the year – mean very high LNG prices in Japan. In fact, the Japanese right now are paying the highest gas prices in the world.

Japanese utilities aren’t being passive price takers, however.

Some Japanese utilities and other industrial gas buyers have sought to renegotiate terms of the

long-term contracts in recent years. Some are investing in LNG projects in Australia, Indonesia and Russia’s Sakhalin Island north of Japan to secure future supplies, the U.S. Energy Information Administration said in a March 2011 report.

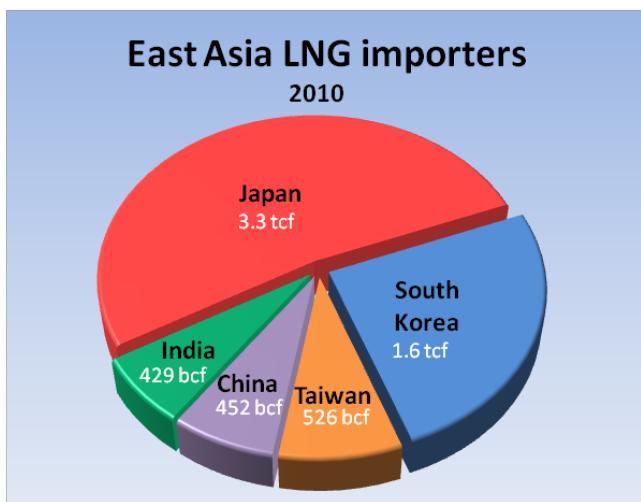
The price of emergency spot LNG cargos in Japan, as the nation replaces power generation lost after the Fukushima nuclear disaster, has been even higher than the contract LNG price. However, spot cargos remain a small fraction of the overall LNG shipments to Japan.

### **Redundancy of LNG infrastructure**

The “security of supply” principle shows up in another feature of the Japan LNG industry: The country has far more capacity to receive and regasify LNG than is typically found among the bigger LNG importers. This redundancy lets Japan import more gas during winter and gives the Japanese peace of mind that if an earthquake, tsunami or even routine maintenance take out LNG infrastructure, the nation’s gas-dependent industries will hum along.

The linkage of LNG prices to the Japan Crude Cocktail explains generally how the pricing scheme works in Japan, but digressions from the formula occur based on a variety of factors, including volumes shipped, distance the LNG travels, and how desperately the buyer and seller need the deal.

For example, Argus Media, which tracks the LNG market, reported that the July weighted average price in Japan was \$16.19 per million Btu. But Japan took LNG shipments from 13 nations that month, with the price varying from \$9.04 for Trinidad and Tobago LNG to \$17.47 for Malaysian LNG. Spot cargos are selling for top prices, although most shipments are sailing under long-term contracts.



Source: BP Statistical Review of World Energy

The story of how LNG is priced in South Korea and Taiwan is similar to that of Japan. Argus reported that Korean buyers paid an average of \$13.36 in July. The shipments came from eight nations. The low price was \$6.26 from Yemen and the high was \$17.24 from Oman.

Other Asian buyers pay less than those in Japan and Korea for imported LNG.

For example, last January, the average price was \$11.44 per million Btu in Japan and \$10.12 in Korea. But, according to Argus, the average price was \$6.40 in India and \$5.92 in China, two nations with significant domestic gas production, although not enough to fill all local demand.

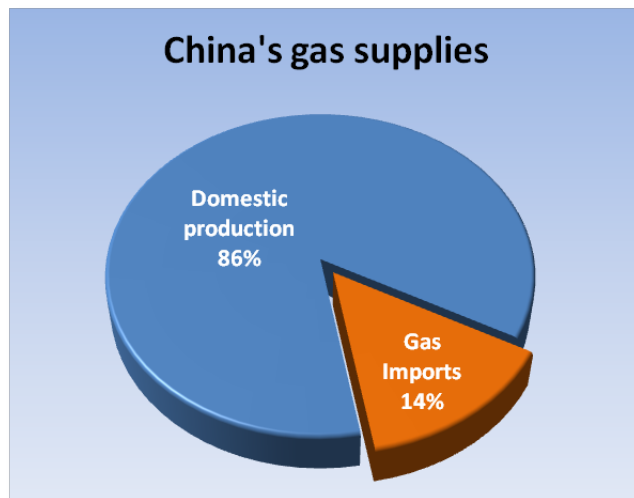
By September, when Japan was paying about \$15 for LNG the average price was \$10.65 in China, Bloomberg reported.

LNG makers aren't selling gas to China under the same long-term pricing contracts as Japan. China cut some particularly tough deals for its first long-term LNG buys about a decade ago.

Spot cargos are different, and LNG makers have been asking top dollar. In Japan, the spot LNG price jumped to over \$17 per million Btu in October, up from \$10 in March before Fukushima. Prices have climbed so high that some refineries in India are switching to fuel oil rather than paying premiums for spot LNG shipments.

In some cases, the link between oil and gas prices in long-term contracts sets a ceiling on the maximum oil price used in the formula. Indonesia recently has been trying to renegotiate the \$38 oil price cap in an LNG-supply contract it has with a China buyer, according to Platts. That cap was set in 2006 and was a negotiated increase from the original ceiling of \$25 per barrel from 2002, Platts said.

China appears to be in a particularly strong position when it comes to gas-price



Source: BP Statistical Review of World Energy

negotiations. It doesn't buy very much yet, but virtually all of the world's gas suppliers would like to be selling into the world's hottest economy. China buys both pipeline gas and LNG, but it also has its own domestic production and is investing to boost that production.

Many analysts believe Japan and Korea will continue to favor long-term LNG contracts, with prices linked to oil. But if oil prices remain high, and nuclear power production comes back in Japan, some softening of the gas price could occur.

## Europe – a loosening link to oil prices

The Arab oil embargo of 1973 also hit European utilities between the eyes. The six-month embargo slashed world oil production by about 4 percent. An assertive OPEC pushed a doubling of world oil prices from 1972 to 1975.

Western European demand for oil plunged 23 percent during those years. Europeans wanted new suppliers of energy, and in natural gas they had some good options.

Russia had giant gas fields looking for an export market. Norway had big new discoveries in the North Sea. And Algeria, too, was home to some giant fields.

Gas trading was relatively new in Europe at the time. Belgium, Germany and France were the first to import natural gas, from a major Netherlands field called Groningen discovered in 1959.

In trying to figure out how to price gas to provide a fair return as well as the fortune needed to develop the field and pipelines, the Dutch linked natural gas prices to the prices of substitute fuel oils and insisted on long-term contracts.

Russia, Norway and Algeria adopted that pricing structure for similar reasons, and it persists today for much of Europe's pipeline-gas imports. Those three nations and their handful of mega-fields remain Europe's top source of foreign gas supplies. (Russia, Norway and Algeria were the world's No. 1, 2 and 5 gas exporters last year, joined by Qatar and Canada in the No. 3 and 4 positions, with the Netherlands at No. 6. As for gas pricing in Europe, the United Kingdom gas market is more like North America's than continental Europe's, as will be discussed below.)

The price link to oil in Europe wasn't as iron-clad as in Japan, however. Exporters discounted gas prices to reflect the cost of competing fuels – heavy fuel oil for industry and distillate for

power plants, the EIA said. Other notable contract features: the gas destination was locked in to prevent a buyer from diverting gas from a lower-priced market to a higher-priced market the exporter also was serving – blocking unwanted competition – and the gas price could get renegotiated periodically.

Since the pivotal economic year of 2008, this decades-long system has been under attack by gas buyers.

### **The oil-gas price link**

With oil prices currently near historic highs and the local economies wobbly, many European gas buyers are demanding price relief. They're aiming their frustrations at Russia's Gazprom, whose pipelines dominate the European gas trade.

The big European gas buyers are playing tough. To show Gazprom they mean business, they have boosted their spot and short-term buys of LNG, often for lower prices than the pipeline gas. They've got a motivated LNG exporter in Qatar, which has far more capacity to make LNG than it has buyers. Qatar will negotiate its LNG price. Last year, Qatar sent some 40 percent of its LNG to Europe.

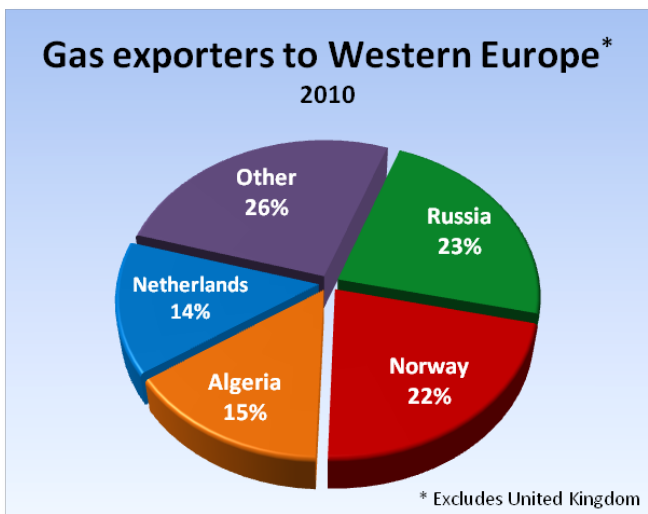
(Qatar gas sold for \$15 to \$16 per million Btu in East Asia in June, while selling for \$9 to \$12 in Europe that month and \$4.25 in Texas, according to Argus.)

European imports of LNG grew by 26 percent last year, while pipeline-gas imports from Russia fell by 2 percent, the EIA said.

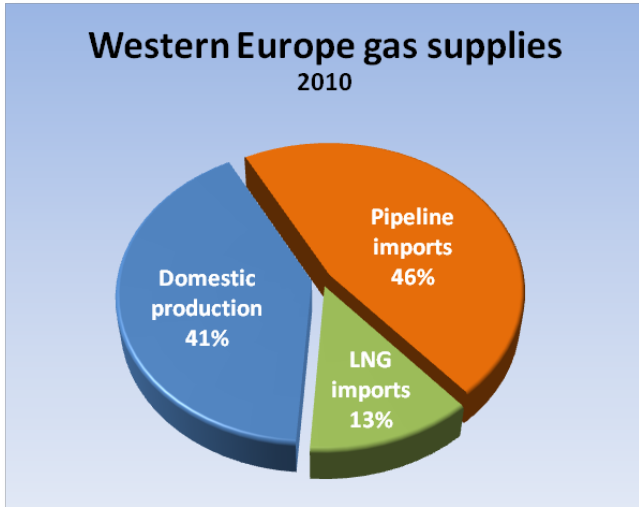
Gazprom is not powerless in this fight – long-term supply contracts are a potent weapon.

But Gazprom doesn't want to jeopardize its European market share, which underpins its export business.

In some cases Gazprom is changing the basket of oil prices it uses, often adding spot gas prices to



Source: BP Statistical Review of World Energy



Source: BP Statistical Review of World Energy

the formula, so gas-compared-to-gas pricing is gaining a toehold over gas-linked-to-oil pricing. Usually, the new price is good for a fixed period, such as two or three years. This suits the buyers, who know that oil prices can fall as well as rise.

European buyers also are playing tough with LNG suppliers, not only by sometimes getting better prices than they pay for pipeline gas. Supply contracts are shorter – five to 10 years instead of perhaps 25-year terms from a few years ago. And new language is letting buyers divert cargos to other markets – such as the premium-priced Japan spot market in 2011.

It's unclear how loose the oil-price link will become for continental Europe gas prices. But Norway recently "switched as much as 30 percent of their contracted volumes to spot-market pricing," the EIA said.

### The British difference

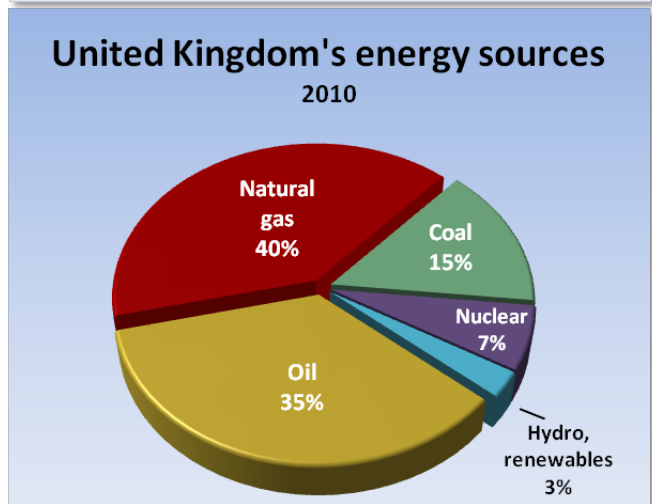
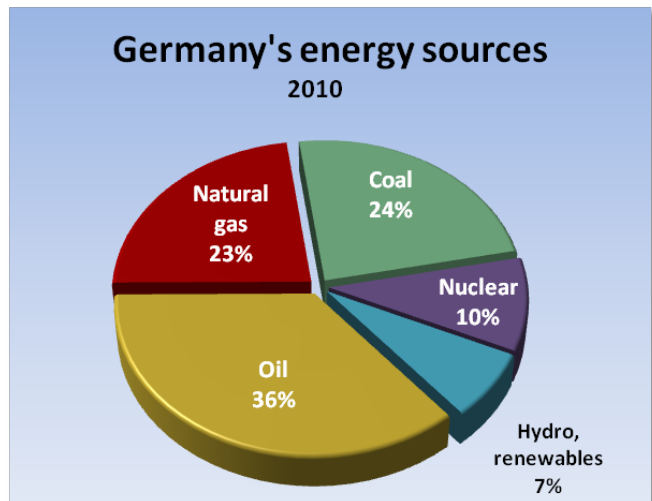
Natural gas pricing in the United Kingdom is different from pricing on the continent.

Natural gas is the top fuel source in Great Britain, while in many European countries gas is a mere sidekick to oil as an energy source – in Germany gas was No. 3 behind oil and coal last year.

Like North America, the gas market in the U.K. developed over the past several decades based on its own gas reserves, often from small to medium-sized fields, not imports. That is different from continental Europe's high dependence on imports from giant fields, according to the Energy Charter Secretariat, a group that upholds international laws to ensure the smooth flow of energy between exporters and importers.

Further, Great Britain began liberalizing its markets in the 1980s, while continental Europe is still deregulating its energy markets.

The nation even developed a hypothetical trading hub called the National Balancing Point, through which gas in the country must "pass."



Source: BP Statistical Review of World Energy



NBP is akin to the Henry Hub in the United States, an actual trading hub, and the NBP price is typically cited in lists of European gas prices. An active futures market tied to the NBP also helped Great Britain separate itself somewhat from the rest of Europe on natural gas pricing.

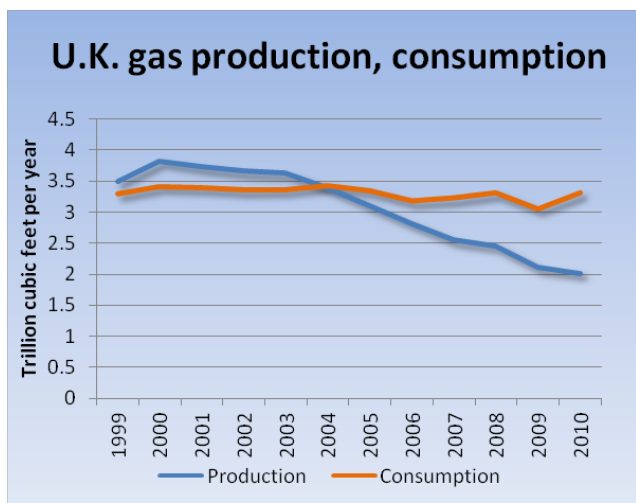
During the peak years of Britain's North Sea production, some gas was dirt cheap, creating another departure from the continent's oil-linked gas prices. This cheap gas came up wells with oil or valuable gas condensate. Because gas flaring was not allowed and gas injection sometimes wasn't cost-effective, producers discounted the gas just to get rid of it – just as occurred in Alaska's Cook Inlet during the 1960s and 1970s, the early years of production there.

All this let U.K. price its gas based on supply and demand within the country, not oil prices. The continent's oil-linked prices did influence U.K. gas prices, however, because excess British production was exported.

But those exports have ended. Great Britain hasn't been self-sufficient in natural gas since 2003. The U.K.'s gas production plunged 45 percent from 2003 through last year, while gas consumption dipped 2 percent.

As a result, British utilities and other gas consumers import some gas, mainly via pipeline from Norway's North Sea fields, but also via pipeline from the Netherlands, especially during winter. This means the nation's gas price is not completely divorced from the long-term, oil-linked-pricing contracts found on the continent. But the NBP price usually is a little lower than prices found on the continent.

Last year, the U.K. also was officially Europe's No. 2 LNG importer, behind Spain. But much of the LNG gas landed in the U.K. was then piped to the continent – with Britain's well-developed gas infrastructure and better-developed gas trading markets a catalyst for delivering the LNG there



Source: BP Statistical Review of World Energy

rather than elsewhere in Europe. (Russia's Gazprom is a minority investor in one pipeline connecting Britain to the continent.)

## North America – the lowest prices, for now

The Arab oil embargo had profound immediate effect on oil prices in North America. But not on natural gas prices.

That's because the natural gas industry – from prices to pipelines – was heavily regulated at the time. Through the mid-1970s, this regulation kept gas prices, supply and demand little changed. Deregulation began in the late 1970s and was essentially done by the early 1990s, giving rise to the North American gas industry we see today.

In general, North American gas is a classic commodity that can freely move throughout the United States and Canada on an extensive pipeline network.

Unlike other parts of the world, North America has many gas fields and many producers.

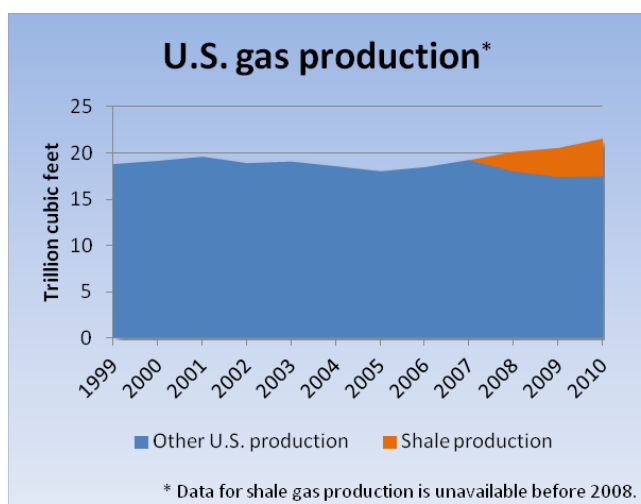
Gas is priced against other gas supplies available in North America, and an active futures market keeps the pricing transparent while letting

traders manage price risk by locking in the price they'll pay in coming months.

In times of abundant domestic supply, such as today thanks to growing shale gas production, gas prices are totally disconnected from oil prices.

As was mentioned, the energy punch of a thousand cubic feet of natural gas is about one-sixth the punch of a barrel of oil. As recently as 2005, U.S. oil and gas prices fit this one-to-six ratio. But since then both oil prices and shale gas production have soared. U.S. natural gas at present is priced about one-30th of oil prices.

The oil-price link in North America becomes more evident in times of scarcity, however.

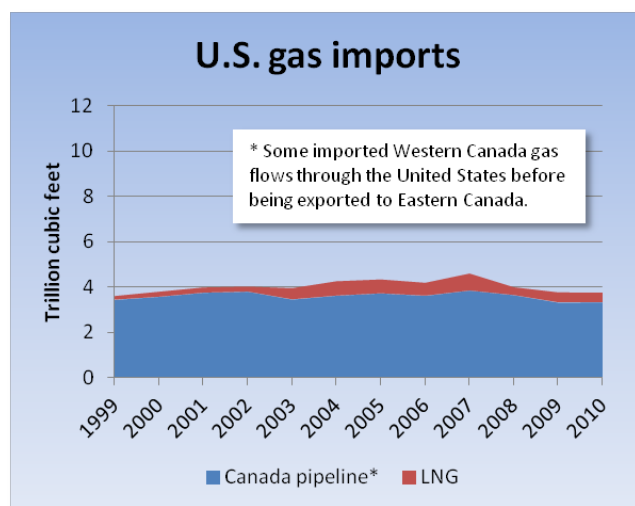


Source: U.S. Energy Information Administration

The United States had a “gas shock” during the winter of 2000-2001. Domestic gas supplies fell short of demand. “Buyers quickly bid up gas prices, until dual-fired power generation users found it economical to switch from gas to residual fuel oil,” said the Energy Charter Secretariat report. “Thus an indirect linkage between gas prices and oil prices was re-established.”

The price link lingered until early 2006, when gas surpluses reappeared and gas prices started moving away from oil.

Imported gas, even LNG, is priced against other U.S. supplies, not against prices in overseas markets. The United States relies mostly on Canadian pipeline-gas imports to ensure adequate supply. Both Canadian and LNG imports have fallen because of higher Lower 48 shale gas production.



Source: U.S. Energy Information Administration

Imports peaked at 16.4 percent of U.S. demand in 2005. Last year, the U.S. imported 11 percent of the gas used, according to the EIA. Canadian pipeline gas comprised almost 90 percent of the imports last year.

### ***Ocean of arbitrage opportunities***

What caused the current gas world, where buyers pay \$16 in Japan, \$10 in Europe and \$3.60 in the United States for essentially identical molecules of methane?

At its root, supply and demand turmoil is striking the different market structures of Asia, Europe and North America differently.

The forces at play in today's haywire gas pricing include:

- Rising shale gas production in the United States. This event has rippled through the world. It cut loose some global LNG production that had eyed the U.S. market and sent it to Europe and Asia. In Europe, LNG makers found willing buyers eager to

send a message to Gazprom about its pipeline-gas prices. In Asia, Japan has been an avid buyer, needing extra gas to replace lost nuclear power generation.

- High oil prices. This has pained gas buyers everywhere in the world except North America. The link of gas prices to oil prices is strained today, but generally intact because the link is written into long-term contracts. Some gas buyers are getting gas sellers to give them price breaks. Some gas sellers are asking gas buyers to renegotiate the oil price ceiling that limits how high gas can go. Some European contracts are including local gas prices in the pricing formula. Some Asian contracts are tweaking their pricing formulas to soften how much gas prices respond to higher oil prices. It's unclear how much more pushback will come from LNG buyers, particularly as old contracts expire, if oil prices remain high or keep rising.
- The U.K.'s paradox. The United Kingdom's rising gas imports are weakening that nation's resistance to oil-linked gas prices, although Norway, the main exporter to Great Britain, has moved to base its natural gas price there on local gas prices rather than oil.
- The China factor. China is hotly chasing its own domestic gas production, including abundant shale gas reserves. Last year its production grew 14 percent. China also intends to increase its pipeline-gas imports and is investing in LNG projects to secure supply as its appetite for energy grows. In September, China paid 15 percent less for gas from a new Turkmenistan pipeline than it paid for LNG. With lots of options, China is positioning itself to pay less than top-dollar for gas. The low prices it secured a decade ago with its initial LNG buys were not lost on

Japanese buyers. How much China will influence Asian gas prices is unclear.

- The Japan factor. Since last March's Fukushima disaster, this country is figuring out what role it wants nuclear power to play in its future. Gas-fired generation will fill part of any cut in nuclear power, as will coal and oil fuels.
- Ample LNG supply. For now, the 19 nations that export LNG can make far more than the market needs. This imbalance has helped boost spot and short-term supplies of LNG. European buyers have benefitted by getting lower prices, but Japan's desperate need for more gas after Fukushima means high spot prices in Asia. The LNG supply-demand imbalance might disappear in a few years as demand grows, then reappear later this decade when new LNG capacity in Australia starts up. Nobody is sure how this imbalance will affect prices.

Why would anyone ship LNG to the United States, as is occurring occasionally? Why isn't every ounce of LNG production sold to Asia, where buyers today pay top prices?

Here are some of the reasons:

- Most LNG is sold under long-term contracts to utilities in specific countries.
- Typically the long-term contracts don't allow deliveries to places not specified in the contract. Sometimes, after delivery, gas will get diverted to a higher-paying market, if the buyer has more supply than needed.
- Some LNG makers have investments in LNG-receiving ports and need gas deliveries at those ports.
- An LNG maker might send a spot shipment to Europe rather than Asia to keep from flooding the Asia market and weakening prices there.

- Most LNG tankers are contracted to sail between specific ports.
- The biggest LNG tankers that might be available to free-lance a shipment are too big for many Asian LNG ports.

Still, the price disparity today is big enough that it's profitable to divert LNG cargos to higher-paying markets if possible.

And this is happening.

In some cases, LNG shipments are getting redirected to Asia to get the best price there.

In some cases, LNG shipments meant for the United States are heading to Europe instead.

In some cases, LNG loads are arriving in the United States to fulfill contract-destination terms then heading back to sea in search of a better market.

Some U.S. and Canadian companies are positioning themselves to export LNG as a price-arbitrage play. If they succeed and export enough volume, most analysts expect U.S. natural gas prices to rise.

No one knows if and when the price disparity will end.

It could end if arbitrage opportunities grow, forcing prices to converge.

It could end if oil prices plunge, or China grows its own gas production quickly, or the U.S. shale plays fizzle, or Europe exploits its own shale gas resources, or the U.S. exports gas as LNG, or Japan re-embraces nuclear power, or world economic doldrums dampen demand.

Or any of a thousand other events could factor in.

Analyst Jim Jensen of Jensen Associates in 2009 had this insight into the gas market that seems to apply today:

"Natural gas is the manic depressive of the fossil fuel sources. We have been through a period of depression. We are now in the manic phase. It's kind of useful to step back and realize that things were not as bad as you thought they were when it was depressive, and they may not be as good as you think they were when it's manic."



A Web-based version of this article can be found at:  
<http://www.arcticgas.gov/The-three-worlds-of-natural-gas-prices>

For more information, please visit our website: [www.arcticgas.gov](http://www.arcticgas.gov)

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