

# THE MONTHLY ADVISOR

April 2011

Volume 15, Issue 4

Published by  
**Energy Solutions**<sup>INC</sup>  
natural gas buying advisors

## Our Outlook

Buyers  
should be  
taking  
advantage of  
price  
weakness

**Short-term:** Our targeted first quarter low of \$3.73 per MMBtu was hit on March 4, and thus, our requirements for the 1st quarter low have been met. Cooler weather in the northern part of the nation may inhibit the ability of the market to test this \$3.73 per MMBtu low, making it more likely that prices have entered the seasonal 2nd quarter rally. This year's rally will likely be anemic in comparison to past years and at this time is expected to reverse at \$4.50-\$4.73 per MMBtu.

**Long-term:** Natural gas prices are expected to advance in the first part of summer, but then another major price decline is expected in the fall as storage refills rapidly. Energy Solutions, Inc. views the fall as the potential timing of the next major buying opportunity. While an unforeseen event could alter the long-term outlook, at this time too much production and too little demand weakens any case to be overly bullish on natural gas prices.

## Natural Gas Buying Guide

A Decision-Making Tool to Improve Profitability

Energy Solutions<sup>INC</sup>  
natural gas buying advisors

By Valerie Wood

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# Pricing Analysis: "At a Glance"

## Bearish Factors

- Several shale producers have announced profits of as much as 43% even with natural gas priced at \$4 per MMBtu. This is because of a combination of increased efficiencies and beneficial hedges that the producers have in place.
- Rising crude oil prices are bearish for natural gas prices as this trend could slow economic recovery.
- The producing region is injecting into storage at record pace.
- January 2011 production levels are still 7% higher than last year.
- Traders continue to be vocal about their intentions to "sell" as prices move toward the \$5 per MMBtu level, and "selling" pushes prices right back down.
- Significant snowpack in the Northwest should increase [hydropower supplies](#), displacing an estimated 1.5 Bcf/day of natural gas.
- Higher-priced [NGLs](#) continue to incent natural gas drilling.

## Neutral Factors

- There are still a lot of unknowns about the implications of the tragedy in Japan and how it may impact the future of nuclear power in the U.S.
- Meteorologists are calling for above active hurricane activity.
- Implementation of the [Dodd-Frank Wall Street Reform Bill](#) is still an unknown.
- More states are looking at stricter regulations on [fracking](#), including the required disclosure of the chemicals used.

## Bullish Factors

- Near-term weather is short-term bullish.
- Speculators hold an extreme net-short position which can result in a price rally.
- The timing for the seasonal second quarter rally is here and price support at \$4 is holding.

## Natural Gas Pricing Outlook

There is a lack of urgency by buyers to complete forward purchases. On the other side, speculative selling seems to also be weakening, and this is resulting in less mileage in price declines. The \$4 per MMBtu price level has been serving as an area of [price support](#). On the other hand, a decisive break below this psychological level could cause the \$4 per MMBtu price level to become an area of [price resistance](#). It is difficult to be bullish on natural gas prices given the ongoing growth in production, the fear that rising crude oil prices could stymie economic recovery, the backlog of uncompleted wells that can be brought into service quickly, the announcements by producers of increased efficiencies and falling drilling costs, and slow demand by the commercial and industrial sector. However, it is also difficult to know just how many of these factors are already built into natural gas price levels. For now, natural gas prices aren't establishing any sort of new trend, but rather are simply bouncing back and forth in a tight trading range. The day will arrive where new market information creates a catalyst for aggressive buying or selling, but right now, no one really knows what that catalyst may be.

[Click Here](#)

to view our "Actions to Consider" in our most recent Weekly Edition

## Natural Gas Commitment of Traders Report

(As of April 5, 2011)

	Long	Short	Net
Non-Commercial	130,282	330,652	(200,370)
Commercial	385,850	235,403	150,447
Non-Reportable	85,916	35,993	49,923
Managed Money	117,796	214,438	(96,642)
Other Reportables	12,486	116,214	(103,728)
Swap Dealers	254,143	39,504	214,639
Producer/Merc/User	131,707	195,899	(64,192)
Non-Reportable	85,916	35,993	49,923

The top section of data represents the basic COT weekly report and the bottom section of data represents the contents of the disaggregated COT report.

**Long Position:** Indicates the purchase of a contract

**Short Position:** Indicates the sale of a contract

### Non-commercial: Large speculative traders

- Managed Money: Commodity Trading Advisors, Commodity Pool Operators and Hedge Funds

- Other Reportables: All Other Speculators

### Commercial: Large hedgers (producers, consumers, etc.)

- Producer/Merchant/Processor/User: An entity that predominantly engages in the production, processing, packing or handling of the physical commodity

- Swap Dealers: An entity that uses the futures markets to manage or hedge the risk associated with physical prices

**Non-reportable:** Small speculators and small hedgers



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## Fundamental Pricing Analysis

Market fundamentals remain [bearish](#). Several shale producers recently indicated that they have a good chunk of their natural gas production hedged for 2011, and one indicated that at \$4 per MMBtu natural gas it is experiencing a 43% profit. This profit has less to do with the actual price of natural gas than with increased drilling efficiencies and the cost benefits of natural gas liquids (see p. 11). Some liquid-rich plays are capable of producing four times as much natural gas as a typical vertical gas well or a drier shale play. Producers continue to reduce finding and exploration costs, while increasing efficiencies. It is estimated that a 20% increase in efficiencies will offset a 10% reduction in the drilling rig count. Thus, a falling drilling rig count is not expected to result in dramatic production pullbacks. Plus, the number of uncompleted wells in the U.S. (or those wells waiting to be connected to a natural gas pipeline) is at an all-time high of 3,000. This means that production can quickly respond to higher price levels. With domestic production levels near all-time highs there are no supply concerns on the horizon and it is difficult to make a case for higher natural gas prices. The only thing that is likely to change this fundamental outlook is a change in the perception of demand. Near-term: snowpack in the Northwest will increase hydro power capabilities and reduce the need for natural gas fired electric generation in that region; the producing region is aggressively injecting into storage and there are no concerns over refilling storage to adequate levels by November 1, 2011; and the tragedy in Japan will have little impact on domestic pricing because the U.S. relies very little on [liquefied natural gas](#) (LNG) imports.

Global macroeconomic data has been mostly positive. In some cases economic growth is causing countries to implement [inflation](#) fighting policies, which typically start with an increase in short-term interest rates. As interest rates rise, economic growth tends to slow. On top of this, rising crude oil prices are bearish for natural gas as this trend increases the potential to stymie economic recovery which, in turn, would reduce natural gas demand.

Overall, while analysts somewhat disagree on projected price levels there is consensus that natural gas prices will continue to rise each year after 2011, with the biggest potential for sustained higher prices not starting until 2013 at the earliest.

## Technical Pricing Analysis

Regardless of bearish fundamental factors, there are a number of technical signals that point to the upside, and the timing for technical run-up is here as prices nearly always increase during the second quarter of the year. For starters, the psychological price level of \$4 per MMBtu seems to be holding and that would indicate that the [front-month](#) natural gas [NYMEX](#) price dip to \$3.731 per MMBtu may be declared the first quarter low. From a first quarter low the front-month natural gas NYMEX price then historically rallies into the second quarter. The average historical rally is usually just over 50 percent, but this year, Energy Solutions, Inc. anticipates that a second quarter rally will end at somewhere between \$4.50-\$4.73 per MMBtu.

On the other hand, if the front-month natural gas NYMEX contract managed to fall to below \$3.731 per MMBtu, it would alter the forward outlook and \$4 per MMBtu would become a level of price resistance rather than price support.

While weekly storage reports are ultimately a fundamental factor, those reports are expected to prompt buying and selling from the speculative sector. The speculators still hold an extreme net-short position, meaning that natural gas prices are vulnerable to the upside. However, with the fundamentals being so overwhelming bearish the upside is still deemed limited in comparison to history. So even if a rally extended to \$5 per MMBtu or slightly above, it would likely be short-lived because several hedge funds and speculative players have already voiced that they would again become active sellers at those price levels, and selling will push natural gas prices right back down.

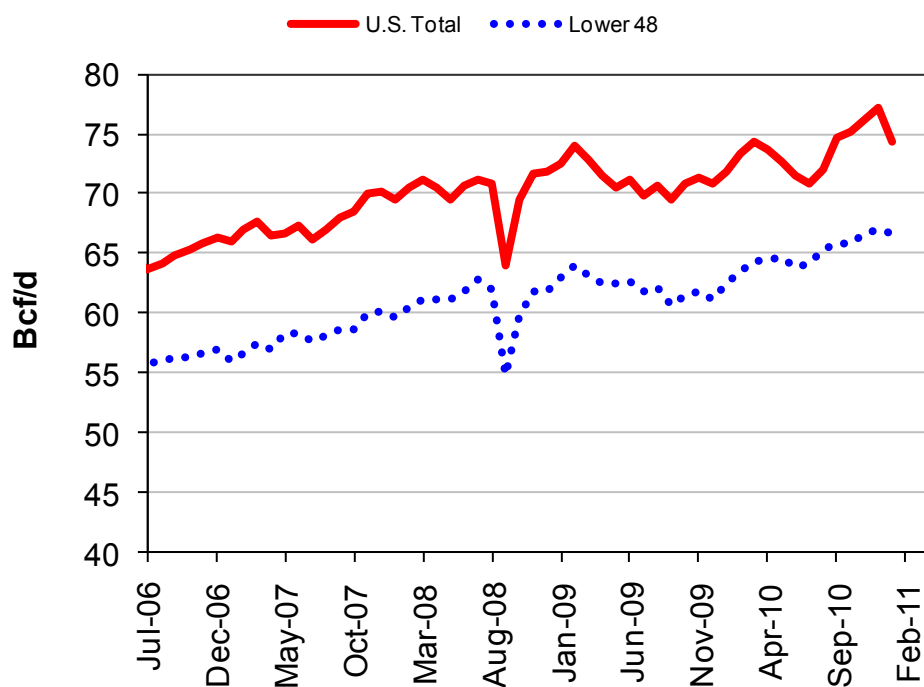
# Supply / Demand Analysis and Outlook

## Production Data: Through Jan. 2011

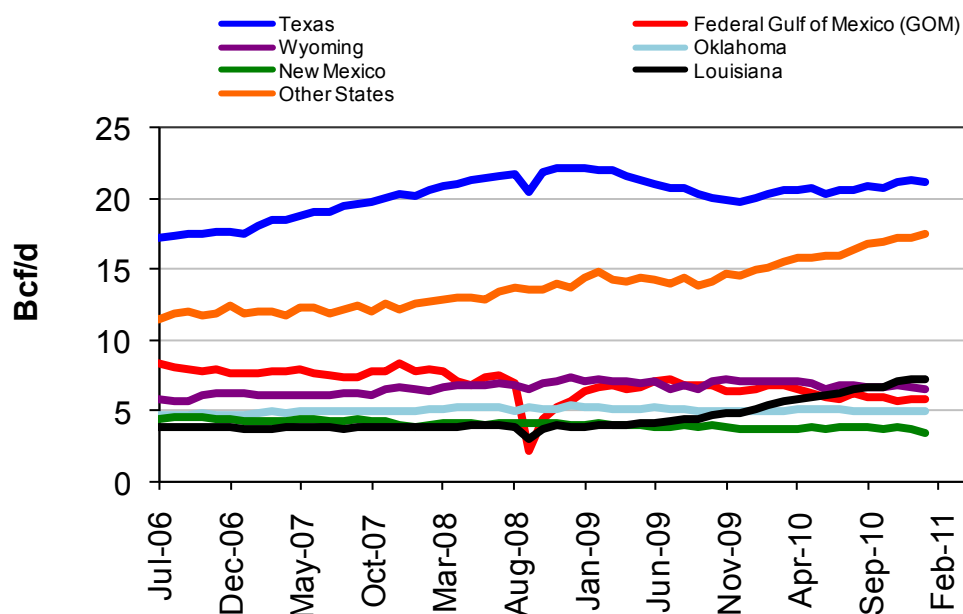
According to the latest Monthly Natural Gas Gross Production Report from the Energy Information Administration (EIA) in January 2011, production in the Lower 48 States fell by 0.5 percent or 0.34 billion cubic feet per day (Bcf/d). This loss was in part due to cold weather conditions which caused large declines in New Mexico and Wyoming, totaling 0.51 Bcf/d. Texas was down 0.6 percent or 0.12 Bcf/d for the month. Some of these declines occurred because of well “freeze-offs” that forced producers to temporarily shut in production. Other States rose 1.5 percent or 0.25 Bcf/d as new wells were added in the Marcellus Shale.

Natural gas production levels for January 2011 in the Lower-48 states are up 4.27 Bcf/day from January 2010 levels. This represents a 7% year-over-year increase in natural gas production. The EIA expects production levels to return to an upward trend in the next few reports before showing modest monthly declines. The key term here is “modest” as most analysts still expect production levels in 2011 to easily surpass 2010 levels.

## U.S. and Lower 48 States Natural Gas Gross Production



## State Natural Gas Gross Production

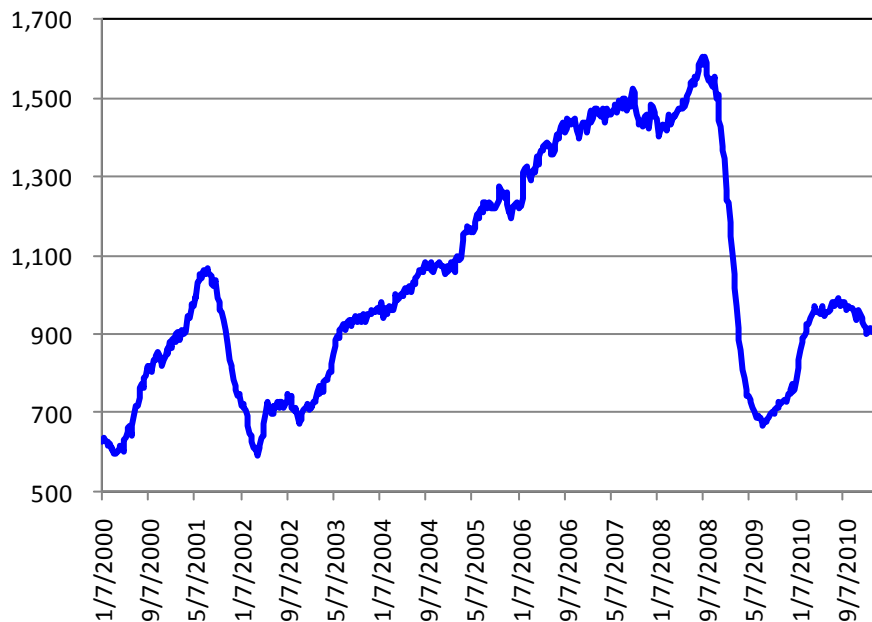


# Supply/Demand Analysis and Outlook

## Rig Count: As of 04/08/11

The most recent Baker Hughes drilling rig count report shows that the natural gas drilling rig count now stands at 889 versus 959 one year ago. As crude oil prices have risen, producers have moved drilling rigs accordingly. One year ago, 65% of the active drilling rigs were searching for natural gas, but today it is 50%. Even so, the EIA predicts that natural gas production will continue to increase year-over-year because of shale drilling.

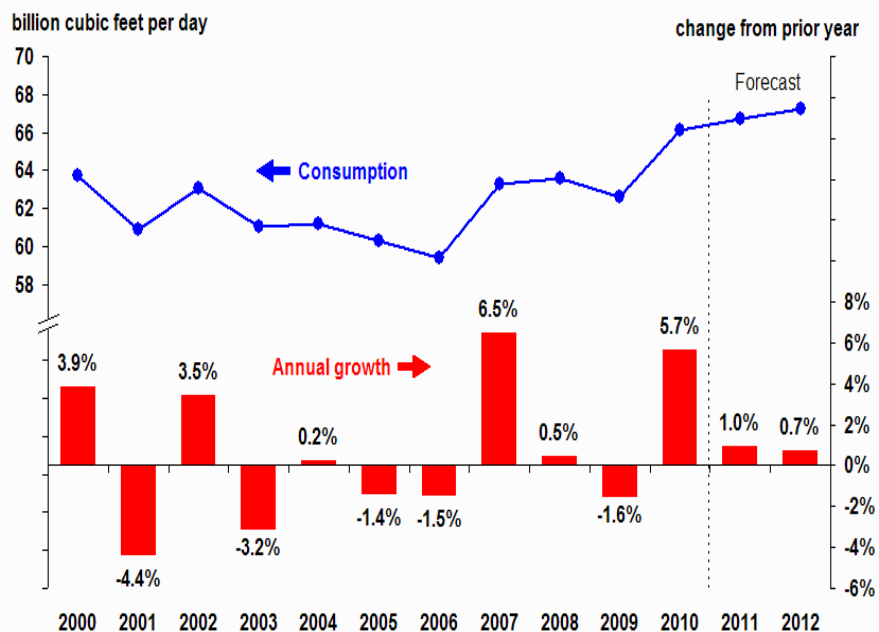
## Natural Gas Drilling Rig Count



## Consumption Projections As of 04/12/11

The EIA predicts that in 2011 total natural gas consumption will rise slightly from 2010 levels to 66.7 Bcf/day. This projection is primarily caused by an anticipated increase in consumption from the industrial sector. The EIA expects natural gas consumption from the industrial sector to increase 3.6% to 18.7 Bcf/day in 2011. Natural gas demand levels will continue to climb in 2012 because of the industrial and electric power sectors.

## U.S. Total Natural Gas Consumption



Source: Short-Term Energy Outlook, April 2011



# Storage Analysis and Outlook

## Storage Outlook

A colder than average spring in the northern part of the nation has reduced storage injections in the Eastern and Western Regions; but the Producing Region (Alabama, Arkansas, Kansas, Louisiana, Mississippi, New Mexico, Oklahoma, and Texas) is another story as inventories have hit another all-time high for this time of the year. Current storage inventory levels of 1,607 Bcf are below last year's levels, but are by no means worrisome. Some analysts are already calling for storage to reach close to 4,000 Bcf by October 31, 2011, a figure that is feasible given the pace of the Producing Region injections and the fact that storage capacity is expected to expand by 103 Bcf this year and another 178.8 Bcf in 2012.

**Projected Price Impact:** The pace of storage injections in April will be viewed as a gauge of supply and demand. Prices may move in response to the release of the weekly storage reports, but no long-standing impacts are expected because the injection season will just be starting.

## Weekly Storage Comparison (in Bcf)

Week Ending	This Year	Last Year
April 8	+ 28 Injection	+ 79 Injection
April 1	- 45 Withdrawal	+ 29 Injection
March 25	+ 12 Injection	+ 12 Injection
March 18	- 6 Withdrawal	+ 7 Injection

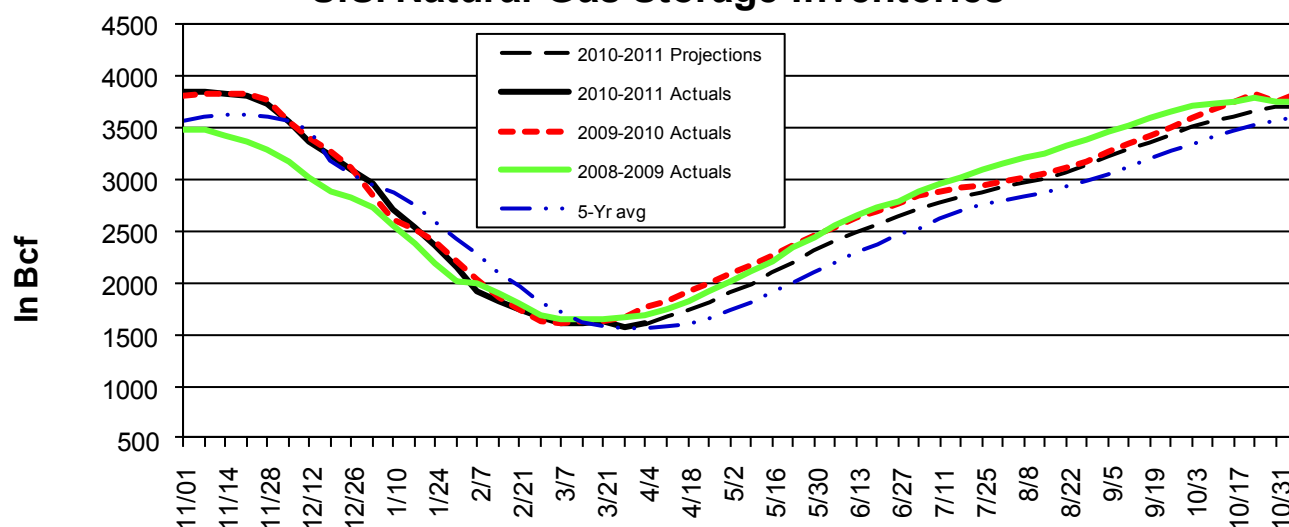
## Year-on-Year Comparison (in Bcf)

2011 Inventories	1,607 Bcf
2010 Difference	- 137 Deficit (Inventories were 1,744)
5-Yr. Avg. Difference	+100 Surplus (Inventories were 1,597)

## Storage Projections (in Bcf)

Injection season ends:	10/31/11
Number of weeks remaining in the injection season:	29
ESI's estimate of storage inventories on 10/31/11:	3,721 Bcf
To reach this estimate, storage injections must equal	+73 Bcf per Week
If injections are equal to the 2010 weekly average of	+71 Bcf per Week
Then storage inventories on 10/31/11 will be:	3,672 Bcf
If injections are equal to the 5-year average of	+72 Bcf per Week
Then storage inventories on 10/31/11 will be:	3,682 Bcf
ESI estimates that by 05/30/11, storage inventories will be:	2,204 Bcf
ESI estimates that by 06/30/11, storage inventories will be:	2,559 Bcf
ESI estimates that by 07/30/11, storage inventories will be:	2,875 Bcf

## U.S. Natural Gas Storage Inventories



# Weather Outlook

## Busy Hurricane Season Forecasted

The Atlantic-basin tropical storm season officially runs from June 1 through November 30. With more onshore production, concerns over hurricane-related disruptions are reduced. For example, in 2001 23 percent of the nation's natural gas supplies originated in the Gulf of Mexico, whereas today that number is only 8 percent. So the number of hurricanes that occur matters less than the route they choose to take, and how these routes affect the U.S. Mainland. Meteorologists already predict that this year the storms that do occur will create more trouble than usual. The Colorado State University (CSU) team says there is a 72 percent chance that one major hurricane (Saffir/Simpson category 3 -4-5) with sustained winds of 111 mph will make landfall along the U.S. coastline. This is up over a historical average of just 52 percent. CSU also says that there is a 48 percent chance (compared to a 31% average) that a major hurricane will hit the east coast, including peninsular Florida, and a 47 percent chance (as opposed to a 30% average) that a major hurricane will make landfall on the Gulf Coast from the Florida Panhandle west to Brownsville, Texas. There are several factors that impact tropical storm formation. The presence of dust off of Africa indicates drier air that will hinder tropical storm development in that region. [La Niña](#) conditions, which are currently weakening, create low wind shear. (A high wind shear is more likely to break-up the formation of tropical storms.) And the current status of the Atlantic Multidecadal Oscillation (AMO) indicates that the sea surface temperature is in a warm phase—warm water acts as “fuel” in hurricane formation.

## Expert Outlooks

**Colorado State University:**  
16 Tropical Storms, of which 9 will become hurricanes with 5 of these reaching major hurricane strength.

**Tropical Storm Risk:**  
14 Tropical Storms, of which 8 will become hurricanes with 4 of these reaching major hurricane strength.

**AccWeather.com:**  
15 Tropical Storms, of which 8 will become hurricanes with 3 of these reaching major hurricane strength.

**Tropical Meteorology Project:** 16 Tropical Storms, of which 9 will become hurricanes with 5 of these reaching major hurricane strength.

**Projected Price Impact:** Weather-wise, this is a shoulder season with little natural gas demand for heating or cooling needs. Unless there is a catastrophic storm price sensitivity to hurricane season should continue to be lower than it has been in the past.

### NOAA Weather Map Color Code

Blue Colors: Below normal temperatures

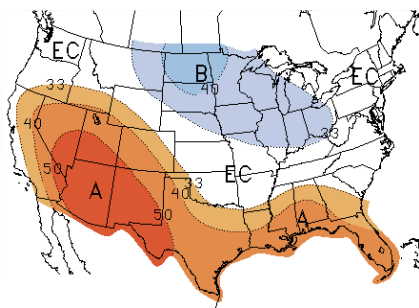
Orange/Red Colors: Above normal temperatures

Gray: Normal temperatures

White: Equal chances of above normal or below normal temperatures

NOTE: Temperature extremes go from lighter (slight variance) to darker (extreme variance)

### 3-Month Outlook: May-Jun-Jul 2011



Issued March 17, 2011

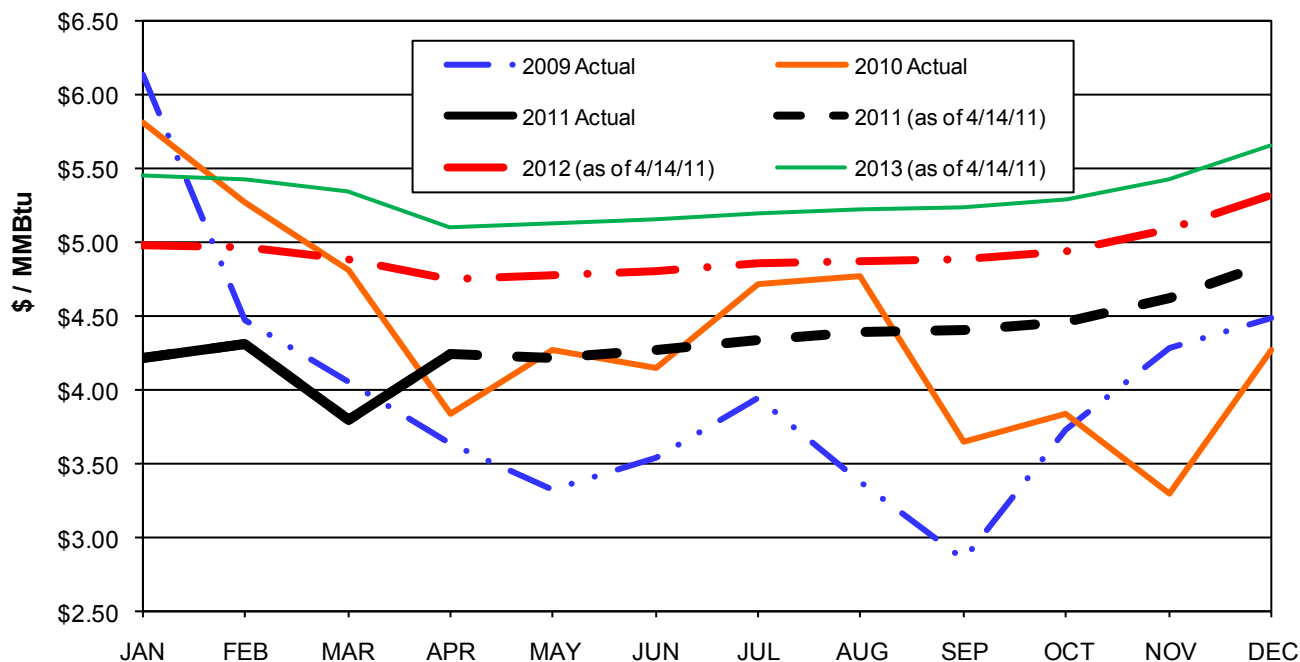
### AccuWeather Hurricane Outlook



# Pricing Analysis and Outlook

## NYMEX Historical and Future Prices

NOTE: This graph is updated each Monday on our website.



## Quick April Recap

The April 2011 natural gas NYMEX contract expired at \$4.24 per MMBtu. With this expiration, the average 2011 NYMEX expiration for the first four months of the year is \$4.14 per MMBtu. April made its front-month debut on February 25, 2011. In its last month of trading, April hit a low of \$3.778 per MMBtu on March 3, 2011, and a high of \$4.48 per MMBtu on March 28, 2011. Also, the April 2011 expiration was much stronger than the April 2009 and April 2010 expirations of \$3.631 and \$3.842 per MMBtu, respectively.

## NYMEX Comparison Data

Past Month Comparison	3/11	3/10
March	\$3.793	\$4.816
April Comparison	4/11	4/10
03/29/11 (Expiration)	\$4.240	\$3.842
03/28/11	\$4.374	\$3.872
03/25/11	\$4.403	\$3.981
Next Month Comparison	5/10	5/09
May	\$4.271	\$3.321

**May 2011 NYMEX Expiration:  
Wednesday, April 27, 2011**

## Historical Natural Gas NYMEX Expiration

	2007	2008	2009	2010	2011
JAN	\$5.838	\$7.172	\$6.136	\$5.814	\$4.216
FEB	\$6.917	\$7.996	\$4.476	\$5.274	\$4.316
MAR	\$7.547	\$8.930	\$4.056	\$4.816	\$3.793
APR	\$7.558	\$9.578	\$3.631	\$3.842	\$4.240
MAY	\$7.508	\$11.280	\$3.321	\$4.271	
JUN	\$7.591	\$11.916	\$3.538	\$4.155	
JUL	\$6.929	\$13.105	\$3.949	\$4.717	
AUG	\$6.110	\$9.217	\$3.379	\$4.774	
SEP	\$5.430	\$8.394	\$2.843	\$3.651	
OCT	\$6.423	\$7.472	\$3.730	\$3.837	
NOV	\$7.269	\$6.469	\$4.289	\$3.292	
DEC	\$7.203	\$6.888	\$4.486	\$4.267	

# Education: EIA Assesses Global Shale

## EIA Assesses Global Shale

The use of [horizontal drilling](#) in conjunction with [hydraulic fracturing](#) has greatly expanded the ability of producers to profitably produce natural gas from low permeability geologic formations, particularly shale formations. The development of shale gas plays has become a “game changer” for the U.S. natural gas market. The proliferation of activity into new shale plays has increased shale gas production in the United States from 0.39 trillion cubic feet (Tcf) in 2000 to 4.87 Tcf in 2010, or 23 percent of U.S. dry gas production. Shale gas reserves have increased to about 60.6 Tcf by year-end 2009, when they comprised about 21 percent of overall U.S. natural gas reserves, now at the highest level since 1971. By 2035, the Energy Information Administration projects that shale gas production will account for 46 percent of U.S. natural gas production.

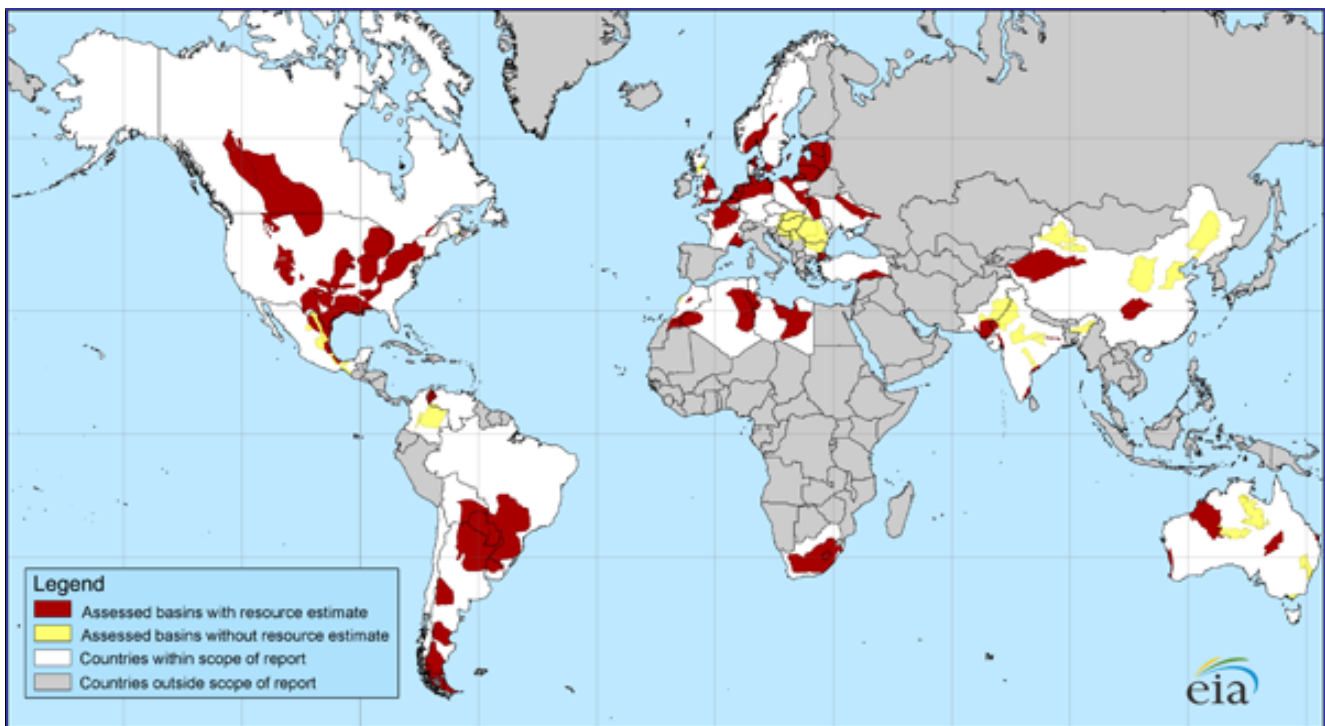
While shale production has dramatically changed the natural gas outlook in the U.S., it has done the same throughout many parts of the world. To gain a better understanding of the potential of international shale gas resources, EIA

recently completed [“World Shale Gas Resources: An Initial Assessment of 14 Regions Outside the United States.”](#)

Although the shale gas resource estimates will likely change over time as additional information becomes available, the report shows that the international shale gas resource base is vast. The initial estimate of technically recoverable shale gas resources in the 32 countries examined is 5,760 Tcf. Add this to the U.S. estimate of the shale gas technically recoverable resources of 862 Tcf and the total is 6,622 Tcf for the U.S. and these 32 other countries.

To put this number into perspective, world proven reserves of natural gas as of January 1, 2010 are about 6,609 Tcf, and world technically recoverable gas resources are roughly 16,000 Tcf (largely excluding shale gas). Thus, adding the identified shale gas resources to other gas resources increases total world technically recoverable gas resources by over 40 percent, with an estimated 22,600 Tcf.

The biggest overseas shale reserves lie in China; but Argentina, Mexico, South Africa Canada, Libya, Algeria, France, and Poland are also endowed with massive reserves.



## Chemical Disclosure Website Launched

Two state groups have launched a registry for chemicals used in extracting natural gas through hydraulic fracturing. The registry, which received funding from the Department of Energy, will make it easier for the public to find out what chemicals are being used to extract natural gas in nearby wells. Through use of a Material Safety Data Sheet, drillers disclose the contents of the fluids used at each well (except for the chemicals they consider to be trade secrets). To date, 24 of the participating drillers have also volunteered to post this data on [FracFocus.org](http://FracFocus.org). Undoubtedly, these drillers are hoping that participation in the voluntary registry may help to avoid a mandate from Congress to disclose all chemicals being used.

## Gas Vehicle Legislation Re-introduced

The U.S. House of Representatives has re-introduced bi-partisan legislation that expands incentives for the deployment of natural gas-powered vehicles. The New Alternative Transportation to Give America Solutions “(NatGas)” Act creates a consumer tax credit that is equal to about 80 percent of the difference in price between a natural gas-powered vehicle and a typical gasoline-powered vehicle. This bill also expands tax credits for natural gas refueling infrastructure and provides automakers with new tax deductions if they produce natural gas vehicles. Lawmakers hope to get this bill (or some form thereof) on the President’s desk by late-summer.



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## Study Examines Shale Emissions

A study conducted by professors of Cornell University finds that natural gas extracted from shale formations by way of hydraulic fracturing releases large amounts of methane. The study shows that over the lifetime of the well the fracturing process can cause up to eight percent of the methane recovered to escape into the air. When methane emissions are considered, the study says natural gas released from these shale formations produces more greenhouse gases than coal and coal-fired electricity generate over a period of twenty years. The study claims that shale gas is worse than conventional gas, worse than oil, and worse than coal. However, while this study is capturing attention, a senior economic advisor at the American Petroleum Institute says the study relied on weak data regarding methane leaks and did not take into account the efficiency of natural gas-fired electric generation. Since this is the first peer-reviewed paper on methane emissions from shale gas it is going to get some attention; and, if anything, it will create an incentive for the industry to look closer at shale gas supplies before concluding it is the “fuel” of the future.

## Nuke Inspections Create Unknowns

The nuclear tragedy in Japan prompted Germany to shut down one-fourth (or seven) of its older nuclear plants. To date the U.S. has not responded with the same type of knee-jerk reaction; but President Obama has requested a comprehensive review of the U.S. nuclear facilities.

In the aftermath of the 1979 Three Mile Island nuclear power plant accident in Pennsylvania, nuclear power was in broad disfavor in the U.S. Then growing concerns of climate change and emissions earned nuclear power widespread support. But this has again changed following the Fukushima crisis.

The GE nuclear reactor that was damaged in Japan is present in 23 power plants in the U.S. These plants are currently responsible for about 20 percent of the nation's nuclear power. It is estimated that if all nuclear capacity in the U.S. were replaced with natural gas-fired electric generation, natural gas demand would increase by 3.6 Bcf/day or by 5.6 percent.

Spring and fall tend to be the time when nuclear power plants are taken off-line for maintenance and refueling. This year it is expected that additional inspections will occur in conjunction with the traditional downtime. However, what is unknown is whether these inspections will lengthen the planned outage, trigger a transition away from the GE nuclear reactors, ultimately lead to a shut-down of facilities that use the GE nuclear reactor.

## NGL Production Rising

[Natural gas liquids](#) (NGL) production is on the rise as producers target liquid-rich natural gas basins. NGLs include ethane, propane, normal butane, isobutane, pentanes, and other hydrocarbons, which are stripped away from the pure methane and sold separately. The NGL market is very lucrative because NGLs are priced in conjunction with crude oil, which at this time are in excess of \$100 per barrel. It is estimated that NGL production in the [Marcellus Shale](#) has quadrupled in 2009. Similarly, 2009 NGL production in the [Eagle Ford Shale](#) grew five-fold over 2008 levels, and the [Woodford Shale](#) experienced an 83 percent increase in 2009 over 2008 levels. The economics of NGLs continue to create an incentive to look for natural gas, and therefore, all of these regions expect ongoing increases in 2010.

## CFTC Working to Impose Position Limits

The [Commodity Futures Trading Exchange](#) (CFTC) continues to try to develop a proposal to impose federal position limits on 28 futures contracts, one of these being the NYMEX Henry Hub natural gas futures contract. The CFTC says the limits are a requirement of the Dodd-Frank Wall Street Reform and Consumer Protection Act and are designed to prevent excessive speculation. However, numerous industry groups claim that the proposed rules will do little to accomplish this task and will only increase costs to market participants. In fact, many industry groups say implementation of the rules will harm liquidity and be overly burdensome, resulting in a disincentive to utilize futures contracts. The CFTC has received more than 5,700 comments on its proposal and a final outcome has yet to be determined so it is difficult to know exactly what the potential impact may be.

## Regulators Approve Offshore Vessel

U.S. regulators have approved the use of the first floating production, storage and offloading vessel (FPSO) in the Gulf of Mexico. Most offshore producing platforms send the oil and natural gas to shore via a pipeline. Conversely, this FPSO will collect the oil and offload it onto tanker shuttles. This allows oil companies to explore further offshore. Plus, the companies have the capability to move the FPSO out of harm's way in the event of a major tropical storm or hurricane. FPSOs are already being widely used offshore in Brazil and West Africa. This approval opens the door for more distant offshore exploration in the U.S.

# NYMEX Pricing Data

## NYMEX Settlement Prices on 04/14/11

May-11	\$4.212
Jun-11	\$4.269
Jul-11	\$4.342
Aug-11	\$4.389
Sep-11	\$4.408
Oct-11	\$4.455
Nov-11	\$4.623
Dec-11	\$4.861

Jan-12	\$4.981
Feb-12	\$4.963
Mar-12	\$4.894
Apr-12	\$4.751
May-12	\$4.773
Jun-12	\$4.809
Jul-12	\$4.854
Aug-12	\$4.879
Sep-12	\$4.890
Oct-12	\$4.943
Nov-12	\$5.091
Dec-12	\$5.323

Jan-13	\$5.450
Feb-13	\$5.423
Mar-13	\$5.345
Apr-13	\$5.105
May-13	\$5.127
Jun-13	\$5.157
Jul-13	\$5.202
Aug-13	\$5.227
Sep-13	\$5.237
Oct-13	\$5.290
Nov-13	\$5.435
Dec-13	\$5.660

Jan-14	\$5.785
Feb-14	\$5.760
Mar-14	\$5.678
Apr-14	\$5.423
May-14	\$5.448
Jun-14	\$5.483
Jul-14	\$5.533
Aug-14	\$5.566
Sep-14	\$5.581
Oct-14	\$5.636
Nov-14	\$5.786
Dec-14	\$6.026

## Daily Trading Data: Highs and Lows

NYMEX Contract Trading	Trading Date	Daily Open	Daily High	Daily Low	Daily Settlement
Apr 11	03/11/11	\$3.831	\$3.947	\$3.806	\$3.889
Apr 11	03/14/11	\$3.923	\$4.053	\$3.891	\$3.914
Apr 11	03/15/11	\$3.911	\$4.004	\$3.800	\$3.941
Apr 11	03/16/11	\$3.948	\$4.015	\$3.902	\$3.938
Apr 11	03/17/11	\$3.941	\$4.168	\$3.919	\$4.158
Apr 11	03/18/11	\$4.160	\$4.198	\$4.099	\$4.168
Apr 11	03/21/11	\$4.156	\$4.234	\$4.151	\$4.207
Apr 11	03/22/11	\$4.156	\$4.264	\$4.151	\$4.254
Apr 11	03/23/11	\$4.269	\$4.350	\$4.254	\$4.335
Apr 11	03/24/11	\$4.350	\$4.399	\$4.215	\$4.244
Apr 11	03/25/11	\$4.230	\$4.425	\$4.219	\$4.403
Apr 11	03/28/11	\$4.425	\$4.480	\$4.334	\$4.374
Apr 11	03/29/11	\$4.333	\$4.369	\$4.195	\$4.240
May 11	03/30/11	\$4.260	\$4.382	\$4.255	\$4.355
May 11	03/31/11	\$4.374	\$4.442	\$4.205	\$4.389
May 11	04/01/11	\$4.405	\$4.428	\$4.286	\$4.362
May 11	04/04/11	\$4.334	\$4.364	\$4.233	\$4.289
May 11	04/05/11	\$4.282	\$4.322	\$4.223	\$4.231
May 11	04/06/11	\$4.226	\$4.245	\$4.129	\$4.146
May 11	04/07/11	\$4.145	\$4.160	\$4.033	\$4.057
May 11	04/08/11	\$4.061	\$4.079	\$4.014	\$4.041
May 11	04/11/11	\$4.016	\$4.152	\$3.990	\$4.108
May 11	04/12/11	\$4.110	\$4.145	\$4.058	\$4.098
May 11	04/13/11	\$4.090	\$4.182	\$4.075	\$4.141
May 11	04/14/11	\$4.140	\$4.261	\$4.063	\$4.212

The Daily Open indicates the price of the contract when the trading day began. The Daily High and Daily Low represent the daily trading range. The Daily Settlement, also referred to as the closing price, represents the price at the end of the trading day. The Daily Open price is usually close to the Daily Settlement price from the day before.

## NYMEX Strip Prices (Settlement on 4/14/11)

3-Month	\$4.27
6-Month	\$4.35
12-Month	\$4.60
24-Month	\$4.83
05/11-12/11	\$4.44
11/11-03/12	\$4.86
05/12-10/12	\$4.84
2012	\$4.93
2013	\$5.30
2014	\$5.64

## Strip Price Defined

A strip price is the simple average of several months. For example, the 3-month strip price is the simple average of the settlement prices for May 2011, June 2011, and July 2011. By comparison, the 12-month strip is the simple average of the monthly settlement prices for May 2011 through April 2012. The value of natural gas contracts into the future are representative of anticipated market conditions. For that reason, prices into the future will continually change as market conditions fluctuate. However, in most cases the further you go into the future, the higher the strip price due to increased uncertainty.

# Recent NYMEX Gas Futures Pricing

Date	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11
03/10/11	\$3.830	\$3.892	\$3.955	\$4.030	\$4.078	\$4.098	\$4.147	\$4.335
03/11/11	\$3.889	\$3.945	\$4.007	\$4.082	\$4.132	\$4.152	\$4.202	\$4.389
03/14/11	\$3.914	\$3.976	\$4.040	\$4.116	\$4.164	\$4.184	\$4.235	\$4.431
03/15/11	\$3.941	\$4.012	\$4.080	\$4.159	\$4.206	\$4.228	\$4.280	\$4.485
03/16/11	\$3.938	\$4.010	\$4.079	\$4.157	\$4.202	\$4.227	\$4.284	\$4.492
03/17/11	\$4.158	\$4.234	\$4.299	\$4.369	\$4.405	\$4.423	\$4.476	\$4.653
03/18/11	\$4.168	\$4.246	\$4.316	\$4.388	\$4.422	\$4.438	\$4.492	\$4.667
03/21/11	\$4.161	\$4.241	\$4.313	\$4.383	\$4.415	\$4.426	\$4.478	\$4.646
03/22/11	\$4.254	\$4.331	\$4.396	\$4.463	\$4.493	\$4.502	\$4.553	\$4.717
03/23/11	\$4.335	\$4.412	\$4.477	\$4.543	\$4.570	\$4.579	\$4.628	\$4.781
03/24/11	\$4.244	\$4.327	\$4.397	\$4.467	\$4.494	\$4.502	\$4.551	\$4.718
03/25/11	\$4.403	\$4.490	\$4.563	\$4.636	\$4.665	\$4.673	\$4.722	\$4.872
03/28/11	\$4.374	\$4.448	\$4.520	\$4.594	\$4.624	\$4.630	\$4.677	\$4.831
03/29/11	\$4.240	\$4.263	\$4.335	\$4.411	\$4.445	\$4.452	\$4.503	\$4.666
03/30/11		\$4.355	\$4.426	\$4.502	\$4.535	\$4.542	\$4.590	\$4.744
03/31/11		\$4.389	\$4.458	\$4.533	\$4.566	\$4.571	\$4.617	\$4.770
04/01/11		\$4.362	\$4.437	\$4.515	\$4.554	\$4.562	\$4.612	\$4.777
04/04/11		\$4.289	\$4.363	\$4.441	\$4.486	\$4.497	\$4.548	\$4.725
04/05/11		\$4.231	\$4.304	\$4.384	\$4.433	\$4.446	\$4.497	\$4.678
04/06/11		\$4.146	\$4.220	\$4.302	\$4.352	\$4.367	\$4.418	\$4.602
04/07/11		\$4.057	\$4.126	\$4.209	\$4.259	\$4.275	\$4.327	\$4.521
04/08/11		\$4.041	\$4.107	\$4.192	\$4.243	\$4.259	\$4.308	\$4.494
04/11/11		\$4.108	\$4.176	\$4.260	\$4.309	\$4.324	\$4.373	\$4.556
04/12/11		\$4.098	\$4.168	\$4.253	\$4.304	\$4.325	\$4.375	\$4.554
04/13/11		\$4.141	\$4.206	\$4.283	\$4.333	\$4.355	\$4.404	\$4.579
04/14/11		\$4.212	\$4.269	\$4.342	\$4.389	\$4.408	\$4.455	\$4.623

Date	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12
03/10/11	\$4.593	\$4.726	\$4.717	\$4.668	\$4.548	\$4.581	\$4.616	\$4.658
03/11/11	\$4.644	\$4.779	\$4.772	\$4.722	\$4.594	\$4.627	\$4.662	\$4.704
03/14/11	\$4.690	\$4.826	\$4.818	\$4.770	\$4.651	\$4.683	\$4.717	\$4.760
03/15/11	\$4.753	\$4.888	\$4.878	\$4.827	\$4.708	\$4.741	\$4.776	\$4.821
03/16/11	\$4.768	\$4.905	\$4.897	\$4.847	\$4.728	\$4.761	\$4.796	\$4.841
03/17/11	\$4.907	\$5.043	\$5.030	\$4.975	\$4.837	\$4.867	\$4.900	\$4.945
03/18/11	\$4.915	\$5.050	\$5.039	\$4.979	\$4.829	\$4.857	\$4.889	\$4.931
03/21/11	\$4.892	\$5.025	\$5.013	\$4.951	\$4.799	\$4.825	\$4.856	\$4.900
03/22/11	\$4.961	\$5.092	\$5.080	\$5.018	\$4.861	\$4.885	\$4.918	\$4.960
03/23/11	\$5.017	\$5.141	\$5.125	\$5.062	\$4.893	\$4.912	\$4.946	\$4.989
03/24/11	\$4.961	\$5.083	\$5.068	\$5.007	\$4.849	\$4.868	\$4.902	\$4.945
03/25/11	\$5.105	\$5.219	\$5.200	\$5.132	\$4.959	\$4.978	\$5.011	\$5.052
03/28/11	\$5.058	\$5.173	\$5.154	\$5.083	\$4.919	\$4.939	\$4.971	\$5.011
03/29/11	\$4.899	\$5.019	\$5.001	\$4.939	\$4.791	\$4.813	\$4.848	\$4.891
03/30/11	\$4.971	\$5.090	\$5.071	\$5.009	\$4.858	\$4.878	\$4.913	\$4.956
03/31/11	\$4.998	\$5.118	\$5.098	\$5.038	\$4.883	\$4.903	\$4.938	\$4.980
04/01/11	\$5.012	\$5.134	\$5.116	\$5.054	\$4.906	\$4.930	\$4.967	\$5.009
04/04/11	\$4.967	\$5.090	\$5.070	\$5.007	\$4.851	\$4.877	\$4.913	\$4.955
04/05/11	\$4.922	\$5.047	\$5.026	\$4.961	\$4.811	\$4.837	\$4.873	\$4.917
04/06/11	\$4.849	\$4.976	\$4.957	\$4.892	\$4.750	\$4.778	\$4.815	\$4.860
04/07/11	\$4.787	\$4.923	\$4.909	\$4.844	\$4.712	\$4.744	\$4.783	\$4.829
04/08/11	\$4.754	\$4.890	\$4.876	\$4.810	\$4.679	\$4.708	\$4.747	\$4.793
04/11/11	\$4.813	\$4.944	\$4.930	\$4.862	\$4.731	\$4.759	\$4.797	\$4.843
04/12/11	\$4.810	\$4.942	\$4.927	\$4.857	\$4.725	\$4.751	\$4.788	\$4.834
04/13/11	\$4.831	\$4.963	\$4.946	\$4.877	\$4.740	\$4.764	\$4.800	\$4.845
04/14/11	\$4.861	\$4.981	\$4.963	\$4.894	\$4.751	\$4.773	\$4.809	\$4.854

# Definitions

**Bear Market:** Market in which prices are declining.

**Bull Market:** Market in which prices are rising.

**Cash Market:** The market for a cash commodity where the actual physical product is traded.

**City Gate:** The physical location where the interstate pipeline interconnects with the utilities' distribution pipeline. At this point, the pipeline pressure is lowered and the natural gas is odorized.

**Commercial and Trade Accounts:** Companies involved in the production, processing, or merchandising of a commodity. These typically have their own group of traders in the physical trading ring but sometimes use other traders as well to try and keep their trading patterns more secretive.

**Commitment of Traders Report:** A report released each Friday by the CFTC, which details the volume of long and short positions.

**Expiration Date:** The date and time after which trading in a futures or options contract terminates, and after which all option contract rights or obligations become null and void.

**Expiration Price:** The settlement price of the commodity on the expiration date.

**Fundamental Analysis:** The study of pertinent supply and demand factors, which influence the specific price behavior of commodities; includes physical factors like storage inventories and weather. (See also Technical Analysis)

**Liquidation:** The closing out of a futures position; this term typically relates to the closing out of a long position while the term used to denote the closing out of a short position is more often referred to as covering.

**Long Position:** As it relates to the futures market, one who has bought a futures contract to establish a market position that obligates the holder to take delivery unless the contract is liquidated with an offsetting sale.

**New York Mercantile Exchange (NYMEX):** The commodity exchange based in New York City where natural gas **futures contracts** are traded. Other energy futures are traded on this exchange as well.

**Non-Commercials:** As it relates to the futures market, non-commercials are generally speculative traders.

**OPEC (Organization of the Petroleum Exporting Countries):** The acronym for the Organization of the Petroleum Exporting Countries that has organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members (as of the date of writing this definition) are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

**Open Interest:** Futures contracts during a given period of time, which have not been satisfied by an offsetting sale, purchase or actual delivery. (Also referred to as open commitment.)

**Range Bound:** A term that is used when a commodity seems to be unable to move above or below a certain trading price range.

**Settlement Price:** The price established by the NYMEX Exchange Settlement Committee at the close of each trading session to be used by the clearinghouse in determining net gains or losses, margin requirements, and the next day's price limits; calculating the weighted average of prices as the market nears closing derives the settlement price.

**Short Position:** As it relates to the futures market, one who has sold a futures contract to establish a market position that obligates the seller to make delivery at the agreed upon price unless the contract is liquidated with an offsetting purchase. (Opposite of Long Position.)

**Spot Market:** The cash market. Natural gas spot market trades are done on a monthly or daily basis, whereas power market spot market trades are done on an hourly basis.

**Storage:** Facility used for the storage of natural gas; usually a cavern carved out of natural salt domes or depleted natural gas reservoirs into which natural gas can be reinvested and produced with minimal loss; storage inventories are utilized particularly in the Northeast and Midwest to help meet natural gas heating demand needs during the winter months.

**Technical Analysis:** An approach to forecasting commodity prices, which examines patterns of price change, rates of change, and changes in volume of trading and open interest, without regard to underlying fundamental market factors.

**Trading Volume:** In the futures market, the number of transactions in a contract made during a specified period of time.

This publication is published monthly by Energy Solutions, Inc.  
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Annual Subscriptions: \$695 via E-mail / \$790 via U.S. Mail

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