



139 East Fourth Street, Rm. 1212-Main  
P.O. Box 960  
Cincinnati, Ohio 45201-0960  
Tel: 513-287-4337  
Fax: 513-287-4386  
[dianne.kuhnell@duke-energy.com](mailto:dianne.kuhnell@duke-energy.com)

Dianne B. Kuhnell,  
Senior Paralegal

VIA OVERNIGHT DELIVERY

May 6, 2013

Jeff Derouen  
Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, Kentucky 40602-0615

RECEIVED

MAY 07 2013

PUBLIC SERVICE  
COMMISSION

Re: Case No. 2012-00180

Dear Mr. Derouen:

Enclosed please find an original and twelve copies of *Duke Energy Kentucky, Inc.'s Annual Report on Hedging Activity for April 1, 2012 through March 31, 2013* and the *Petition of Duke Energy Kentucky, Inc. for Confidential Treatment Contained in the Hedging Report of April 1, 2012 through March 31, 2013*. Also enclosed is one copy of the Confidential Material (Attachment A and Report) to be Filed Under Seal as requested in the Petition for Confidential Treatment.

Please date-stamp the extra two copies of the Annual Hedging Report and Petition and return to me in the enclosed envelope.

Sincerely,

Dianne Kuhnell  
Senior Paralegal

cc: Larry Cook (w/enclosures)

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MAY 07 2013

PUBLIC SERVICE  
COMMISSION

**BEFORE THE KENTUCKY  
PUBLIC SERVICE  
COMMISSION**

**Annual Report on Hedging Activity  
For April 1, 2012 – March 31, 2013  
And Report on Hedging Activity  
For Future Gas Deliveries**

**By  
Duke Energy Kentucky**

May, 2013

The Vice President Ohio and Kentucky Gas Operations, Manager of Gas Resources, the Lead of Gas Procurement and Analysis and other personnel (Natural Gas Hedging Committee) met on a regular basis to review current market conditions for natural gas, short and long-term weather forecasts, gas industry trade publications, and price estimates to determine whether to enter into any hedging transactions. These meetings were scheduled at least monthly, but can occur more frequently depending on the season and market conditions. A brief summary of the decision made at each of these meetings during the 12 months ended March 2013 is attached, along with the information reviewed during each meeting (see Attachment A).

A summary of the amounts hedged prior to March 31, 2013 for delivery at a later date is shown below, followed by details of the factors influencing Duke Energy Kentucky, Inc's ("Duke Energy Kentucky") decision to enter into the hedging agreements during the 12 months ended March 31, 2013.

Strike Date	Supplier	Type	Price Per Dth	Delivery Point	Volume Dth/day	Month(s)	Seasonal Volume
<b>Summer 2012</b>							
11/17/2009*		Fixed		CGT-M		Nov 10 – Oct 12	
12/20/2010**		Fixed		CGT-M		Nov 11 – Mar 13	
8/10/2011***		Fixed		CGT-M		Apr 12 -- Mar 14	
10/26/2011***		Collar		CGT-M		Apr 12 – Oct 12	
<b>Winter 2012/13</b>							
12/20/2010**		Fixed		CGT-M		Nov 11 – Mar 13	
8/10/2011***		Fixed		CGT-M		Apr 12 -- Mar 14	
10/26/2011***		Fixed		CGT-M		Nov 12 – Oct 13	
11/21/2011***		Fixed		CGT-M		Nov 12 – Mar 13	
12/16/2011***		Cst Avg		CGT-M		Nov 12 – Mar 13	
<b>Summer 2013</b>							
8/10/2011***		Fixed		CGT-M		Apr 12 -- Mar 14	
10/26/2011***		Fixed		CGT-M		Nov 12 – Oct 13	
<b>Winter 2013/14</b>							
8/10/2011***		Fixed		CGT-M		Apr 12 -- Mar 14	
11/21/2011***		Fixed		CGT-M		Nov 13 – Mar 14	
1/23/2012***		Fixed		CGT-M		Nov 13 – Mar 15	
<b>Summer 2014</b>							
1/23/2012***		Fixed		CGT-M		Nov 13 – Mar 15	
10/19/2012		Fixed		CGT-M		Apr 14 – Oct 15	

Strike Date	Supplier	Type	Price Per Dth	Delivery Point	Volume Dth/day	Month(s)	Seasonal Volume
<b>Winter 2014/15</b>							
1/23/2012***		Fixed		CGT-M		Nov 13 – Mar 15	
10/19/2012		Fixed		CGT-M		Apr 14 – Oct 15	
<b>Summer 2015</b>							
10/19/2012		Fixed		CGT-M		Apr 14 – Oct 15	

- \* See Annual Report on Hedging Activity for April 1, 2009 – March 31, 2010
- \*\* See Annual Report on Hedging Activity for April 1, 2010 – March 31, 2011
- \*\*\* See Annual Report on Hedging Activity for April 1, 2011 – March 31, 2012

[REDACTED]

There were no transactional costs associated with any of these arrangements. When the natural gas is delivered, the suppliers simply invoice Duke Energy Kentucky based on the hedged price. The portions of system supply hedged for each season are listed in the table below, along with the percentage including storage:

Season As of March 31, 2013	Total System Supply	Total Hedged	% Hedged	% Hedged And Storage*
Summer 2012				
Winter 2012/13				
Summer 2013				
Winter 2013/14				
Summer 2014				
Winter 2014/15				
Summer 2015				
Winter 2015/16				

\* Includes Interstate Pipeline Storage and Supply Contracts that mimic Storage Service.

**Fixed Price with [REDACTED] October 19, 2012**

During the hedging meeting on October 18, 2012, discussions focused on market fundamentals such as weather, storage inventory levels, and economic factors such as supply and demand. In addition, discussed Winter and Summer Strip Charts based on Technical analysis, spreads between current NYMEX prices, forecasts, and historical prices. Significant discussion took place regarding the current high storage inventory levels and the impact on prices. Returning to lower storage levels resulting from normal winter weather is projected to increase prices. Based on this information the Natural Gas Hedging Committee decided to hedge additional gas for the 19 month period April 2014 to October 2015. Duke Energy Kentucky contacted [REDACTED] requesting bids for [REDACTED] dth's/day on Columbia Gulf Mainline for the period beginning

April 1, 2014 through October 31, 2015. [REDACTED] was the lowest bidder at [REDACTED], with [REDACTED] bidding [REDACTED] and [REDACTED] respectively. The fixed price of [REDACTED] was selected as the lowest bid.

The EIA storage report released on October 18, 2012 indicated that as of October 12, 2012, total U.S. amount of gas in storage was 3,776 bcf (92% full), which was 181 bcf higher than the previous year and 249 bcf higher than the 5-year average. Duke Energy Kentucky's storage with [REDACTED] was approximately [REDACTED] bcf ([REDACTED] full).

The table below compares the futures price data for October 19th and the locked in price that Duke Energy Kentucky agreed to pay [REDACTED] for base gas to be delivered April 1, 2014 through October 31, 2015 at Columbia Gulf Mainline. Please note that PIRA's and EIA's forecasts were not available for the period April 1, 2014 through October 31, 2015.

Month	NYMEX Futures Price			Fixed Price
	High	Low	Close	
Apr 14	\$4.163	\$4.144	\$4.155	
May 14	\$4.162	\$4.153	\$4.160	
Jun 14	\$4.188	\$4.176	\$4.179	
Jul 14	\$4.216	\$4.196	\$4.207	
Aug 14	\$4.225	\$4.225	\$4.225	
Sep 14	\$4.227	\$4.221	\$4.227	
Oct 14	\$4.265	\$4.265	\$4.265	
Nov 14	\$4.340	\$4.337	\$4.340	
Dec 14	\$4.529	\$4.524	\$4.529	
Jan 15	\$4.635	\$4.627	\$4.635	
Feb 15	\$4.600	\$4.593	\$4.600	
Mar 15	\$4.508	\$4.500	\$4.508	
Apr 15	\$4.283	\$4.283	\$4.283	
May 15	\$4.302	\$4.297	\$4.297	
Jun 15	\$4.318	\$4.318	\$4.318	
Jul 15	\$4.355	\$4.355	\$4.355	
Aug 15	\$4.374	\$4.374	\$4.374	
Sep 15	\$4.392	\$4.377	\$4.377	
Oct 15	\$4.413	\$4.413	\$4.413	
Weighted Ave.	[REDACTED]			

**Faux Storage Service with [REDACTED] – February 2013**

In February 2013, Duke Energy Kentucky contacted [REDACTED], [REDACTED], and [REDACTED] to provide a storage-like service for the Winter of 2013/2014. Duke Energy Kentucky requested the suppliers bid on the following proposal:

Maximum Daily Quantity: from [REDACTED] Dth/day  
 Term Purchase Quantity: [REDACTED] Dth (must take)  
 Delivery Point: Springboro (via ANR or TETCO)

This represents approximately [redacted] of the estimated load for the Winter of 2013/2014.

For analysis purposes the Commodity cost portion of the total cost was based on NYMEX closing price of the Summer 2013 Strip plus the MichCon basis (and an adder if appropriate) on February 15, 2013. The results were as follows:

[redacted]	[redacted]/Dth
[redacted]	[redacted]
[redacted]	[redacted]/Dth
[redacted]	[redacted]/Dth

[redacted] bid was the lowest and was accepted.

The Commodity cost portion of the total cost will be based on the average of the 7 months beginning April 2013 through October 2013 MichCon city-gate *Inside FERC's Gas Market Report Index*.

**Effect of Hedging Program on Gas Costs**

The effect of the hedging activity on gas cost can be determined by comparing the price paid for any hedged gas with the published Inside FERC First of Month Index (FOMI) for the delivery point where physical delivery of the hedged gas was received (Columbia Gulf Mainline). The hedged price includes the basis from Henry Hub to the point of delivery. This analysis shows that for the 12 months ended March 31, 2013 gas costs were about [redacted] higher when comparing the hedged price with the FOMI at the time of physical delivery than they would have been if no hedging had taken place. The following tables list each package of hedged gas and the impact on the total gas cost resulting from that hedge.

**Summer Season 2012**

Supplier	Type	Dth/day	Total Dth	Receipt Point	Hedged Price \$/dth	IFERC FOMI \$/dth	Cost Increase/ (Savings)
<b>April</b>							
[redacted]	Fixed	[redacted]	[redacted]	CGT-M	\$ [redacted]	\$ [redacted]	\$ [redacted]
[redacted]	Fixed	[redacted]	[redacted]	CGT-M	\$ [redacted]	\$ [redacted]	\$ [redacted]
[redacted]	Fixed	[redacted]	[redacted]	CGT-M	\$ [redacted]	\$ [redacted]	\$ [redacted]
[redacted]	Collar ([redacted])	[redacted]	[redacted]	CGT-M	\$ [redacted]	\$ [redacted]	\$ [redacted]
<b>May</b>							
[redacted]	Fixed	[redacted]	[redacted]	CGT-M	\$ [redacted]	\$ [redacted]	\$ [redacted]
[redacted]	Fixed	[redacted]	[redacted]	CGT-M	\$ [redacted]	\$ [redacted]	\$ [redacted]
[redacted]	Fixed	[redacted]	[redacted]	CGT-M	\$ [redacted]	\$ [redacted]	\$ [redacted]
[redacted]	Collar ([redacted])	[redacted]	[redacted]	CGT-M	\$ [redacted]	\$ [redacted]	\$ [redacted]

Summer Season 2012 Continued							
Supplier	Type	Dth/day	Total Dth	Receipt Point	Hedged Price \$/dth	IFERC FOMI \$/dth	Cost Increase/ (Savings)
<b>June</b>							
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			
	Collar ( )			CGT-M			
<b>July</b>							
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			
	Collar ( )			CGT-M			
<b>August</b>							
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			
	Collar ( )			CGT-M			
<b>September</b>							
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			
	Collar ( )			CGT-M			
<b>October</b>							
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			
	Collar ( )			CGT-M			
<b>Season Total</b>							

**Winter Season 2012-13**

Supplier	Type	Dth/day	Total Dth	Receipt Point	Hedged Price \$/dth	IFERC FOMI \$/dth	Cost Increase/ (Savings)
<b>November</b>							
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			
<b>December</b>							
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			
	Fixed			CGT-M			

Winter Season 2012-13 Continued

Supplier	Type	Dth/day	Total Dth	Receipt Point	Hedged Price \$/dth	IFERC FOMI \$/dth	Cost Increase/ (Savings)
<b>January</b>							
[Redacted]	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
<b>February</b>							
[Redacted]	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
<b>March</b>							
[Redacted]	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
	Fixed	[Redacted]	[Redacted]	CGT-M	[Redacted]	[Redacted]	[Redacted]
<b>Season Total</b>							

Due to the mechanics of the Gas Cost Adjustment (GCA) Clause, the effect of the hedging program on the gas cost portion of customer's bills will occur in stages. The Expected Gas Cost (EGC) component of each GCA included estimated gas costs based on a combination of hedged gas and gas at estimated market prices. Absent the hedging program, the EGC would have been calculated on market prices alone. The Actual Adjustment (AA) component of each GCA also includes the effect of the hedging program reflected in the actual gas costs, which are compared to GCA revenues to calculate the AA.

When the monthly EGCs were calculated, the forecasted natural gas requirements were priced out based on the weighted average of known hedged prices and the NYMEX futures price on the day that the calculation was performed. To determine the impact of the hedging program on the EGC, the hedging transactions were removed from the original calculations to determine what EGC would have been filed if no hedging had taken place. This effect may differ from the ultimate impact on the GCA once actual costs are known and flow through the AA.

The following table shows the effect that hedging had on each separate GCA rate for the 12 months ending March 31, 2013. The prior year's hedging program continues to affect the AA portion of the GCA through August 31, 2012. Likewise, gas costs during the 12 months ended March 31, 2013 will continue to affect the AA portion of the GCA through August 31, 2013. A negative sign means that the rate was decreased due to the hedging program, and a positive indicates that the rate was increased. Rates are in dollars per ccf.



Month	Impact on EGC	Impact on AA *	Impact on GCA
April 2012	+\$0.0692	+\$0.0013	+\$0.0705
May 2012	+\$0.1335	+\$0.0013	+\$0.1348
June 2012	+\$0.1577	-\$0.0016	+\$0.1561
July 2012	+\$0.1556	-\$0.0016	+\$0.1540
August 2012	+\$0.1317	-\$0.0016	+\$0.1301
September 2012	+\$0.1106	+\$0.0036	+\$0.1142
October 2012	+\$0.0847	+\$0.0036	+\$0.0883
November 2012	+\$0.0346	+\$0.0036	+\$0.0382
December 2012	+\$0.0130	+\$0.0047	+\$0.0177
January 2013	-\$0.0043	+\$0.0047	+\$0.0004
February 2013	+\$0.0176	+\$0.0047	+\$0.0223
March 2013	+\$0.0133	+\$0.0042	+\$0.0175

\*Includes impact on AA from previous year's hedging activity.

To determine the ultimate effect on the price paid by customers subject to the GCA, the total difference in gas cost due to the hedging program was divided by the annual total Ccf used in the calculation of the EGC as part of the GCA filing effective March 1, 2013. Based on this calculation, GCA customers will pay approximately \$[REDACTED]/Ccf more than they would have paid absent the hedging program for natural gas purchased between April 1, 2012 and March 31, 2013, as shown below:

[REDACTED]

**Effect of Hedging Program on Volatility**

The hedging program increases costs when market prices are relatively low and decreases costs when market prices are high. This provides prima facie evidence that the hedging program meets its stated goal of reducing the volatility in gas prices and providing some protection against extremely high prices. Based on a more statistical definition of volatility, the hedging program reduced the standard deviation of the average commodity cost of gas by \$0.32/dth over the 12 months ended March 31, 2013.

	Actual Average Commodity Cost of Gas (Includes Hedging)			Cost/ (Savings)	Estimated Average Commodity Cost of Gas Without Hedging		
	Commodity Cost	Dth	Wgt. Avg.		Commodity Cost	Dth	Wgt. Avg.
Apr-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
May-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Jun-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Jul-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Aug-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

	Actual Average Commodity Cost of Gas (Includes Hedging)			Cost/ (Savings)	Estimated Average Commodity Cost of Gas Without Hedging		
	Commodity Cost	Dth	Wgt. Avg.		Commodity Cost	Dth	Wgt. Avg.
Sep-12							
Oct-12							
Nov-12							
Dec-12							
Jan-13							
Feb-13							
Mar-13							
Standard Deviation							
Reduction in Standard Deviation							

**Weather Analysis**

The table below lists heating degree days for November 2012 through March 2013 compared to normal.

	Nov	Dec	Jan	Feb	Mar	Total
Normal Heating Degree Days*	621	907	1,069	855	662	4,114
<b>2012/2013</b>						
Heating Degree Days	678	760	962	882	855	4,137
% Colder (Warmer) than Normal	9%	(16%)	(10%)	3%	29%	1%

\* Based on 10-year average 1990-1999.

**Summary**

Gas prices for the 12 months ended March 2013 were consistent and historically low priced. The average NYMEX settlement price for the 12 month period ended March 31, 2013 was about \$2.94 with a range of \$1.66. The comparable 2012/2011 average was about \$4.09 with a range of about \$1.48. During this period the result of the hedging program was increased costs. Although the hedging plan increased gas costs overall, the hedging strategy was in place to provide protection against extreme prices and reduce volatility. The hedging program was successful in reducing the impact of volatility on the GCA by 59%.

Attachment A  
Information Reviewed at Hedging Meetings

Gas Commercial Operations  
 Hedging Program  
 Market Indicators Summary  
 April 18, 2012

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Apr 12–June 12)	↔	Long	NOAA predicting above average temperatures for April 2012–June 2012 for the South, Mid-continent and Eastern portion of the CONUS.	12
Mid Term Forecast (30-60 days)	↓	Long	May is predicted to be 14.9% warmer than normal based on 10 year normals and June weather is predicted to be 2.9% above normal. According to private forecaster WeatherBell Analytics the drought and mild winter of last year is unlikely to recur—a mild summer and cold winter are on tap.	13
Short Term Forecast (6-10 days)	↔	Short	Strong Above, Much Above, and Above from west coast to the Mississippi River with Below from Mississippi to the East coast early in the period.	14
Tropical Storm Activity	↓	Short	Colorado State University predicted a below average 2012 Atlantic hurricane season with 10 named storms. The prediction was based on a cooling of waters in the tropical Atlantic Ocean.	
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage injections for the week ending April 13th were 25 BCF. Storage levels are at 2.512 TCF which is 53.1% higher than last year and 57.7% higher than the 5 year average.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13 Summer 2013: [REDACTED]	↑	Long	GAS PRICE SCORECARD: April 2012–October 2012 US Production, Net Trade, and Storage Levels remain bearish while Economy, Electric Generation, and Industrial Sector demand are bullish. Price Outlook remains Bearish.	16-17
Gas Daily—Price Predictions	↑↓	Long	Citing high storage levels and modest cuts in dry gas production several analysts have lowered their forecasts. S&P reduced their 2012 forecast to \$2 from \$3. BNP Paribas reduced their 2012 forecast 13% to \$2.34 from \$2.70. Canaccord cut their 2012 forecast 21% to \$2.75, further downside for gas prices now appear quite limited. Chesapeake sees below \$5 gas for decades.	18
Gas Daily—Storage Levels	↔	Long	Storage surplus could climb to 1 Tcf above the five-year average. This surplus will have little impact on gas prices, since it has already been incorporated in the current price. Gas prices will remain low unless there is a dramatic decline in supply, increase in coal to gas switching and increase in industrial demand resulting from economic recovery.	19
Gas Daily—LNG Exports	↑	Long	FERC has approved Cheniere Energy's application to build facilities to export natural gas. In addition, Canada approved BC LNG exports from Kitimat, British Columbia.	20
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.228 Summer 2013: \$3.353	↑	Long	The projected Henry Hub natural gas spot price averages \$3.511/MMBtu for 2012 and \$3.400/MMBtu for 2013	21
<b>Technical Analysis</b>				
Winter 2012-13 Strip Chart	↔	Short	Closed at \$3.04	22
Summer 2013 Strip Chart	↔	Short	Closed at \$3.27	23
Winter 2013-14 Strip Chart	↔	Short	Closed at \$3.72	24
Summer 2014 Strip Chart	↔	Short	Closed at \$3.70	25
Winter 2014-15 Strip Chart	↔	Short	Closed at \$4.05	26
Summer 2015 Strip Chart	↔	Short	Closed at \$3.94	27
<b>Economy</b>				
Demand	↑	Long	EIA projects total natural gas consumption to grow by 4.2% to 69.6 Bcf/d in 2012 resulting from large gains in electric power generation. Total natural gas consumption to grow 1.3% to 70.5 Bcf/d in 2013.	28-29
Supply	↔	Long	Total marketed production grew by an estimated 4.8 Bcf/day or 7.9% in 2011, the largest volumetric increase in history. Production growth will continue in 2012 and 2013 but at a much lower rate.	28-29
Oil Market	↔	Long	EIA expects WTI spot prices to average of \$106 per barrel in 2012 and 2013, \$ 11 per barrel higher than the average price last year.	28-29

**Meeting Minutes: 426 Annex Conference Room - 1:00 pm**  
 Attendees: Jim Mehring, Jeff Kern, Terry Bates, Mitch Martin, Joachim Fischesser, Steve Niederbaumer  
 Reviewed fundamentals such as weather (current to L/T forecasts), storage levels, industry publications, governmental agency, technical analysis and supply and demand fundamentals. Discussed the Ohio and Kentucky Hedging Programs including the addition of the Summer 2015 season. Discussed the analysts downward projections relative to the current NYMEX prices and discussed the initial 2012 hurricane forecast and its impact on prices. Significant discussion took place regarding pricing implications associated with the historically high storage levels. Determined that based on this data, not to effectuate any additional hedging at this time. However, we will continue to monitor pricing, and other market fundamentals to determine if hedging should occur prior to the next scheduled meeting.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2011 - October 2012  
 As of 04/17/12

	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Collar												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for winter months and 40% for summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 04/17/12

Load Forecast  
 City Gate Load Forecast (Mcf)  
 TCO FSS Injections (Mcf)  
 Total Requirements (Mcf)  
 TCO FSS Withdrawals (Mcf)  
 Other "Withdrawals" (Mcf)  
 Total Withdrawals (Mcf)

Amount Hedged (dth/day)  
 Fixed Price  
 Fixed Price  
 Fixed Price  
 Fixed Price  
 Cost Avg.  
 Total Hedged (dth/day)  
 Total Hedged (dth)

Types of Hedging Products (1)  
 Fixed Price  
 Price Caps  
 No-Cost Collars

Embedded Hedged Cost  
 Winter  
 Summer

Estimated EGC per Dth at City Gate

Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

Amt. Hedged with Storage @ City Gate  
 Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (incl. Injections) (Dth)  
 % Hedged & Storage  
 Seasonal %

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 04/17/12

Nov-13    Dec-13    Jan-14    Feb-14    Mar-14    Apr-14    May-14    Jun-14    Jul-14    Aug-14    Sep-14    Oct-14

**Load Forecast**  
 City Gate Load Forecast (Mcf)  
 TCO FSS Injections (Mcf)  
 Total Requirements (Mcf)  
 TCO FSS Withdrawals (Mcf)  
 Other "Withdrawals" (Mcf)  
 Total Withdrawals (Mcf)

**Amount Hedged (dth/day)**  
 Fixed Price  
 Fixed Price  
 Fixed Price  
 Total Hedged (dth/day)  
 Total Hedged (dth)

**Types of Hedging Products (1)**  
 Fixed Price  
 Price Caps  
 No-Cost Collars

**Embedded Hedged Cost**  
 Winter  
 Summer

**Estimated EGC per Dth at City Gate**  
 Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

**Amt Hedged with Storage @ City Gate**  
 Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (Incl. Injections) (Dth)  
 % Hedged & Storage  
 Seasonal %

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 04/17/12

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (Incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.



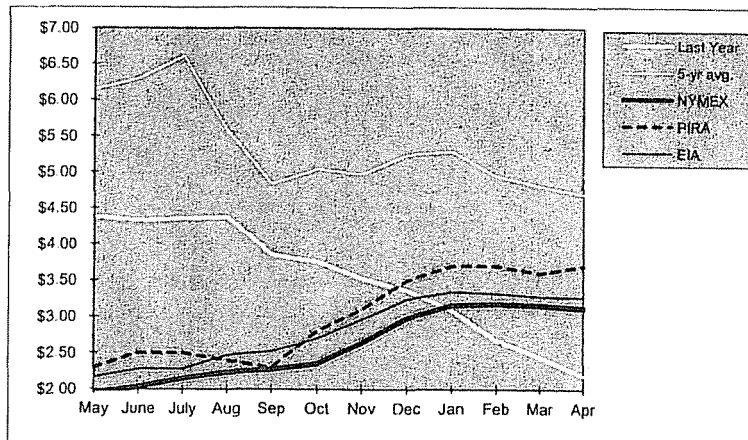
4/17/2012

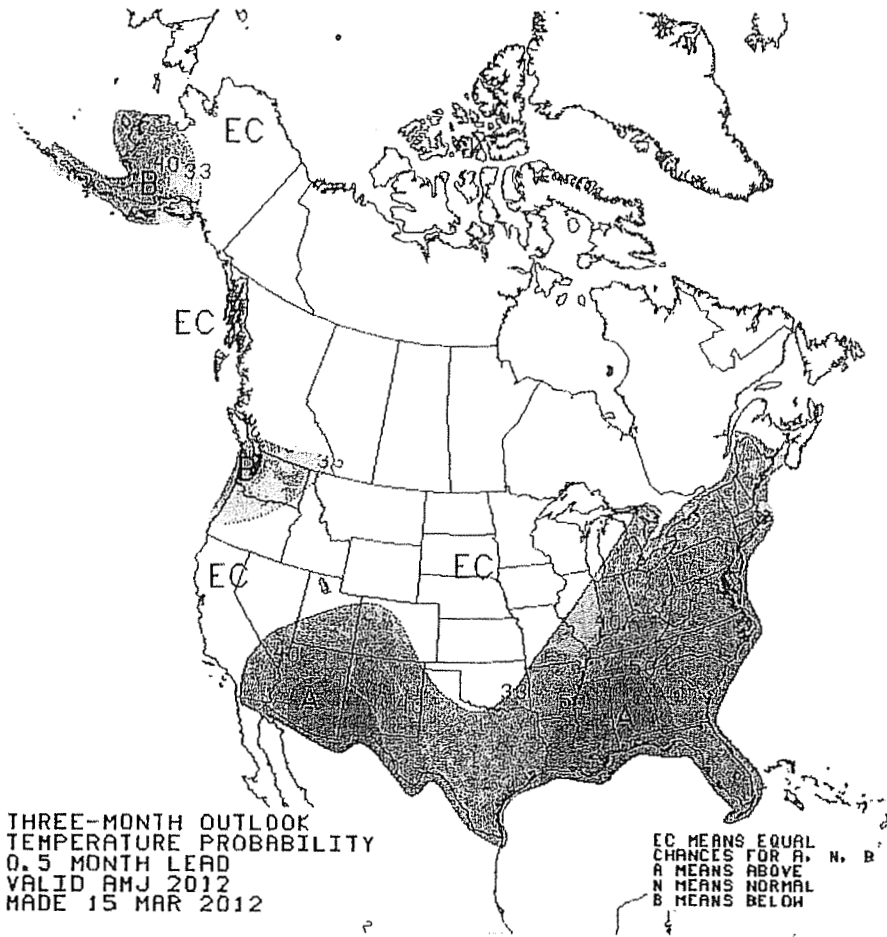
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/12)	
		Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2012					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2012					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					

**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (07/08-11/12)	Last Year (2011-2012)		PIRA 28-Mar-12	EIA 10-Apr-12	NYMEX 19-Apr-12		
May	\$6.15	\$4.38			\$2.170	\$1.947		
June	\$6.31	\$4.33			\$2.280	\$2.033		
July	\$6.61	\$4.36			\$2.280	\$2.152		
Aug	\$5.57	\$4.37			\$2.470	\$2.235		
Sep	\$4.84	\$3.86			\$2.520	\$2.277		
Oct	\$5.04	\$3.76			\$2.700	\$2.351		
Nov	\$4.97	\$3.52			\$2.960	\$2.637		
Dec	\$5.24	\$3.36			\$3.240	\$2.977		
Jan	\$5.28	\$3.08			\$3.340	\$3.156		
Feb	\$4.95	\$2.68			\$3.320	\$3.178		
Mar	\$4.81	\$2.45			\$3.280	\$3.157		
Apr	\$4.70	\$2.19			\$3.270	\$3.120		
12 Month Avg	\$5.37	\$3.53			\$2.819	\$2.602		
Summer Average					\$2.527	\$2.302		
Winter Average					\$3.228	\$3.021		





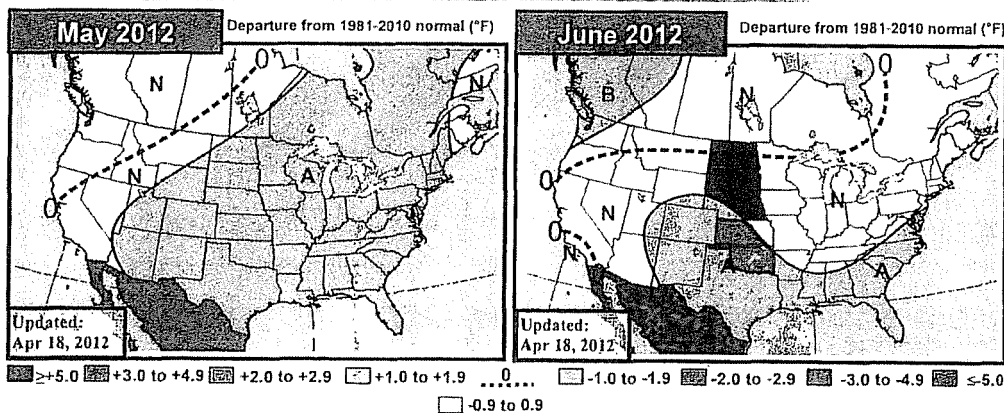
# EarthSat's 30-60 Day Outlook



Wednesday, April 18, 2012

Meteorologists: BH/SS

EarthSat Weather



**Previous** Cool changes in the mid-continent  
 Plenty of uncertainty in the forecast

Slight cool changes were made to the forecast this week as uncertainty grows. We still show widespread above normal temperatures across much of the eastern half of the US and back into the Southwest, but with decreased confidence we've eliminated the +2F anomaly area across the Plains and western Midwest. There is not a lot of great consensus among atmospheric teleconnections, and without a clear signal it's difficult to pin down a precise pattern. The WPO is expected to be negative heading into the beginning of the month, and if that remains a dominant signal it would favor cool conditions in the Northwest and seasonal to warmer conditions in the South and East. As far as model guidance goes, the ECMWF weeklies which are valid out to May 13 show cooler conditions in the Plains and part of the Interior West, with some warmth in the Northeast. The MJO could be key by mid month, as a return to Phase 8 or 1 would generally produce a cooler outcome for the eastern half.

**Previous** Cooler in the Northwest  
 Slightly cooler South and East

Some cool changes were also applied to the June outlook. These included an addition of belows to the Northwest, the expansion of the 0F line to the northern Plains and Great Lakes, and the slight contraction of the +1F anomaly area across the South and East. Like May, there's a clear cut signal for June which keeps confidence on the lower end. This summer is expected to be a transition from this past winter's El Nino to a positive ENSO regime. In similar Junes in the past (using 2001, 1951, 1986, and 2009 as examples in particular), there had been a cool signal across the northern tier, especially the upper Midwest, and a warm signal on the South, which echoes our forecast somewhat. With that, there may be a cooler risk in the Northeast. As far as model guidance goes, the CFS model shows warmth in the Plains and back into the Southwest with near normal temperatures in the East. The ECMWF monthly model from earlier this month echoes the warm Plains and West, but also extends warmth somewhat into the South and Midwest as well.

May PWCCD\*\* Forecasts \*10Y Normal updated to '02-11

May 2012 Fcst:	125.0	10Y Normal*	108.8
		30Y Normal	104.4
		May-2011	123.0

Change: -5  
 GWHDD: 135 (30 yr: 153) \*\*National Population-Weighted CDDs

Jun PWCCD\*\* Forecasts \*10Y Normal updated to '02-11

Jun 2012 Fcst:	242.0	10Y Normal*	235.1
		30Y Normal	226.4
		Jun-2011	261.5

Change: -5  
 \*\*National Population-Weighted CDDs

**Apr so far**

Final 60 Day Outlook    Final 30 Day Outlook    Verif. current forecast (4/1-4/20)

Now that we have forecast data out to the end of April we have us a better idea of where our forecast stands. The recent extreme warmth, though brief, paints a warmer picture in the East with anomalies of 3-5F above normal in New England. Meanwhile, the core of the strongest warmth is a bit further west than in our forecasts, and is stronger with anomalies of 5-8F above normal across the Rockies and central Plains. With ridging building in the West, the cool anomalies in the West have been eliminated. Overall it appears that while we warmed the April forecast in the 30 Day, the actual result will still be warmer than our outlook.



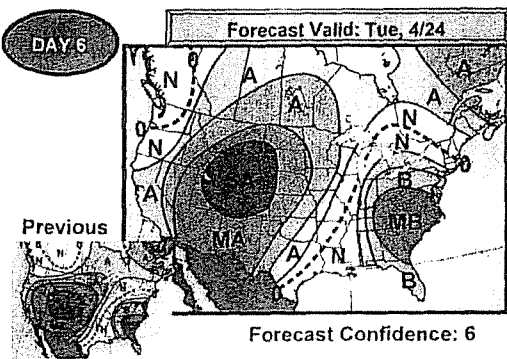
# 6-10 Day Forecast—Detailed



Thursday, April 19, 2012

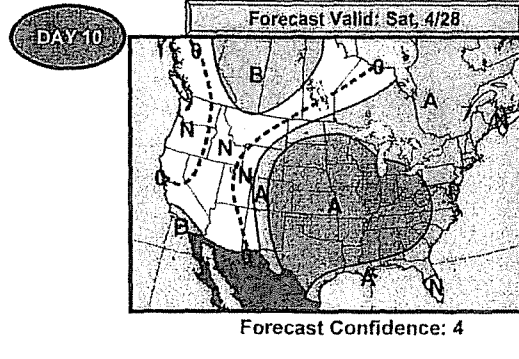
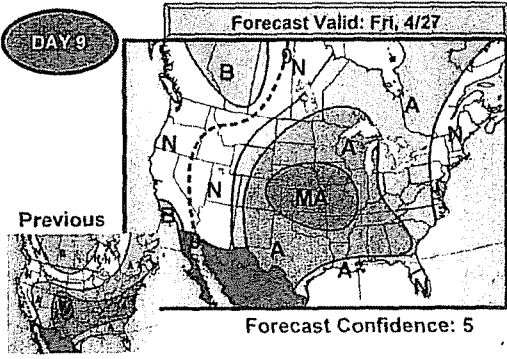
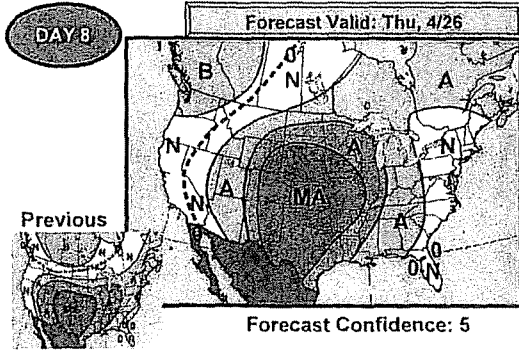
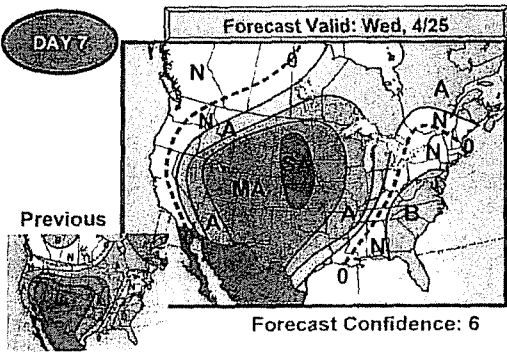
Meteorologist: AC/BH

## Forecast Temperature Deviations



**\*Stronger Warmth Possible in North-Central U.S.\***  
**\*Confidence Down By Mid-Period\***

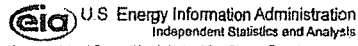
Confidence is lower for today's forecast as models are not handling the pattern well during the second half of the period. The early part of the period still holds some decent agreement though. The biggest risks come to the North-Central U.S. as early as the mid-period where stronger warmth could span across this region and begin to push toward the Midwest and Northeast for the latter parts of the period. Some much above to strong above normal potential may be seen, depicted best within the operational models. Should this scenario pan out, cooler temperatures would become available in the West. Late in the period, a weak trough may loom over the Northeast, possibly stalling the advancement of warmth into the region.



- A +3F to +4F   ■ A +5F to +7F   ■ MA +8F to +14F   ■ SA +15 or Higher
- B -3F to -4F   ■ B -5F to -7F   ■ MB -8F to -14F   ■ SB -15 or Lower

Weekly Natural Gas Storage Report

Page 1 of 1



Home > Natural Gas > Weekly Natural Gas Storage Report

Weekly Natural Gas Storage Report

[Glossary](#) [Elasticity](#)

[Release Schedule](#)  
[Sign Up for Email Updates](#)

Released: April 19, 2012 at 10:30 a.m. (eastern time) for the Week Ending April 13, 2012  
 Next Release: April 26, 2012

Working Gas in Underground Storage, Lower 48

other formats: [Summary TXT](#) [CSV](#)

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	04/13/12	04/06/12	Change	Year Ago (04/13/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,105	1,092	13	644	71.6	673	64.2
West	358	353	5	222	61.3	247	44.9
Producing	1,049	1,042	7	775	35.4	673	55.9
<b>Total</b>	<b>2,512</b>	<b>2,487</b>	<b>25</b>	<b>1,641</b>	<b>53.1</b>	<b>1,593</b>	<b>57.7</b>

Notes and Definitions

Beginning with the report period for the week ending March 16, 2012, EIA is including salt dome and nonsalt-dome subtotals for the Producing Region in the "Summary" section. The sum of the components may not equal the total for the Producing Region, because of independent rounding.

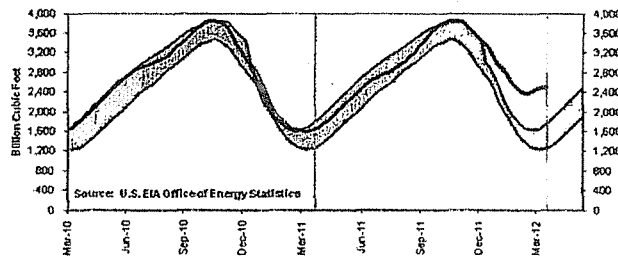
Summary

Working gas in storage was 2,512 Bcf as of Friday, April 13, 2012, according to EIA estimates. This represents a net increase of 25 Bcf from the previous week. Stocks were 871 Bcf higher than last year at this time and 919 Bcf above the 5-year average of 1,593 Bcf. In the East Region, stocks were 432 Bcf above the 5-year average following net injections of 13 Bcf. Stocks in the Producing Region were 376 Bcf above the 5-year average of 673 Bcf after a net injection of 7 Bcf. Stocks in the West Region were 111 Bcf above the 5-year average after a net addition of 5 Bcf. At 2,512 Bcf, total working gas is above the 5-year historical range.

Working gas stocks in the Producing Region, for the week ending April 13, 2012, totaled 1,049 Bcf, with 259 Bcf in salt cavern facilities and 790 Bcf in nonsalt cavern facilities. Working gas stocks increased 1 Bcf in the salt cavern facilities and increased 6 Bcf in the nonsalt cavern facilities, since April 6. An historical series of the salt and nonsalt subtotals of the Producing Region, dating back to January 7, 2011, is available for download at: [energy\\_producing\\_region\\_salt.xls](#).

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- Performance Evaluation
- Related Links
- Storage Basics
- Natural Gas Weekly Update
- Natural Gas Navigator

Working Gas in Underground Storage Compared with 5-Year Range



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2007 through 2011.  
 Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

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[Fedstats](#) | [USA.gov](#) | [Department of Energy](#)

**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**March 28, 2012 Release**

Jan-10		Jan-11		Jan-12		Jan-13	
Feb-10		Feb-11		Feb-12		Feb-13	
Mar-10		Mar-11		Mar-12		Mar-13	
Apr-10		Apr-11		Apr-12		Apr-13	
May-10		May-11		May-12		May-13	
Jun-10		Jun-11		Jun-12		Jun-13	
Jul-10		Jul-11		Jul-12		Jul-13	
Aug-10		Aug-11		Aug-12		Aug-13	
Sep-10		Sep-11		Sep-12		Sep-13	
Oct-10		Oct-11		Oct-12		Oct-13	
Nov-10		Nov-11		Nov-12		Nov-13	
Dec-10		Dec-11		Dec-12		Dec-13	
Average 2010	\$	Average 2011	\$	Average 2012	\$	Average 2013	\$
Summer 2010	\$	Summer 2011	\$	Summer 2012	\$	Summer 2013	\$
Winter 2010-2011	\$	Winter 2011-2012	\$	Winter 2012-2013	\$		

**North American Gas Forecast Monthly**

March 28, 2012

NATURAL GAS

**GAS PRICE SCORECARD: APRIL 2012 -- OCTOBER 2012**

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
U.S. Production		The observed decline in U.S. gas production following its November 2011 peak appears to be stalling this month with a loss of only -0.1 BCF/D relative to February. Moreover, the indicated March Y/Y gain of more than 2 BCF/D looks problematic given the size of "forced" future reductions presented by high storage.
Net Trade		Given Canada's own storage surplus, net trade will soon show Y/Y growth, compounding the market's challenges.
Storage Levels		U.S. storage will rise toward 2.5 TCF by end-March and remain near 0.57 TCF in Canada. The combined Y/Y surplus of 1.2 TCF will require upwards of a 5 BCF/D decline in refills this year versus last.
U.S. Demand Issues	Outlook	Commentary
Economy		The manufacturing sector is still positive for the U.S. economy especially within the point of reference of the recent and projected pace of IP growth, which has been buttressed by the motor vehicles and parts sector.
Electric Generation (EG)		Unprecedented price-driven coal-to-gas substitution is the main driver behind PIRA's projection of significant gas-fired EG gains despite a summer milder than last.
Industrial Sector		With domestic gas-intensive manufacturing on the upswing, industrial end-users appear to be taking full advantage of low cost natural gas supplies. PIRA sees near-term Y/Y growth continuing at a clip of 4.0-4.5%.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation		The CFTC weekly COT data covering the last few weeks show a relatively low NYMEX/ICE net non-commercial short futures position with the last tally below 72,000 lots -- not only less than half last year's net short position, but also a reduction of -50% during 1Q12. Short holdings are up this quarter. But long positions have risen twice as fast since some appear to see limited downside gas risks given the depths already probed by NYMEX futures, unlike the prices suggested by PIRA's fundamental analysis for August and September.
Overall Assessment	Outlook	Commentary
Price Outlook		With the importance of temperatures moving to the back burner, those arguing in favor of higher gas prices have a tough sell outside of the downtrend in gas drilling. Also, the lack of more downside follow-through by U.S. production of late adds to the uncertainty surrounding the adequacy of drilling cuts relative to the limited storage space for production between April and October. A respite could be in store for physical prices in 2Q12, depending on injection demand. Yet, any uplift from those seeking to add to already robust storage positions would simultaneously raise the likelihood of "storage congestion pricing" following the peak cooling season.



## Gas Price Predictions

Standard & Poor's lowered its forecast for 2012 to \$2 from \$3, citing growing production and storage levels and the mild winter. Gas production increased to a record 69.5 Bcf/d, a 6.7% increase from last year despite a decline in drilling rigs. Factors contributing to oversupply include: improving well performance, associated gas production, working through inventories of drilled but uncompleted wells, joint-venture drilling commitments, and continued drilling to hold acreage. S&P cut its 2013 and 2014 prices by 50 cents to \$2.75/MMBtu and \$3.50/MMBtu, respectively.

BNP Paribas reduced their 2012 forecast by 13% to \$2.34/MMBtu from \$2.70/MMBtu citing continued strong production. "In response to low prices, producers have historically limited supplies by laying down rigs. This year, however, the allure of higher netback pricing from oil and NGL's will likely bring higher volumes of natural gas to the market than warranted by current prices." Paribas also reduced the forecast for 2013 to \$3.68/MMBtu from \$3.85/MMBtu.

Citing high storage levels and modest cuts in overall dry gas production several analysts have lowered their 2012-2013 forecasts. "While a number of large producers are reducing their dry gas drilling to zero, they are not forecasting significant drops in absolute dry gas production, implying a large amount of dry gas is being produced in association with crude oil."

Pritchard lowered its forecast to \$2.50/MMBtu from \$3.30/MMBtu for 2012 and to \$3.30/MMBtu from \$4.00/MMBtu for 2013.

Stifel is lowering its forecast to \$2.62/MMBtu from \$3.12/MMBtu for 2012, and \$3.75/MMBtu from \$3.98/MMBtu for 2013.

Baird is lowering its forecast to \$2.45/MMBtu from \$3.10/MMBtu for 2012, and \$3.75/MMBtu from \$4.00/MMBtu for 2013.

Canaccord cut their 2012 forecast 21% to \$2.75/MMBtu, their 2013 forecast by 11% to \$4.00/MMBtu and left their long-term forecast unchanged at \$5.00/MMBtu. Model runs indicate gas in storage will end the injection season at 4 Tcf, just shy of estimated capacity. According to Canaccord, "further downside for gas prices now appear quite limited." "Our model indicates the gas market has tightened from roughly 1 Bcf/d oversupplied at year-end to roughly 2 Bcf/d undersupplied versus year ago levels."

Chesapeake CEO sees below \$5 gas for decades—McClendon sought to assure the power sector not to worry about the recurrence of the price spikes of a decade ago. "There's nothing temporary about the abundance of natural gas and its low price, gas should be viewed as a baseload fuel for decades to come."

## Storage Levels

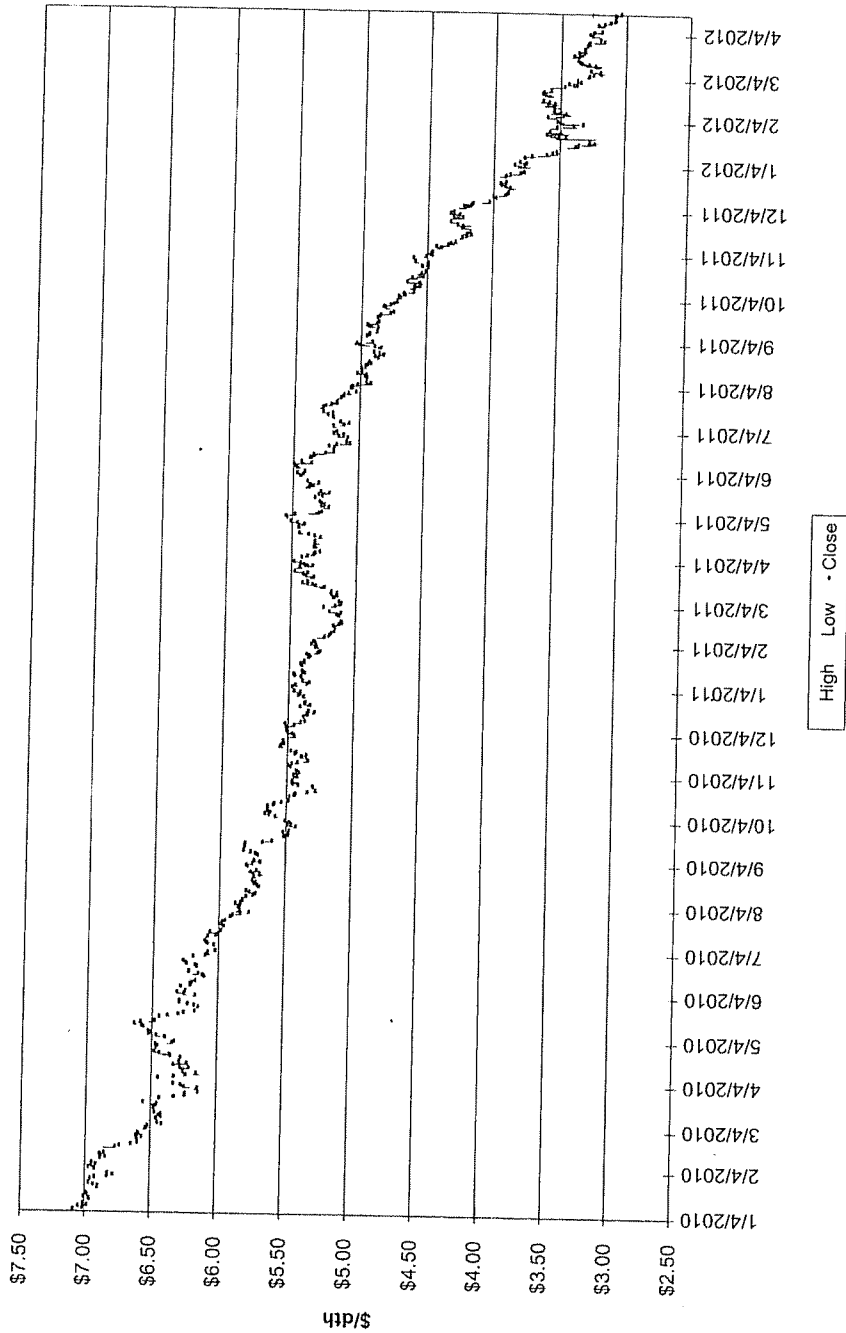
There is so much gas in storage that analysts believe there is a possibility that the surplus could climb to 1 Tcf above the five-year average. IAF Advisors expects the surplus to peak in the next couple of weeks in the 950 Bcf range, but indicated it is "certainly quite possible that 1 Tcf could be reached". Getting to the 1 Tcf surplus may not make much difference to gas prices—"We're already at record highs (storage levels) and have been for quite a while so I would image most of it has already been priced in." The current surplus presents significant overhead resistance to the market for quite some time. "That's clearly gas that does not have to be purchased and put into storage in preparation for the winter of 2013."

Gas prices will remain low and storage facilities will push capacity limits unless several bullish trends emerge simultaneously. Storage in the last few years has been bailed out by consecutively hot summers and cold winters going back to 2009—the most recent winter, the warmest in 60 years, resulted in inventories that are more than 900 Bcf, or 57%, above a year ago. According to the author, the current surplus plus the 1.5 Bcf/d imbalance will require over 1.1 Tcf of incremental gas burn during the refill season to keep inventories below the current capacity of 4.1 Tcf. The bullish trends needed are a dramatic decline in gas supplies, a big increase in power generators switching from coal to gas and a strong ramp-up in industrial demand resulting from a robust national economic recovery. The odds are low that the domestic gas market will avoid another major supply glut.

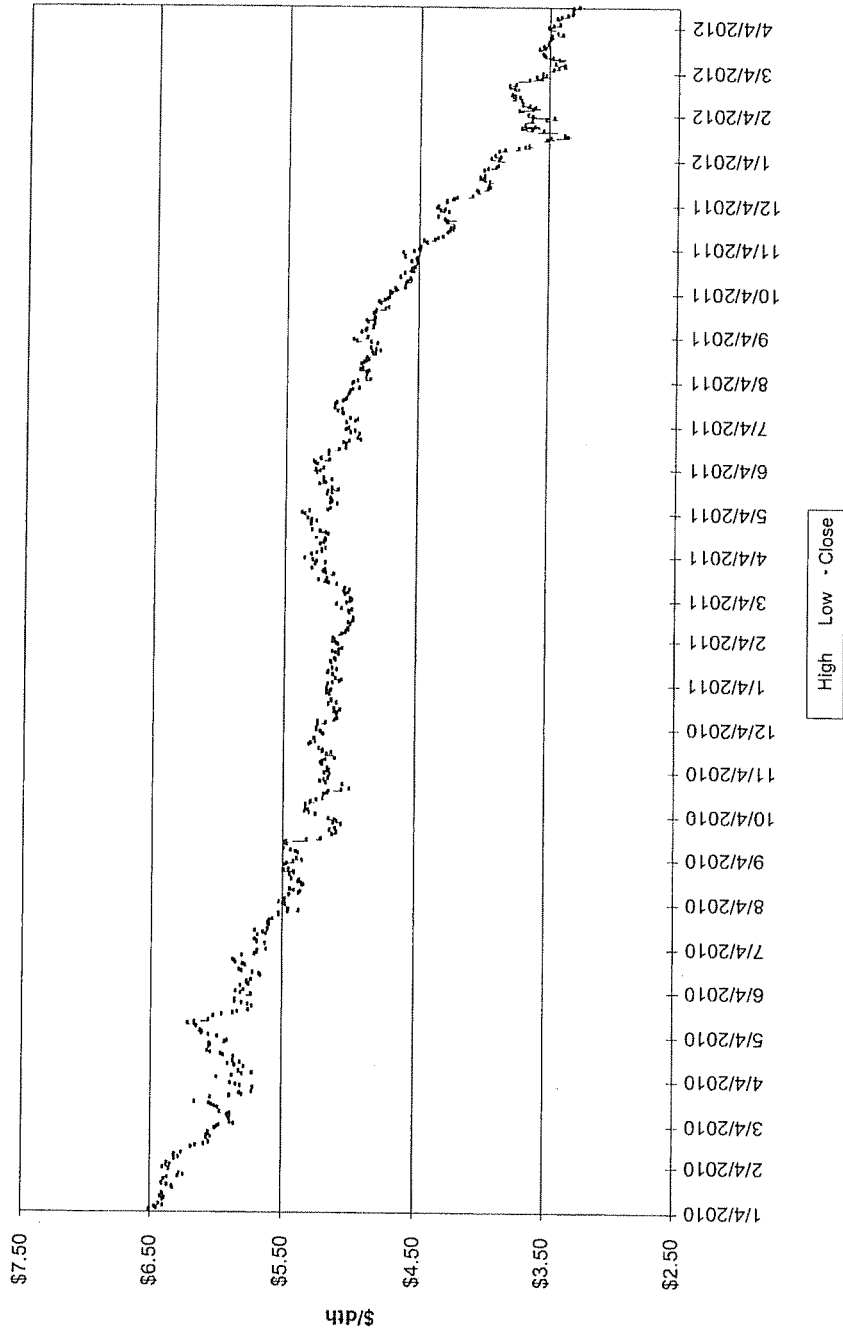
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**April 10, 2012 Release**

Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	3.34
Feb-10	5.32	Feb-11	4.09	Feb-12	2.50	Feb-13	3.32
Mar-10	4.29	Mar-11	3.97	Mar-12	2.18	Mar-13	3.28
Apr-10	4.03	Apr-11	4.25	Apr-12	2.16	Apr-13	3.27
May-10	4.14	May-11	4.31	May-12	2.17	May-13	3.28
Jun-10	4.80	Jun-11	4.55	Jun-12	2.28	Jun-13	3.30
Jul-10	4.63	Jul-11	4.42	Jul-12	2.28	Jul-13	3.33
Aug-10	4.32	Aug-11	4.05	Aug-12	2.47	Aug-13	3.37
Sep-10	3.89	Sep-11	3.90	Sep-12	2.52	Sep-13	3.41
Oct-10	3.43	Oct-11	3.56	Oct-12	2.70	Oct-13	3.51
Nov-10	3.71	Nov-11	3.24	Nov-12	2.96	Nov-13	3.62
Dec-10	4.25	Dec-11	3.17	Dec-12	3.24	Dec-13	3.77
Average 2010	\$ [REDACTED]	Average 2011	\$ [REDACTED]	Average 2012	\$ [REDACTED]	Average 2013	\$ [REDACTED]
Summer 2010	\$ [REDACTED]	Summer 2011	\$ [REDACTED]	Summer 2012	\$ [REDACTED]	Summer 2013	\$ [REDACTED]
Winter 2010-2011	\$ [REDACTED]	Winter 2011-2012	\$ [REDACTED]	Winter 2012-2013	\$ [REDACTED]		

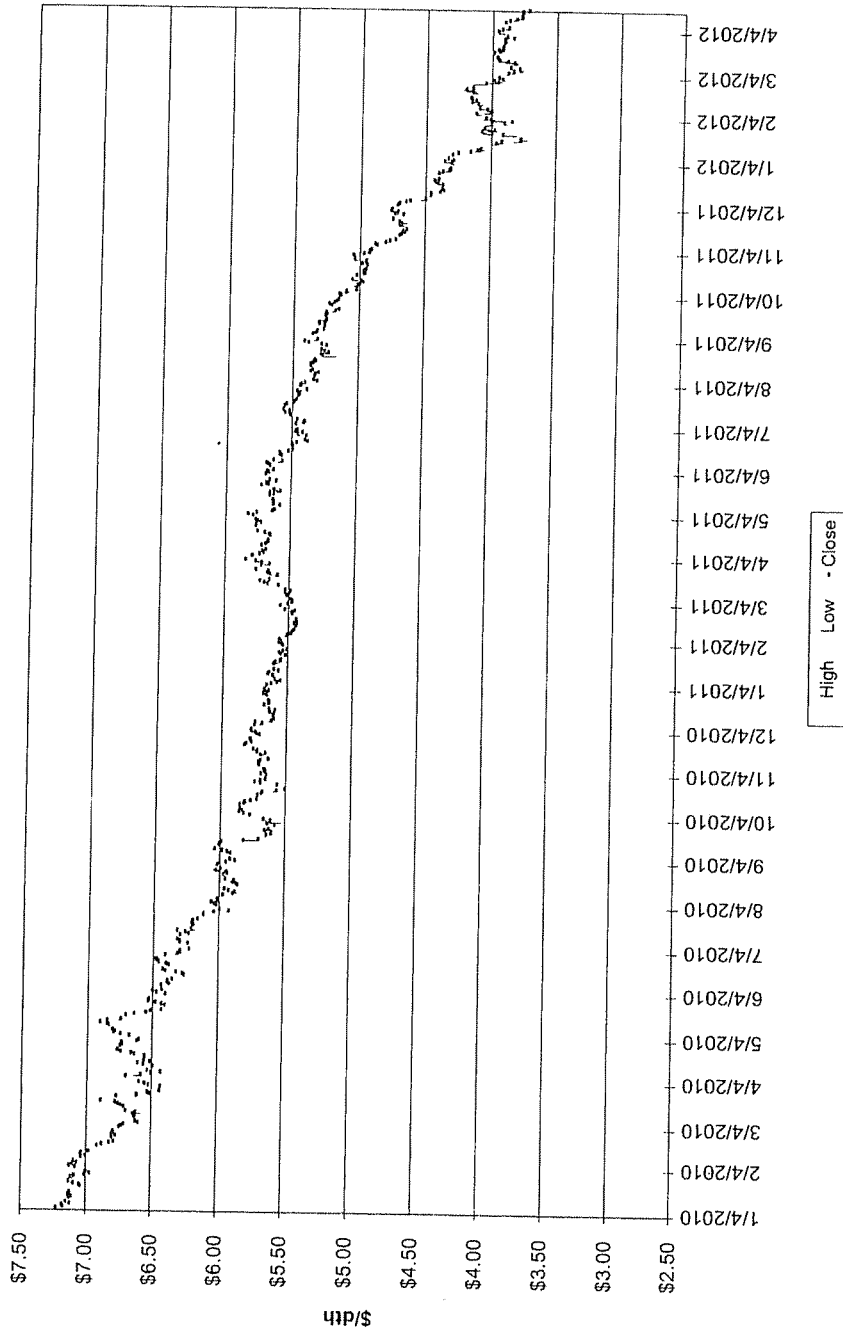
Winter Strip Nov12 - Mar13



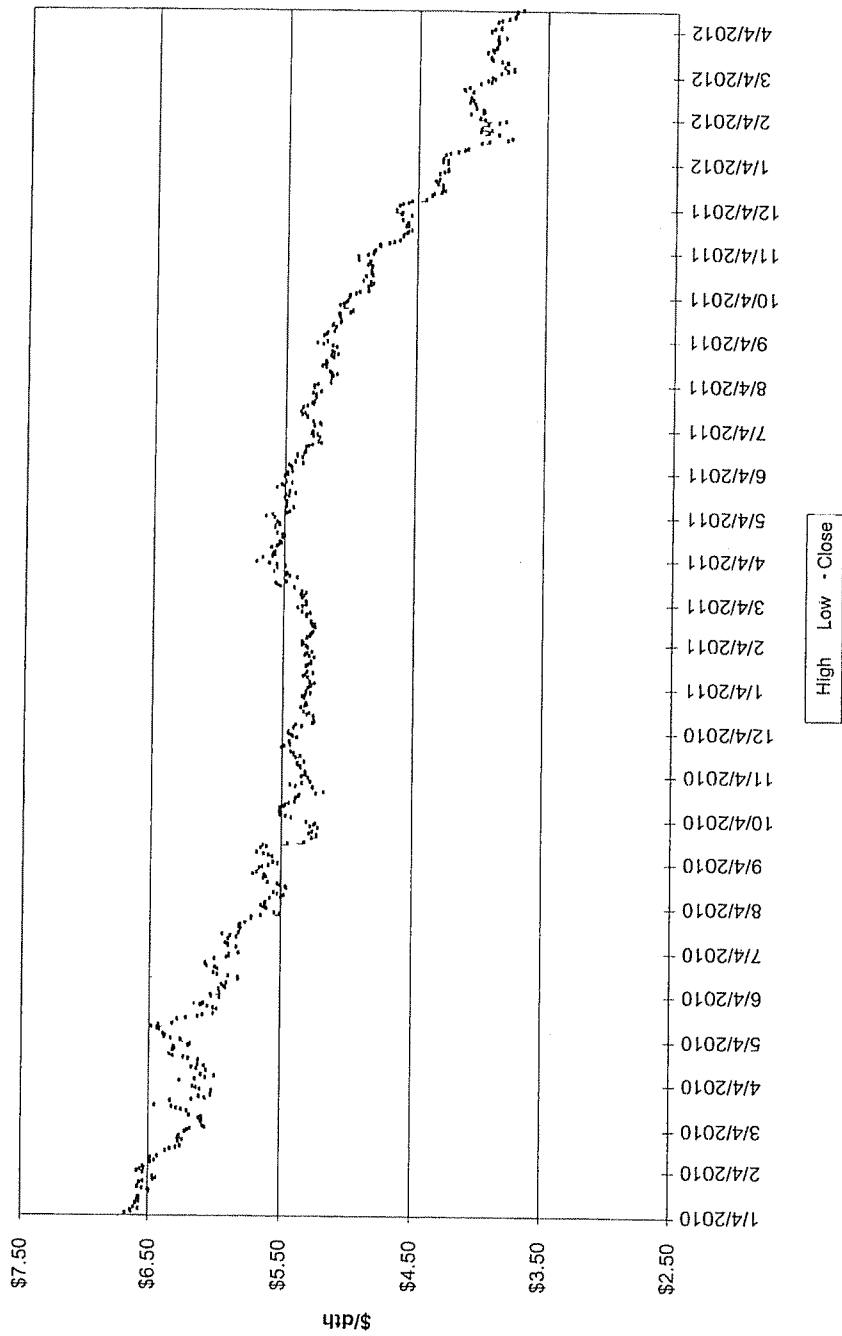
Summer Strip 2013



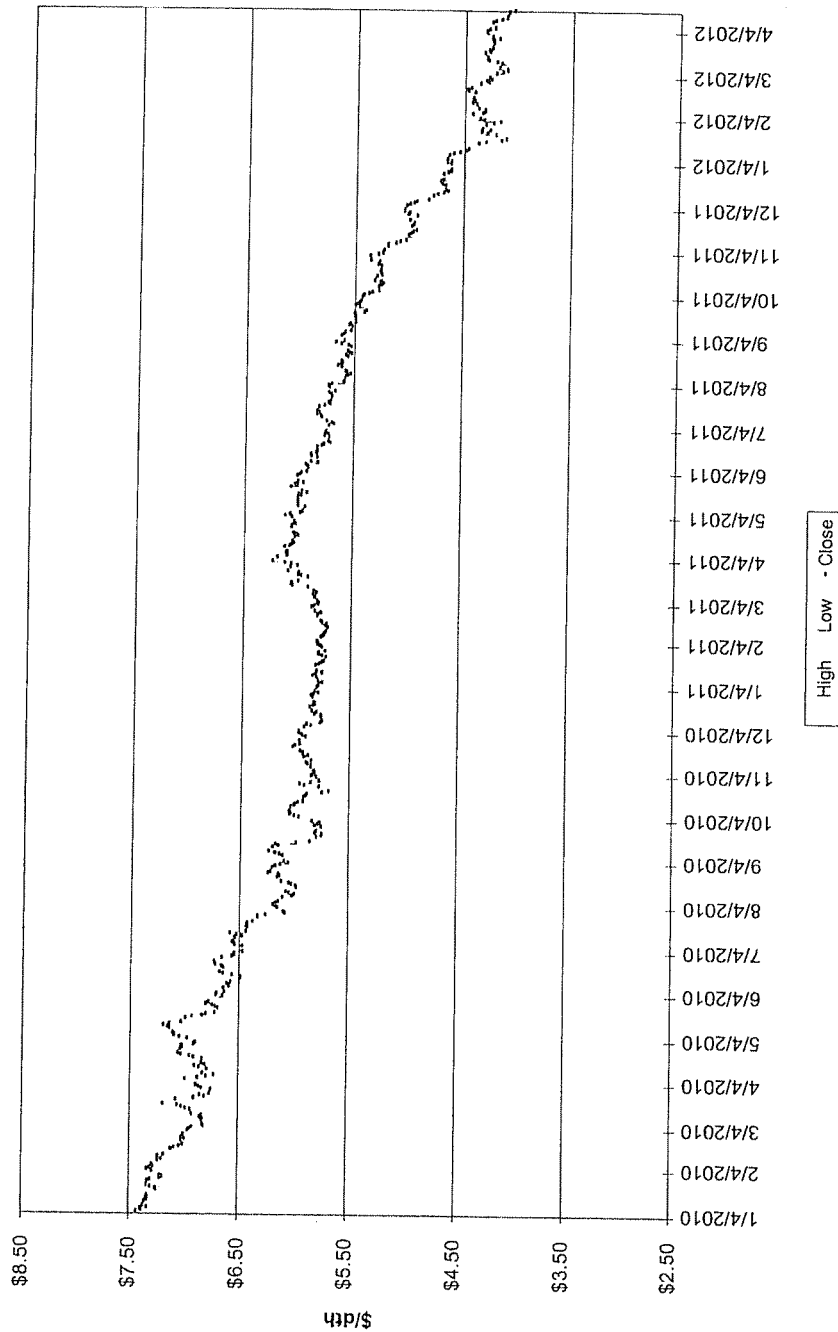
Winter Strip Nov13 - Mar14



Summer Strip 2014

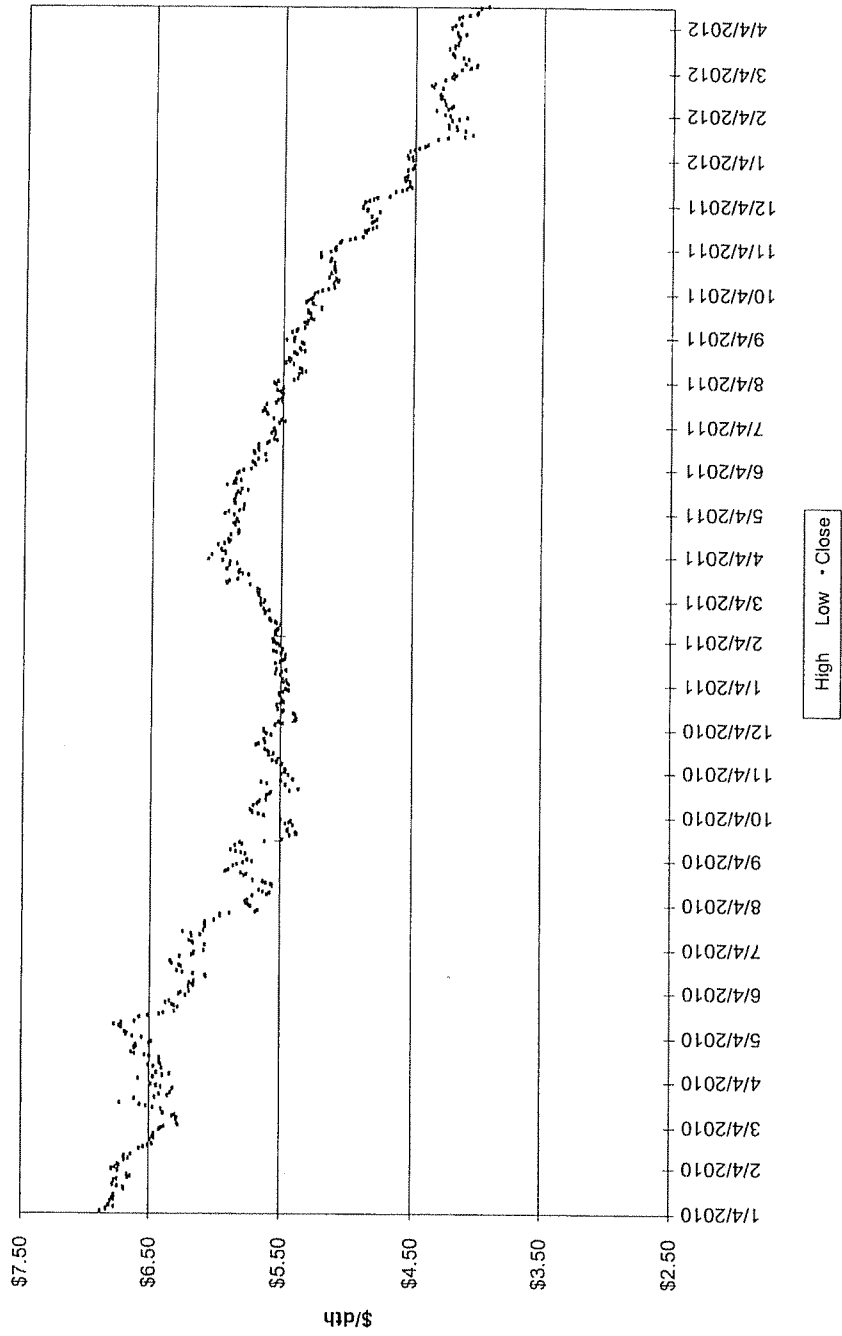


Winter Strip Nov14 - Mar15





Summer Strip 2015



*Independent Statistics & Analysis*

## U.S. Energy Information Administration April 2012

### Short - Term Energy and Summer Fuels Outlook

April 10, 2012 Release

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 69.6 billion cubic feet per day (Bcf/d) in 2012, an increase of 2.8 Bcf/d (4.2 percent) from 2011. EIA expects that large gains in electric power use will offset declines in residential and commercial use. Because of the much - warmer - than normal winter this year, EIA expects residential and commercial consumption to fall by 3.9 percent and 2.7 percent, respectively, in 2012, reflecting a downward revision in projected consumption from last month's *Outlook*. Currently, the National Oceanic and Atmospheric Administration (NOAA) expects heating degree - days to total 4,020 for 2012, 5.3 percent less than in last month's *Outlook*, and about 11 percent below the 30 - year normal level.

**Projected consumption of natural gas in the electric power sector grows by about 16 percent in 2012, primarily driven by the increasing relative cost advantages of natural gas over coal for power generation in some regions.** Consumption in the electric power sector peaks in the third quarter of 2012, at 30.6 Bcf/d, when electricity demand for air conditioning is highest. This compares with 27.7 Bcf/d in the third quarter of 2011.

**Growth in total natural gas consumption continues into 2013, with forecast consumption averaging 70.5 Bcf/d.** A forecast of closer - to - normal winter temperatures drives increases in residential and commercial consumption of 7.3 percent and 4.7 percent, respectively. The increase in consumption in these sectors, as well as an increase in industrial consumption, more than offsets a 3.4 - percent decline in power - sector natural gas burn.

**U.S. Natural Gas Production and Imports.** Total marketed production of natural gas grew by an estimated 4.8 Bcf/d (7.9 percent) in 2011, the largest year - over - year volumetric increase in history. This strong growth was driven in large part by increases in shale gas production. **While EIA expects year - over - year production growth to continue in 2012, the projected increases occur at a much lower rate than in 2011 as low prices reduce new drilling plans. According to Baker Hughes, the natural gas rig count was 647 as of April 5, 2012, down from a 2011 high of 936 in mid-October. So far, the lower rig count has not impacted production levels, partly reflecting improved drilling efficiency.** While fewer horizontal natural gas rigs, particularly in areas of dry production such as the Haynesville Shale, probably indicate declines in these areas, these losses are more than offset in the short term by

other production from wet plays.

Pipeline gross imports are expected to fall by 0.7 Bcf/d (7.2 percent) in 2012 as domestic supply displaces Canadian sources. The warm winter in the United States also adds to the year - over - year decline in imports, particularly to the Northeast, where imported natural gas can serve as additional supply in times of very cold weather. Pipeline gross exports grew by 1.0 Bcf/d in 2011, driven by increased exports to Mexico, and are expected to continue to grow, at a slower rate, in 2012 and 2013.

#### Crude Oil

**EIA has lowered the forecast 2012 average U.S. refiner acquisition cost of crude oil by \$2 per barrel from last month's Outlook to \$112 per barrel, still \$10 per barrel higher than last year's average price. EIA expects the price of West Texas Intermediate (WTI) crude oil to average about \$106 per barrel in 2012, the same as in last month's Outlook but \$11 per barrel higher than the average price last year.** Constraints in transporting crude oil from the U.S. midcontinent region contribute to the expected discount for WTI relative to other world crude oil prices. EIA expects WTI prices to remain relatively flat in 2013, averaging about \$106 per barrel, while the average U.S. refiner acquisition cost of crude oil averages \$110 per barrel.

Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 May 24, 2012

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (June 12--Aug 12)	↑	Long	NOAA predicting above average temperatures for June 2012--August 2012 for the southern portion through the Mid-continent portions of the CONUS.	12
Mid Term Forecast (30-60 days)	↑ ↓	Long	June is predicted to be 10.6% warmer than normal based on 10 year normals and July weather is predicted to be 0.7% below normal.	13
Short Term Forecast (6-10 days)	← →	Short	Above and Much Above on the eastern and southern portion of CONUS early in the period replaced with normal weather later in the period	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage injections for the week ending May 11th were 61 BCF. Storage levels are at 2.667 TCF which is 40.9% higher than last year and 40.8% higher than the 5 year average.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13 Summer 2013: [REDACTED]	↑ ↓	Long	GAS PRICE SCORECARD: May 2012--September 2012 US Production, Net Trade, and Storage Levels remain bearish while Economy, Electric Generation, and Industrial Sector demand are bullish. Price Outlook remains Bearish.	16-17
Gas Daily--Price Predictions	↑ ↓	Long	Spot gas prices of less than \$2/MMBtu are likely in late summer due to continued strong production and full storage according to Bentek. Bentek expects prices to average \$2.32/MMBtu over the summer. Tudor Pickering states that prices need to be around \$2/Mcf for the summer not to overflow storage capacity. If power demand does not reduce the storage overhand, prices are expected to drop to \$1/Mcf later this year. Goldman Sachs is predicting \$4/MMBtu prices in 2013 due to additional production cuts and record levels of coal-to-gas switching.	18
Gas Daily--Market Analysis	↑	Long	After a four-year bear market, BNP Paribas has predicted US gas prices are staging a comeback due to shifts in the fundamentals--industry might not be as oversupplied as anticipated, base load coal plants being displaced. 2012 estimate revised from \$2.34 to \$2.76/MMBtu and 2013 estimate of \$4.00/MMBtu from \$3.68.	19
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.008 Summer 2013: \$3.131	↓	Long	The projected Henry Hub natural gas spot price averages \$2.448/MMBtu for 2012 and \$3.173/MMBtu for 2013.	20
<b>Technical Analysis</b>				
Winter 2012-13 Strip Chart	↑	Short	Closed at \$3.44	21
Summer 2013 Strip Chart	↑	Short	Closed at \$3.58	22
Winter 2013-14 Strip Chart	↑	Short	Closed at \$3.98	23
Summer 2014 Strip Chart	↑	Short	Closed at \$3.88	24
Winter 2014-15 Strip Chart	↑	Short	Closed at \$4.23	25
Summer 2015 Strip Chart	↑	Short	Closed at \$4.08	26
<b>Economy</b>				
Demand	↑	Long	EIA projects total natural gas consumption to grow by 5.1% to 70.2 Bcf/d in 2012 resulting from large gains in electric power generation.	27-28
Supply	← →	Long	Total marketed production grew by an estimated 4.8 Bcf/day or 7.9% in 2011, the largest volumetric increase in history. Production growth will continue in 2012 and 2013 but at a much lower rate.	27-28
Oil Market	← →	Long	EIA expects WTI spot prices to average of \$104 per barrel in 2012 and 2013, \$9 per barrel higher than the average price last year.	27-28

**Meeting Minutes: 426 Annex Conference Room - 8:00 am**  
 Attendees: Jim Mehring, Jeff Kern, Mitch Martin, Steve Niederbaumer

Discussed market fundamentals such as weather, storage inventory levels, and economic factors such as supply and demand. Discussed the PIRA and EIA forecasts as well as analyst predictions concerning price expectations. In addition, discussed Winter and Summer Strip Charts based on Technical Analysis. Discussed our current positions within Ohio and Kentucky hedging plans (updated the Load Forecast received from Forecasting Department) and that no additional hedging is required under the plans at this time. In addition, discussed the spreads between current NYMEX prices, forecasts, and historical prices. After much discussion, a decision was made not to hedge additional gas.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2011 - October 2012  
 As of 05/23/12

	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (Mcf/dth)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Collar												
Collar												
Total Hedged (Summer)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt. Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

5

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 05/23/12

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Cost Avg. (dth/day)												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt. Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (Incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 05/23/12

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Total Hedged (otm/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt. Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 05/23/12

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amnt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.



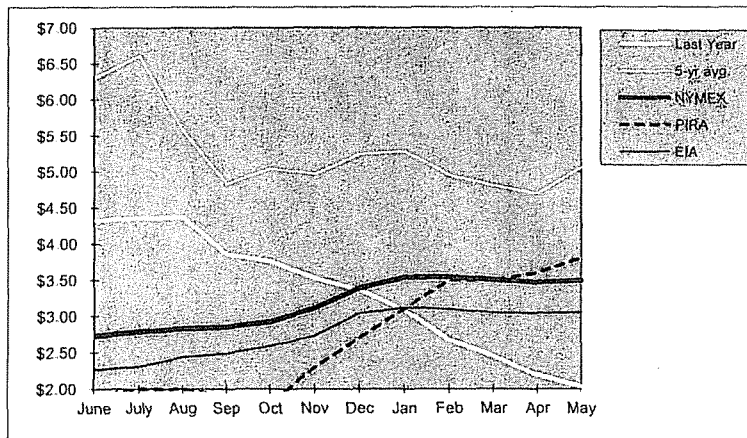
5/23/2012

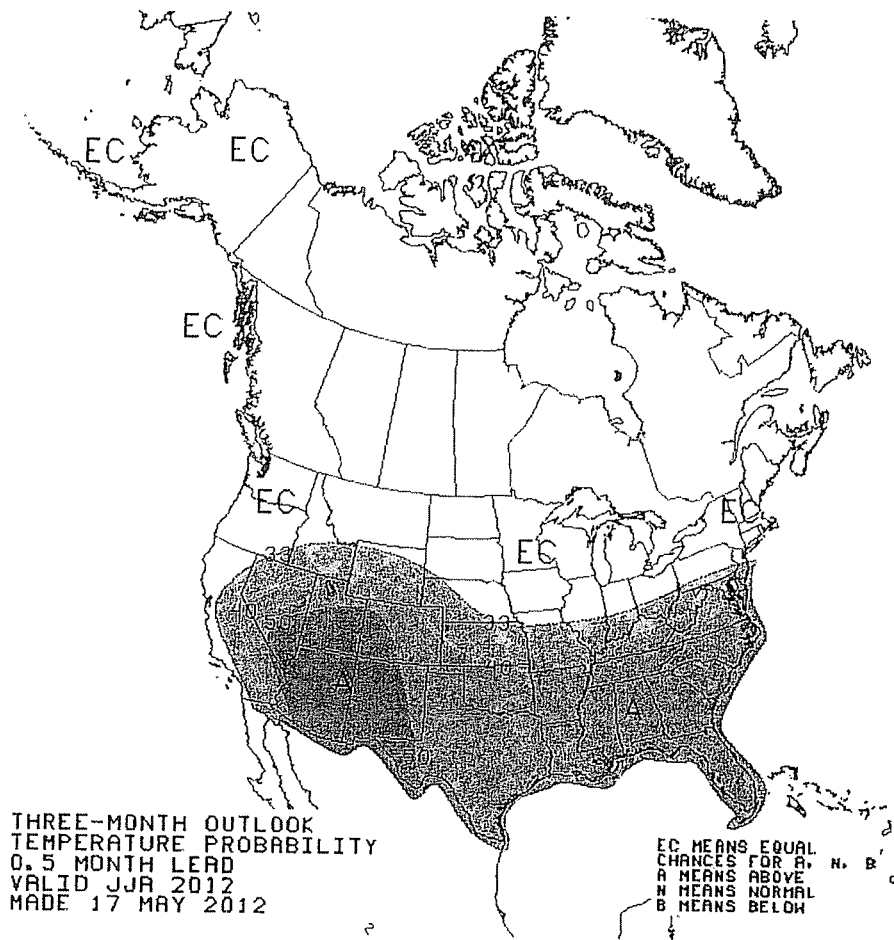
**Duke Energy Kentucky  
 Hedging Program  
 Current Position**

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/12)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2012					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2012					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					

**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

Historic Prices: NYMEX Closing Price							Hedged Prices	
	5-yr. avg. (07/08-11/12)	Last Year (2011-2012)		PIRA 25-Apr-12	EIA 8-May-12	NYMEX 24-May-12	Ohio	Kentucky
June	\$6.31	\$4.33			\$2.270	\$2.734		
July	\$6.61	\$4.36			\$2.310	\$2.788		
Aug	\$5.57	\$4.37			\$2.440	\$2.830		
Sep	\$4.84	\$3.86			\$2.490	\$2.856		
Oct	\$5.04	\$3.76			\$2.590	\$2.924		
Nov	\$4.97	\$3.52			\$2.730	\$3.116		
Dec	\$5.24	\$3.36			\$3.040	\$3.386		
Jan	\$5.28	\$3.08			\$3.120	\$3.538		
Feb	\$4.95	\$2.68			\$3.100	\$3.545		
Mar	\$4.81	\$2.45			\$3.050	\$3.505		
Apr	\$4.70	\$2.19			\$3.040	\$3.466		
May	\$5.06	\$2.04			\$3.050	\$3.493		
12 Month Avg	\$5.28	\$3.33			\$2.769	\$3.182		
Summer Average					\$2.599	\$3.013		
Winter Average					\$3.008	\$3.418		



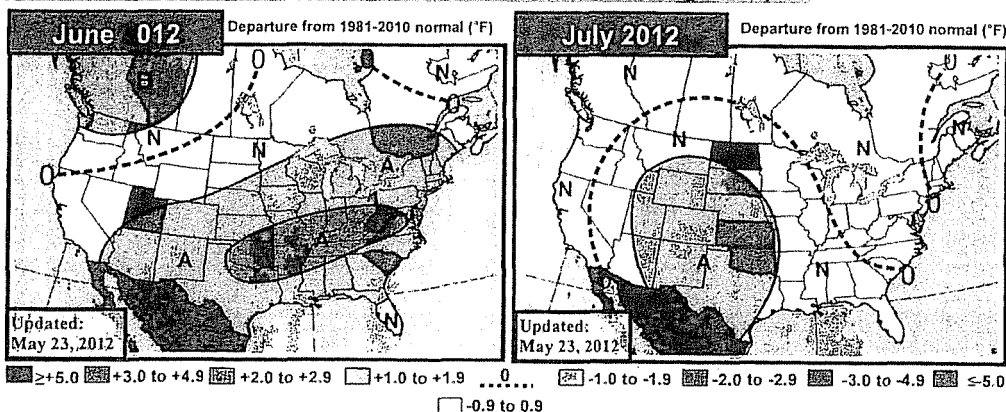


# EarthSat's 30-60 Day Outlook



Wednesday, May 23, 2012

Meteorologists: SS/BH



**Previous**  
 Much hotter Midwest and East  
 Cooler Northwest

Our latest June update features a rather significant shift to the warmer direction with widespread above normal temperatures across the eastern half, strongest in the lower Midwest and the Tennessee Valley. Meanwhile, cooler changes were noted in the Northwest and to a lesser extent in the Great Basin. The warmer changes go along with our current warm forecast for the first week of the month across the eastern half. Long range models show decent support for this warmer outlook with the latest CFS model showing widespread warmth, with a focus on the central US, while the ECMWF weekly outlooks from earlier this week show widespread warmth across the eastern half carrying past the first half of the month. There is some risk to the cooler end in the northern tier as the GFS and ECMWF ensembles show the NAO trending negative, but the negative NAO has been difficult to maintain over the past several months.

Jun PWCCD** Forecasts	*10Y Normal updated to '02-11	
Jun 2012 Fcst: <b>260.0</b>	10Y Normal*	235.1
	30Y Normal	226.1
	Jun-2011	261.5

Change: +16  
 \*\*National Population-Weighted CDDs

**Previous**  
 Warmer Great Lakes  
 Hotter in the Rockies/Plains

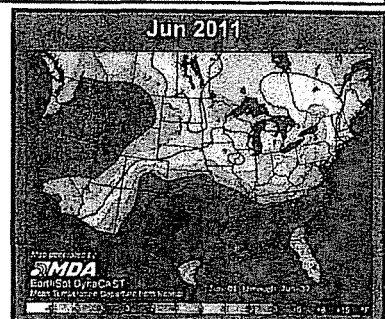
While not quite as dramatic as June, there were still some notable warm changes for July with the area of belows removed from the Great Lakes region and aboves expanded across the Rockies and Plains. July looks to mark a continuing transition in the tropical Pacific as we trend into a positive ENSO regime, supported more strongly by the latest computer models of the IRI. Similar years marking a transition to a positive ENSO over the summer include 2009, 2006, 1986, and 1951, and an evenly-weighted composite of those years shows marginally warm conditions across much of the South and West and marginally cool conditions in the Midwest and Northeast. Eliminating 1986 from the picture due to its -AMO/+PDO phase gives a clearer picture with more widespread warmth in the West and cooler conditions in the Midwest.

Jul PWCCD** Forecasts	*10Y Normal updated to '02-11	
Jul 2012 Fcst: <b>335.0</b>	10Y Normal*	337.2
	30Y Normal	333.9
	Jul-2011	412.5

Change: +16  
 \*\*National Population-Weighted CDDs

**May so far**

With much of May in the books and the rest of the month covered in our current forecast, the month looks to remain extremely warm with widespread anomalies of 3-8F above normal across the eastern half of the US, strongest in the Midwest, while cooler conditions are seen in the Northwest. Our previous outlooks captured the overall pattern rather well with both the 60 Day and 30 Day outlooks projecting widespread warmth, but neither forecast anticipated the magnitude of the heat. The expected 85 GW/CDDs shatters the previous record low of 103 (data since 1950), while the 153 PWCCDs would be second highest to 1991 (167 CDDs).



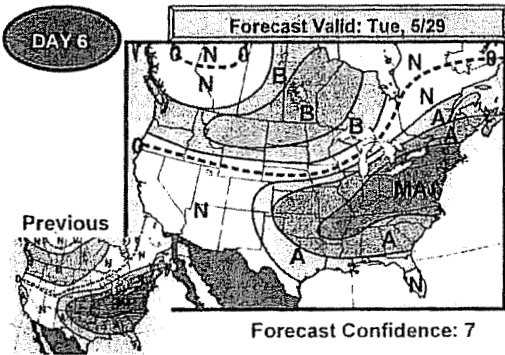
# 6-10 Day Forecast—Detailed

Thursday, May 24, 2012

Meteorologist: AC/BH

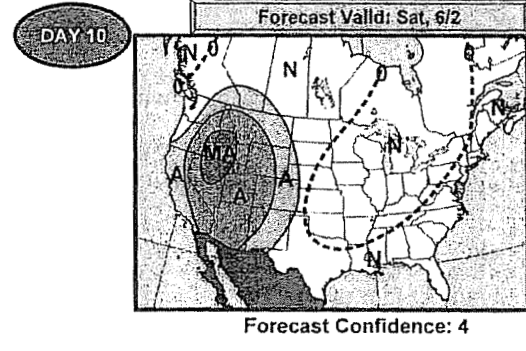
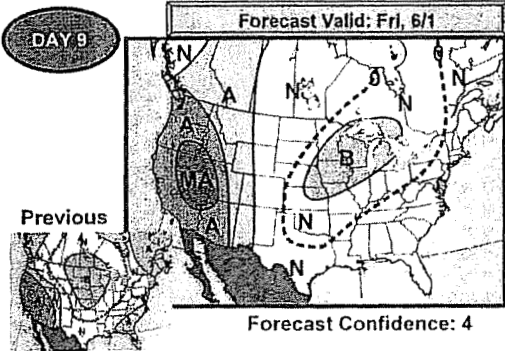
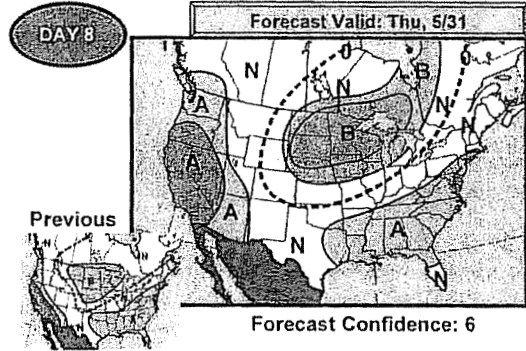
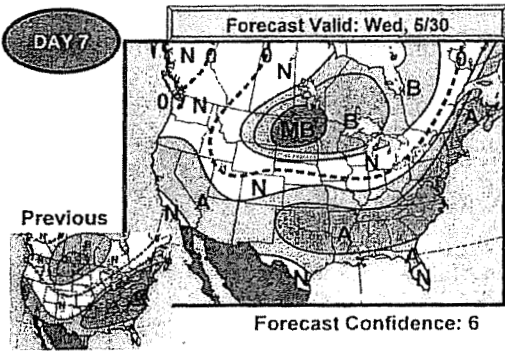


## Forecast Temperature Deviations

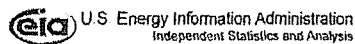


**"West Takes On Warmer Temperatures Late"**  
**"Cooler Faster In Midwest Early"**

The cooler potential for the Midwest has come into better agreement amongst the models and the forecast has followed in this outlook. The region could turn cooler than expected for the middle part of the period as the cold air mass swings out of the Northern Plains. Parts of this air mass could elongate and head for the Southern Plains and Texas for the end of the period. The cooler air mass is not expected to reach the Southeast or immediate Northeast Coast with any cooler risk being fairly minimal. The West is warmer during the late period, placing above to much above normal readings over much of the region. Yet, there is some concern the next trough could swing toward the Northwest late and provide a cooler than expected outlook.



A +3F to +4F  
  A +5F to +7F  
  MA +8F to +14F  
  SA +15 or Higher  
 B -3F to -4F  
  B -5F to -7F  
  MB -8F to -14F  
  SB -15 or Lower



Home > Natural Gas > Weekly Natural Gas Storage Report  
**Weekly Natural Gas Storage Report**

[Glossary](#)

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Released: May 17, 2012 at 10:30 a.m. (eastern time) for the Week Ending May 11, 2012  
 Next Release: May 24, 2012

Working Gas in Underground Storage, Lower 48 other formats: [Summary](#) [TXT](#) [CSV](#)

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	05/11/12	05/04/12	Change	Year Ago (05/11/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,236	1,189	47	788	56.9	843	46.6
West	386	379	7	248	55.6	288	34.0
Producing	1,045	1,038	7	857	21.9	763	37.0
<b>Total</b>	<b>2,667</b>	<b>2,606</b>	<b>61</b>	<b>1,893</b>	<b>40.9</b>	<b>1,894</b>	<b>40.8</b>

**Notes and Definitions**

Beginning with the report period for the week ending March 16, 2012, EIA is including salt dome and nonsalt-dome subtotals for the Producing Region in the Summary section. The sum of the components may not equal the total for the Producing Region, because of independent rounding.

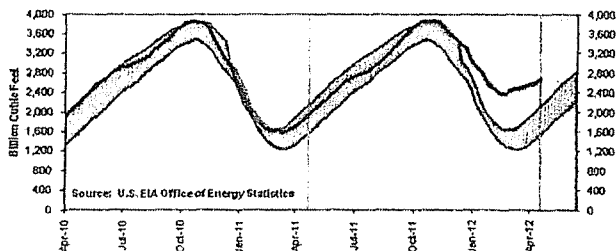
**Summary**

Working gas in storage was 2,667 Bcf as of Friday, May 11, 2012, according to EIA estimates. This represents a net increase of 61 Bcf from the previous week. Stocks were 774 Bcf higher than last year at this time and 773 Bcf above the 5-year average of 1,894 Bcf. In the East Region, stocks were 393 Bcf above the 5-year average following net injections of 47 Bcf. Stocks in the Producing Region were 282 Bcf above the 5-year average of 763 Bcf after a net injection of 7 Bcf. Stocks in the West Region were 98 Bcf above the 5-year average after a net addition of 7 Bcf. At 2,667 Bcf, total working gas is above the 5-year historical range.

Working gas stocks in the Producing Region, for the week ending May 11, 2012, totaled 1,045 Bcf with 238 Bcf in salt cavern facilities and 807 Bcf in nonsalt cavern facilities. Working gas stocks decreased 3 Bcf in the salt cavern facilities and increased 10 Bcf in the nonsalt cavern facilities, since May 4. An historical series of the salt and nonsalt subtotals of the Producing Region is available for download at: [wngwr\\_producing\\_region\\_salt.xls](#)

- Date
- [History \(XLS\)](#)
- [5-Year Averages, Maximum, Minimum, and Year-Ago Stocks \(XLS\)](#)
- References
- [Methodology](#)
- [Differences Between Monthly and Weekly Data](#)
- [Revision Policy](#)
- [Performance Evaluation](#)
- [Related Links](#)
- [Storage Basics](#)
- [Natural Gas Weekly Update](#)
- [Natural Gas Navigator](#)

Working Gas in Underground Storage Compared with 5-Year Range



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2007 through 2011.  
 Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

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**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**April 25, 2012 Release**

Jan-10		Jan-11		Jan-12		Jan-13	
Feb-10		Feb-11		Feb-12		Feb-13	
Mar-10		Mar-11		Mar-12		Mar-13	
Apr-10		Apr-11		Apr-12		Apr-13	
May-10		May-11		May-12		May-13	
Jun-10		Jun-11		Jun-12		Jun-13	
Jul-10		Jul-11		Jul-12		Jul-13	
Aug-10		Aug-11		Aug-12		Aug-13	
Sep-10		Sep-11		Sep-12		Sep-13	
Oct-10		Oct-11		Oct-12		Oct-13	
Nov-10		Nov-11		Nov-12		Nov-13	
Dec-10		Dec-11		Dec-12		Dec-13	
Average 2010	\$	Average 2011	\$	Average 2012	\$	Average 2013	\$
Summer 2010	\$	Summer 2011	\$	Summer 2012	\$	Summer 2013	\$
Winter 2010-2011	\$	Winter 2011-2012	\$	Winter 2012-2013	\$		

**North American Gas Forecast Monthly**

April 25, 2012

**NATURAL GAS**

**GAS PRICE SCORECARD: MAY 2012 – SEPTEMBER 2012**

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
U.S. Production	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	The collective failure of U.S. gas producers to curb production even relative to recent highs promises to make future cutbacks even more demanding and difficult. Increasingly bleak prospects for future storage flexibility, the market's buffer to physical price erosion, will weigh heavily on the market's diminishing call on supply.
Net Trade	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Canada's massive storage surplus will require either large-scale production cuts or strong Y/Y growth of net exports to the supply-saturated U.S. But even large production cutbacks point to similar Y/Y export volumes.
Storage Levels	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	End-September storage is forecast to reach ~3.8 TCF, roughly equal to the end-October 2011 level. But even this elevated storage level would require a hard-to-accomplish 1.5 BCF/D, or so, U.S. production pullback between March and September.
U.S. Demand Issues	Outlook	Commentary
Economy	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Manufacturing IP climbed at an impressive clip in 1Q12, led by the motor vehicles sector together with gas-intensive chemicals and metals. Gas-intensive goods exports also continue to post new highs, but growth is losing momentum.
Electric Generation (EG)	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Coal-to-gas substitution has begun to play havoc with coal stockpiles raising the risk that some regional coal markets may aim to win back market share from natural gas, its main enemy, through lower coal prices.
Industrial Sector	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Despite the strength of gas-intensive manufacturing, weather-adjusted industrial gas demand has underperformed relative to earlier expectations, leading PIRA to mark down near-term growth by ~150 MMCF/D to ~0.7 BCF/D.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Ongoing gas price declines are continuing to attract buying, particularly from reported non-commercials. Earlier this month, the NYMEX/ICE net short futures position contracted toward 45,000 lots before rebounding to over 62,000 lots amidst renewed short selling. But total non-commercial shorts reached a new high of 450,000 lots as of last Friday's COT report. Although simple risk/reward measures are likely discouraging some selling and/or encouraging some buying, unprecedented storage highs for this point on the calendar, suggest prices could be whipsawed given the sizable bets already placed by bulls and bears alike.
Overall Assessment	Outlook	Commentary
Price Outlook	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A month ago we could envision a respite for physical prices in the second quarter depending on injection demand. However, additional milder-than-normal weather from late March onward, coupled with no trace of sequential production pullback, has intensified downward pressure on Henry Hub prices, despite huge gains in the electric power sector at coal's expense. Looking ahead from today's gas balances, the heavy cloud hanging over gas prices looks even darker since the enlarged velocity of future required production cutbacks to balance the market will push gas producers toward harsh gas well shut-in economics.



### Gas Price Predictions

Bentek has reported spot gas prices of less than \$2/MMBtu are highly likely in late summer due to continued strong production and full storage. "Even though gas prices at current levels above \$2/MMBtu remain highly competitive with coal for power generation, the demand uptick has not trumped the supply and storage overhang." In order to prevent storage from test capacity limits, record power burn levels, flat production profile and below-average injections for the entire summer are required. Bentek expects prices to average \$2.32/MMBtu over the summer with \$2.70/MMBtu as the monthly high during the summer peak month.

Natural gas price need to be around \$2/Mcf for the summer to create enough demand to avoid overfilling storage according to Tudor Pickering. "We have to burn 400 Bcf in 200 days, or 2 Bcf/d," to ensure that storage inventories don't exceed estimated capacity of around 4.1 Tcf by November. If prices remain at current levels, that should create enough gas demand by power generators to reach the goal. If power demand does not reduce the storage overhand, prices are expected to drop to around \$1/Mcf later this year.

According to Goldman Sachs, additional production cuts and a record level of coal-to-gas switching reaffirmed their prediction that gas prices in the summer of 2013 will rebound, although the upcoming summer still remains a wild card. Goldman has predicted \$4/MMBtu prices in 2013.

### **Market Analysis**

According to BNP Paribas, after a four-year bear market, it appears that US gas prices are staging a comeback. Important shifts in fundamentals suggest that natural gas futures curve will steepen earlier than anticipated. Fundamental factors include:

- Weekly storage injections are less than expected, raising the prospect that the industry might not be as oversupplied as anticipated.
- Trend emerging in the form of partial displacement of base load coal plants by natural gas, suggesting that fuel-switching will continue to limit summer injections. Data shows the natural gas-fired generation has now displaced coal in every region of the US.
- Given BNP's revised supply/demand projections, for 2012 price estimate revised from \$2.34 to \$2.76/MMBtu to reflect lower end-of-season inventory. 2013 estimate of \$4.00/MMBtu from \$3.68 in response to rapidly receding inventory levels.

Wood Mackenzie Comments:

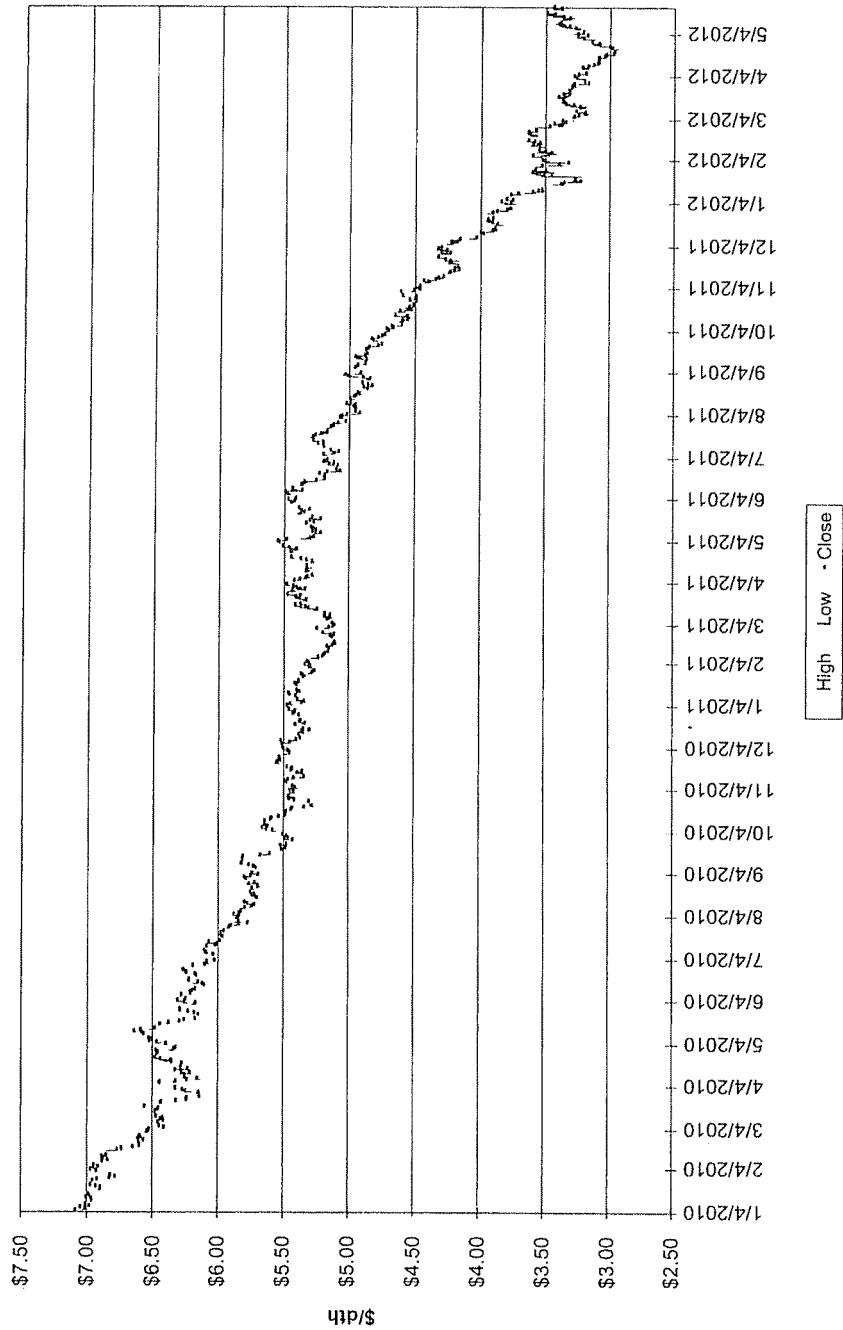
For the next 18 month, most important items to watch in the North American gas markets:

- Marcellus well backlog—Watch for backlog to support strong production growth even if drilling levels decline.
- Stress on producer balance sheets—Producers reducing planned capital expenditures for North American gas, watch for continued declines in their drilling levels.
- Coal market flexibility—coal market has supported gas demand and prices, by buying out coal contracts, reselling volumes into export markets and pursuing off-site stockpiles.

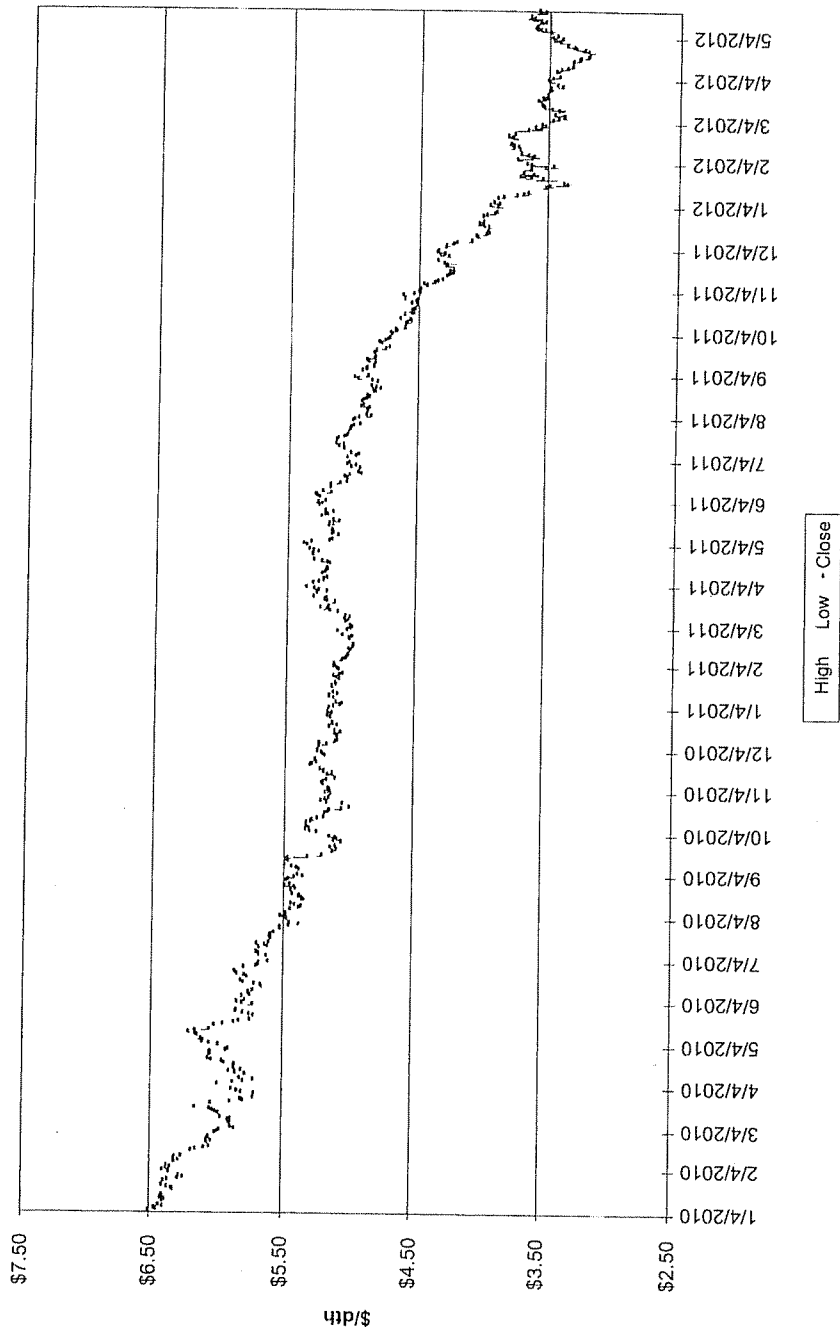
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**May 8, 2012 Release**

Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	3.12
Feb-10	5.32	Feb-11	4.09	Feb-12	2.50	Feb-13	3.10
Mar-10	4.29	Mar-11	3.97	Mar-12	2.18	Mar-13	3.05
Apr-10	4.03	Apr-11	4.25	Apr-12	1.95	Apr-13	3.04
May-10	4.14	May-11	4.31	May-12	2.21	May-13	3.05
Jun-10	4.80	Jun-11	4.55	Jun-12	2.27	Jun-13	3.08
Jul-10	4.63	Jul-11	4.42	Jul-12	2.31	Jul-13	3.11
Aug-10	4.32	Aug-11	4.05	Aug-12	2.44	Aug-13	3.15
Sep-10	3.89	Sep-11	3.90	Sep-12	2.49	Sep-13	3.20
Oct-10	3.43	Oct-11	3.56	Oct-12	2.59	Oct-13	3.29
Nov-10	3.71	Nov-11	3.24	Nov-12	2.73	Nov-13	3.38
Dec-10	4.25	Dec-11	3.17	Dec-12	3.04	Dec-13	3.51
Average 2010	\$ [REDACTED]	Average 2011	\$ [REDACTED]	Average 2012	\$ [REDACTED]	Average 2013	\$ [REDACTED]
Summer 2010	\$ [REDACTED]	Summer 2011	\$ [REDACTED]	Summer 2012	\$ [REDACTED]	Summer 2013	\$ [REDACTED]
Winter 2010-2011	\$ [REDACTED]	Winter 2011-2012	\$ [REDACTED]	Winter 2012-2013	\$ [REDACTED]		

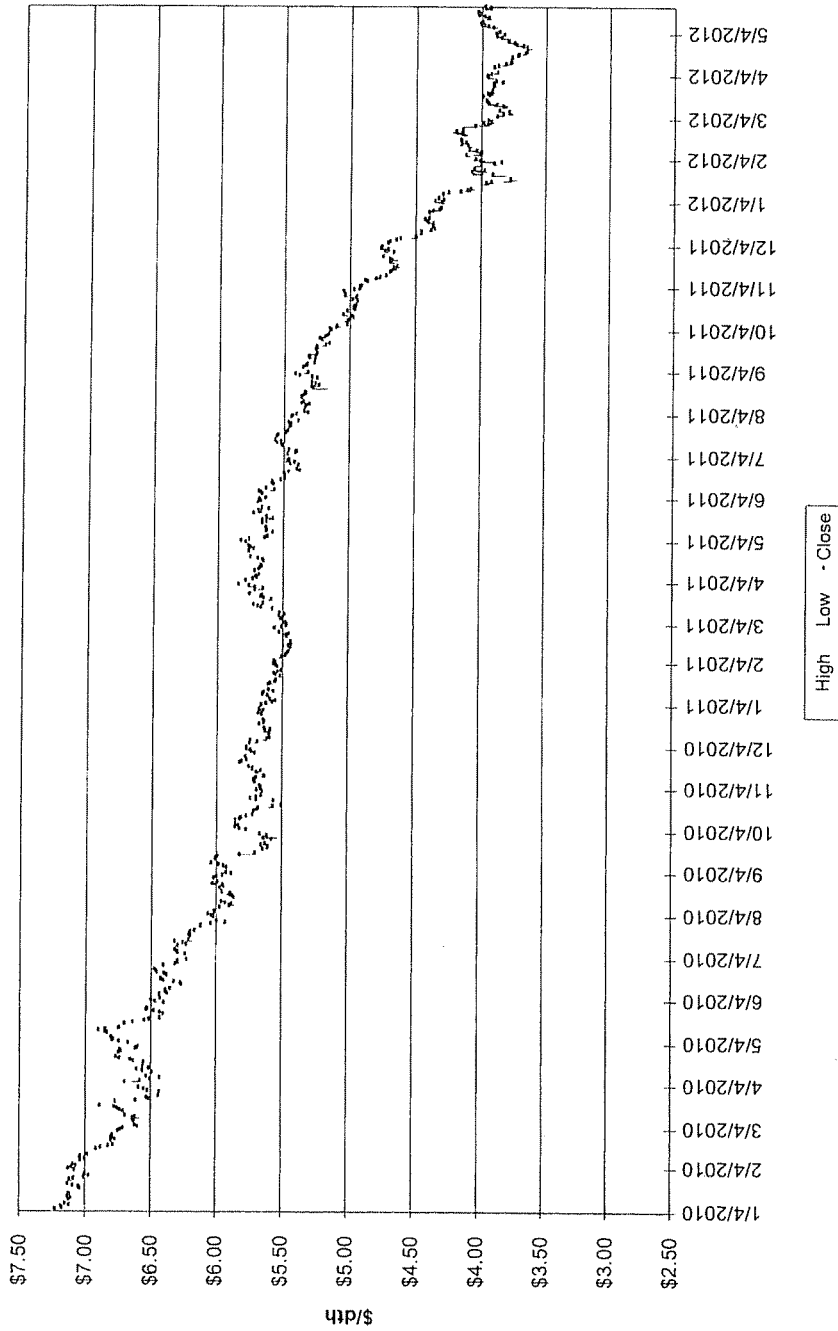
Winter Strip Nov12 - Mar13



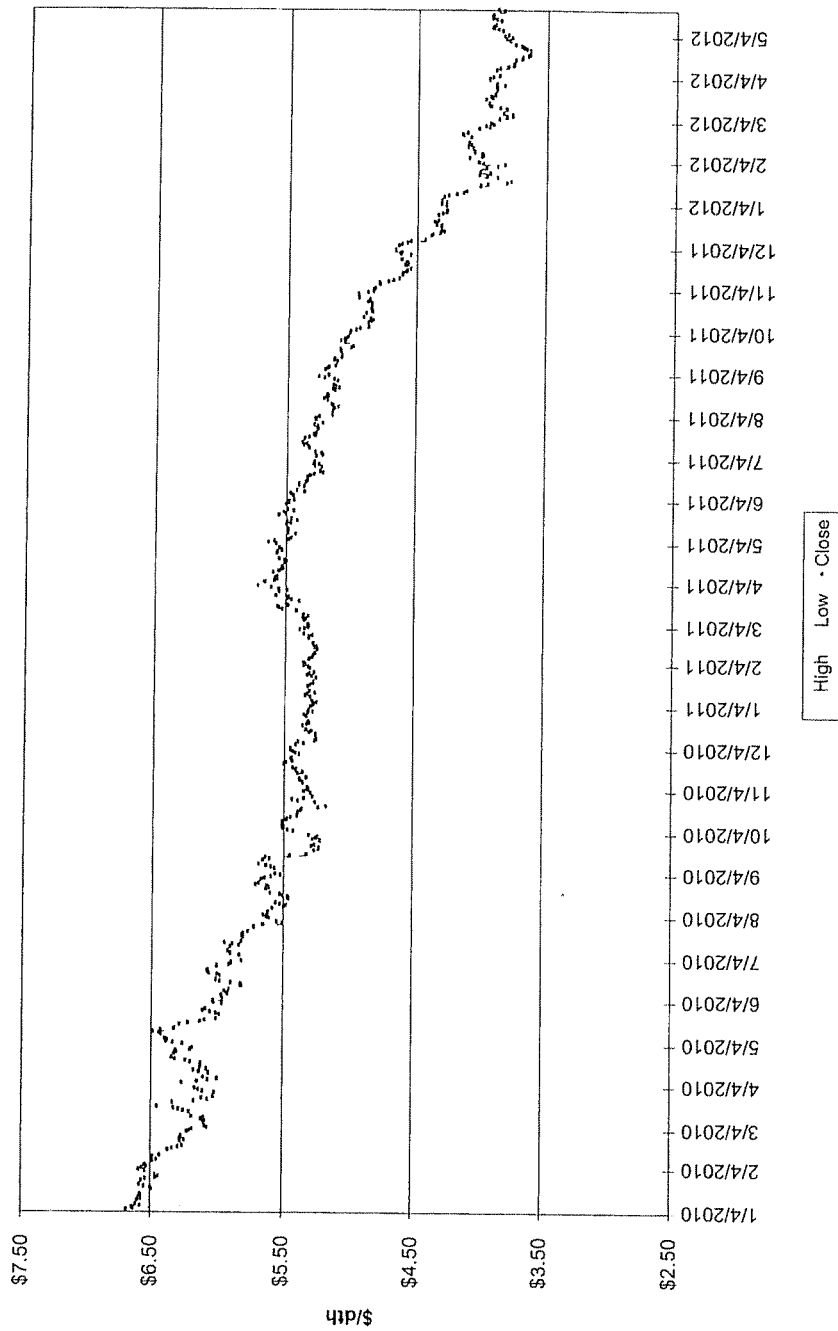
Summer Strip 2013



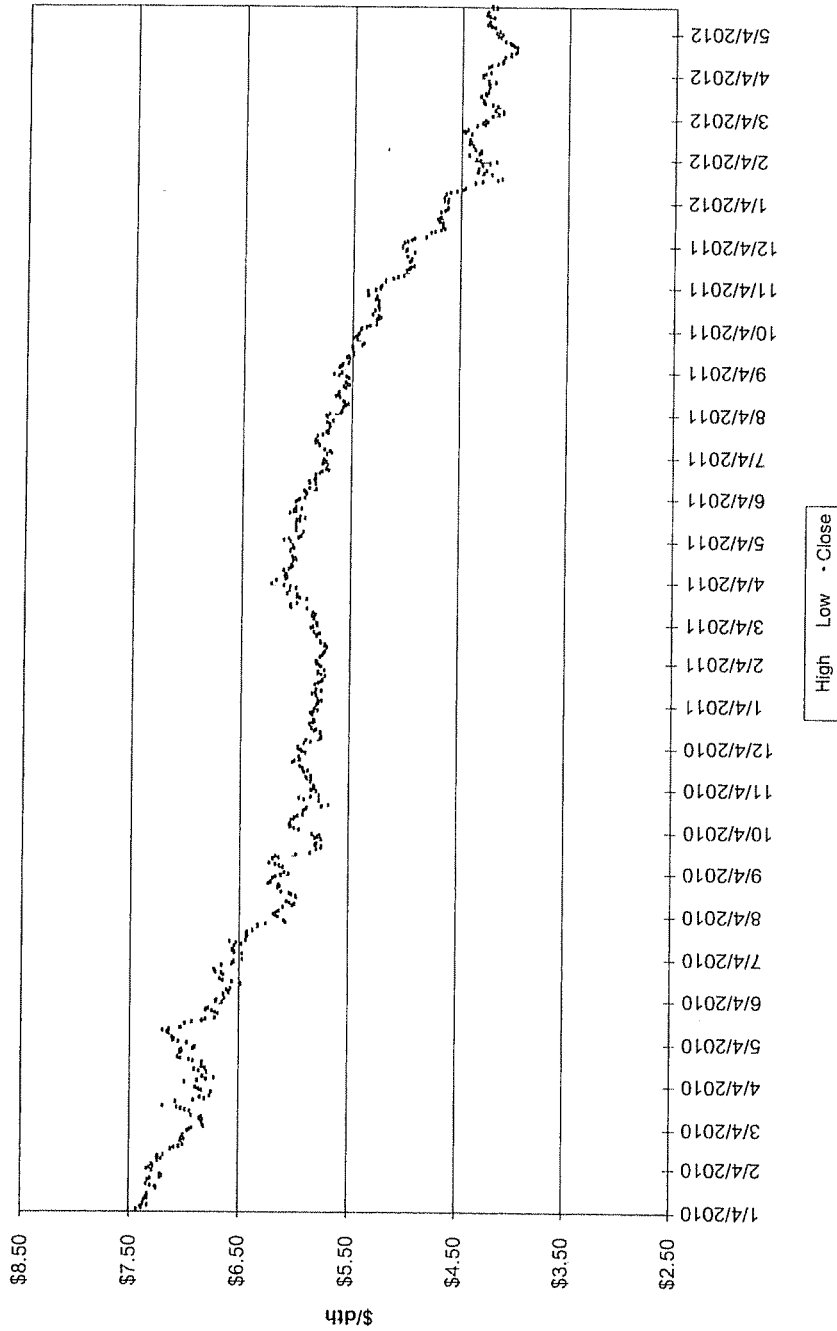
Winter Strip Nov13 - Mar14



Summer Strip 2014

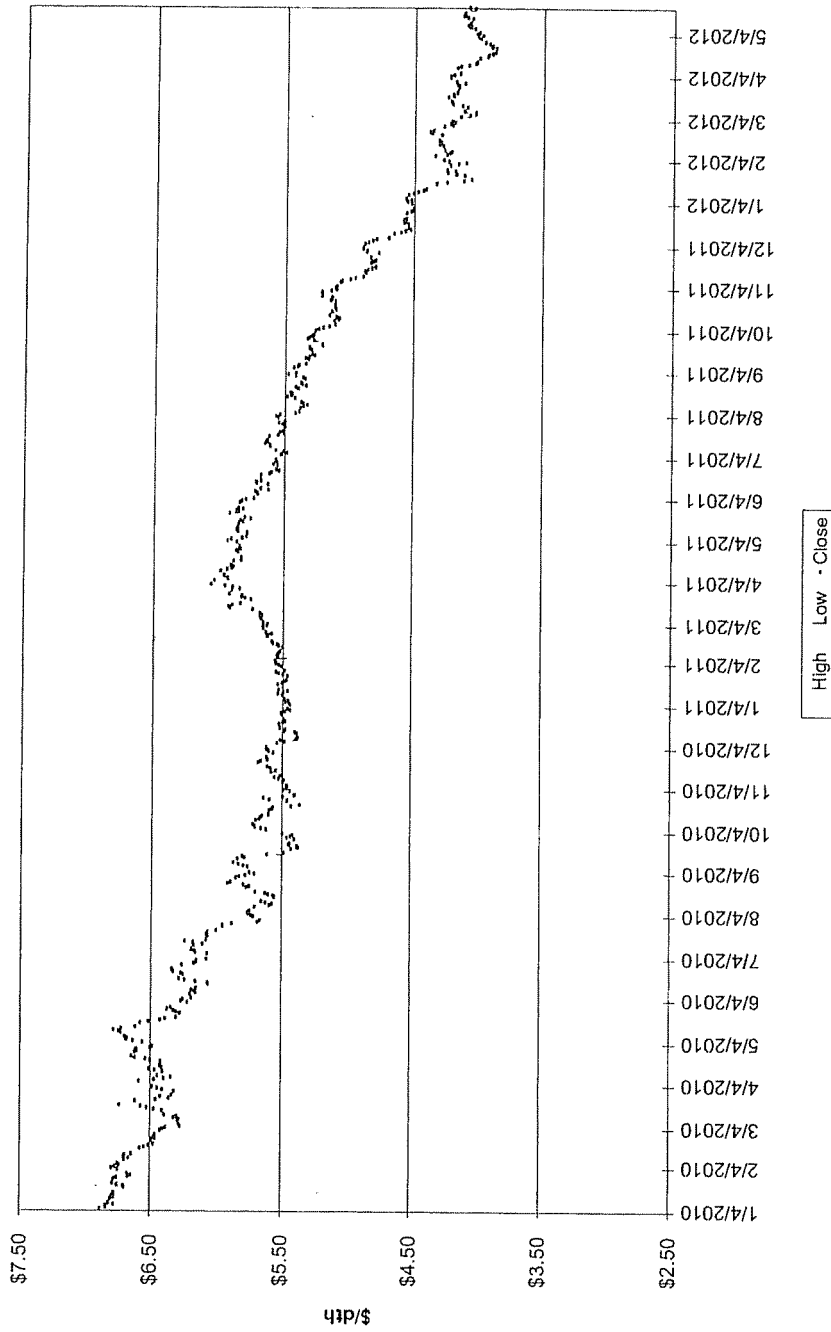


Winter Strip Nov14 - Mar15





Summer Strip 2015





*Independent Statistics & Analysis*

## U.S. Energy Information Administration

### Short-Term Energy Outlook

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 70.2 billion cubic feet per day (Bcf/d) in 2012, an increase of 3.4 Bcf/d (5.1 percent) from 2011 and an upward revision of 0.6 Bcf/d from last month's Outlook. EIA expects that large gains in electric power use will offset declines in residential and commercial use. Because of the much-warmer than-normal winter this year, EIA expects both residential and commercial consumption to fall by over 6 percent in 2012, reflecting a downward revision in projected consumption from last month's Outlook. The downward revisions in residential and commercial consumption reflect the decline in total projected 2012 heating degree-days as reported by the National Oceanic and Atmospheric Administration.

Projected consumption of natural gas in the electric power sector grows by almost 21 percent in 2012, primarily driven by the increasing relative cost advantages of natural gas over coal for power generation in some regions. Consumption in the electric power sector peaks in the third quarter of 2012, at 31.2 Bcf/d, when electricity demand for air conditioning is highest. This compares with 27.7 Bcf/d during the third quarter of 2011.

Growth in total natural gas consumption slows in 2013, with forecast consumption averaging 71.2 Bcf/d. However, unlike 2012, growth in 2013 is driven by consumption from the residential, commercial, and industrial sectors. A forecast of closer-to-normal winter temperatures drives increases in residential and commercial consumption in 2013 of 7.1 percent and 4.2 percent, respectively. The increase in consumption in these sectors, as well as a 1.4-percent increase in industrial consumption, more than offsets a 2.0-percent decline in power-sector natural gas burn.

**U.S. Natural Gas Production and Imports.** Total marketed production of natural gas grew by an estimated 4.8 Bcf/d (7.9 percent) in 2011. This strong growth was driven in large part by increases in shale gas production. While EIA expects year-over-year production growth to continue in 2012, the projected increases occur at a slower rate than in 2011 as low prices reduce new drilling plans. According to Baker Hughes, the natural gas rig count was 613 as of April 27, 2012, down from a 2011 high of 936 in mid-October, making it the lowest rig count since 2002. EIA's production survey indicates natural gas marketed production fell by 420 Bcf/d from January 2012 to February 2012. EIA expects growth in U.S. production during 2012 to average 4.4 percent. Declining production from less-profitable "dry" natural gas plays such as the Haynesville Shale are offset by growth in production from liquids-rich natural gas production areas such as the Eagle Ford and wet areas of the Marcellus Shale, and associated gas from the growth in domestic crude oil production.

## Crude Oil

EIA's current forecast of the average U.S. refiner acquisition cost of crude oil in 2012 is \$110 per barrel, which is \$2.50 per barrel lower than in last month's *Outlook*, but still about \$8 per barrel higher than last year's average price. EIA expects the price of West Texas Intermediate (WTI) crude oil to average about \$104 per barrel in 2012, about \$2 per barrel lower than the forecast in last month's *Outlook*, but \$9 per barrel higher than the 2011 average price. EIA expects crude oil prices to remain relatively flat in 2013.



Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 June 29, 2012

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (July 12--Sept 12)	↑	Long	NOAA predicting above average temperatures for July 2012--September 2012 over the CONUS.	12
Mid Term Forecast (30-60 days)	↑ ↓	Long	July is predicted to be 12.7% warmer than normal based on 10 year normals and August weather is predicted to be 1.1% below normal.	13
Short Term Forecast (6-10 days)	↑	Short	Above and Much Above over most of CONUS early in the period with normal temperatures moving from west to east weather later in the period.	14
Tropical Storm Activity	↑	Short	Bureau of Safety and Environmental Enforcement said on Tuesday that approximately 17.2% of offshore production was shut-in as a result of Debby. This is some 773,000 Mcf/day.	
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage injections for the week ending June 22nd were 57 BCF. Storage levels are at 3.053 TCF which is 27.1% higher than last year and 25.0% higher than the 5 year average. Storage levels have reached the 3-Tcf level the earliest point on record (earliest prior was July 23, 2009). Canadian storage glut may have an impact on US prices as Canadian producers attempt to find a market for Canadian gas. Canada storage fields could be full in a matter of weeks. Active gas rigs at 13-year low to 541.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13 Summer 2013: [REDACTED]	↑ ↓	Long	GAS PRICE SCORECARD: Gas Price Outlook for July 2012--Sept. 2012 remains "Bearish", Gas Price Outlook for Oct. 2012--March 2013 is "Bullish".	16-17
Gas Daily--Price Predictions	↑ ↓	Long	According to the International Energy Agency gas prices to recover to \$3.50/MMBtu in 2013 from an estimated \$2.50/MMBtu average in 2012. 2013 will be a turning point for gas prices as producers pull back even as demand rebounds. Also IEA predicts gas prices to rise back over \$4.00/MMBtu by 2014. Gas prices will need to rise significantly from current levels if producers hope to recover drilling costs according to ExxonMobil. Producers are "all losing our shirts" with gas prices below \$3.00/MMBtu.	18
Gas Daily--Coal-to Gas Switching	↑	Long	Natural gas and coal each accounted for 32% of electricity generated in April. The average spot price of Henry Hub gas was \$17.80/MWH in April while the average spot price of Central Appalachian coal was \$30.76/MWH. Credit Suisse estimates that switching would peak at 58c/d from last year at \$2.50/Mcf but only 500,000 Mcf/d if prices rise to \$4/Mcf. Coal plant will take back market share as gas prices rise. Utilities, as summer heat approaches, run their coal-fired plants even though they are less economic because they want gas-fired plants in reserve in case of spikes in demand.	19-20
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.126 Summer 2013: \$3.171	↑	Long	The projected Henry Hub natural gas spot price averages \$2.554/MMBtu for 2012 and \$3.226/MMBtu for 2013.	21
<b>Technical Analysis</b>				
Winter 2012-13 Strip Chart	↑	Short	Closed at \$3.32	22
Summer 2013 Strip Chart	↑	Short	Closed at \$3.49	23
Winter 2013-14 Strip Chart	↑	Short	Closed at \$3.91	24
Summer 2014 Strip Chart	↑	Short	Closed at \$3.82	25
Winter 2014-15 Strip Chart	↑	Short	Closed at \$4.17	26
Summer 2015 Strip Chart	↑	Short	Closed at \$4.00	27
<b>Economy</b>				
Demand	↑	Long	EIA projects total natural gas consumption to grow by 4.1% to 69.5 Bcf/d in 2012 resulting from large gains in electric power generation.	28-29
Supply	↔	Long	Total marketed production grew by an estimated 4.8 Bcf/day or 7.9% in 2011, the largest volumetric increase in history. Production growth will continue in 2012 and 2013 but at a much lower rate due to low prices impacting new drilling plans.	28-29
Oil Market	↔	Long	EIA expects WTI spot prices to average of \$93 per barrel in 2012 and 2013 this is a significant reduction from last months forecast due to concerns about the world economy and oil demand growth.	28-29

Meeting Minutes: 426 Annex Conference Room - 10:30 am  
 Attendees: Jim Mehring, Jeff Kern, Joachim Fischesser, Steve Niederbauer  
 Discussed market fundamentals including weather (hurricane activity Debby), storage inventory levels, PIRA and EIA price forecasts, independent analysts projections of supply and demand and the impact on gas prices, economic influences on supply and demand and technical analysis on Summer and Winter Strip prices. In addition, reviewed DEO and DEK's hedging program to date. Significant discussion took place around the record storage level, current hot weather, aftermath of hurricane Debby and the recent runup of prices. Based on these factors, a decision was made not to hedge additional volumes.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2011 - October 2012  
 As of 06/25/12

	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Collar												
Collar												
Total Hedged (quantity)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt. Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (Incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 06/25/12

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged / Withdrawal</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Cost Avg. (1)												
Total Hedged (Mcf)												
Total Hedged (Dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amount Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 08/25/12

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Total Hedged (dth/day)												
Total Hedged (dlh)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.



Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 06/25/14



Load Forecast  
 City Gate Load Forecast (Mcf)  
 TCO FSS Injections (Mcf)  
 Total Requirements (Mcf)  
 TCO FSS Withdrawals (Mcf)  
 Other "Withdrawals" (Mcf)  
 Total Withdrawals (Mcf)

Amount Hedged (dth/day)  
 Fixed Price  
 TBD  
 Total Hedged (dth/day)  
 Total Hedged (dth)

Types of Hedging Products (1)  
 Fixed Price  
 Price Caps  
 No-Cost Collars

Embedded Hedged Cost  
 Winter  
 Summer

Estimated EGC per Dth at City Gate  
 Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

Amt Hedged with Storage @ City Gate  
 Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (incl. Injections) (Dth)  
 % Hedged & Storage  
 Seasonal %

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

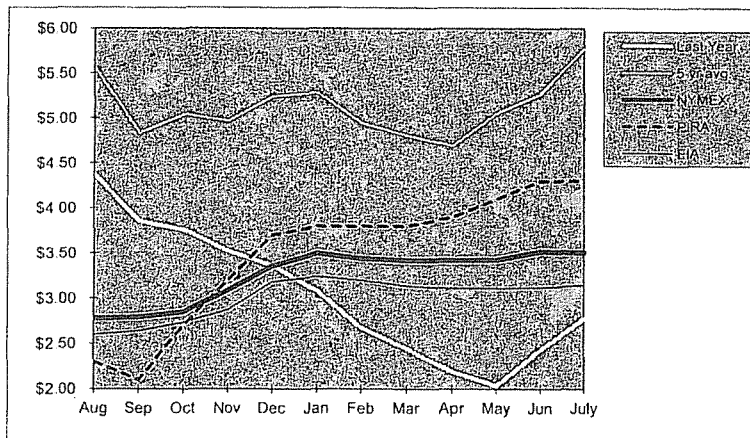
6/25/2012

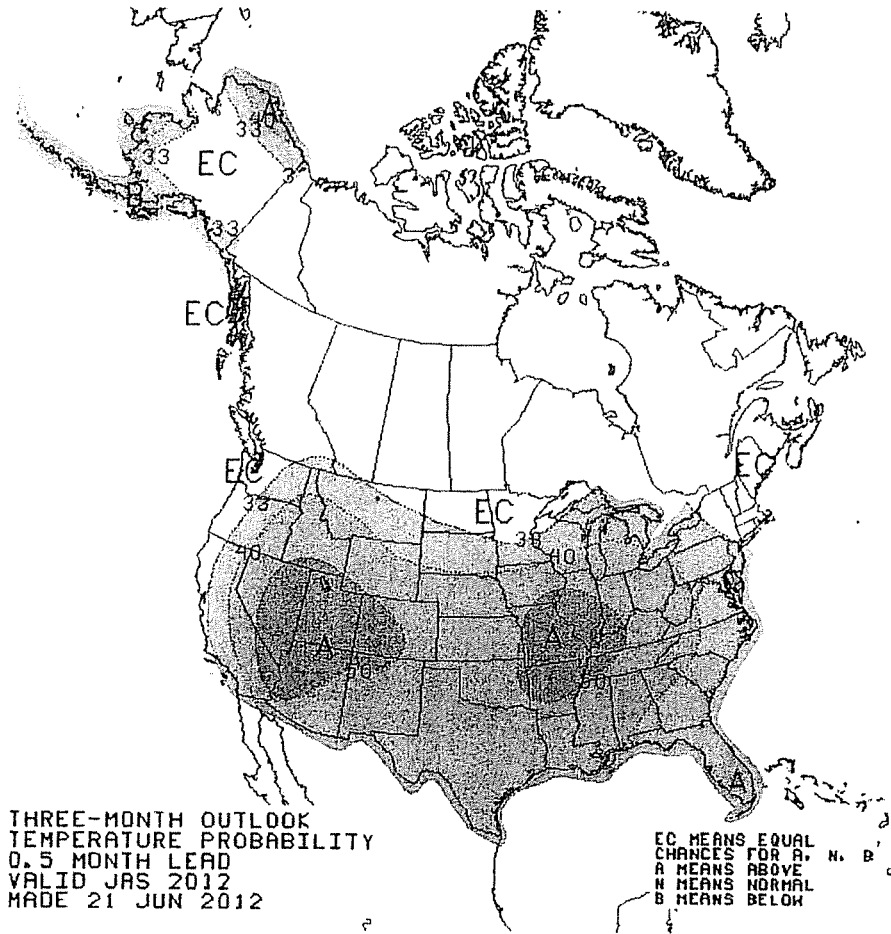
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/12)	
		Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2012					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2012					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					

COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES

Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (07/08-11/12)	Last Year (2011-2012)		PIRA 26-Jun-12	EIA 10-Jun-12	NYMEX 29-Jun-12		
Aug	\$5.57	\$4.37			\$2.600	\$2.778		
Sep	\$4.84	\$3.86			\$2.640	\$2.792		
Oct	\$5.04	\$3.76			\$2.730	\$2.850		
Nov	\$4.97	\$3.52			\$2.870	\$3.086		
Dec	\$5.24	\$3.36			\$3.180	\$3.355		
Jan	\$5.28	\$3.08			\$3.240	\$3.500		
Feb	\$4.95	\$2.68			\$3.200	\$3.442		
Mar	\$4.81	\$2.45			\$3.140	\$3.419		
Apr	\$4.70	\$2.19			\$3.110	\$3.419		
May	\$5.06	\$2.04			\$3.110	\$3.425		
Jun	\$5.27	\$2.43			\$3.120	\$3.519		
July	\$5.78	\$2.77			\$3.150	\$3.507		
12 Month Avg	\$5.13	\$3.04			\$3.008	\$3.258		
Summer Average					\$2.923	\$3.184		
Winter Average					\$3.126	\$3.360		





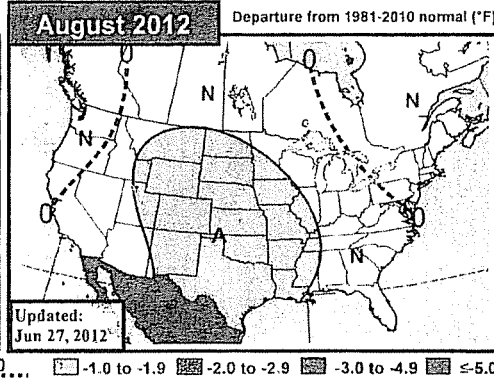
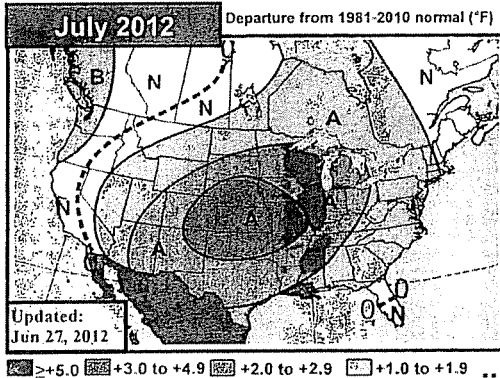
# EarthSat's 30-60 Day Outlook



EarthSat Weather

Wednesday, June 27, 2012

Meteorologists: SS/BH



Legend for temperature departure maps:  
 >+5.0, +3.0 to +4.9, +2.0 to +2.9, +1.0 to +1.9, 0.0 to 0.9, -1.0 to -1.9, -2.0 to -2.9, -3.0 to -4.9, ≤-5.0

**Previous** Major warm changes to forecast  
 Extensive heat in central US

Significant warm changes were made to the forecast this month, propelling July into the Top 5 warmest months based on PWCCDD dating back to 1950. Widespread anomalies of >2F are expected from the southern Rockies into much of the Plains and Midwest (where drought will help), and aboves have been extended into the East. Further warm changes may yet be in store, as the current forecast is based on the heat diminishing by the latter part of the month. Our current forecast out to July 11 totals 157 CDDs, which outpaces the extremely hot 2011 by 20 PWCCDDs (though much of 2011's most impressive heat was on the back end of the month). If the heat doesn't diminish significantly, 2012 may rival or even exceed 2011's PWCCDD totals. The CFS model supports the heat overall, as does the -PDO/+AMO combo and, at least early on, the ongoing low AAM base state. There is still the risk of the -SOI driving conditions cooler in the latter part of the month, but this has yet to show strong correlations this season.

Jul PWCCDD** Forecasts	**10Y Normal updated to '02-'11		
Jul 2012 Fcst:	380.0	10Y Normal*	337.2
		30Y Normal	333.9
		Jul-2011	412.5
Change:	+32	**National Population-Weighted CDDs	

**Previous** More aboves in western Midwest and in Rockies  
 Marginal warm changes in East

While not nearly as extreme as July, August showed some warm changes this week with above normal temperatures extending further into the Rockies and also into the western Midwest, and the 0F line moving northward into the Mid-Atlantic. The warmer changes were spurred in large part due to the slower arrival of El Niño impacts so far this summer, and the risk that it doesn't abruptly change into August either. Drought is certainly a factor, with dry conditions from the Southwest into the Plains, Midwest, and South potentially leading to warmer risks. The CFS model supports the continuation of the heat as well, showing hotter conditions than our forecast across the Midwest and Mississippi Delta region. The downside risk still centers around El Niño, as a more classic pattern associated with this signal could eventually lead towards a cooler solution.

Aug PWCCDD** Forecasts	**10Y Normal updated to '02-'11		
Aug 2012 Fcst:	318.0	10Y Normal*	321.6
		30Y Normal	307.0
		Aug-2011	348.5
Change:	+3	**National Population-Weighted CDDs	

**June so far**

Final 60 Day Outlook    Final 30 Day Outlook    Verif. current forecast (6/1-6/30)

June still appears to be much hotter than expected across the Plains, Rockies, and Southwest. It's a bit cooler than expected in the South and along the East Coast (though the upcoming heat pushes things slightly closer to our forecast if you look away the first week of June and added the first week of July the Midwest and East would be substantially warmer). We did catch the cooler weather in the Northwest and the heat in the central Plains as well as the seasonable weather in California. Despite a cool start, if the current forecast for the next few days is correct June will total 254 PWCCDDs, 8th warmest since 1950 and only 1 PWCCDD from our final forecast.

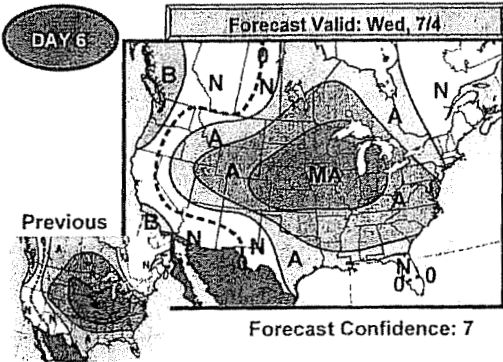


# 6-10 Day Forecast—Detailed

Friday, June 29, 2012 Meteorologist: BH/AC

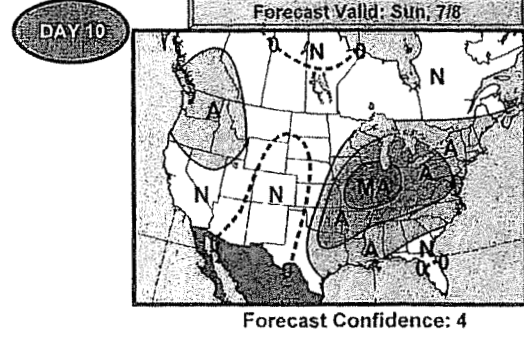
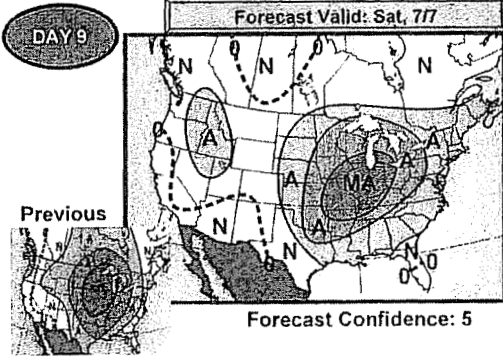
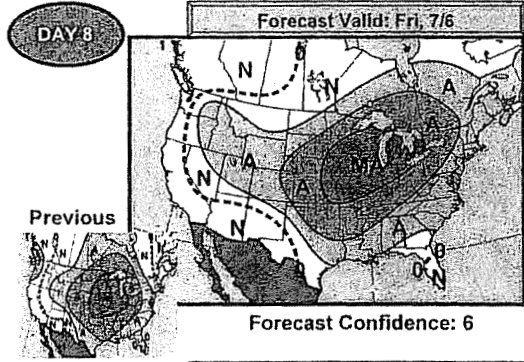
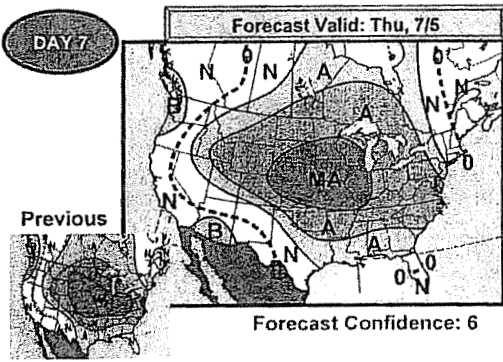


## Forecast Temperature Deviations



**\*Confidence Down Due To 2nd Half Discrepancies\***  
**\*Strongest Heat In Plains, Midwest Early\***

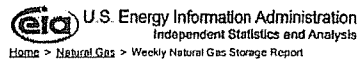
Models have diverged during the second half of the forecast period, causing this forecast to come down in confidence. The strong heat continues to span across the Midwest and Plains through the early part of the period, and the models do agree with this assessment still. The second half of the period could contain cooler than expected temperatures from the Northern Plains into the foothills of the Rockies with the filtering of cooler air from the Northern Tier possible. The MJO could progress into Phase 2, emphasizing the chance for stronger warmth for the Northeast in the latter part of the period. Stronger warmth could exist across the Northwest for the latter part of the period as well.



A +3F to +4F
  A +5F to +7F
  MA +8F to +14F
  SA +15 or Higher  
 B -3F to -4F
  B -5F to -7F
  MB -8F to -14F
  SB -15 or Lower

Weekly Natural Gas Storage Report

Page 1 of 1



Weekly Natural Gas Storage Report

[Release Schedule](#)  
[Sign Up for Email Updates](#)

Released: June 28, 2012 at 10:30 a.m. (eastern time) for the Week Ending June 22, 2012  
 Next Release: July 6, 2012

Working Gas in Underground Storage, Lower 48

other formats: [Summary TXT](#) [CSV](#)

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	06/22/12	06/15/12	Change	Year Ago (06/22/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,477	1,443	34	1,111	32.9	1,189	24.2
West	456	447	9	331	37.8	372	22.6
Producing	1,130	1,116	14	967	16.9	890	27.0
Total	3,063	3,006	57	2,410	27.1	2,450	25.0

Notes and Definitions

Beginning with the report period for the week ending March 16, 2012, EIA is including salt dome and nonsalt-dome subtotals for the Producing Region in the Summary section. The sum of the components may not equal the total for the Producing Region, because of independent rounding.

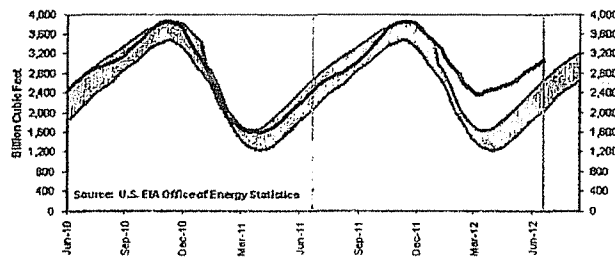
Summary

Working gas in storage was 3,063 Bcf as of Friday, June 22, 2012, according to EIA estimates. This represents a net increase of 57 Bcf from the previous week. Stocks were 653 Bcf higher than last year at this time and 613 Bcf above the 5-year average of 2,450 Bcf. In the East Region, stocks were 288 Bcf above the 5-year average following net injections of 34 Bcf. Stocks in the Producing Region were 240 Bcf above the 5-year average of 890 Bcf after a net injection of 14 Bcf. Stocks in the West Region were 84 Bcf above the 5-year average after a net addition of 9 Bcf. At 3,063 Bcf, total working gas is above the 5-year historical range.

Working gas stocks in the Producing Region, for the week ending June 22, 2012, totaled 1,130 Bcf, with 267 Bcf in salt cavern facilities and 862 Bcf in nonsalt cavern facilities. Working gas stocks increased 2 Bcf in the salt cavern facilities and increased 11 Bcf in the nonsalt cavern facilities since June 15. An historical series of the salt and nonsalt subtotals of the Producing Region is available for download at: [wngr producing region salt.xls](#).

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- Performance Evaluation
- Related Links
- Storage Basics
- Natural Gas Weekly Update
- Natural Gas Navigator

Working Gas in Underground Storage Compared with 5-Year Range



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2007 through 2011.  
 Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**June 26, 2012 Release**

Jan-10									
Feb-10									
Mar-10									
Apr-10									
May-10									
Jun-10									
Jul-10									
Aug-10									
Sep-10									
Oct-10									
Nov-10									
Dec-10									
Average 2010	\$								
Summer 2010	\$								
Winter 2010-2011	\$								
Jan-11									
Feb-11									
Mar-11									
Apr-11									
May-11									
Jun-11									
Jul-11									
Aug-11									
Sep-11									
Oct-11									
Nov-11									
Dec-11									
Average 2011	\$								
Summer 2011	\$								
Winter 2011-2012	\$								
Jan-12									
Feb-12									
Mar-12									
Apr-12									
May-12									
Jun-12									
Jul-12									
Aug-12									
Sep-12									
Oct-12									
Nov-12									
Dec-12									
Average 2012	\$								
Summer 2012	\$								
Winter 2012-2013	\$								
Jan-13									
Feb-13									
Mar-13									
Apr-13									
May-13									
Jun-13									
Jul-13									
Aug-13									
Sep-13									
Oct-13									
Nov-13									
Dec-13									
Average 2013	\$								
Summer 2013	\$								



**North American Gas Forecast Monthly**

June 26, 2012

NATURAL GAS

**U.S. GAS PRICE SCORECARD: JULY 2012 – MARCH 2013**

Bearish Neutral Bullish

Supply: Jul.-Sep.	Outlook	Commentary
Domestic Production		Despite plummeting gas rig counts, production shows no sign of a substantive slowdown. But a large sequential pullback before November still appears required to balance the market barring bullish weather anomalies.
U.S. Net Trade		The long awaited jump of Canadian exports remains more subdued, partly due to lower production and enough storage refills to keep the Y/Y surplus near 150 BCF by end-June.
U.S. Storage Levels		The expected end-June Y/Y storage surplus of ~600 BCF will require a ~2.5 BCF/D Y/Y slowdown of injections over the next few months given usable capacity limits — a challenging task without the help of bullish weather events.
Demand: Jul.-Sep.	Outlook	Commentary
Electric Generation (EG)		Despite higher gas prices, incremental Y/Y coal-to-gas substitution (~2.7 BCF/D) is forecast to drive gas-fired EG higher Y/Y by 3.0-3.5 BCF/D over the next four months.
Industrial Sector		Weather-adjusted gas demand growth has been less than indicated by PIRA's U.S. manufacturing activity signposts in the face of cheap domestic gas.
Supply: Oct.-Mar.	Outlook	Commentary
Domestic Production		Lower 48 production will feel the effect of the gas-oriented drilling collapse, thereby, reducing Y/Y output, despite the partially offsetting impact of more associated gas.
U.S. Net Trade		Incremental Y/Y Canadian exports should reflect higher gas prices and stronger demand south of the border.
U.S. Storage Levels		A weather-driven demand rebound and lower production are forecast to generate sizable Y/Y storage deficits in 1Q13.
Demand: Oct.-Mar.	Outlook	Commentary
Electric Generation (EG)		Higher Y/Y gas prices are forecast to reduce coal-to-gas substitution with resulting declines in gas-fired EG.
Industrial Sector		Gas demand will get a boost from incremental space heating, if heating degree days are closer to normal.
Residential/Commercial (R/C)		PIRA's "normal" weather model implies that Nov. – Mar. Y/Y gas heating growth will average 5-6 BCF/D (0.8-0.9 TCF)
Gas Prices Outlook	Outlook	Commentary
July 2012 — September 2012		Domestic gas balances will struggle to cope with the storage surplus, although we expect bullish momentum to build regarding post-September price prospects.
October 2012 — March 2013		A more normal heating season, coupled with declining Y/Y production, should set the stage for stronger gas prices than indicated by the NYMEX forward curve.
NYMEX Prices and Speculation		
Non-commercial trading has slowed in recent weeks, the likely result of turmoil across most financial markets (including commodities and equities) as uncertainty surrounding the global and U.S. economies has increased. In the case of natural gas, the combined NYMEX/ICE long futures position was pared by ~18,000 lots, while short holdings expanded by ~10,000 lots — relatively minor changes when compared to the sizeable changes recorded in the preceding months.		

### Gas Price Predictions

According to Wood Mackenzie assuming normal weather, a gas price below \$2.25 puts too much gas demand in play from the power sector, prices above \$2.58/MMBtu will push too much gas into storage. "With competitive gas prices and high coal stockpiles, generators can respond quickly to changes in relative fuel prices, so even if the heat stretches into July and August, those stockpiles will keep Henry Hub well below \$3.00/MMBtu.

US gas prices to recover to \$3.50 in 2013 from an estimated \$2.50/MMBtu average in 2012 according to the International Energy Agency. 2013 will be a "turning point" for US gas prices as producers pull back even as demand rebounds. Gas prices are expected to rise back over \$4.00/MMBtu by 2014, resulting in gas production increasing again due to a large number of wells drilled but not completed.

North American gas prices will need to rise significantly from current levels if producers hope to recover drilling costs according to ExxonMobil. Exxon and other producers are "all losing our shirts" with gas prices below \$3.00/MMBtu. "Today we're seeing these very low prices because the industry overshot when we had those six, seven, eight and nine-dollar prices. Now we have overdeveloped." "We have a historic opportunity to rejuvenate the American economy and rejuvenate American manufacturing and competitiveness because we now have a long-term stable supply of natural gas."

## **Coal-to-Gas Switching**

### **Gas equals coal's power-gen share for first time**

Natural gas and coal each accounted for 32% of electricity generated in the US in April according to EIA. This is the first time natural gas has matched coal since EIA began collecting data in 1973. In 1973 coal accounted for 45.5% of generation and gas made up 18.3%. The EIA report indicated that the average spot price of Henry Hub gas was \$17.80/MWh in April while the average spot price of Central Appalachian coal was \$30.76/MWh.

### **Analysts see room for more coal-to-gas switching**

There is room for natural gas to take more power-generation market share from coal this year, but switching would be tightly linked to spot gas prices and could see a pullback in 2013. Coal plants would take back incremental market share as gas prices climb past key benchmarks in the upper \$2, and at \$3 and \$4/Mcf. Credit Suisse estimates that switching would peak in the July/August period at 5 Bcf/d assuming gas at \$2.50/Mcf but just 500,000 Mcf/d if gas were to rise to \$4/Mcf. Credit Suisse for 2013 sees gas' market share down year-over-year depending on gas price assumptions, with \$3.50/Mcf gas potentially loses 1 Bcf/d to 2 Bcf/d of demand.

### **Coal-to-gas switch happening faster, but pace likely to slow**

Low gas prices have pushed utilities to switch from coal to gas at a rate not seen in years, but the pace will likely slow due to reliability issues and generation limits. Power burn was up 1.7 Bcf/d to 31 Bcf/d a 27% increase from last year. Utilities, as summer heat approaches, run their coal-fired plants even though they are less economic because they want gas-fired plants in reserve in case of spikes in demand. Additional switching will likely be limited by the amount of gas-fired generation currently available in the US.

### **Several factors limit coal-to-gas switching**

FBR has indicated they expect coal-to-gas switching during the summer months to be "very limited" but will lead to "significant but not extraordinary" switching levels for 2012 as a whole. FBR estimates incremental coal-to-gas switching of about 3 to 3.5 Bcf/d will

occur for 2012, compared to 2011. Limiting factors include combined-cycle gas turbine utilization, forced burns of coal and reliability concerns will cause utilities to run coal plants instead of gas regardless of price signals. "As for the future of the industry, many utilities and regulators fear that heavy reliance on natural gas will prove to be risky given the inherent volatility in natural gas prices, but our sense is that the allure of today's cheapest option (natural gas) will be hard to resist long term."

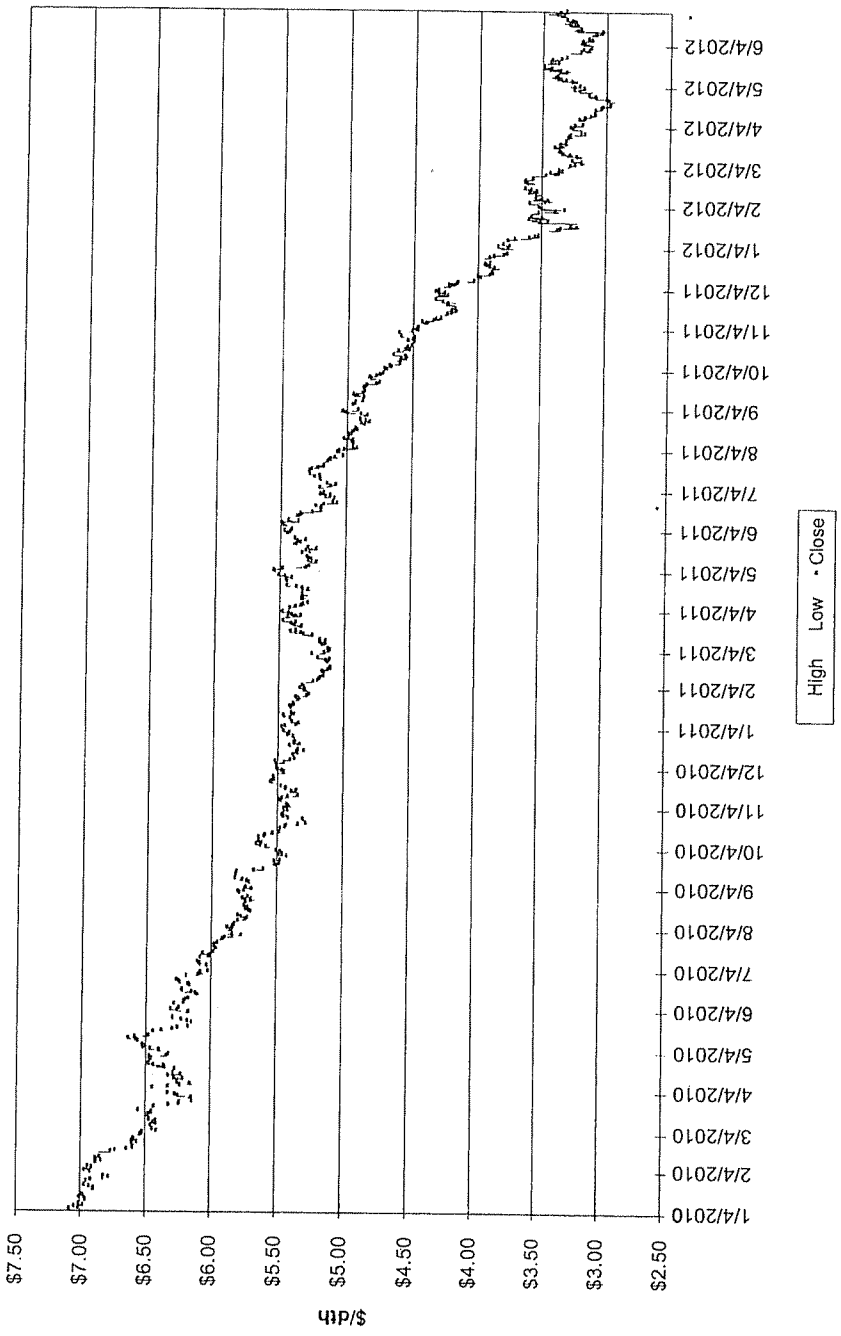
**Fuel-switching 'most important dynamic' for gas**

Fuel switching offers a viable long-term solution for the natural gas industry to rebalance supply and demand. "Fuel-switching is the most important dynamic to watch for in 2013. Baseload coal plants are losing market share." Less gas will be available for injection into storage. According to BNP Paribas, fuel-switching alone will not boost gas consumption enough to keep up with supply. Other factors critical to increasing demand going forward include LNG exports, growing fertilizer and ammonia demand, and regulatory changes—including the Cross-State Air Pollution Rule concerning power plant emissions. Paribas expects Henry Hub prices to average \$2.75/MMBtu in 2012, \$4.00/MMBtu in 2013 and \$8.00/MMBtu in 2015.

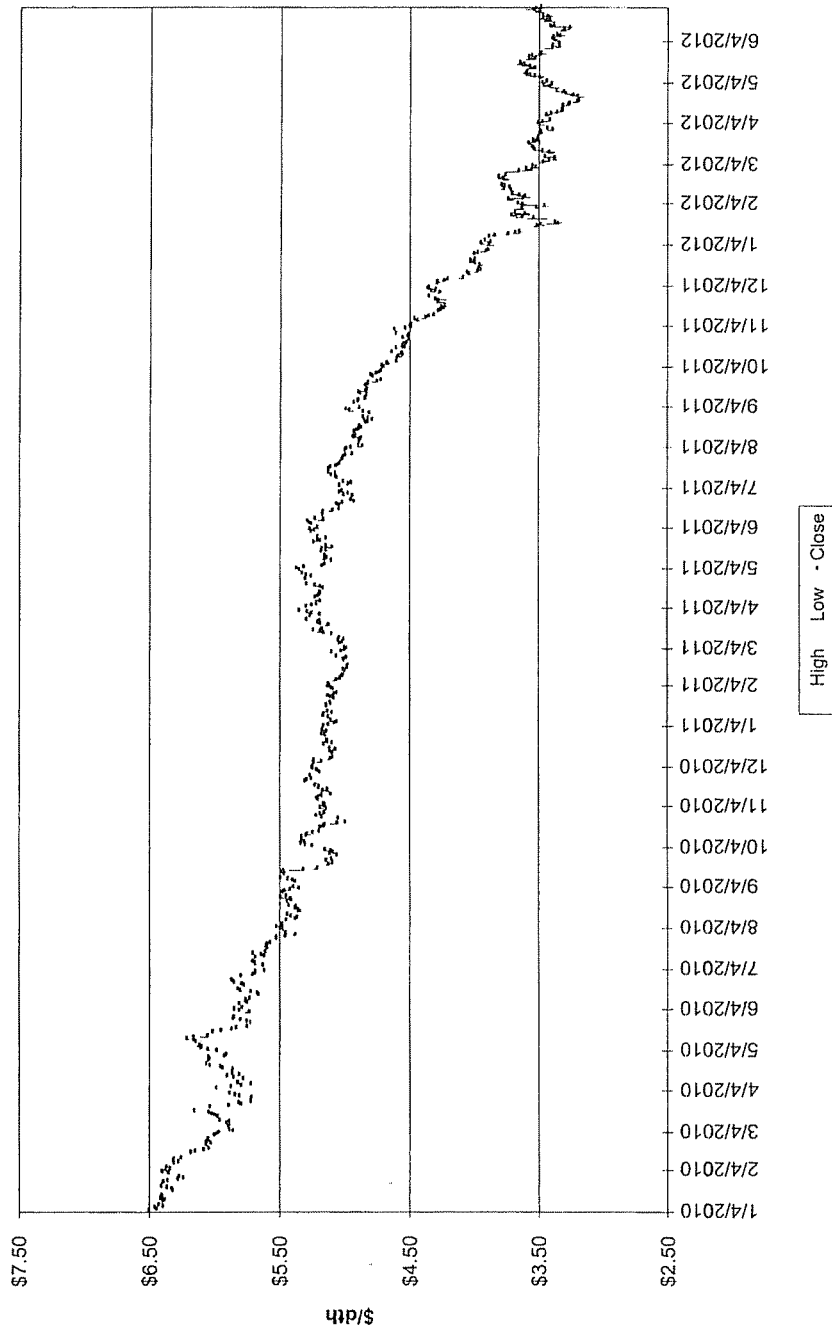
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**June 10, 2012 Release**

Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	3.24
Feb-10	5.32	Feb-11	4.09	Feb-12	2.50	Feb-13	3.20
Mar-10	4.29	Mar-11	3.97	Mar-12	2.18	Mar-13	3.14
Apr-10	4.03	Apr-11	4.25	Apr-12	1.95	Apr-13	3.11
May-10	4.14	May-11	4.31	May-12	2.43	May-13	3.11
Jun-10	4.80	Jun-11	4.55	Jun-12	2.41	Jun-13	3.12
Jul-10	4.63	Jul-11	4.42	Jul-12	2.49	Jul-13	3.15
Aug-10	4.32	Aug-11	4.05	Aug-12	2.60	Aug-13	3.18
Sep-10	3.89	Sep-11	3.90	Sep-12	2.64	Sep-13	3.22
Oct-10	3.43	Oct-11	3.56	Oct-12	2.73	Oct-13	3.31
Nov-10	3.71	Nov-11	3.24	Nov-12	2.87	Nov-13	3.40
Dec-10	4.25	Dec-11	3.17	Dec-12	3.18	Dec-13	3.53
Average 2010	\$ [REDACTED]	Average 2011	\$ [REDACTED]	Average 2012	\$ [REDACTED]	Average 2013	\$ [REDACTED]
Summer 2010	\$ [REDACTED]	Summer 2011	\$ [REDACTED]	Summer 2012	\$ [REDACTED]	Summer 2013	\$ [REDACTED]
Winter 2010-2011	\$ [REDACTED]	Winter 2011-2012	\$ [REDACTED]	Winter 2012-2013	\$ [REDACTED]		

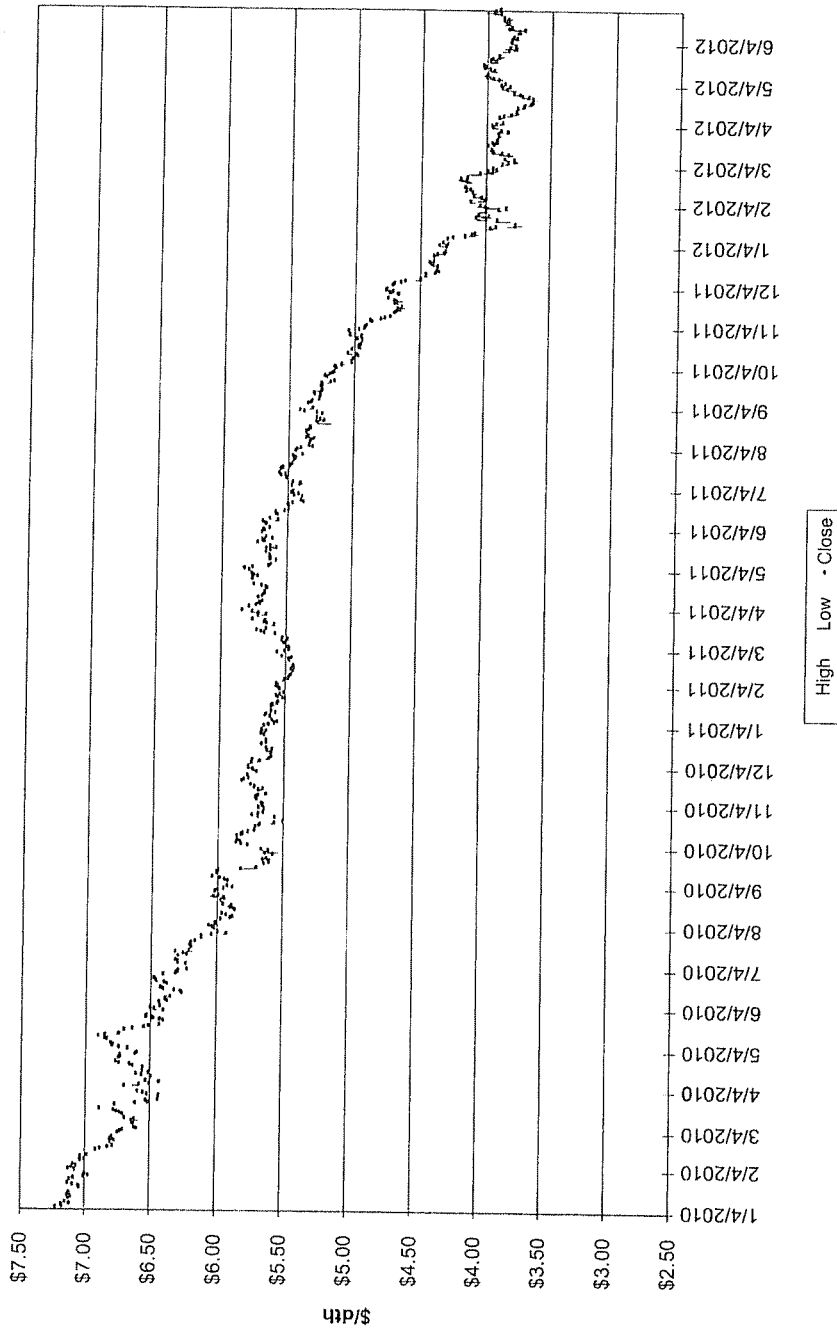
Winter Strip Nov12 - Mar13



Summer Strip 2013

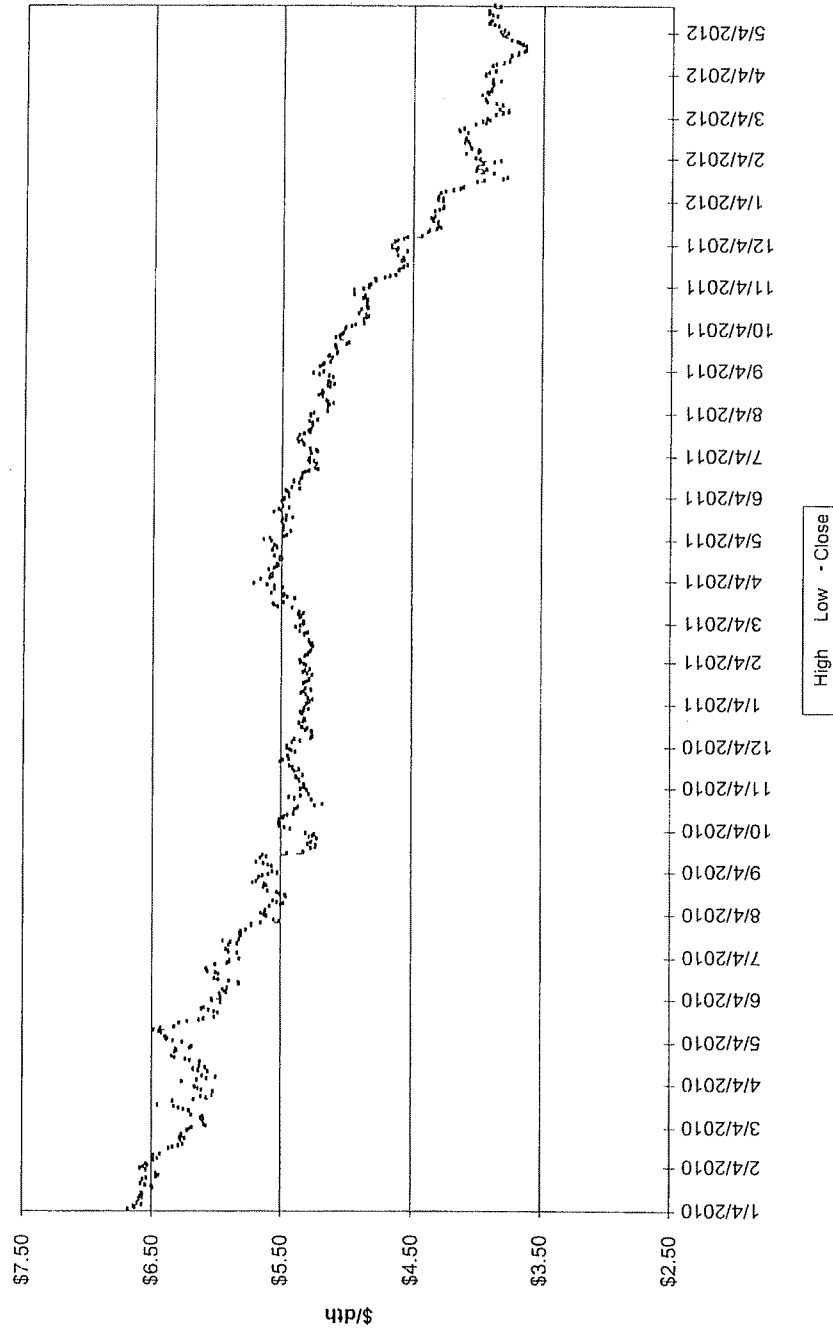


Winter Strip Nov'13 - Mar'14

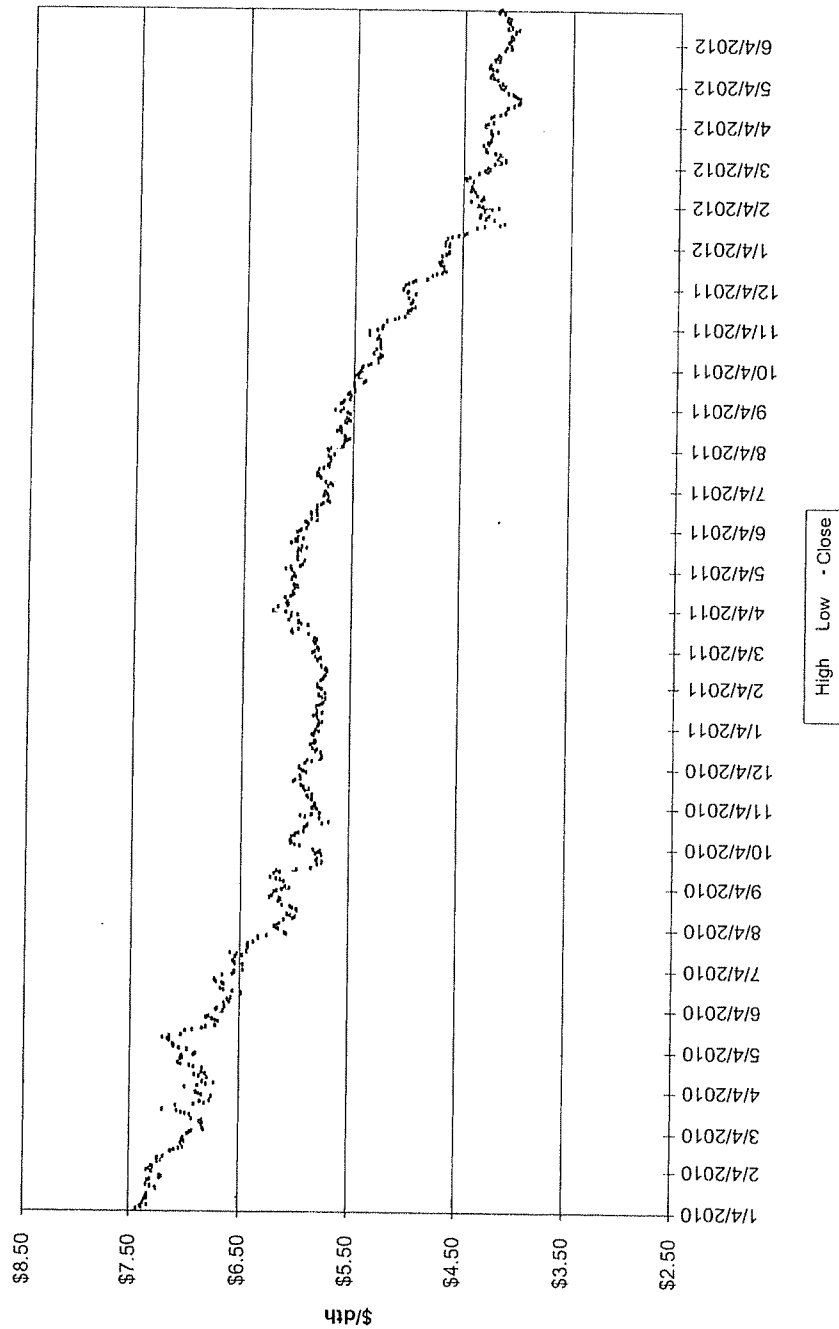




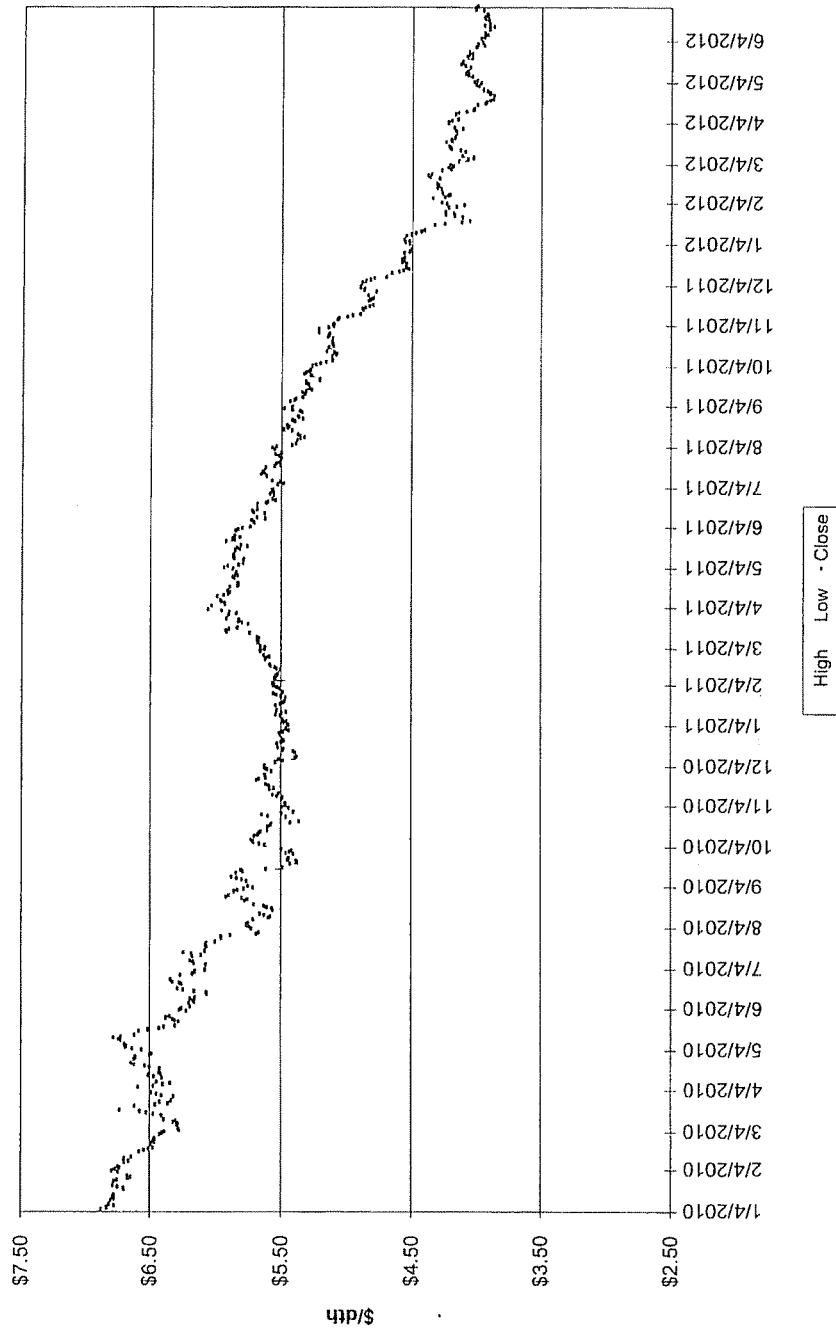
Summer Strip 2014



Winter Strip Nov14 - Mar15



Summer Strip 2015





*Independent Statistics & Analysis*

## U.S. Energy Information Administration

### Short-Term Energy Outlook

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 69.5 billion cubic feet per day (Bcf/d) in 2012, an increase of 2.7 Bcf/d (4.1 percent) from 2011 and a downward revision of 0.7 Bcf/d from last month's Outlook. This month's Outlook revises downward the forecast for residential and commercial consumption to reflect a decline in total projected 2012 heating degree-days as reported by the National Oceanic and Atmospheric Administration. EIA expects that large gains in electric power use will offset declines in residential and commercial use.

Projected consumption of natural gas in the electric power sector grows by nearly 20 percent in 2012, primarily driven by the increased relative cost advantages of natural gas over coal for power generation in some regions. Consumption in the electric power sector peaks in the third quarter of 2012, at 30.2 Bcf/d, when electricity demand for air conditioning is highest. This compares with 27.7 Bcf/d during the third quarter of 2011.

Growth in total natural gas consumption slows in 2013, with forecast consumption averaging 71.3 Bcf/d. However, unlike 2012, growth in 2013 is driven by consumption increases from the residential, commercial, and industrial sectors. A forecast of closer-to-normal winter temperatures drives increases in residential and commercial consumption in 2013 of 7.4 percent and 5.7 percent, respectively. Power-sector gas burn remains at historically high levels with little change from 2012 levels.

**U.S. Natural Gas Production and Imports.** Total marketed production of natural gas grew by 4.8 Bcf/d (7.9 percent) in 2011. This strong growth was driven in large part by increases in shale gas production. While EIA expects year-over-year production growth to continue in 2012, the projected increases occur at a slower rate than in 2011, as low prices reduce new drilling plans.

According to Baker Hughes, the natural gas rig count was 588 as of June 1, 2012, down from a 2011 high of 936 in mid-October, making it the lowest rig count since 1999. EIA's production survey indicates natural gas marketed production fell by 0.25 Bcf/d from February 2012 to March 2012, and February 2012 production was revised downward from previous estimates. EIA expects mostly flat production through the fall, but overall 2012 production still averages 2.3 Bcf/d (3.4 percent) above 2011 levels. Declining production from less-profitable "dry" natural gas plays such as the Haynesville Shale are offset by growth in production from liquids-rich natural gas production areas such as the Eagle Ford and wet areas of the Marcellus Shale, and associated gas from the growth in domestic crude oil production.

Based on the outlook from National Oceanic and Atmospheric Administration for the current Atlantic hurricane season, EIA estimates a 70-percent probability that total shut-in natural gas production in the GOM during the upcoming hurricane season (June through November) will fall somewhere between 5.8 and 16.2 Bcf, with a median outcome of 9.5 Bcf (an average of 0.05 Bcf/d over the 6 months). There is a wide range of uncertainty around this forecast. The bulk of outages are expected during the late summer and early fall months of August, September, and October.

West Texas Intermediate (WTI) crude oil spot prices averaged more than \$100 per barrel over the first 4 months of 2012. The WTI spot price then fell from \$106 per barrel on May 1 to \$83 per barrel on June 1, reflecting market concerns about world economic and oil demand growth. EIA projects the price of WTI crude oil to average about \$95 per barrel over the second half of 2012 and the U.S. refiner acquisition cost of crude (RAC) to average \$100 per barrel, both almost \$11 per barrel lower than last month's Outlook. EIA expects crude oil prices to remain relatively flat in 2013. This forecast rests on the assumption that U.S. real gross domestic product (GDP) grows by 2.2 percent this year and 2.4 percent next year, while world oil-consumption-weighted real GDP grows by 3.1 percent and 3.5 percent in 2012 and 2013, respectively. The recent economic and financial news that points towards weaker economic outlooks could lead to lower economic growth forecasts and further downward revisions to EIA's crude oil price forecasts.

Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 July 27, 2012

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (July 12–Sept 12)	↑	Long	NOAA predicting above average temperatures for August 2012–October 2012 over the majority of CONUS	12
Mid Term Forecast (30-60 days)	↑	Long	August is predicted to be 8.8% warmer than normal based on 10 year normals and September weather is predicted to be 8.4% above normal.	13
Short Term Forecast (6-10 days)	↑	Short	Above and Much Above over most of CONUS with the exception of the West Coast and portions of the East Coast during the period.	14
Tropical Storm Activity	↔	Short	Tropical cyclone formation us not expected during the next 48 hours Private weather forecaster WSI has raised its Atlantic hurricane forecast by one to 13 named storms citing warmer water temperatures in the North Atlantic.	
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage injections for the week ending July 20th were 26 Bcf. Storage levels are at 3.189 Tcf which is 18.0% higher than last year and 15.8% higher than the 5 year average. Three months ago storage levels were climbing so rapidly that analyst projected that the maximum capacity would be reached and that the surplus to the five-year average would climb beyond 1 Tcf. However, after a hotter than normal summer, dramatic boost in coal-to-gas switching, neither of the options seems likely.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13 Summer 2013: [REDACTED]	↑	Long	GAS PRICE SCORECARD: Gas Price Outlook for October 2012–December 2013 "Bullish". Prices during the period are unlikely to be high enough to re-vitalize dry gas drilling.	16-17
Gas Daily--Price Predictions	↑↓	Long	Barclay's forecasts 2013 to average \$3.25/MMBtu. Barclay's outlook for the rest of the injection season suggests that gas prices can stay at a level not far from \$3 in August, but then must correct lower in Sept and Oct. or risk a price-depressing storage fill. The following are 2013 gas price forecasts: Tudor Pickering Holt--\$3.65/Mcf, FBR Capital--\$3.50/Mcf, Credit Suisse--\$4.00/MMBtu, Wood Mackenzie--\$3.95/MMBtu, Paribas--\$4.00/MMBtu	18
Gas Daily--Coal-to Gas Switching	↑	Long	Perceptions of fuel-switching ability limit gas price rally as prices approach \$3/MMBtu according to Paribas. However, Paribas believes the actual fuel-switching threshold price is higher due to higher than expected delivered coal costs. "By plotting delivered coal prices against plant capacity levels, it becomes clear that at best only 37% of US coal plants would operate if gas prices remained at or below \$3/MMBtu. If prices eventually rise to \$4, then two-thirds of installed coal capacity would theoretically operate at a profit."	19
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.136 Summer 2013: \$3.157	↓	Long	The projected Henry Hub natural gas spot price averages \$2.582/MMBtu for 2012 and \$3.215/MMBtu for 2013.	20
<b>Technical Analysis</b>				
Winter 2012-13 Strip Chart	↑	Short	Closed at \$3.49	21
Summer 2013 Strip Chart	↑	Short	Closed at \$3.62	22
Winter 2013-14 Strip Chart	↑	Short	Closed at \$4.02	23
Summer 2014 Strip Chart	↑	Short	Closed at \$3.97	24
Winter 2014-15 Strip Chart	↑	Short	Closed at \$4.31	25
Summer 2015 Strip Chart	↑	Short	Closed at \$4.15	26
<b>Economy</b>				
Demand	↑	Long	EIA projects total natural gas consumption to grow by 4.9% to 69.9 Bcf/d in 2012 resulting from large gains in electric power generation. Consumption growth slows in 2013 to an average of 71.1 Bcf/d--this growth driven by residential, commercial, and the industrial sectors.	27-28
Supply	↔	Long	Total marketed production grew by an estimated 4.8 Bcf/day or 7.9% in 2011, the largest volumetric increase in history. Production growth will continue in 2012 and 2013 but at a much lower rate due to low prices impacting new drilling plans.	27-28
Oil Market	↔	Long	EIA expects WTI spot prices to average of \$88 per barrel over the second half of 2012 this is a reduction of about \$7 per barrel from last months forecast due to concerns about the world economy and oil demand growth.	27-28

Meeting Minutes: 426 Annex Conference Room - 10:00 am

Attendees: Jim Mehring, Jeff Kern, Joachim Fischesser, Terry Bates, Mitch Martin, Steve Niederbauer

Discussed current market conditions including current weather forecasts (continued heat), storage levels, various analysts projections, impact of coal-to-gas switching, as well as EIA's forecasts for Supply and Demand of the Natural Gas markets and Oil prices and the current positions of the Hedging Programs. Significant discussion took place around storage levels--current level in storage was not reached until mid-September last year, to reach the 5-year average balance, injections must average [REDACTED] Bcf's (while the 5-year average is 56 Bcf's) for the remaining 15 weeks of the injection season. Based on the discussion, no additional hedging was recommended.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2011 - October 2012  
 As of 07/25/12

	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Collar												
Collar												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawals (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 07/25/12

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/draw)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Cost Avg.												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated ECC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.



Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 07/25/12

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Am't Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 07/25/12

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

26.2%

1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

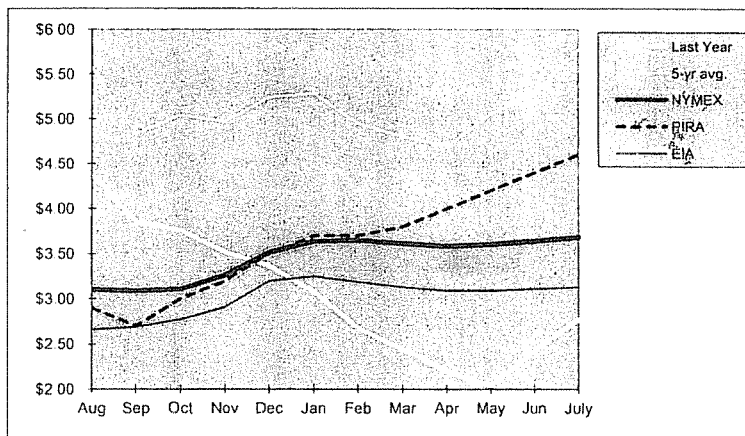
7/25/2012

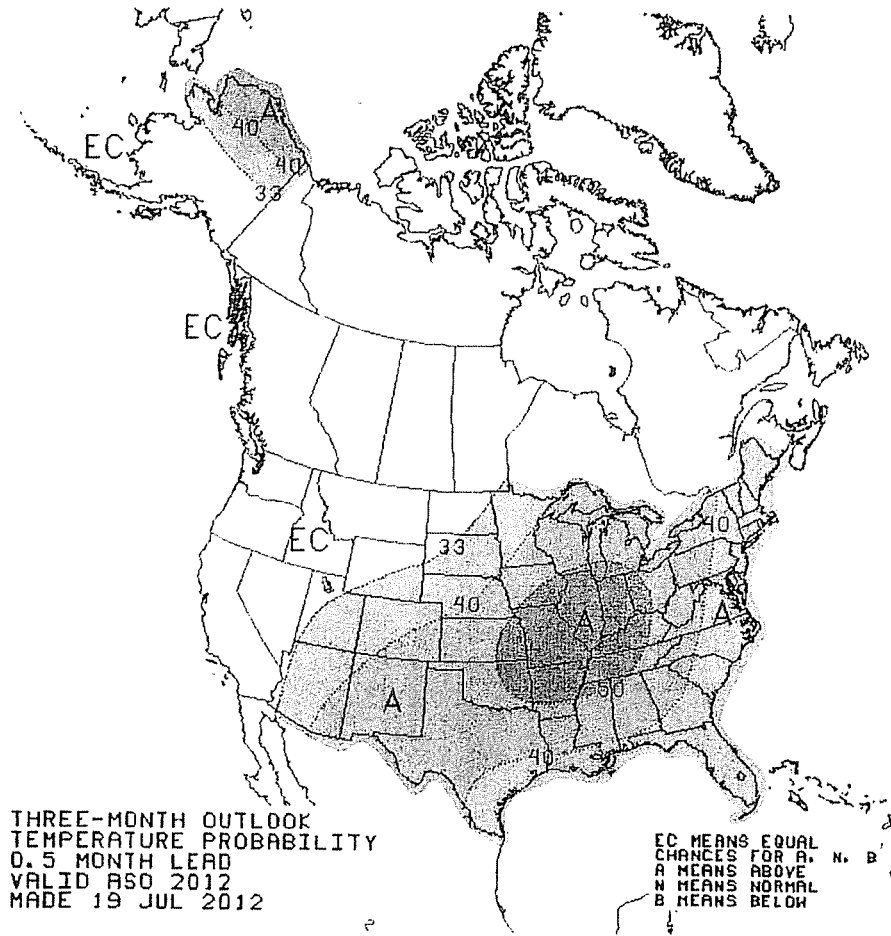
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/12)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2012					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2012					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					

**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

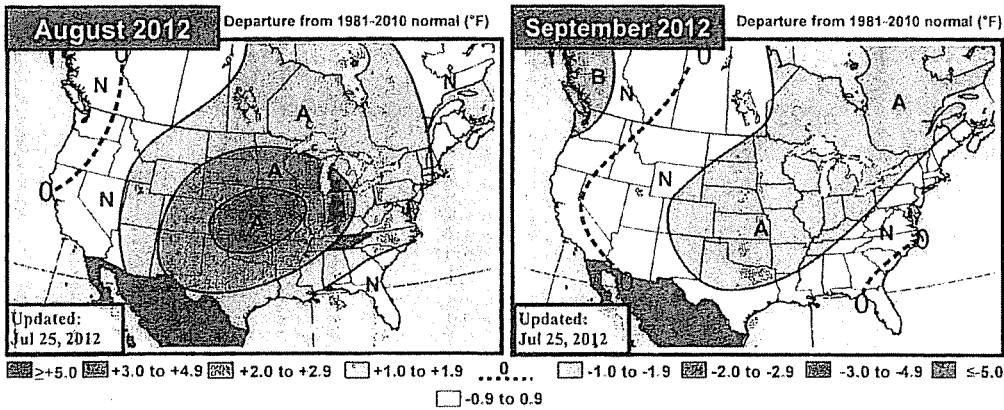
Historic Prices: NYMEX Closing Price							Hedged Prices	
	5-yr. avg. (07/08-11/12)	Last Year (2011-2012)		PIRA 20-Jul-12	EIA 10-Jul-12	NYMEX 27-Jul-12	Ohio	Kentucky
Aug	\$5.57	\$4.37			\$2.660	\$3.105		
Sep	\$4.84	\$3.86			\$2.690	\$3.090		
Oct	\$5.04	\$3.76			\$2.770	\$3.106		
Nov	\$4.97	\$3.52			\$2.910	\$3.262		
Dec	\$5.24	\$3.36			\$3.200	\$3.516		
Jan	\$5.28	\$3.08			\$3.250	\$3.639		
Feb	\$4.95	\$2.68			\$3.190	\$3.648		
Mar	\$4.81	\$2.45			\$3.130	\$3.615		
Apr	\$4.70	\$2.19			\$3.090	\$3.583		
May	\$5.06	\$2.04			\$3.090	\$3.605		
Jun	\$5.27	\$2.43			\$3.110	\$3.642		
July	\$5.78	\$2.77			\$3.130	\$3.684		
12 Month Avg	\$5.13	\$3.04			\$3.018	\$3.458		
Summer Average					\$2.934	\$3.402		
Winter Average					\$3.136	\$3.536		





# EarthSat's 30-60 Day Outlook

Wednesday, July 25, 2012 Meteorologists: SS/BH

**Previous**

**Drought continues to drive heat in mid-continent**

**East Unchanged**

Warm changes were made to our final August forecast with a +3F or greater anomaly area added across the drought-stricken central Plains and western Midwest and more +2F anomalies extending from the upper Midwest and northern Plains back through parts of the Rockies. The drought is the major driver of the forecast change here, as we've seen July come in extremely hot in the major drought areas of the mid-continent. If July is any indication, +3F may not be hot enough as July is set to feature widespread anomalies of 5-8F across the Midwest and Plains. The forecast accounts for the possibility of a pattern change in the latter part of the month, but given persistence the risk to the forecast would still be more likely to the hotter side in the mid-continent, with a variability-driven cool risk in the East.

Aug PWCCD** Forecasts		*10Y Normal updated to '02-11	
Aug 2012 Fcst:	350.0	10Y Normal*	321.6
		30Y Normal	307.0
		Aug-2011	348.5
	Change: +7	**National Population-Weighted CDDs	

**Previous**

**Warmer northern Plains/upper Midwest**

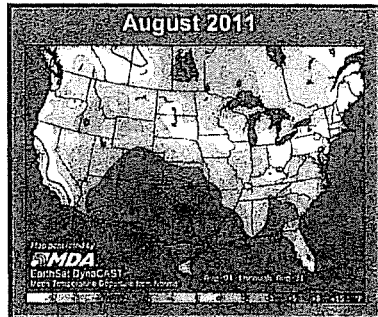
**Cooler Northwest**

The September forecast features some minor warm changes with aboves extended back into the northern Plains and northwestern Midwest and to a lesser extent in the Interior Northeast, while some cool changes are seen in the Northwest. Drought and persistence remain the main factors in the forecast with the long term -PDO and +AMO signals leading the way. The burgeoning El Nino remains a cool risk, but its impacts may be more likely to take shape later in the fall. The most recent run of the CFS model supports the heat across the Midwest and Plains as well. The tropics may eventually lend to a cool risk in the South or East.

Sep PWCCD** Forecasts		*10Y Normal updated to '02-11	
Sep 2012 Fcst:	188.0	10Y Normal*	173.5
		30Y Normal	167.7
		Sep-2011	176.1
	Change: +3	**National Population-Weighted CDDs	

**July so far**

With July nearing an end it's clear that the month will be one of the hottest on record. In fact, if the current forecast out to the end of the month verifies, it will fall just one national PWCCD short of 2011, as the hottest on record dating back to 1950. Our initial forecast was certainly not hot enough, and while the forecast was warmed significantly in the final 30 Day outlook it still fell short of the magnitude of the heat across the mid-continent, especially in the northern Plains and upper Midwest. It's also slightly cooler in the Southwest and southern California.



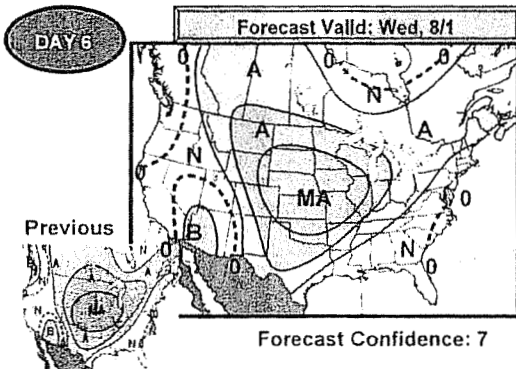
# 6-10 Day Forecast—Detailed



Friday, July 27, 2012

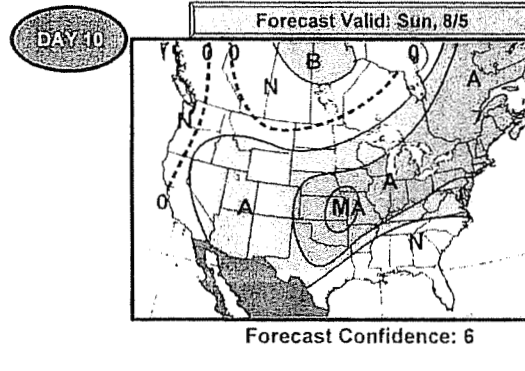
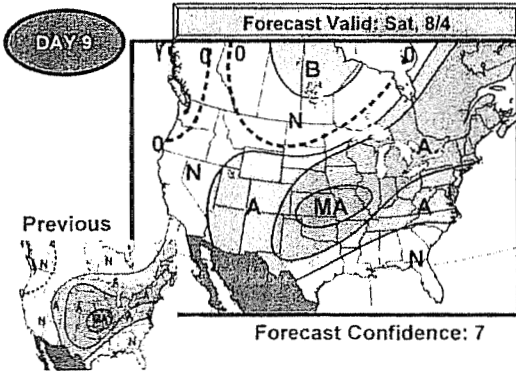
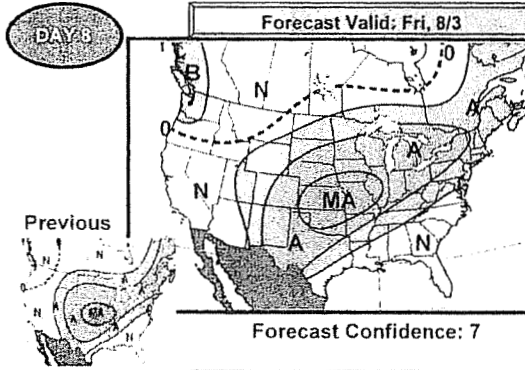
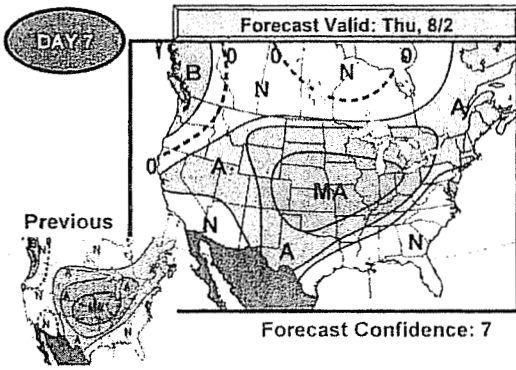
Meteorologist: BH/JS

## Forecast Temperature Deviations



**\*Heat Remains Mired In The Central States\***  
**\*Storms Lead To Early Uncertainty in East\***

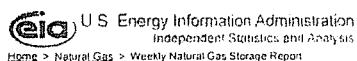
Strong levels of heat continue to roast the central states, with much above normal anomalies spanning the Plains and western Midwest. Afternoon highs could spike higher than forecast due to drought impacts, especially early. After a seasonal beginning to the period featuring some uncertainty with the details due to storm impacts, temperatures look to increase in the Mid-Atlantic and Northeast with New England in particular seeing some hotter potential. If this heat is able to shift into the Northeast the northern Plains could end up turning cooler than predicted. The western states continue to see mostly seasonal conditions, but could briefly rise a little hotter late.



A +3F to +4F  
  A +5F to +7F  
  MA +8F to +14F  
  SA +15 or Higher  
 B -3F to -4F  
  B -5F to -7F  
  MB -8F to -14F  
  SB -15 or Lower

Weekly Natural Gas Storage Report

Page 1 of 1



Weekly Natural Gas Storage Report

[Glossary](#)

[Release Schedule](#)  
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Released: July 26, 2012 at 10:30 a.m. (eastern time) for the Week Ending July 20, 2012  
 Next Release: August 2, 2012

Working Gas in Underground Storage, Lower 48 other formats: [Summary TXT](#) [CSV](#)

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	07/20/12	07/13/12	Change	Year Ago (07/20/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,575	1,555	20	1,327	18.7	1,408	11.9
West	495	488	7	386	28.2	407	21.6
Producing	1,119	1,120	-1	989	13.1	938	19.3
Total	3,189	3,163	26	2,702	18.0	2,754	15.8

Notes and Definitions

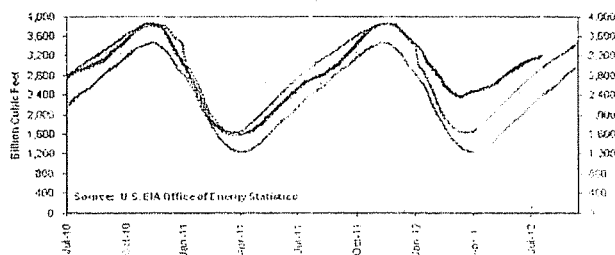
Beginning with the report period for the week ending March 16, 2012, EIA is including salt dome and nonsalt-dome subtotals for the Producing Region in the Summary section. The sum of the components may not equal the total for the Producing Region, because of independent rounding.

Summary

Working gas in storage was 3,189 Bcf as of Friday, July 20, 2012, according to EIA estimates. This represents a net increase of 26 Bcf from the previous week. Stocks were 487 Bcf higher than last year at this time and 435 Bcf above the 5-year average of 2,754 Bcf. In the East Region, stocks were 167 Bcf above the 5-year average following net injections of 20 Bcf. Stocks in the Producing Region were 181 Bcf above the 5-year average of 938 Bcf after a net withdrawal of 1 Bcf. Stocks in the West Region were 88 Bcf above the 5-year average after a net addition of 7 Bcf. At 3,189 Bcf, total working gas is above the 5-year historical range.

Working gas stocks in the Producing Region for the week ending July 20, 2012, totaled 1,119 Bcf with 242 Bcf in salt cavern facilities and 877 Bcf in nonsalt cavern facilities. Working gas stocks decreased 5 Bcf in the salt cavern facilities and increased 4 Bcf in the nonsalt cavern facilities since July 13. An historical series of the salt and nonsalt subtotals of the Producing Region is available for download at [wnsr\\_producing\\_region\\_salt.xls](#).

Working Gas in Underground Storage Compared with 5-Year Range



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2007 through 2011.  
 Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

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**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**July 20, 2012 Release**



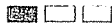
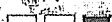
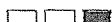



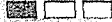



Jan-10		Jan-11		Jan-12		Jan-13	
Feb-10		Feb-11		Feb-12		Feb-13	
Mar-10		Mar-11		Mar-12		Mar-13	
Apr-10		Apr-11		Apr-12		Apr-13	
May-10		May-11		May-12		May-13	
Jun-10		Jun-11		Jun-12		Jun-13	
Jul-10		Jul-11		Jul-12		Jul-13	
Aug-10		Aug-11		Aug-12		Aug-13	
Sep-10		Sep-11		Sep-12		Sep-13	
Oct-10		Oct-11		Oct-12		Oct-13	
Nov-10		Nov-11		Nov-12		Nov-13	
Dec-10		Dec-11		Dec-12		Dec-13	
Average 2010	\$	Average 2011	\$	Average 2012	\$	Average 2013	\$
Summer 2010	\$	Summer 2011	\$	Summer 2012	\$	Summer 2013	\$
Winter 2010-2011	\$	Winter 2011-2012	\$	Winter 2012-2013	\$		

**North American Gas Forecast Monthly**

July 20, 2012

NATURAL GAS

**U.S. GAS PRICE SCORECARD: 2013 EARLY-BIRD**

Bearish Neutral Bullish 		
Supply: Oct '12-Mar '13	Outlook	Commentary
Lower 48 Gas Production		Plummeting gas rig counts should depress Y/Y production at least into 2H'13. Dry conventional and shale gas plays (e.g. Haynesville) should lead the downtrend, barring sustained gas prices in excess of \$4.50.
Associated Gas Production		The growth of oil drilling should moderate as deliverability depletion losses from post-first-year wells increase rapidly. Yet, Y/Y associated gas expansion should come close to matching the current year's growth.
Other Gas Production		So far, shale gas growth has more than offset net declines elsewhere, but much narrower Y/Y net shale gas growth is expected in 2013. Another year of 2+ BCF/D declines from the "fourth bucket" remains on the horizon despite an expected doubling of Y/Y growth in the Permian Basin. Similarly, Rockies gas production losses are seen more than offsetting higher Bakken shale gas output.
U.S. Imports from Canada		Canadian production should trend lower into 1Q13 before recovering slightly in 2013 thanks to higher gas prices and expanding supply from liquid-rich plays. A colder, more normal winter will inflate Y/Y demand, with resulting net exports declining by ~0.5 BCF/D.
U.S. LNG Imports		U.S. prices will remain too low to attract spot LNG.
U.S. Exports to Mexico		Ongoing growth of associated gas volumes should keep total production close to flat and minimize higher U.S. exports.
U.S. Storage Levels		Our forecast end-March 2013 Y/Y storage deficit of 600 BCF, dependent on a normal heating season degree days, would allow post-1Q net injections to inflate Y/Y by ~3 BCF/D without threatening another potential "storage box" situation.
Demand: Oct '12-Mar '13	Outlook	Commentary
Electric Generation (EG)		PIRA's incremental 5160 MMBtu/Y/Y 2013 Henry Hub price outlook would take a major bite out of coal-to-gas switching relative to 2012, in the area of 3.5-4.0 BCF/D. Fuel switching would revert to higher cost Appalachian coals.
Industrial Sector		PIRA's outlook for 2-3% growth in this sector excludes the impact of higher space heating in early 2013 from a return to normal weather. Minimal demand growth, excl. heating, in 2012 sets a low bar for 2013, but also implies downside risks.
Residential/Commercial (R/C)		The unusually cold 2010-11 heating season was followed by an "off the charts" warm 2011-12 winter, making substantial Y/Y R/C heating gains likely.
Gas Prices	Outlook	Commentary
October 2012 — December 2013		PIRA's bullish 2013 gas prices relative to the NYMEX forward curve are unlikely to be high enough to re-vitalize dry gas drilling. The impact of much greater price-inelastic heating loads, coupled with lower Y/Y domestic production, should yield high enough gas prices to diminish EG coal-to-gas substitution without leading to storage-congested injection-season pricing.

### Gas Price Predictions

Barclays has revised their third-quarter forecast up 31% to \$2.70/MMBtu citing the hot weather and low-priced natural gas displacing coal fired generation. Barclays did not change their fourth quarter estimate of \$3/MMBtu and full-year 2013 forecast of \$3.25/MMBtu. "Our base outlook for the rest of the injection season suggests that gas prices can stay at a level not far from \$3 in August, but then must correct lower in September and October or risk a price-depressing storage fill."

Tudor Pickering Holt has cut their long-term forecast for 2016 and beyond from \$6/Mcf to \$5/Mcf. In addition, their prediction for the last half of 2012 is an average of \$3.06/Mcf and \$3.65/Mcf for 2013. Between 2014 and 2016 they predict gas will average between \$4.25/Mcf and \$4.50/Mcf.

Citing gas production declines to balance market and lift prices in 2013 FBR Capital is predicting that 2012 prices will average \$2.49/Mcf, improving to \$3.50/Mcf in 2013, \$4/Mcf and \$4.50/Mcf beyond that.

Gas prices to recover to \$4/MMBtu by the end of 2013 according to Credit Suisse  
Credit Suisse expects gas production to decline through 2013 which will help tighten the supply/demand balance and raise prices. Credit Suisse estimates that gas inventories will remain higher than the five-year average this year and could reach a record 4.049 Tcf by the end of the injection season.

"Through withdrawal season (2012-2013), the impact of the rapid decline in dry gas drilling through the first half of 2012 will be evident. Lags between drilling declines and production declines can be muddied by the timing of well completions, but six months is a good rule of thumb. The productivity of the gas and oil rig fleet has fallen from 9 Bcfd at the start of the year—enough to offset declines of 8.5 Bcfd from existing wells—to 7.0 Bcfd today. Neither high-grading nor continued rig efficiency nor the backlog of uncompleted wells is nearly enough to offset the extremely low rig count. As a result, we remain more bullish on 2013 gas pricing relative to the NYMEX strip and expect a Henry Hub price next year of \$3.95/MMBtu."

## Coal-to-Gas Switching

### **Perceptions of fuel-switching ability limit gas price rally according to BNP Paribas**

The perception that gas-fired generators would lose market share to coal plants as gas prices approach \$3/MMBtu has limited summer price recovery. According to Paribas the actual fuel-switching threshold price is higher due to higher-than anticipated delivered coal costs, most expensive coal deliveries occur in parts of the country with significant summer air conditioning requirements, and the wide range of delivered coal prices suggest that large step changes in gas prices will be needed to shift the load back to coal generation.

"By plotting delivered coal prices against plant capacity levels, it becomes clear that at best only 37% of US coal plants would operate if gas prices remained at or below \$3/MMBtu. If prices eventually rise to \$4, then two-thirds of installed coal capacity would theoretically operate at a profit."

With less than a month left of peak air-conditioning demand, Paribas is of the opinion there is little in the way of fundamentals to re-ignite buying interest. Paribas 2012 prices forecast of \$2.70/MMBtu and \$4.00/MMBtu for 2013.

June EIA data has shown that production curtailments announced in the first quarter of 2012 were already offset by associated gas growth early in the second quarter. EIA has revised up its dry gas production for the year by 0.56 Bcf/d.

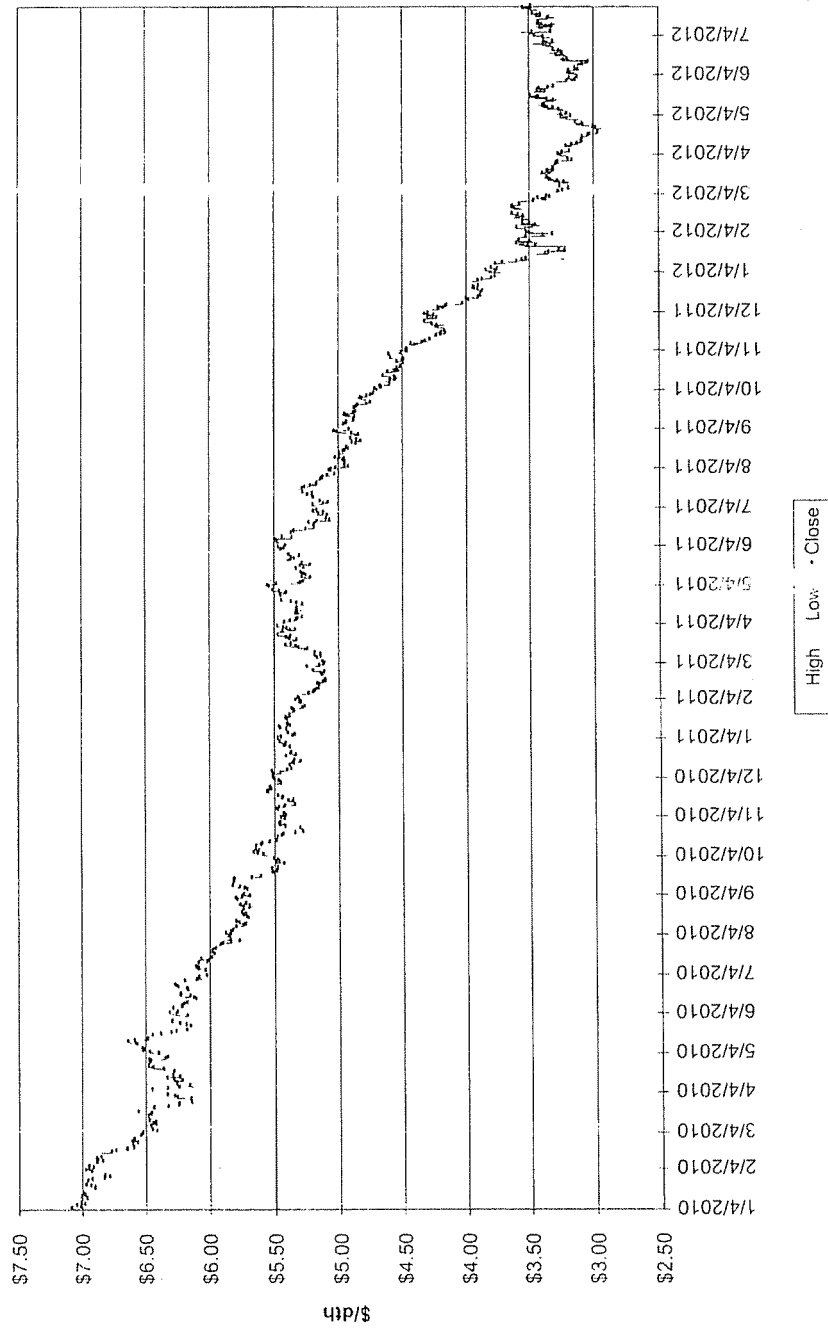
Paribas expects inventory levels to be 3.89 Tcf at the end of the injection season. This 1.4 Tcf build during the injection season is the smallest build in more than 20 years and falls short of analyst expectations.

"In light of additional background analysis on dispatch trends, we remain convinced that electric power demand will continue to curb the build in inventories this year."

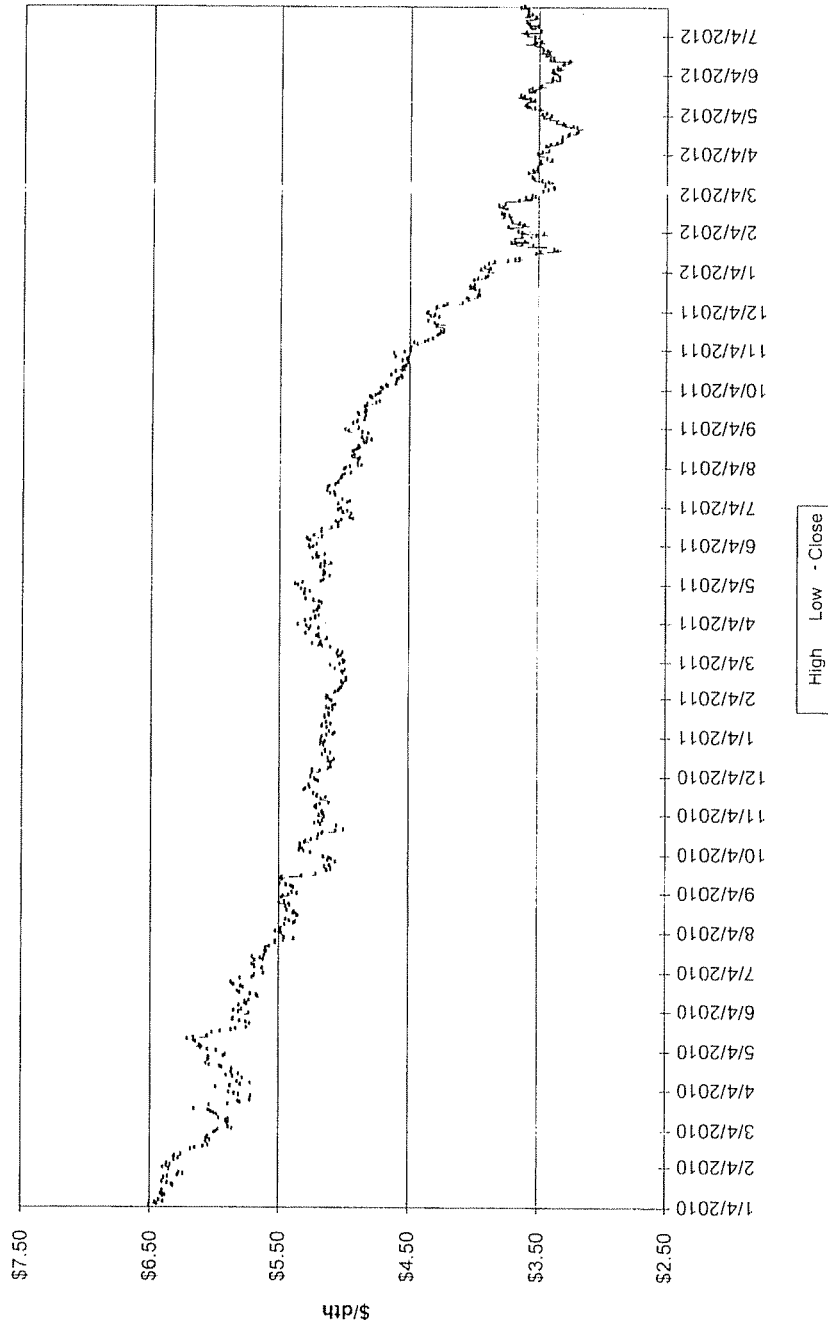
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**July 10, 2012 Release**

Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	3.25
Feb-10	5.32	Feb-11	4.09	Feb-12	2.50	Feb-13	3.19
Mar-10	4.29	Mar-11	3.97	Mar-12	2.18	Mar-13	3.13
Apr-10	4.03	Apr-11	4.25	Apr-12	1.95	Apr-13	3.09
May-10	4.14	May-11	4.31	May-12	2.43	May-13	3.09
Jun-10	4.80	Jun-11	4.55	Jun-12	2.47	Jun-13	3.11
Jul-10	4.63	Jul-11	4.42	Jul-12	2.55	Jul-13	3.13
Aug-10	4.32	Aug-11	4.05	Aug-12	2.66	Aug-13	3.17
Sep-10	3.89	Sep-11	3.90	Sep-12	2.69	Sep-13	3.21
Oct-10	3.43	Oct-11	3.56	Oct-12	2.77	Oct-13	3.30
Nov-10	3.71	Nov-11	3.24	Nov-12	2.91	Nov-13	3.39
Dec-10	4.25	Dec-11	3.17	Dec-12	3.20	Dec-13	3.52
Average 2010	\$ [REDACTED]	Average 2011	\$ [REDACTED]	Average 2012	\$ [REDACTED]	Average 2013	\$ [REDACTED]
Summer 2010	\$ [REDACTED]	Summer 2011	\$ [REDACTED]	Summer 2012	\$ [REDACTED]	Summer 2013	\$ [REDACTED]
Winter 2010-2011	\$ [REDACTED]	Winter 2011-2012	\$ [REDACTED]	Winter 2012-2013	\$ [REDACTED]		

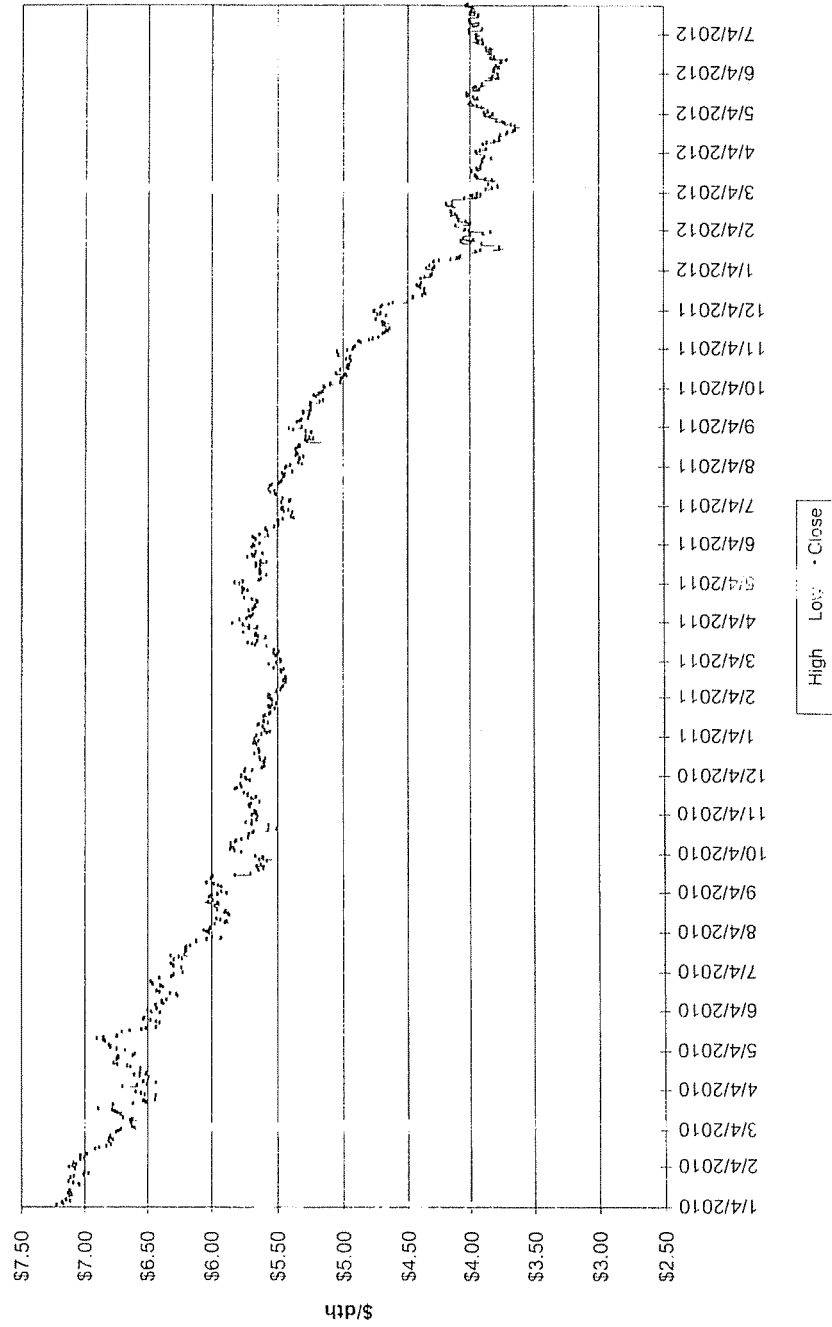
Winter Strip Nov12 - Mar13



Summer Strip 2013

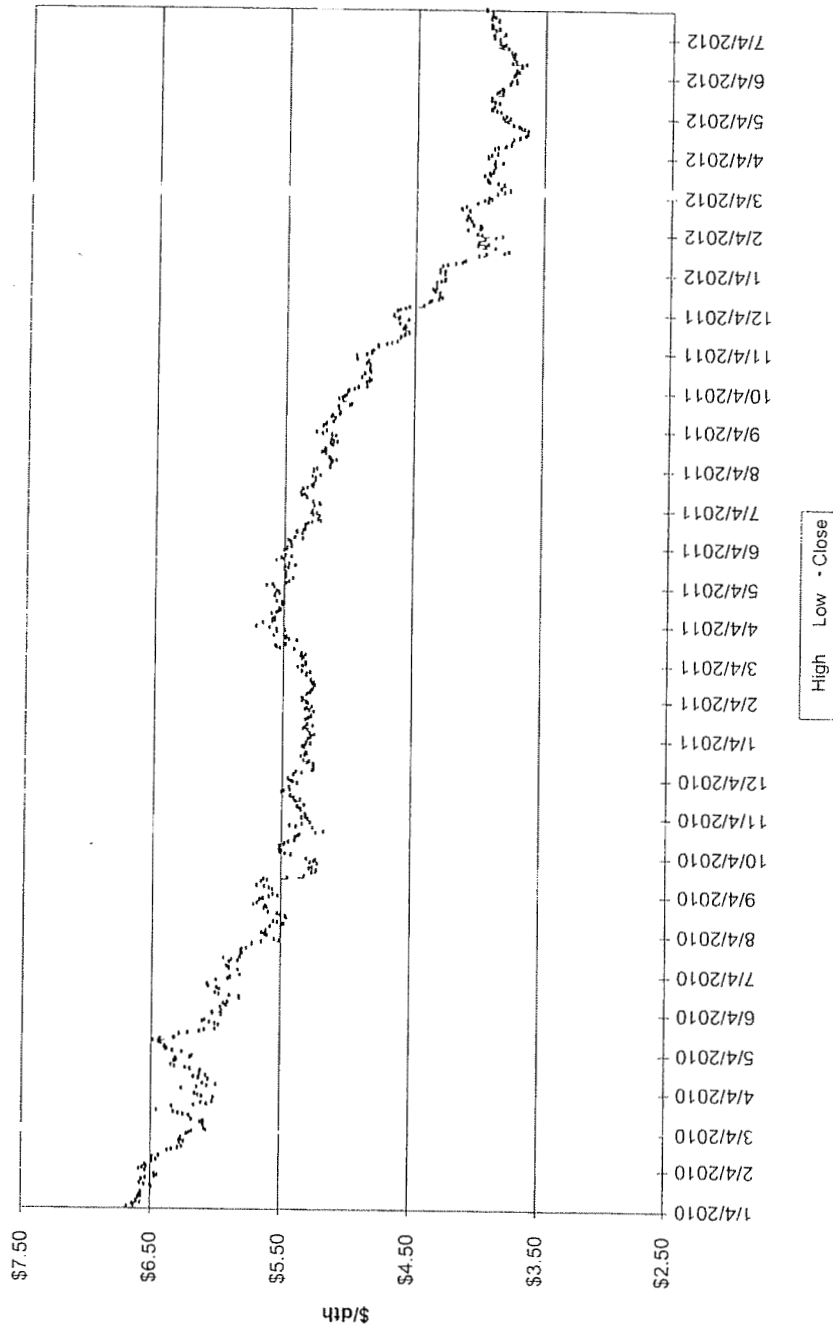


Winter Strip Nov13 - Mar14

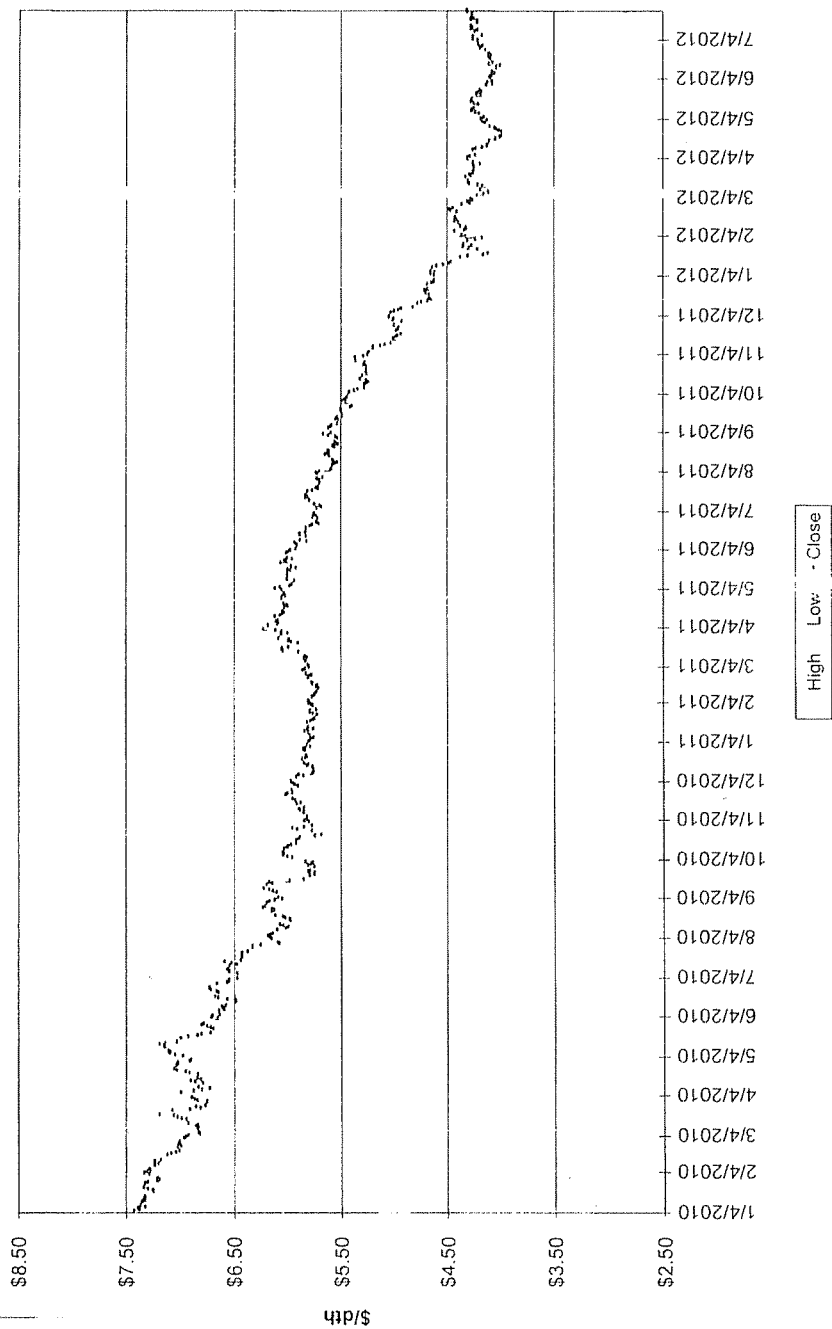




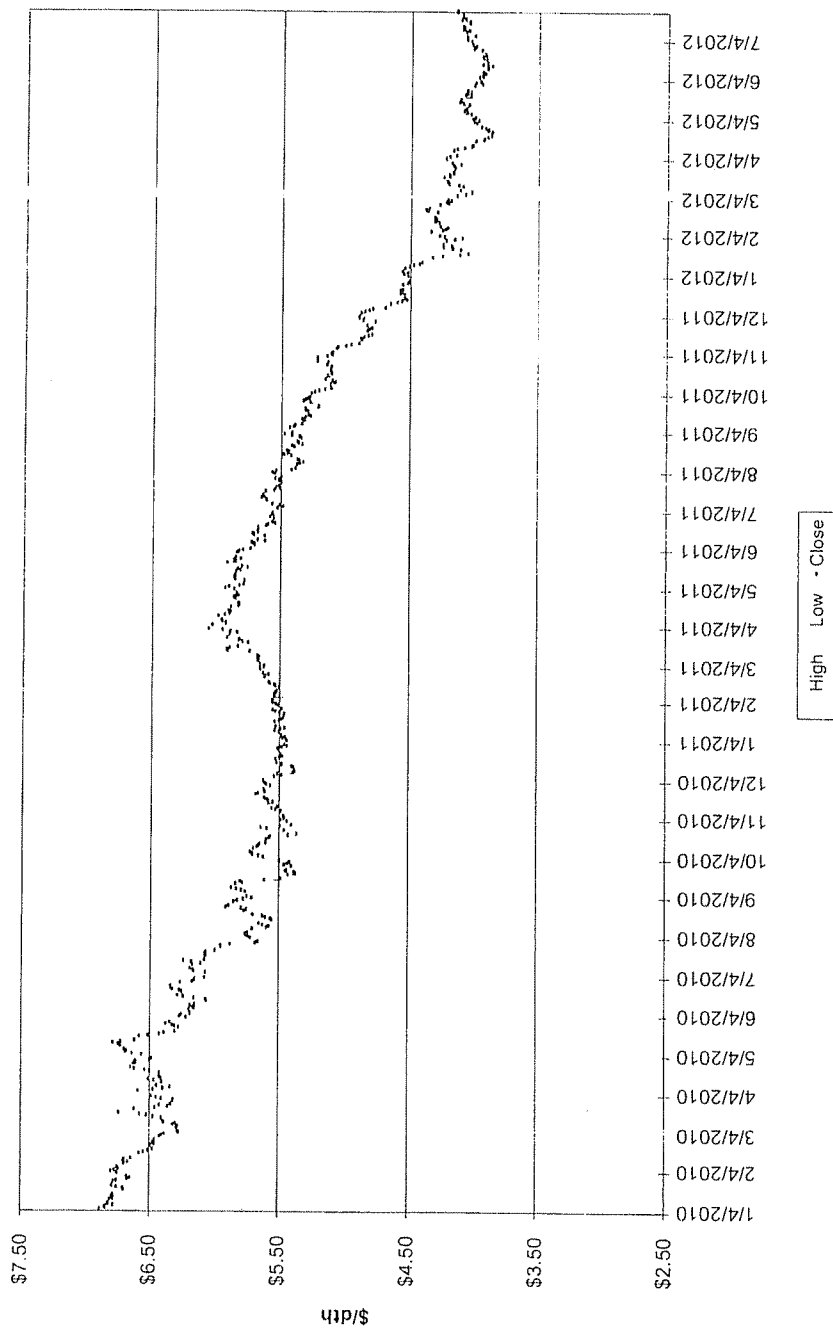
Summer Strip 2014



Winter Strip Nov14 - Mar15



Summer Strip 2015





*Independent Statistics & Analysis*

## U.S. Energy Information Administration

### Short-Term Energy Outlook

July 2012

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 69.9 billion cubic feet per day (Bcf/d) in 2012, an increase of 3.3 Bcf/d (4.9 percent) from 2011 and an upward revision of 0.5 Bcf/d from last month's Outlook. EIA expects that large gains in electric power use in 2012 will more than offset declines in residential and commercial use.

Projected consumption of natural gas in the electric power sector grows by 21 percent in 2012, primarily driven by the increased relative cost advantages of natural gas over coal for power generation in some regions. Consumption in the electric power sector peaks at 31.2 Bcf/d in the third quarter of 2012, when electricity demand for air conditioning is highest. This compares with 27.7 Bcf/d during the third quarter of 2011.

Growth in total natural gas consumption slows in 2013, with forecast consumption averaging 71.1 Bcf/d. However, unlike 2012, growth in 2013 is driven by consumption increases from the residential, commercial, and industrial sectors. A forecast of near-normal weather next winter drives 2013 increases in residential and commercial consumption of 7.7 percent and 4.5 percent, respectively. Although projected natural gas burn in the electric power sector declines by 1.9 percent from 2012, it remains at historically high levels in 2013.

**U.S. Natural Gas Production and Imports.** Total marketed production of natural gas grew by 4.8 Bcf/d (7.9 percent) in 2011. This strong growth was driven in large part by increases in shale gas production. EIA expects continued year-over-year growth in 2012, though not as strong as the previous year. This month's Outlook revises upward the forecast for marketed production for 2012, partially reflecting upward revisions to historical data for the first few months of the year. EIA, however, expects a small drop in production in the coming months, reflecting the decline in rigs since October 2011. According to Baker Hughes, the natural gas rig count was 542 as of July 6, 2012, up slightly from last week, which was the lowest rig count since 1999. EIA's production survey indicates natural gas marketed production fell between February and March 2012, but rebounded in April. Declining production from less-profitable "dry" natural gas plays such as the Haynesville Shale is offset by growth in production from liquids-rich natural gas production areas such as the Eagle Ford and wet areas of the Marcellus Shale, and associated gas from the growth in domestic crude oil production.

Based on the outlook from National Oceanic and Atmospheric Administration for the current Atlantic hurricane season, EIA estimates a 70-percent probability that total shut-in natural gas production in the GOM during the upcoming hurricane season (June through November) will fall

somewhere between 5.8 and 16.2 Bcf, with a median outcome of 9.5 Bcf (an average of 0.05 Bcf/d over the 6 months). In late June, Tropical Storm Debby caused several days of disruption to crude oil and natural gas production. During the peak of Debby-related outages, 1.6 Bcf/d of natural gas was shut in, or about 35 percent of normal production. Almost all shut-in production resumed after a few days with a total production outage of about 3.9 Bcf.

**U.S. Natural Gas Inventories.** Working natural gas inventories remain at historically high levels for the time of year. As of June 29, 2012, according to EIA's *Weekly Natural Gas Storage Report*, working inventories totaled 3,102 Bcf, 602 Bcf greater than last year's level and 573 Bcf above the five-year average. The weekly report from June 15, 2012, marked the first time in EIA's history that working inventories surpassed the 3,000 Bcf mark during the month of June. EIA expects that inventory levels at the end of October 2012 will set a new record high slightly above 4,000 Bcf, although the projected increase of 1,525 Bcf in working gas inventory during the 2012 injection season (from the end of March to the end of October) would be the smallest build since 1991. In 2013, working inventory levels recede from record highs, although they will still remain abundant compared with recent history.

**Crude Oil Prices.** EIA projects the West Texas Intermediate (WTI) crude oil spot price to average about \$88 per barrel over the second half of 2012 and the U.S. refiner acquisition cost (RAC) of crude oil to average \$93 per barrel, both about \$7 per barrel lower than last month's Outlook. EIA expects WTI and RAC crude oil prices to remain roughly at these second half levels in 2013. Beginning in this month's *Outlook*, EIA is also providing a forecast of Brent crude oil spot prices, which are expected to average \$106 per barrel for 2012 and \$98 per barrel in 2013. These price forecasts assume that world oil-consumption-weighted real gross domestic product (GDP) grows by 2.9 percent in both 2012 and 2013.



Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 August 16, 2012

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Nov 12--Jan 12)	↑	Long	NOAA predicting above average temperatures for November 2012--January 2013 over the northern to central portions of CONUS	12
Mid Term Forecast (30-60 days)	↑	Long	September is predicted to be 12.4% warmer than normal based on 10 year normals and October weather is predicted to be 6.5% above normal.	13
Short Term Forecast (6-10 days)	↔	Short	Below early in the South with Above in the West. Later in the forecast Normal over most of CONUS.	14
Tropical Storm Activity	↔	Short	Tropical cyclone formation us not expected during the next 48 hours. NOAA raised its hurricane outlook to 12 to 17 named storms and five to eight hurricanes, of which two to three could become Category 3 in strength.	
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage injections for the week ending August 10th were 20 BCF. Storage levels are at 3.261 Tcf which is 15.7% higher than last year and 12.5% higher than the 5 year average. According to PIRA the rapidly narrowing storage surplus has reduced fears of a price crash driven by storage congestion. According to EIA, overall storage will build to a record high of 3.954 Tcf by November 1st.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13: [REDACTED] Summer 2013: [REDACTED]	↑	Long	GAS PRICE SCORECARD: Gas Price Outlook for October 2012--December 2013 "Bullish". Prices during the period are unlikely to be high enough to re-vitalize dry gas drilling.	16-17
Gas Daily--Price Predictions	↑↓	Long	A tightening supply/demand balance will keep a floor under prices for the rest of 2012 and into 2013. An analyst for Raymond James raised its 2012 price from \$2.50 to \$2.65, 2013 price \$3.25 and 2014 price \$4.00. Gas prices to remain rangebound as fuel-switching patterns shift according to Bank of America. BofA predicts \$2.70 for 2012 and \$3.50 for 2013. Gas must hold below \$3 to avoid storage glut--Barclays believes gas prices need to be in the mid-\$2/MMBtu range to avoid exceeding the 4-Tcf threshold.	18
Gas Daily--Increases in Demand	↑	Long	Shale gas creating industrial revival. Cheap natural gas has given the US a competitive advantage. US industries have announced plans to invest \$70 to \$75 billion in manufacturing projects. Several energy-intensive companies have indicated they will expand North American production capacity. Demand to grow without price shock--Barclays estimates gas demand could increase by 11.3 Bcf/d between 2015 and 2020. Much of the demand would come from LNG exports and power-generation resulting from coal-fired capacity being retired.	19-20
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.246 Summer 2013: \$3.294	↓	Long	The projected Henry Hub natural gas spot price averages \$2.668/MMBtu for 2012 and \$3.345/MMBtu for 2013	21
<b>Technical Analysis</b>				
Winter 2012-13 Strip Chart	↔	Short	Closed at \$3.37	22
Summer 2013 Strip Chart	↔	Short	Closed at \$3.55	23
Winter 2013-14 Strip Chart	↔	Short	Closed at \$3.95	24
Summer 2014 Strip Chart	↔	Short	Closed at \$3.90	25
Winter 2014-15 Strip Chart	↔	Short	Closed at \$4.24	26
Summer 2015 Strip Chart	↔	Short	Closed at \$4.08	27
<b>Economy</b>				
Demand	↑	Long	EIA projects total natural gas consumption to grow by 4.8% to 69.8 Bcf/d in 2012 resulting from large gains in electric power generation. Consumption growth slows in 2013 to an average of 70.9 Bcf/d--this growth driven by residential, commercial, and the industrial sectors.	28-29
Supply	↔	Long	Total marketed production grew by an estimated 4.8 Bcf/day or 7.9% in 2011, the largest volumetric increase in history. Production growth will continue in 2012 and 2013 but at a much lower rate due to low prices impacting new drilling plans.	28-29
Oil Market	↔	Long	EIA expects Brent crude spot prices to average about \$103 per barrel over the second half of 2012 this is a increase of about \$3.50 per barrel from last months forecast due to concerns about the world economy and oil demand growth.	28-29

Meeting Minutes: 426 Annex Conference Room - 1:00 pm  
 Attendees: Jim Mahring, Jeff Kern, Terry Bates, Mitch Martin, Steve Niederbaumer  
 Discussed market fundamentals including weather, storage, consumption, supply, winter and summer strip charts, DEO and DEK's hedging program as well as analyst forecasts for future price movements. Discussion took place around analyst price predictions for 2012, 2013, and 2014 as well as articles concerning increases in demand. Significant discussion also took place regarding the high levels of gas in storage and the impact on gas prices. Based on these factors a decision was made not to hedge additional volumes at this time but to monitor the market closely for significant price moves.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2011 - October 2012  
 As of 08/14/12

	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other Withdrawals (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (Mcf/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Collar												
Collar												
Total Hedged (Mcf/day)												
Total Hedged (Mcf)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.



Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 09/14/12

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/daw)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Cost Avg.												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Am't Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 08/14/12

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (Mcf/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (Incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 08/14/12

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

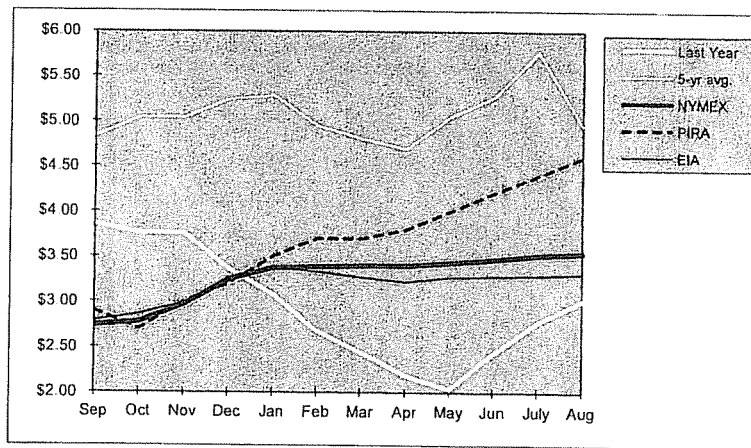
8/14/2012

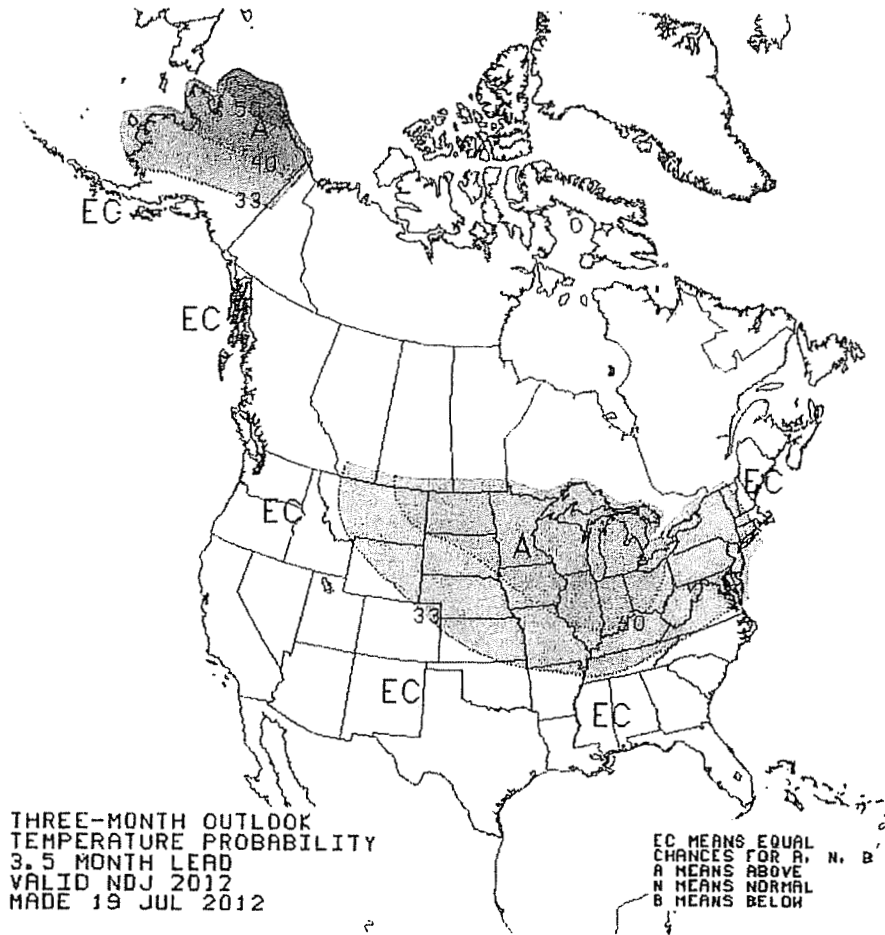
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/12)	
		Total		Required dth/day	Allowed dth/day
		Dth/day	Dth/mo		
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2012					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2012					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					

**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

Historic Prices: NYMEX Closing Price							Hedged Prices	
	5-yr. avg. (07/08-11/12)	Last Year (2011-2012)		PIRA 20-Jul-12	EIA 7-Aug-12	NYMEX 16-Aug-12	Ohio	Kentucky
Sep	\$4.84	\$3.86						
Oct	\$5.04	\$3.76			\$2.790	\$2.742		
Nov	\$5.04	\$3.76			\$2.860	\$2.777		
Dec	\$5.24	\$3.36			\$2.990	\$2.966		
Jan	\$5.28	\$3.08			\$3.270	\$3.241		
Feb	\$4.95	\$2.68			\$3.370	\$3.373		
Mar	\$4.81	\$2.45			\$3.330	\$3.387		
Apr	\$4.70	\$2.19			\$3.270	\$3.400		
May	\$5.06	\$2.04			\$3.220	\$3.400		
Jun	\$5.27	\$2.43			\$3.270	\$3.432		
July	\$5.78	\$2.77			\$3.280	\$3.471		
Aug	\$4.95	\$3.01			\$3.290	\$3.518		
12 Month Avg	\$5.08	\$2.95			\$3.310	\$3.540		
Summer Average					\$3.188	\$3.271		
Winter Average					\$3.146	\$3.269		
					\$3.246	\$3.273		

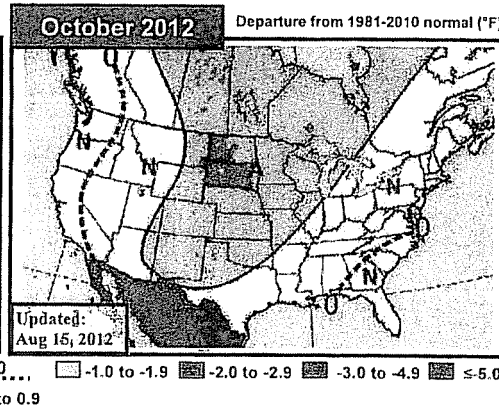
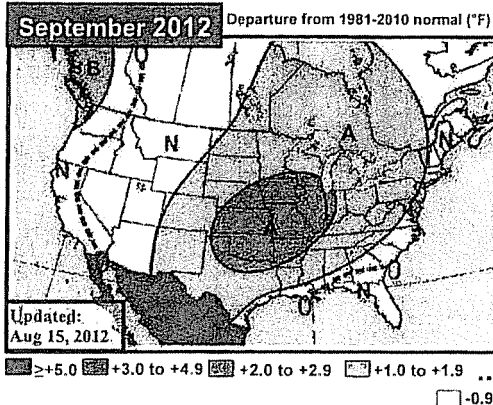




# EarthSat's 30-60 Day Outlook

Wednesday, August 15, 2012

Meteorologists: SS/BH



**Previous** No changes to forecast  
 El Nino risks may increase

No changes were made to the September outlook which continues to feature widespread above normal temperatures across the Plains, Midwest, and Interior East. The forecast remains mainly based upon the continued -PDO/+AMO combination which has largely helped to drive the pattern for the past several months. The drought is also a factor to some extent, though not as much as it has been over the summer. The recent upper-latitude blocking is not expected to be sustained through September, especially if the MJO continues to play a role. However, there are some signs that El Nino may become more of a factor as the SOI has been steadily negative. This could lead to a potential cool risk, especially if we see an increase in atmospheric angular momentum in tandem.

**Sep PWCCD\*\* Forecasts** \*10Y Normal updated to '02-11

Sep 2012 Fcst:	195.0	10Y Normal*	173.5
		30Y Normal	167.7
		Sep-2011	176.1

No Changes \*\*National Population-Weighted CDDs

**Previous** No changes to forecast  
 El Nino risk remains to cooler side

No changes were made to the October forecast which continues to show warmth across the Rockies, Plains, and western Midwest. Similar to September, a potential cool risk is seen should El Nino become more of a factor. The correlation is greater in October than in September with a cool risk from the northern Rockies into the northern Plains, upper Midwest, and Mid-Atlantic. The CFS model shows a similar risk, displaying weak belows from the Northwest into the northern Rockies and Plains, and weak aboves in Texas. Confidence in this forecast is quite low at this point given some of the risks in place.

**Oct GWHDD\*\* Forecasts** \*10Y Normal updated to '02-11

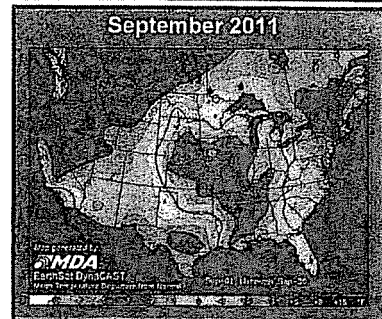
Oct 2012 Fcst:	265.0	10Y Normal*	283.4
		30Y Normal	285.0
		Oct-2011	263.5

No Changes \*\*National Gas-Weighted HDDs

Oct PWCCDs: 58 (30 year normal: 55)

**Aug so far**

The current verification and 15-day forecast is now valid for almost the entire month, and it's notably cooler than we saw in this space last week with below normal temperatures in the northern Plains and western Midwest and also in the Southeast while heat remains extensive in the West. This cooler shift is due to an increase in blocking in the upper-latitudes. As a result, the 30-60 Day Outlook, especially the 30 Day which was based mainly upon drought and long term trends, will likely have been far too hot across the mid-continent and not hot enough in the West.



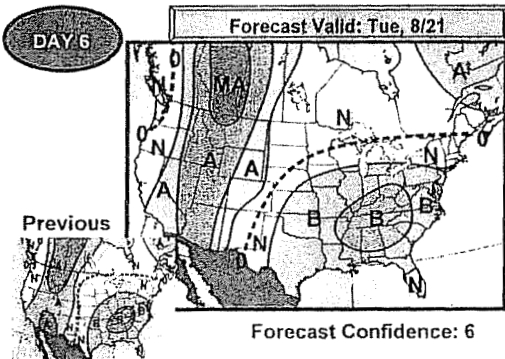
# 6-10 Day Forecast—Detailed

Thursday, August 16, 2012

Meteorologist: BH/AC

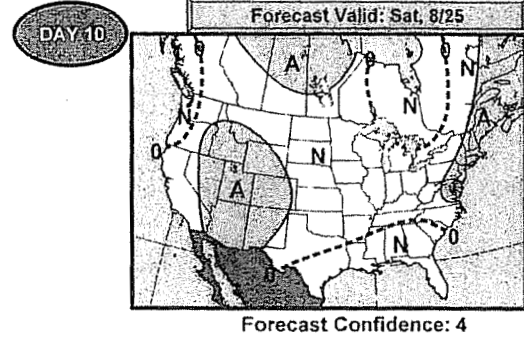
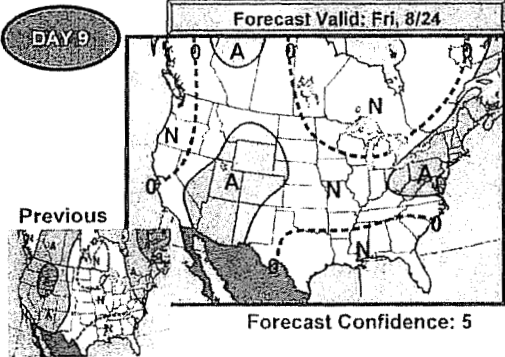
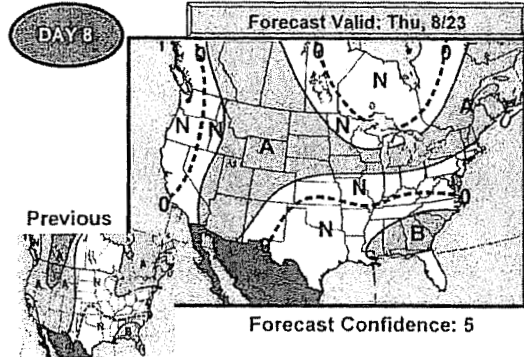
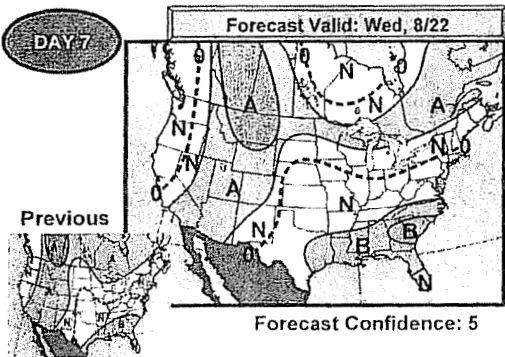


## Forecast Temperature Deviations



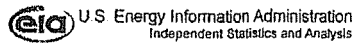
**\*Belows Loom Along The South\***  
**\*Cooler Trend Occurs Within Models Across NW\***

There continues to be more downside potential for the cooler air across the southern Midwest into the South and southern Mid-Atlantic during the early part of the period. Generally, below normal temperatures could encompass these areas longer. The models have changed in their handling of the outlook across the Northwest today compared to yesterday. Where there were warmer risks for the second half of the period, they've trended cooler for today. As a result, there mixed risks to this uncertain region. The forecast period continues to be void of extreme anomalies.



A +3F to +4F  
  A +5F to +7F  
  MA +8F to +14F  
  SA +15 or Higher  
 B -3F to -4F  
  B -5F to -7F  
  MB -8F to -14F  
  SB -15 or Lower





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**Weekly Natural Gas Storage Report**

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Released: August 16, 2012 at 10:30 a.m. (eastern time) for the Week Ending August 10, 2012  
 Next Release: August 23, 2012

Working Gas in Underground Storage, Lower 48 other formats: [Summary TXT](#) [CSV](#)

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	08/10/12	08/03/12	Change	Year Ago (08/10/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,664	1,635	29	1,452	14.6	1,546	7.6
West	493	498	-5	411	20.0	422	16.8
Producing	1,104	1,108	-4	955	15.6	930	18.7
Total	3,261	3,241	20	2,819	15.7	2,898	12.5

**Notes and Definitions**

Beginning with the report period for the week ending March 16, 2012, EIA is including salt dome and nonsalt-dome subtotals for the Producing Region in the Summary section. The sum of the components may not equal the total for the Producing Region, because of independent rounding.

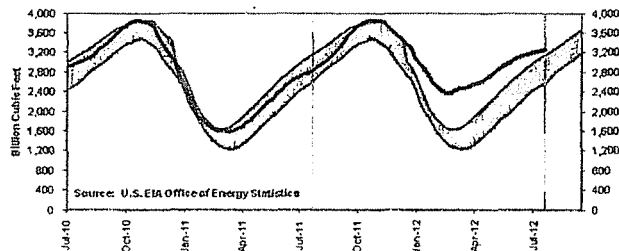
**Summary**

Working gas in storage was 3,261 Bcf as of Friday, August 10, 2012, according to EIA estimates. This represents a net increase of 20 Bcf from the previous week. Stocks were 442 Bcf higher than last year at this time and 363 Bcf above the 5-year average of 2,898 Bcf. In the East Region, stocks were 118 Bcf above the 5-year average following net injections of 29 Bcf. Stocks in the Producing Region were 174 Bcf above the 5-year average of 930 Bcf after a net withdrawal of 4 Bcf. Stocks in the West Region were 71 Bcf above the 5-year average after a net drawdown of 5 Bcf. At 3,261 Bcf, total working gas is above the 5-year historical range.

Working gas stocks in the Producing Region, for the week ending August 10, 2012, totaled 1,104 Bcf, with 220 Bcf in salt cavern facilities and 883 Bcf in nonsalt cavern facilities. Working gas stocks decreased 6 Bcf in the salt cavern facilities and increased 2 Bcf in the nonsalt cavern facilities since August 03. An historical series of the salt and nonsalt subtotals of the Producing Region is available for download at: [wngr producing region salt.xls](#).

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- Performance Evaluation
- Related Links
- Storage Basics
- Natural Gas Weekly Update
- Natural Gas Navigator

Working Gas in Underground Storage Compared with 5-Year Range



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2007 through 2011.  
 Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**July 20, 2012 Release**

Jan-10		Jan-11		Jan-12		Jan-13	
Feb-10		Feb-11		Feb-12		Feb-13	
Mar-10		Mar-11		Mar-12		Mar-13	
Apr-10		Apr-11		Apr-12		Apr-13	
May-10		May-11		May-12		May-13	
Jun-10		Jun-11		Jun-12		Jun-13	
Jul-10		Jul-11		Jul-12		Jul-13	
Aug-10		Aug-11		Aug-12		Aug-13	
Sep-10		Sep-11		Sep-12		Sep-13	
Oct-10		Oct-11		Oct-12		Oct-13	
Nov-10		Nov-11		Nov-12		Nov-13	
Dec-10		Dec-11		Dec-12		Dec-13	
Average 2010	\$	Average 2011	\$	Average 2012	\$	Average 2013	\$
Summer 2010	\$	Summer 2011	\$	Summer 2012	\$	Summer 2013	\$
Winter 2010-2011	\$	Winter 2011-2012	\$	Winter 2012-2013	\$		

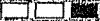


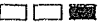




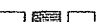

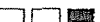
**North American Gas Forecast Monthly**

July 20, 2012

**NATURAL GAS**

**U.S. GAS PRICE SCORECARD: 2013 EARLY-BIRD**

Bearish Neutral Bullish  


Supply: Oct '12-Mar '13	Outlook	Commentary
Lower Mid Gas Production		Accumulating gas log counts should depress 2013 production a bit less (into 2H13). Dry conventional and shale gas plays (e.g. Haynesville) should lead the downturn, barring sustained gas prices in excess of \$4.50.
Associated Gas Production		The growth of oil drilling should moderate as deliverability depletion losses from post-first-year wells increase rapidly. Yet, 2013 associated gas expansion should come close to matching the current year's growth.
Other Gas Production		So far, shale gas growth has more than offset net declines elsewhere, but much narrower 2013 net shale gas growth is expected in 2013. Another year of 2+ BOE/B acre has from the fourth bucket remains on the horizon despite an expected doubling of 2013 growth in the Permian Basin. Similarly, Rockies gas production losses are set to more than offset higher Bakken shale gas output.
U.S. Imports from Canada		Canadian production should trend lower into 1Q13 before recovering slightly in 2Q13 thanks to higher gas prices and expanding supply from liquid-rich plays. A colder, more normal winter will inflate 2013 demand, with resulting net exports declining by -0.5 BCF/D.
U.S. LNG Imports		U.S. gas availability remains too low to attract significant LNG cargoes.
U.S. Exports to Mexico		Ongoing growth of associated gas volumes should keep total production close to flat and minimize higher U.S. exports.
U.S. Storage Levels		Our forecast should match 2013 300-500 bbls of 300-600 BOE dependent on normal heating season. Degree days would allow post-drier injections to inflate 2013 by 2-3 BCF/D without threatening another potential "storage box" situation.
Demand: Oct '12-Mar '13	Outlook	Commentary
Electric Generation (EG)		PIRA's incremental \$1.50/MMBtu 2013 Henry Hub price outlook would take a major bite out of coal-to-gas switching relative to 2012. In the area of 2-5-4.0 BCF/D, fuel switching would revert to higher cost Appalachian coals.
Industrial Sector		PIRA's outlook for 2-3% growth in this sector excludes the impact of higher space heating in early 2013 from a return to normal weather. Minimal demand growth, excl heating, in 2012 sets a low bar for 2013, but also implies downside risks.
Residential/Commercial (R/C)		The unusually cold 2010-11 heating season was followed by an "on-then-barely" warm 2011-12 winter, making substantial 2013 heating gains likely.
Gas Prices	Outlook	Commentary
October 2012 — December 2013		PIRA's bullish 2013 gas prices relative to the NYMEX forward curve are unlikely to be high enough to re-vitalize dry gas drilling. The impact of much greater price-inelastic heating loads, coupled with lower 2013 domestic production, should yield high enough gas prices to diminish EG coal-to-gas substitution without leading to storage-congested injection-season pricing.

## **Gas Price Predictions**

### **Bank Ups Price Forecast on Supply-Demand Tightening**

A tightening supply/demand balance will keep a floor under prices for the rest of the year and into 2013, according to Raymond James, raising its full-year 2012 price forecast from \$2.50 to \$2.65/Mcf. Raymond James is maintaining its 2013 estimate at \$3.25/Mcf and its 2014 gas forecast at \$4/Mcf. According to Raymond James the traditional storage injection season has changed. In the past the typical injection season ended October 31, but in recent years the actual peak in gas storage has consistently slipped to mid-November.

"We still have a massive surplus of gas that means gas prices will likely need to average between \$2.50 and \$3/Mcf for the remainder of the summer to avoid over-filling the gas storage system."

### **Gas Prices to Remain 'Rangebound' as Fuel-Switching Patterns Shift**

Natural gas prices will stay "stuck between a shale rock and a coal hard place" for the remainder of the year according to Bank of America. "This spring's low gas prices touched off a remarkable 5.7 Bcf/d of fuel-switching out of coal to natural gas, a move that has shrunk the storage surplus more quickly than in years, BofA said. But the hot summer has prompted power companies to switch back to the coal stocked in their bins anytime gas prices have climbed above \$3/MMBtu." The relative advantage of using gas to coal is disappearing as gas prices trade above \$3/MMBtu and with coal prices extremely low. BofA predicts US gas prices will average \$2.70/MMBtu for 2012 and \$3.50 for 2013.

### **Gas Must Hold Below \$3 to Avoid Storage Glut**

Natural gas prices must hold below \$3/MMBtu to create enough coal-to-gas switching to keep storage inventories from bumping up against capacity this fall, according to Barclays. Gas displacement of coal hit a peak during the third week of April when prices averaged below \$2/MMBtu, but it pulled back to the lowest level of the year in July as prices rallied. There was a visible pullback in coal displacement as gas prices rose above \$2.50. Based on Barclays analysis of current storage levels, injections, and coal displacement, Barclays believes gas prices need to be in the mid-\$2/MMBtu range to avoid exceeding the 4-Tcf threshold.

## **Increases in Demand**

### **Shale Gas Creating Industrial Revival**

A renaissance in several manufacturing sectors is a result of shale gas. Dow Chemical indicated that the decade between 2000 and 2010 was a very difficult period for manufacturing and petrochemicals. About a million jobs left the industry during that period. In the last 18 months to two years, half of those lost jobs have been recovered. Much of that is due to what is going on with natural gas. Cheap natural gas has given the United States a competitive advantage. Dow anticipates investing \$4 billion in petrochemical plants in Texas and Louisiana, which is more than Dow spent between 2000 to 2010. Many energy-intensive industries are questioning whether there will be enough affordable gas long-term if demand from new and existing sectors increases. "As a direct result of the development of shale gas plays, US industries have announced plans to invest \$70 to \$75 billion in 90 manufacturing projects across the US over the next 5 to 10 years."

### **Low Gas Prices Pump Up Fertilizer Firms' Profits**

"Fertilizer makers reported higher earnings again in the second quarter, largely due to the low cost of their gas feedstock, with several companies saying they will continue to expand North American production capacity." CF Industries has benefited from the abundant gas supply. CF Industries paid \$3.13/MMBtu during the second quarter, compared with \$4.32/MMBtu a year earlier. CF Industries will increase spending on capacity expansions by \$5 billion to \$2 billion. The natural gas fundamentals both in North America and around the world suggests North American expansion strategy is appropriate. "It is hard for any offshore opportunity to come even close to the kind of brownfield opportunities that we have in front of us today" according to CF's CEO.

### **Demand to Grow Without 'Price Shock'**

Barclays Capital states that natural gas demand could increase by some 11.3 Bcf/d between 2015 and 2020. The pace of growth will likely be slow enough to ward off significant price spikes. Over the last 5 years, annual supply growth has increased an average of 2.51 Bcf/d. Barclays estimates the future demand growth to be slightly lower at about 2.25 Bcf/d. Much of the demand would come from LNG exports, as well as the

power-generation sector resulting from coal-fired capacity being retired over the next few years.

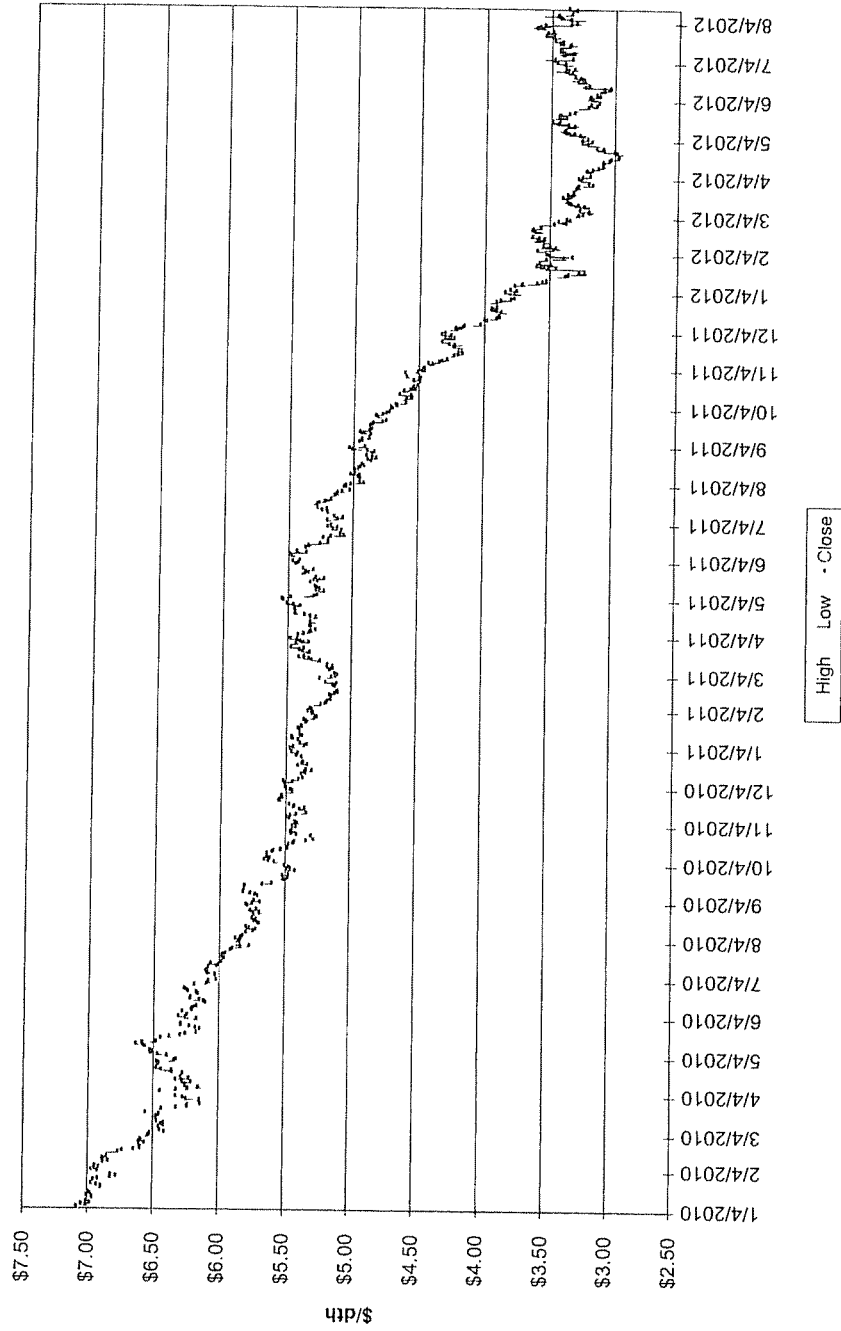
"To be clear, we believe exports will move forward but, the US Department of Energy is in the unenviable position of balancing the desire of the oil and gas industry to export spare gas, which would help the US balance of trade and result in additional jobs, with the demands of consumers (particularly large, gas-intensive consumers) to limit the effect on US gas prices".

According to Barclays, there might be a mismatch between supply and demand in a given year, producers have a sufficient number of untapped wells to quickly respond to price signals, to prevent a sustained, multi-year rally in prices.

**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**August 7, 2012 Release**

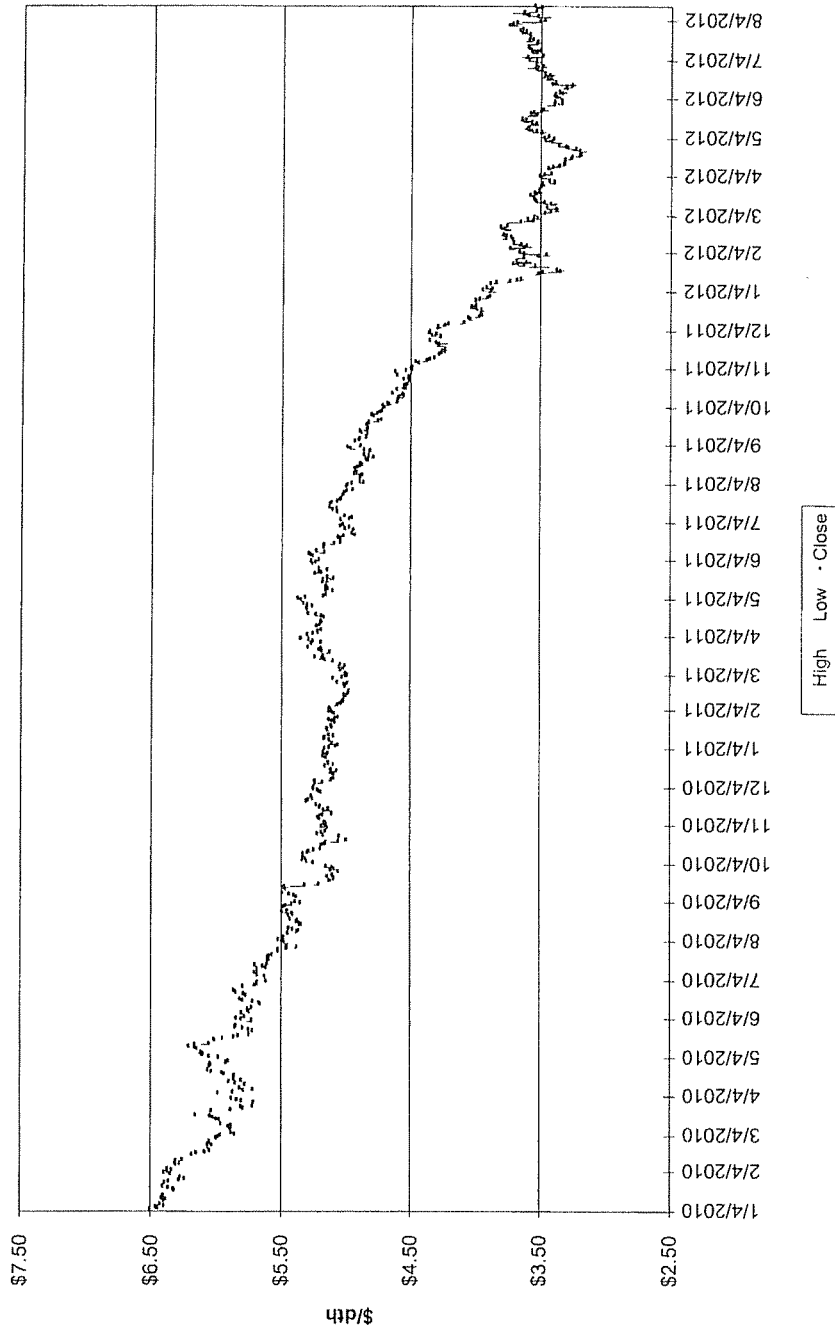
Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	3.37
Feb-10	5.32	Feb-11	4.09	Feb-12	2.50	Feb-13	3.33
Mar-10	4.29	Mar-11	3.97	Mar-12	2.18	Mar-13	3.27
Apr-10	4.03	Apr-11	4.25	Apr-12	1.95	Apr-13	3.22
May-10	4.14	May-11	4.31	May-12	2.43	May-13	3.27
Jun-10	4.80	Jun-11	4.55	Jun-12	2.46	Jun-13	3.28
Jul-10	4.63	Jul-11	4.42	Jul-12	2.95	Jul-13	3.29
Aug-10	4.32	Aug-11	4.05	Aug-12	2.96	Aug-13	3.31
Sep-10	3.89	Sep-11	3.90	Sep-12	2.79	Sep-13	3.28
Oct-10	3.43	Oct-11	3.56	Oct-12	2.86	Oct-13	3.41
Nov-10	3.71	Nov-11	3.24	Nov-12	2.99	Nov-13	3.49
Dec-10	4.25	Dec-11	3.17	Dec-12	3.27	Dec-13	3.62
Average 2010	\$ 4.387	Average 2011	\$ 4.000	Average 2012	\$ 2.668	Average 2013	\$ 3.345
Summer 2010	\$ 4.177	Summer 2011	\$ 4.149	Summer 2012	\$ 2.629	Summer 2013	\$ 3.294
Winter 2010-2011	\$ 4.102	Winter 2011-2012	\$ 2.752	Winter 2012-2013	\$ 3.246		

Winter Strip Nov12 - Mar13

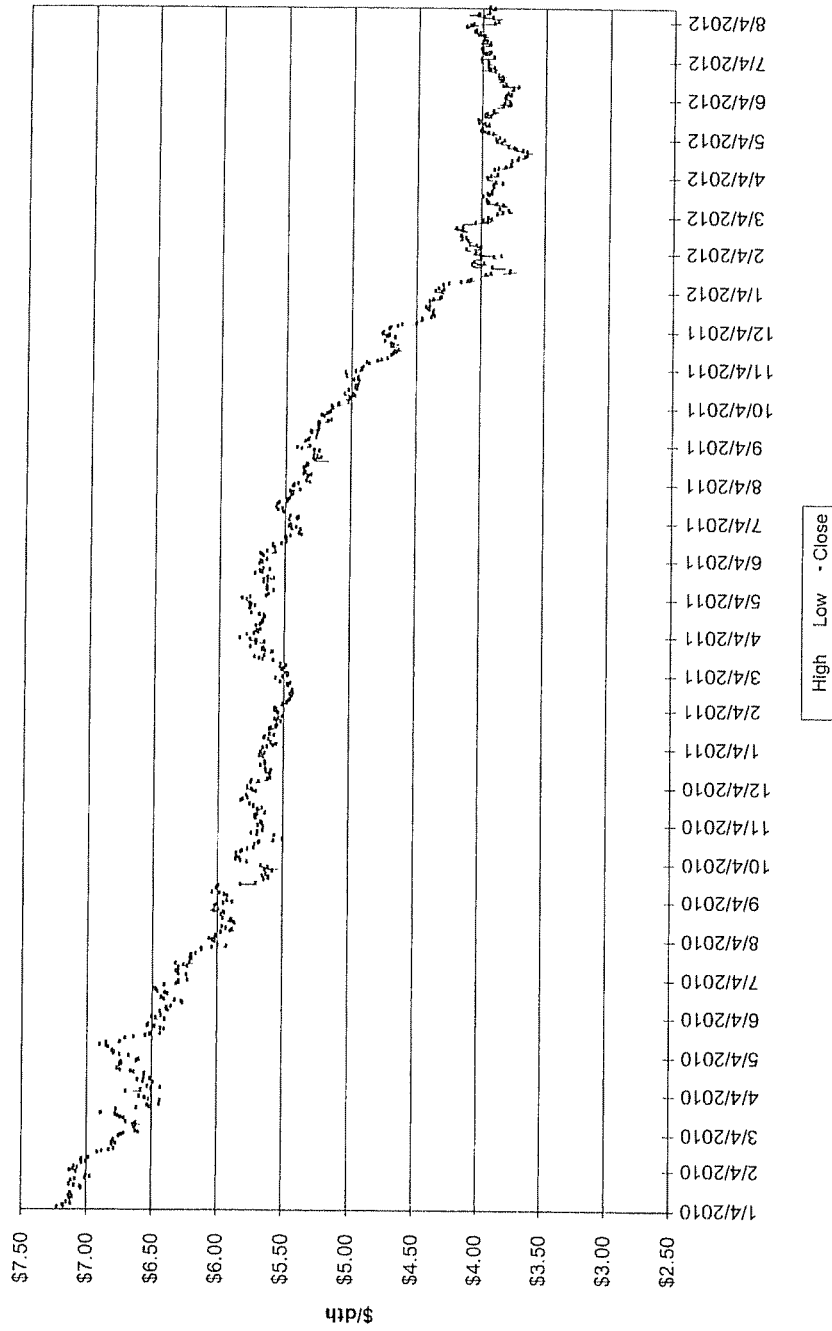




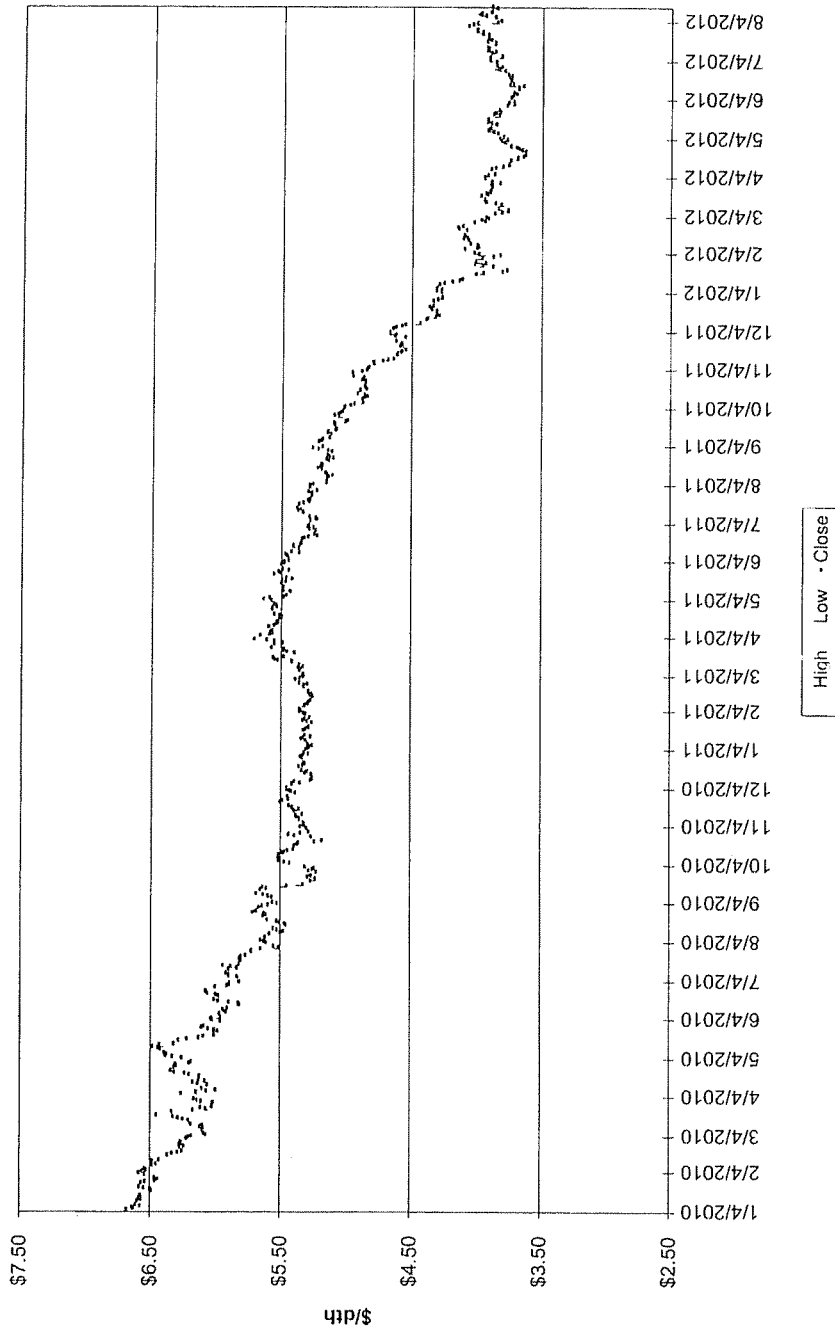
Summer Strip 2013



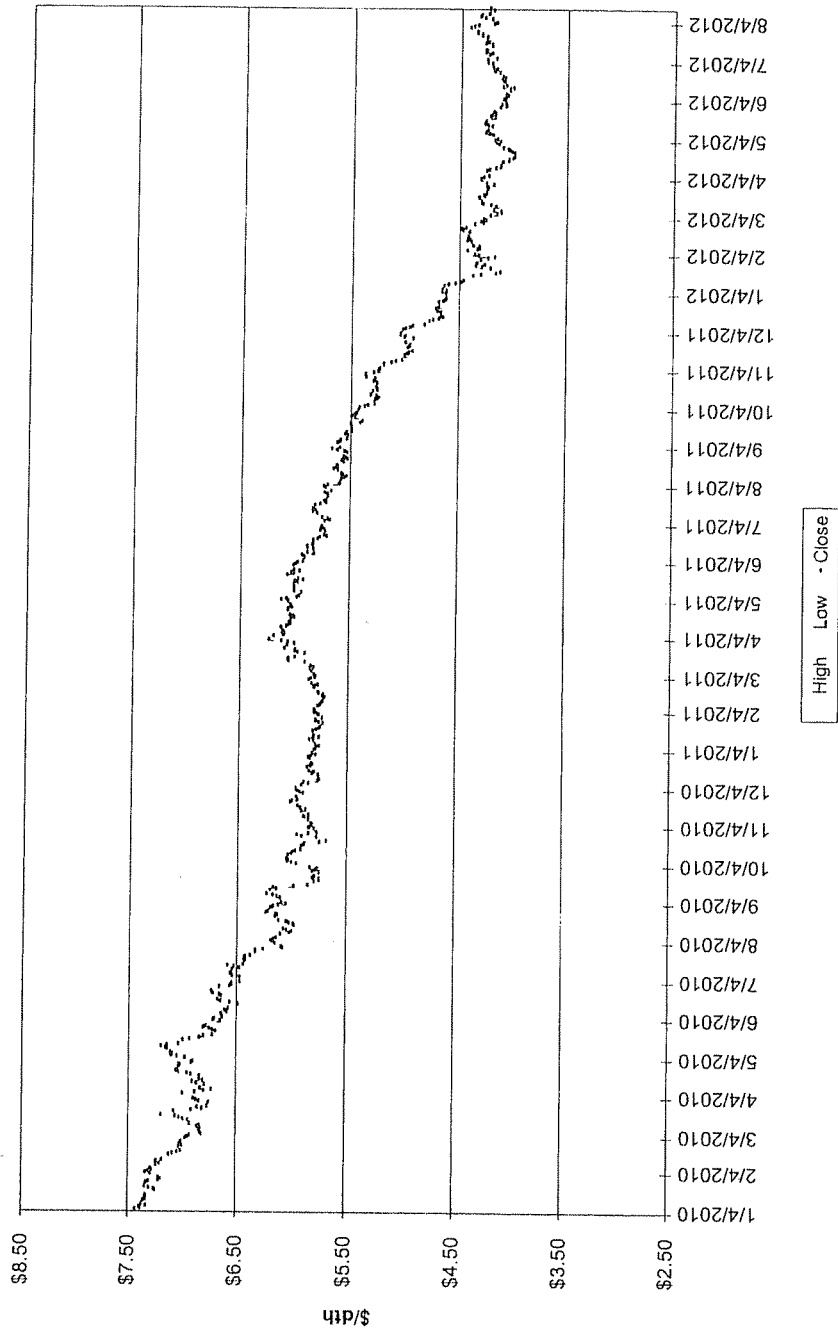
Winter Strip Nov13 - Mar14



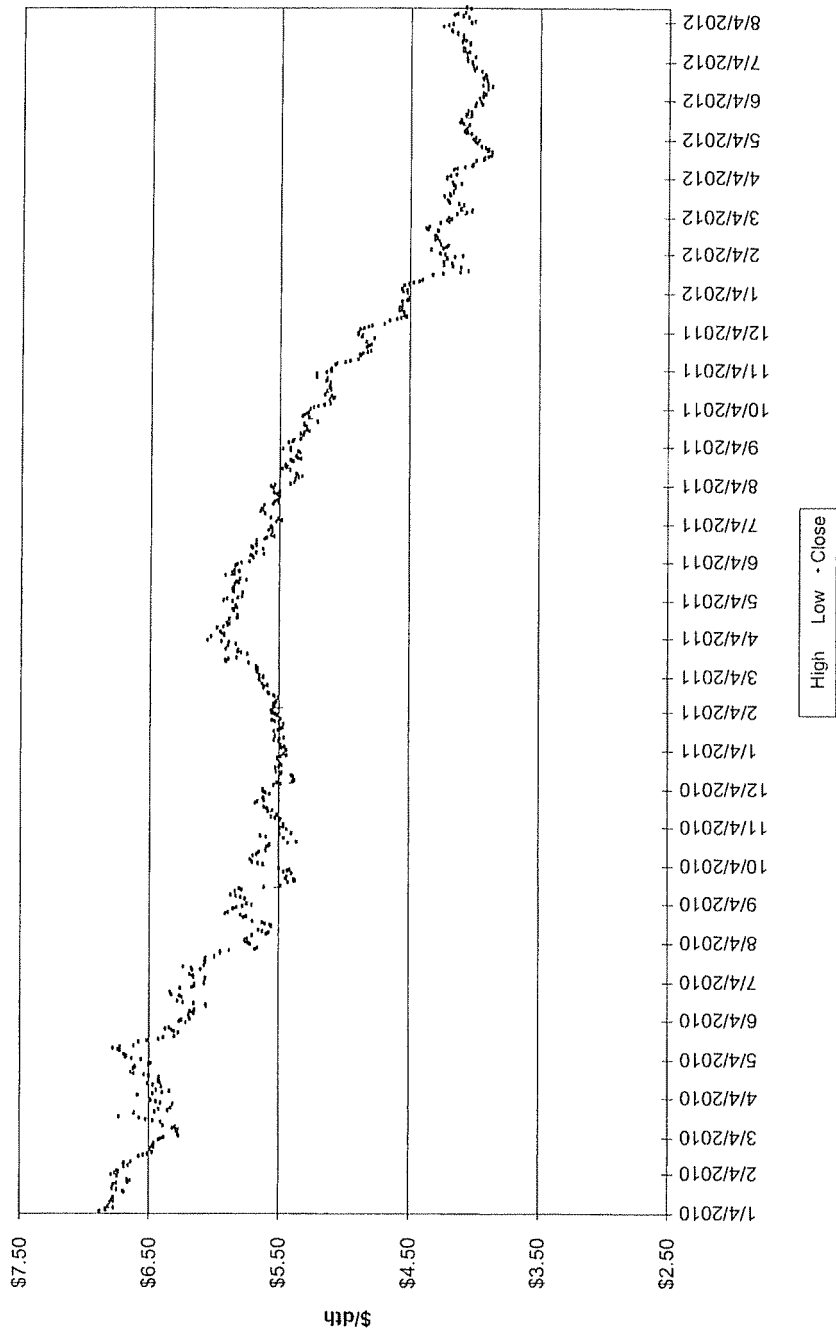
Summer Strip 2014



Winter Strip Nov14 - Mar15



Summer Strip 2015





*Independent Statistics & Analysis*

## U.S. Energy Information Administration

August 2012

### Short-Term Energy Outlook

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 69.8 billion cubic feet per day (Bcf/d) in 2012, an increase of 3.2 Bcf/d (4.8 percent) from 2011. Large gains in electric power use in 2012 will more than offset declines in residential and commercial use. Projected consumption of natural gas in the electric power sector averages 25.4 Bcf/d in 2012, 22 percent higher than in 2011, primarily driven by the improved relative cost advantages of natural gas over coal for power generation in some regions. Consumption in the electric power sector during 2012 peaks at 31.6 Bcf/d in the third quarter, when electricity demand for air conditioning is highest. As a result of the extreme heat last month, estimated electric power-sector natural gas consumption during July 2012 averaged 34.8 Bcf/d, 1.8 Bcf/d higher than projected in last month's *Outlook*.

Growth in total natural gas consumption slows in 2013, with forecast consumption averaging 70.9 Bcf/d. Growth in 2013 is driven by consumption increases from the residential, commercial, and industrial sectors, as consumption in the electric power sector levels off. A forecast of near normal weather next winter drives 2013 increases in residential and commercial consumption of 9.2 percent and 6.4 percent, respectively. Although projected natural gas burn in the electric power sector declines by 3.5 percent from 2012, it remains near historically high levels in 2013.

**U.S. Natural Gas Production and Imports.** Total marketed production of natural gas grew by 4.8 Bcf/d (7.9 percent) in 2011. This strong growth was driven in large part by increases in shale gas production. EIA expects continued year-over-year growth in 2012 of 2.5 Bcf/d. EIA, however, expects a small drop in production in the coming months, reflecting both expected losses from hurricanes and declines related to recent drops in the rig count. According to Baker Hughes, the natural gas rig count was 498 as of August 3, 2012, compared with 811 at the start of 2012. While some declines in production have occurred so far in 2012, production remained flat from April to May. Declining production from less-profitable "dry" natural gas plays such as the Haynesville Shale, as well as the continued long-term decline in the Gulf of Mexico, is offset by growth in production from liquids-rich natural gas production areas such as the Eagle Ford and wet areas of the Marcellus Shale, and associated gas from the growth in domestic crude oil production.

**U.S. Natural Gas Inventories.** Working natural gas inventories remain at historically high levels for this time of year. As of July 27, 2012, according to EIA's *Weekly Natural Gas Storage Report*, working inventories totaled 3,217 Bcf, 472 Bcf greater than last year's level and 407 Bcf above

the five-year average. EIA expects that inventory levels at the end of October 2012 will set a new record of 3,954 Bcf, slightly lower than last month's Outlook, which forecast inventories slightly above 4,000 Bcf. Though absolute levels of working inventories remain high (because of very high storage entering the summer injection season this year), builds since April, for the most part, have been below the five-year average and below last year's levels. The projected increase of 1,477 Bcf in working gas inventory during the 2012 injection season (from the end of March to the end of October) would be the smallest build since 1991. In 2013, working inventory levels recede from current record highs, although they will still remain abundant compared with recent history.

**Crude Oil Prices.** EIA projects that the Brent crude oil spot price will average about \$103 per barrel during the second half of 2012, about \$3.50 per barrel higher than in last month's Outlook. The forecast Brent crude oil spot price falls to an average of \$100 per barrel in 2013. The projected West Texas Intermediate (WTI) crude oil spot price discount to Brent crude oil narrows from about \$14 in the third quarter of 2012 to \$9 by late 2013. These price forecasts assume that world oil-consumption-weighted real gross domestic product (GDP), which increased by 3.0 percent in 2011, grows by 2.8 percent in 2012 and 2.9 percent in 2013.

Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 September 20, 2012

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Nov 12-Jan 13)	↓	Long	NOAA predicting above average temperatures for November 2012-January 2013 over the majority of CONUS	12
Mid Term Forecast (30-60 days)	↔	Long	October is predicted to be 7.2% warmer than normal based on 10 year normals and November weather is predicted to be 5.1% colder than normal. Duke's internal forecast for the month of October reflects cooler than normal in the Upper Midwest through the Ohio River Valley.	13-14
Short Term Forecast (6-10 days)	↔	Short	Below temperatures on the East Coast early in the period are pushed out by Normal temperatures through Central CONUS Above and Much Above on West Coast moving Eastward.	15
Tropical Storm Activity	↔	Short	Tropical cyclone formation us not expected during the next 48 hours Hurricane Isaac shuts in most Gulf gas but damage to infrastructure and price impact minimal.	
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage injections for the week ending September 14th were 67 BCF. Storage levels are at 3.496 Tcf which is 10.1% higher than last year and 8.6% higher than the 5 year average Working design capacity now stands at 4.5 Tcf and increase of 3% from last year	16
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13 Summer 2013	↑	Long	GAS PRICE SCORECARD: Gas Price Outlook for October 2012-December 2013 "Bullish". Bullishness based on return to a normal winter weather and little if any growth in production in 1st quarter of 2013.	17-18
Gas Daily-LNG Exports	↑	Long	6 LNG export projects, representing about 7.7 Bcf/d capacity, to be developed by 2020. Bentek predicts resulting in a 20% higher gas prices. According to APGA, the push to export LNG will impair growing consumer demand, increase domestic gas prices and undermine energy independence efforts. EIA estimates LNG exports could cause prices to increase 54%. Another report indicates LNG exports will not significantly increase prices.	19
Gas Daily-Miscellaneous Information	↑ ↓	Long	Natural gas vehicles may hike demand by 14 Bcf/d by 2030 according to PIRA Energy Group. Gas prices will remain deeply discounted relative to oil prices beyond this decade. The record level in storage is masking a balanced market this year and one that will be undersupplied by 1.5 Bcf/d by the end of 2013. Without an increase in rig count in 2013 the market in 2014 could be undersupplied by 3.2 Bcf/d. Power companies switching from coal to natural gas will keep the market balanced this Fall if prices remain in the \$2.50/Mcf and \$3.25/Mcf.	20
LDC Forum Information	↑	Long	Many LDC participants expect price uncertainty to be at unprecedented levels resulting from record storage levels, increased production, regulation and debate over US gas exports. Power demand for gas has jumped 4.9 Bcf/d from last year due to coal switching. Electric generation will account for about 40% of overall demand by 2014. Chesapeake has flipped its rig activity from dry to wet rigs. In order for Chesapeake to increase dry production, prices would need to return to the \$4 to \$6/MMBtu range.	21
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.192 Summer 2013: \$3.303	↓	Long	The projected Henry Hub natural gas spot price averages \$2.646/MMBtu for 2012 and \$3.343/MMBtu for 2013.	22
<b>Technical Analysis</b>				
Winter 2012-13 Strip Chart	↔	Short	Closed at \$3.28	23
Summer 2013 Strip Chart	↔	Short	Closed at \$3.53	24
Winter 2013-14 Strip Chart	↔	Short	Closed at \$3.93	25
Summer 2014 Strip Chart	↔	Short	Closed at \$3.91	26
Winter 2014-15 Strip Chart	↔	Short	Closed at \$4.24	27
Summer 2015 Strip Chart	↔	Short	Closed at \$4.10	28
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to grow by 4.8% to 69.8 Bcf/d in 2012 resulting from large gains in electric power generation. Consumption growth slows in 2013 to an average of 70.0 Bcf/d or 0.2%--this growth driven by residential, commercial, and the industrial sectors.	29-30
Supply	↔	Long	Total marketed production grew by an estimated 4.8 Bcf/day or 7.9% in 2011, the largest volumetric increase in history. EIA expects year-over-year growth in 2012 of 2.6 Bcf/d. 2013 growth is expected to slow to 0.5 Bcf/d.	29-30
Oil Market	↔	Long	EIA expects Brent crude to average of \$112 per barrel in 2012 and average \$103 per barrel in 2013, both about 3% higher than last months forecast.	29-30

Meeting Minutes: 426 Annex Conference Room - 1:00 pm  
 Attendees: Jim Mehring, Mike Brumback, Joachim Fischesser, Terry Bales, Mitch Martin, Steve Niederbaumer  
 Discussed market fundamentals such as weather, storage inventory levels, and economic factors such as supply and demand. Discussed the PIRA and EIA forecasts as well as analyst predictions concerning price expectations and discussed Winter and Summer Strip Charts based on Technical Analysis. Discussed our current positions within Ohio and Kentucky hedging plans and that hedging percentages will change November 1st. In addition, discussed the topics addressed at the LDC Forum. Based on the review of this data it was determined not hedge additional volumes at this time. However, the committee decided to closely monitor the market and recover prior to the next scheduled meeting if market conditions change.



Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2011 - October 2012  
 As of 09/18/12

	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (Mcf/Day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Collar												
Collar												
Total Hedged (Mcf/day)												
Total Hedged (Dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amount Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 09/18/12

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Cost Avg.												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt. Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (Incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 09/18/12

Nov-13    Dec-13    Jan-14    Feb-14    Mar-14    Apr-14    May-14    Jun-14    Jul-14    Aug-14    Sep-14    Oct-14

**Load Forecast**  
 City Gate Load Forecast (Mcf)  
 TCO FSS Injections (Mcf)  
 Total Requirements (Mcf)  
 TCO FSS Withdrawals (Mcf)  
 Other "Withdrawals" (Mcf)  
 Total Withdrawals (Mcf)  
**Amount Hedged (Dth/dth)**  
 Fixed Price  
 Fixed Price  
 Fixed Price  
 Total Hedged (Dth/dth)  
 Total Hedged (Dth/dth)  
**Types of Hedging Products (1)**  
 Fixed Price  
 Price Caps  
 No-Cost Collars  
**Embedded Hedged Cost**  
 Winter  
 Summer  
**Estimated EGC per Dth at City Gate**  
 Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply  
**Amt Hedged with Storage @ City Gate**  
 Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (incl. injections) (Dth)  
 % Hedged & Storage  
**Seasonal %**

32,078

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 09/18/12

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>AmI Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

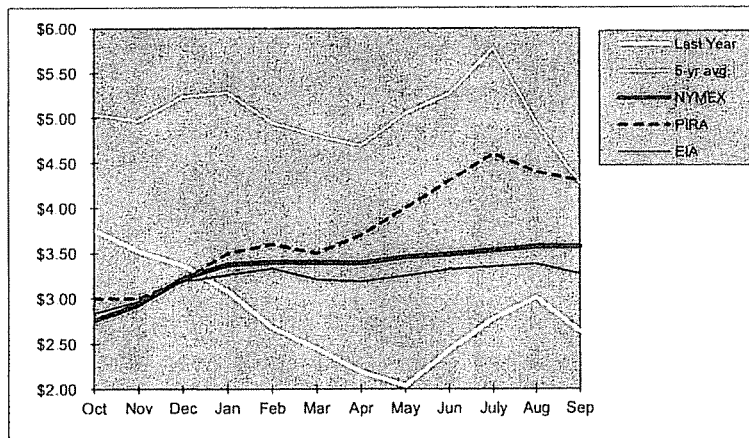
9/18/2012

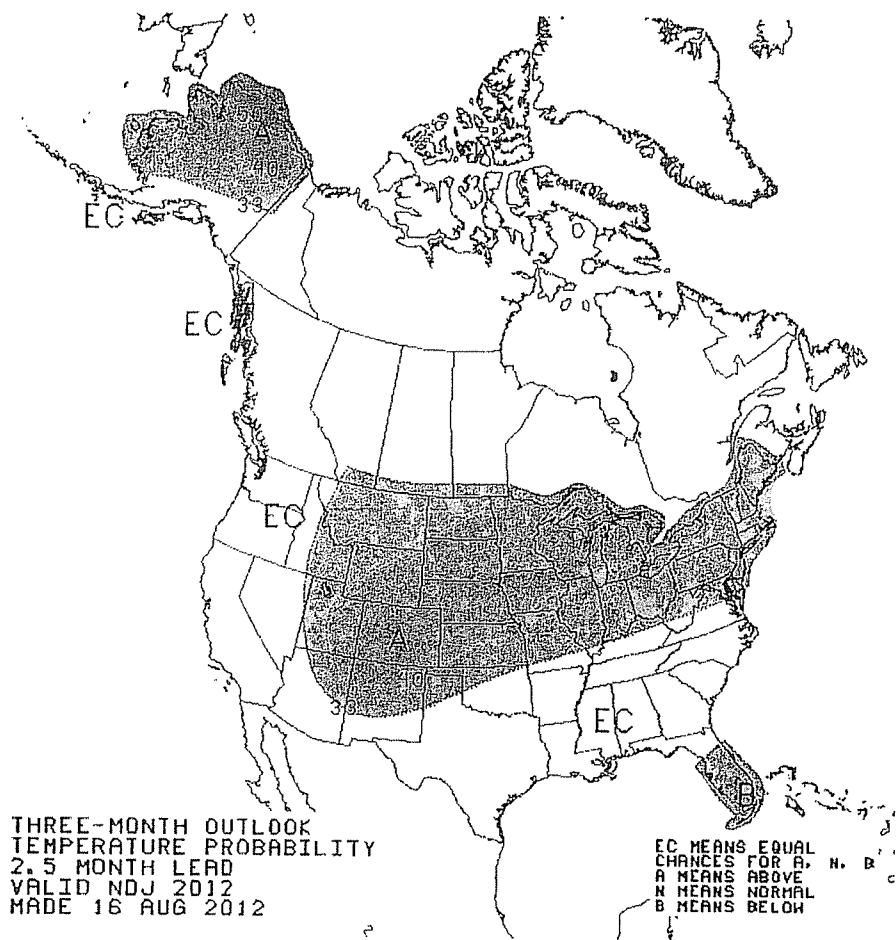
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/12)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2012					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2012					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					

**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

Historic Prices: NYMEX Closing Price							Hedged Prices	
	5-yr. avg. (07/08-11/12)	Last Year (2011-2012)		PIRA 28-Aug-12	EIA 11-Sep-12	NYMEX 20-Sep-12	Ohio	Kentucky
Oct	\$5.04	\$3.76			\$2.840	\$2.758		
Nov	\$4.97	\$3.52			\$2.970	\$2.936		
Dec	\$5.24	\$3.36			\$3.190	\$3.221		
Jan	\$5.28	\$3.08			\$3.260	\$3.373		
Feb	\$4.95	\$2.68			\$3.330	\$3.402		
Mar	\$4.81	\$2.45			\$3.210	\$3.397		
Apr	\$4.70	\$2.19			\$3.190	\$3.390		
May	\$5.06	\$2.04			\$3.250	\$3.458		
Jun	\$5.27	\$2.43			\$3.320	\$3.489		
July	\$5.78	\$2.77			\$3.350	\$3.530		
Aug	\$4.95	\$3.01			\$3.380	\$3.572		
Sep	\$4.28	\$2.63			\$3.270	\$3.574		
12 Month Avg	\$5.03	\$2.83			\$3.213	\$3.342		
Summer Average					\$3.229	\$3.396		
Winter Average					\$3.192	\$3.266		



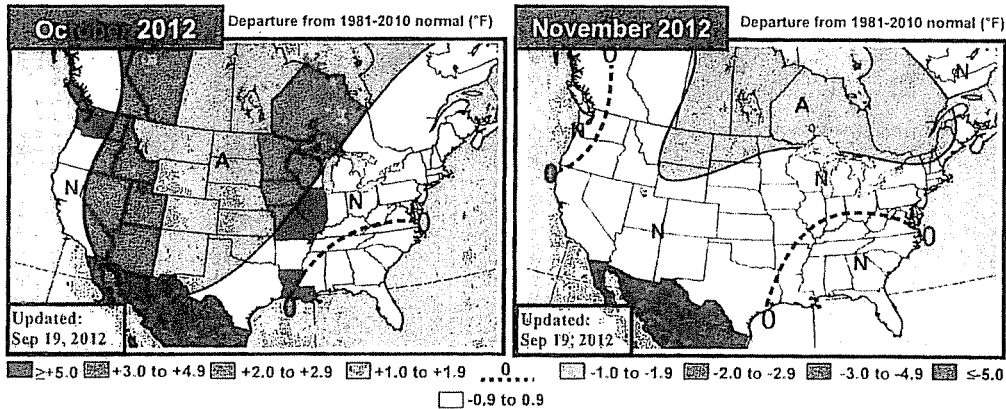


# EarthSat's 30-60 Day Outlook



Wednesday, September 19, 2012

Meteorologists: SS/BH



**October 2012 Previous**

No change to the forecast  
 -PDO/+AMO favor warmth

The October outlook is unchanged this week with warmth still expected across much of the Interior West, Rockies, Plains, and western Midwest, and slight cooling expected in the Southeast. The forecast is still mainly tied to the longer term signals with the -PDO and +AMO favoring the widespread warmth. ENSO is not expected to be a significant factor as the tropical Pacific has been trending cooler in the important ENSO regions. The CFS model shows decent support for the forecast, showing a similar overall pattern to ours. The greatest risks include the potential for stronger warmth over the north-central to Northwest regions, which could also shift the far Southeast a touch cooler.

**November 2012 Previous**

Slight warm changes in Texas/South  
 Warm risk tied to -PDO

The November outlook has warmed across southern areas with most of Texas now in the positive-normal area. Above normal temperatures are still seen being restricted to far northern areas. However, there appears to be a notable warm risk to the forecast as per the expected continuing -PDO, which correlates with the map in the lower right, favoring warmth from the Rockies eastward. This may end up as the main pattern driver, as El Niño does not appear to be ready to ramp up significantly at this point. Barring a significant change in the ENSO outlook, risks to this forecast are largely to the warm side.

Oct GWHDD\*\* Forecasts      \*10Y Normal updated to '02-11

Oct 2012 Fcst:	263.0	10Y Normal*	283.4
		30Y Normal	285.0
		Oct-2011	263.5

Oct PWCCDs: 58 (30 year normal: 55)      \*\*National Population-Weighted CDDs

Nov GWHDD\*\* Forecasts      \*10Y Normal updated to '02-11

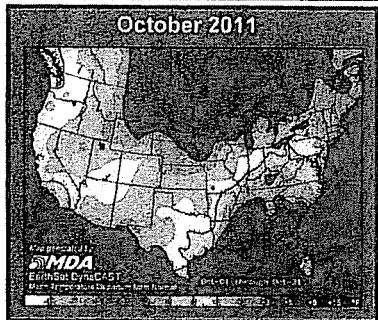
Nov 2012 Fcst:	550.0	10Y Normal*	523.4
		30Y Normal	555.7
		Nov-2011	498.8

Change: -5      \*\*National Gas-Weighted HDDs

**Sep so far**

Final 60 Day Outlook      Final 30 Day Outlook      Current Verif. Forecast (9/1-9/30)

With about 2/3 of September in the books the monthly is becoming more clear, and it's looking more likely that the 30 Day and 60 Day outlooks misplaced the warmth. We had expected the strongest warmth to be seen in the Plains and western Midwest, but the ridge ended up settling up further west with widespread heat across most of the West, particularly from southern California into the Great Basin. In the meantime, belows have been seen across the south and Midwest.



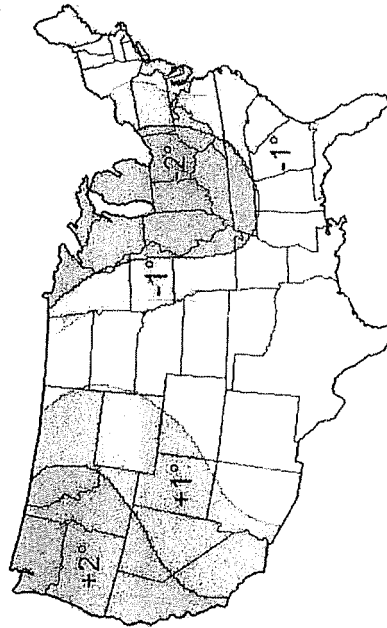




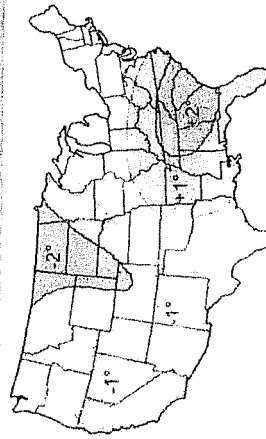
Thursday, September 13, 2012

## October 2012 Forecast

October 2012 Forecast



Previous October 2012 Forecast



### Outlook:

There are significant changes to the October outlook and it does not look anything like the previous forecast issued a few months ago. It now appears that a cooler pattern will set up quicker over the eastern half of the US with cooler changes made in the East, warmer in the West. Cooler than normal temperatures are expected from the Upper Midwest, through the Ohio River Valley, and into the Southeast. Near normal readings are expected for much of the Northeast, Mid-Atlantic, and Plains with warmer than normal temperatures in the West. Overall, a cool trough is expected in the East and warm ridge in the West.

This forecast is based on ENSO conditions, as there is a weak El Nino in place, the NWS extended range model, and other long-range signals. Favored analog years are 2006, 1990, and 1979 with some consideration given to 2009, 1976, and 1968. This overall cool forecast east of the Rockies is actually toned down a bit from what the analog years show. The NWS extended range model is the main reason for not going all in on the cool outlook as it actually shows a warm West as well as the northern tier of the US. Due to uncertainty in El Nino influence and disagreement from the NWS model there is low confidence.

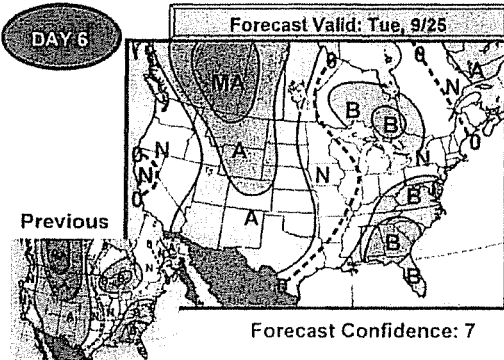
# 6-10 Day Forecast—Detailed

Thursday, September 20, 2012

Meteorologist: BH/AC

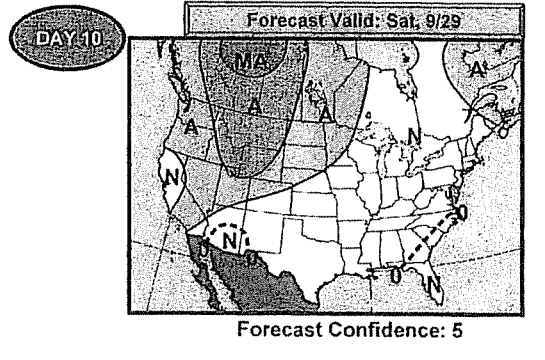
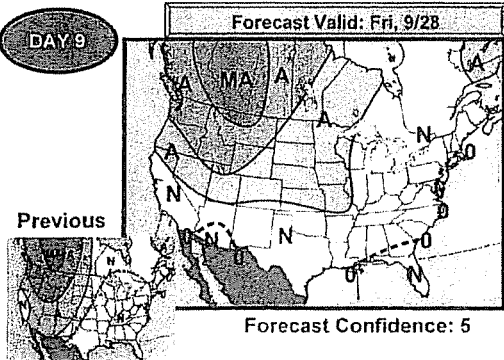
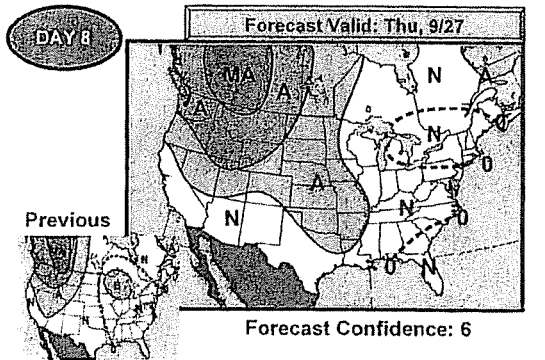
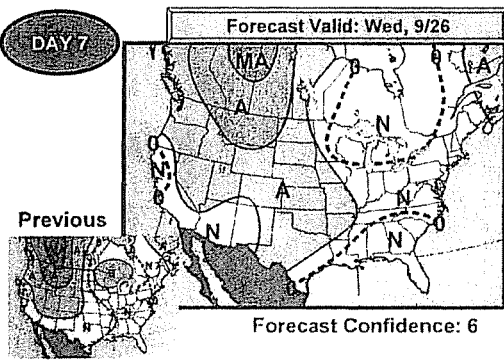


## Forecast Temperature Deviations



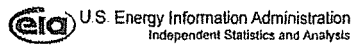
**\*Cool Risks Decrease\***  
**\*Warmth Primarily Focused Over West\***

The cooler risks are beginning to diminish a bit as the cooler air has shifted more into the 1-5 day period. Despite the decreased risk, there is still the prospect for some lingering belows from the Great Lakes into the Northeast during the middle of the period as surface high pressure hovers over eastern Canada. Progressing into the late period, the models show an increase in variability, which provides limits confidence to moderate. The American operational model pushes cooler air into the Northwest for the late period and transfers warmth into the Mid-Continent. The European models, however, continue to keep warmer levels across the Northwest and Interior West.



A +3F to +4F  
  A +5F to +7F  
  MA +8F to +14F  
  SA +15 or Higher  
 B -3F to -4F  
  B -5F to -7F  
  MB -8F to -14F  
  SB -15 or Lower

Weekly Natural Gas Storage Report



Home > Natural Gas > Weekly Natural Gas Storage Report

Weekly Natural Gas Storage Report

[Glossary](#)

[Release Schedule](#)  
[Sign Up for Email Updates](#)

Released: September 20, 2012 at 10:30 a.m. (eastern time) for the Week Ending September 14, 2012  
 Next Release: September 27, 2012

Working Gas in Underground Storage, Lower 48 other formats: [Summary TXT](#) [CSV](#)

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	09/14/12	09/07/12	Change	Year Ago (09/14/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,875	1,831	44	1,736	8.0	1,799	4.2
West	497	494	3	442	12.4	445	11.7
Producing	1,124	1,104	20	997	12.7	974	15.4
Total	3,496	3,429	67	3,176	10.1	3,218	8.6

Notes and Definitions

Beginning with the report period for the week ending March 16, 2012, EIA is including salt dome and nonsalt facility subtotals for the Producing Region in the Summary section. The sum of the components may not equal the total for the Producing Region, because of independent rounding.

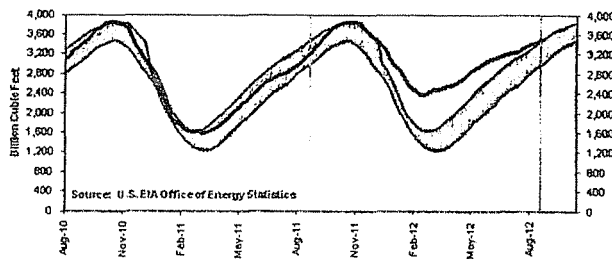
Summary

Working gas in storage was 3,496 Bcf as of Friday, September 14, 2012, according to EIA estimates. This represents a net increase of 67 Bcf from the previous week. Stocks were 320 Bcf higher than last year at this time and 278 Bcf above the 5-year average of 3,218 Bcf. In the East Region, stocks were 76 Bcf above the 5-year average following net injections of 44 Bcf. Stocks in the Producing Region were 150 Bcf above the 5-year average of 974 Bcf after a net injection of 20 Bcf. Stocks in the West Region were 52 Bcf above the 5-year average after a net addition of 3 Bcf. At 3,496 Bcf, total working gas is above the 5-year historical range.

Working gas stocks in the Producing Region, for the week ending September 14, 2012, totaled 1,124 Bcf, with 217 Bcf in salt cavern facilities and 907 Bcf in nonsalt cavern facilities. Working gas stocks increased 10 Bcf in the salt cavern facilities and increased 10 Bcf in the nonsalt cavern facilities since September 7. An historical series of the salt and nonsalt subtotals of the Producing Region is available for download at: [wngr\\_producing\\_region\\_salt.xls](#).

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- Performance Evaluation
- Related Links
- Storage Basics
- Natural Gas Weekly Update
- Natural Gas Navigator

Working Gas in Underground Storage Compared with 5-Year Range



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2007 through 2011.  
 Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

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 Fedstats | [USA.gov](#) | [Department of Energy](#)

**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**August 28, 2012 Release**

Jan-10		Jan-11		Jan-12		Jan-13	
Feb-10		Feb-11		Feb-12		Feb-13	
Mar-10		Mar-11		Mar-12		Mar-13	
Apr-10		Apr-11		Apr-12		Apr-13	
May-10		May-11		May-12		May-13	
Jun-10		Jun-11		Jun-12		Jun-13	
Jul-10		Jul-11		Jul-12		Jul-13	
Aug-10		Aug-11		Aug-12		Aug-13	
Sep-10		Sep-11		Sep-12		Sep-13	
Oct-10		Oct-11		Oct-12		Oct-13	
Nov-10		Nov-11		Nov-12		Nov-13	
Dec-10		Dec-11		Dec-12		Dec-13	
Average 2010	\$	Average 2011	\$	Average 2012	\$	Average 2013	\$
Summer 2010	\$	Summer 2011	\$	Summer 2012	\$	Summer 2013	\$
Winter 2010-2011	\$	Winter 2011-2012	\$	Winter 2012-2013	\$		

**North American Gas Forecast Monthly**  
 August 28, 2012 NATURAL GAS

**U.S. GAS PRICE SCORECARD: OCTOBER 2012 – MARCH 2013**

Bearish Neutral Bullish

Supply	Outlook	Commentary
Lower 48 Gas Production		As production grows, there is a growing concern that the U.S. will not be able to meet demand for gas. With the U.S. production of gas falling, the U.S. will have to rely on imports from Canada and Mexico. The U.S. production of gas is expected to decline in 2013, which will place a ceiling on volumes available for export.
U.S. Imports from Canada		Brimming western Canadian inventories are already on par with mid-November 2011 that almost certainly will lead to a new record end-injection season high. Despite storage nearing the limits of usable working capacity, lower Y/Y production on the order of 1 BCF/D will place a ceiling on volumes available for export.
U.S. Storage Levels		In the advanced mid-injection heating season, storage is still expected to be significantly lower than in previous years. The impact of the U.S. production of gas on storage is expected to be limited, as the U.S. production of gas is expected to decline in 2013.
Demand	Outlook	Commentary
Electric Generation (EG)		Our Reference Case sees gas-fired EG Y/Y growth narrowing to 0.5-0.6 BCF/D in November/December before taking a 3.0 BCF/D Y/Y hit in 1Q13. But those 1Q13 losses would be partly offset in a milder than normal heating season by stronger EG gas demand, driven by lower gas prices and related incremental coal-to-gas switching.
Industrial Sector		PIRA has downgraded its outlook on industrial demand for gas. Y/Y growth of 200 MMCF/D through the end of the upcoming heating season is expected to be lower than in previous years, as well as flat Y/Y investment levels. We believe this downward revision is a fair forecast.
Residential/Commercial (R/C)		Unusually mild weather from November to mid-December stands out as a bearish gas price risk not to be taken lightly. But more normal weather thereafter would push R/C gas heating far above that which occurred during the past unprecedentedly warm winter.
Gas Prices	Outlook	Commentary
October 2012 – December 2013		PIRA's adjusted gas price outlook for 2013 is only partly driven by our assumption of stable production that compares with an extremely low production level. Y/Y production gains in 2012 will be replaced by declines in 2013, given the year-over production upswing. The overall gas price outlook is the interplay between production substitution and demand growth.

**NYMEX Prices and Speculation**

Up until only a few weeks ago, short-covering by non-commercial traders was the dominant theme gleaned from the weekly COT data, as underscored by a -140,000 lot reduction in their NYMEX/ICE short futures position from April 24 through August 7. That reduction flipped the previous net non-commercial short position of -50,000 contracts into a net long position of more than 75,000 at its peak on July 24. The reduction of long positions, plus the inflation of new shorts, has lowered the net spec long balance toward 20,000 lots as of last Friday, suggesting that traders collectively view gas prices as having relatively limited upside potential until the heating season arrives — an assessment PIRA shares.

## **LNG Exports**

### **Bentek Predicts 6 LNG Export Projects, Resulting in 20% Higher Gas Prices**

Six LNG export projects with total export capacity of 58 million mt/yr, or about 7.7 Bcf/d could be by 2020 in North America, representing 12% of global LNG supply and resulting in 20% higher US gas prices compared with a scenario without any US LNG exports. According to Bentek, Henry Hub prices would average \$4.25/MMBtu in 2018 if no US LNG is exported. In the US exports base case prices would average \$5.04/MMBtu in 2020.

### **Exporting LNG Would Increase Prices**

According to American Public Gas Association, the push to export LNG will impair growing consumer demand, increase domestic gas prices and undermine energy independence efforts. EIA estimates LNG exports could cause prices to climb as much as 54% which could stymie demand from ongoing coal-to-gas switching. APGA states that preventing LNG exports would help balance US trade and reduce domestic dependence on foreign oil. "America is now in a unique position to make a significant stride towards energy independence".

### **Exports Won't 'Bail Out' Gas Prices**

LNG exports will not significantly increase US or Canadian prices according to industry executives. "We do not expect LNG exports to bail out North American gas in terms of price. With several proposals on the table to start shipping LNG abroad in 2015, analysts have been divided as to the likely impact on Henry Hub price, with potential increases ranging from \$.30/MMBtu to more than \$1/MMBtu." Of the nearly 20 LNG export projects in North America only three have received all of the licenses and approvals.

## **Miscellaneous Information**

### **Natural Gas Vehicles May Hike Demand by 14 Bcf/d by 2030**

In a recently released study, PIRA Energy Group indicated that natural gas-powered vehicles could consume as much as 14 Bcf/d by 2030 "With or without federal government assistance". "The sheer volume of US recoverable gas resources relative to expected to demand and said Henry Hub gas prices will remain deeply discounted relative to oil prices beyond this decade. For that reason, the adoption of natural gas by commercial trucking is approaching a critical threshold, which ultimately could lead to enormous gas demand growth at the expense of diesel fuel".

### **Record Storage Hiding Balanced Market**

The record level in storage is masking a balanced market this year and one that will be undersupplied by 1.5 Bcf/d by the end of 2013. According to FBR Capital, without an increase in rig count in 2013, the market in 2014 could be undersupplied by 3.2 Bcf/d. "Current excess storage will continue to act as a headwind for a near-term sustained price recovery as we estimate that storage levels will take until the end of next year to decline to normal levels". FBR is predicting prices will average \$3.50/Mcf for 2013 and \$4/Mcf in 2014.

### **Gas Prices to Stay Between \$2.50--\$3.25/Mcf to Enable Switching**

According to Raymond James's analyst Marshall Adkins, power companies switching from coal to natural gas will keep the gas market balanced this fall if prices remain in a range between \$2.50/Mcf and \$3.25/Mcf. Gas prices will gradually improve over the next few years because of the collapse in drilling for dry gas, lower oil prices, and more normal weather when compared with this year's warm weather.

## LDC Forum Information

### **Gas Prices Boost Power Sector Demand, But Industry's Path Unclear**

Many LDC participants indicated that they expect price uncertainty to be at unprecedented levels, resulting from record storage levels, increased production, impact of federal and state regulation and debate over US gas exports. According to the American Public Gas Association, "We in the natural gas industry now sit at the top of the hill". Natural gas is a major jobs creator, the chief catalyst for US energy independence, and the energy source of the 21<sup>st</sup> century.

Electric generation will account for about 40% of overall demand by 2014. Gas passed coal as the dominant fuel source for the first time this year, and the trend is expected to continue as coal-fired plants are retired. Power demand for gas has jumped 4.9 Bcf/d, a 24% increase, from last year due to coal to gas switching.

The EIA is forecasting prices to average \$2.65/MMBtu this year, \$3.34 in 2013, but the agency is forecasting a wide swing in potential prices, from as low as \$2.20 to as high as \$4.70/MMBtu.

Chesapeake Energy has flipped its rig activity from dry to wet rigs. Chesapeake had 112 dry rigs in operation in 2010, but only has 12 rigs currently operating. However, Chesapeake has 116 wet rigs this year, but only 15 in 2010. In order for Chesapeake to increase dry production, prices would need to return to the \$4/MMBtu to \$6/MMBtu range.

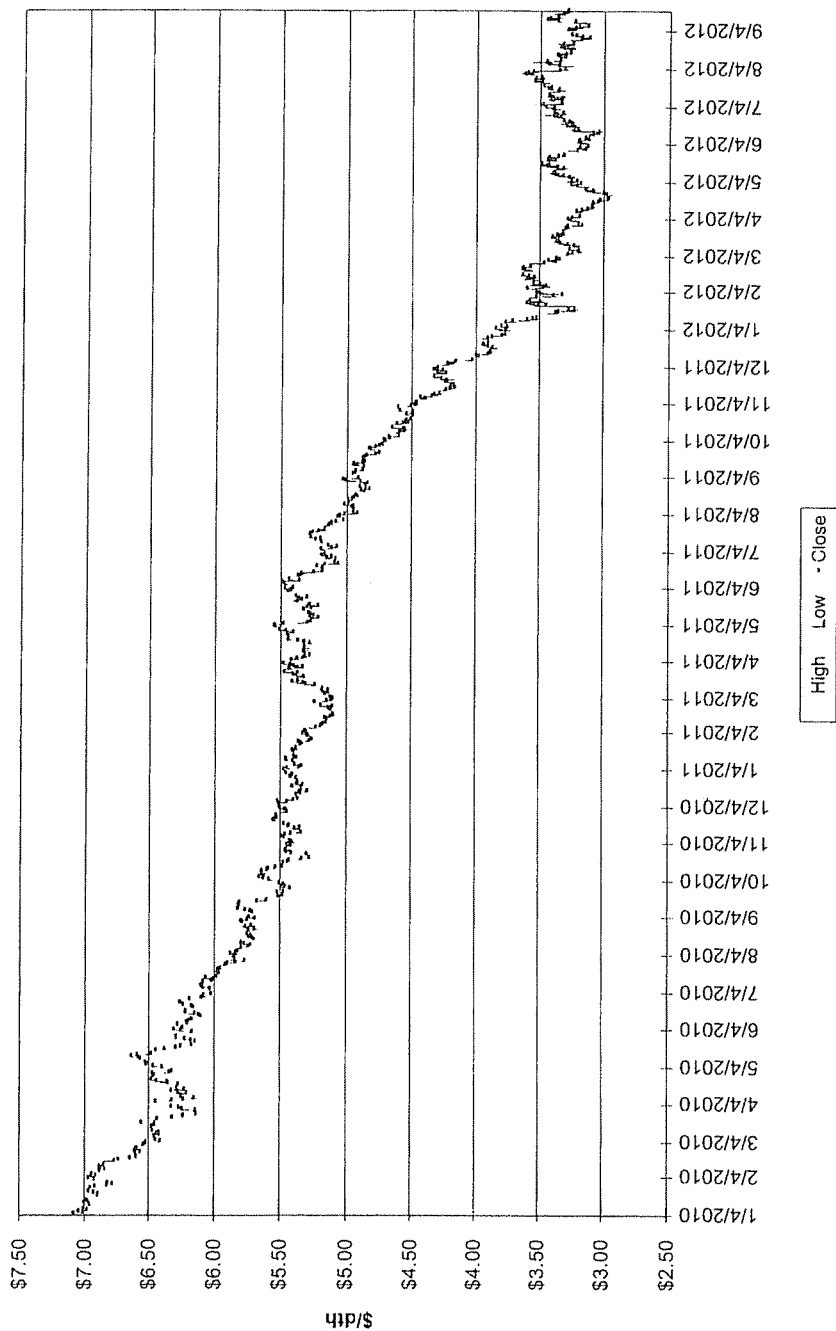
There are clear winners and loser in the current supply-and-demand environment. The Marcellus and Woodford shale's and the Texas Gulf Coast will see the best return on wells while Haynesville, East Texas, San Juan and Piceance basins will like see the lowest returns.



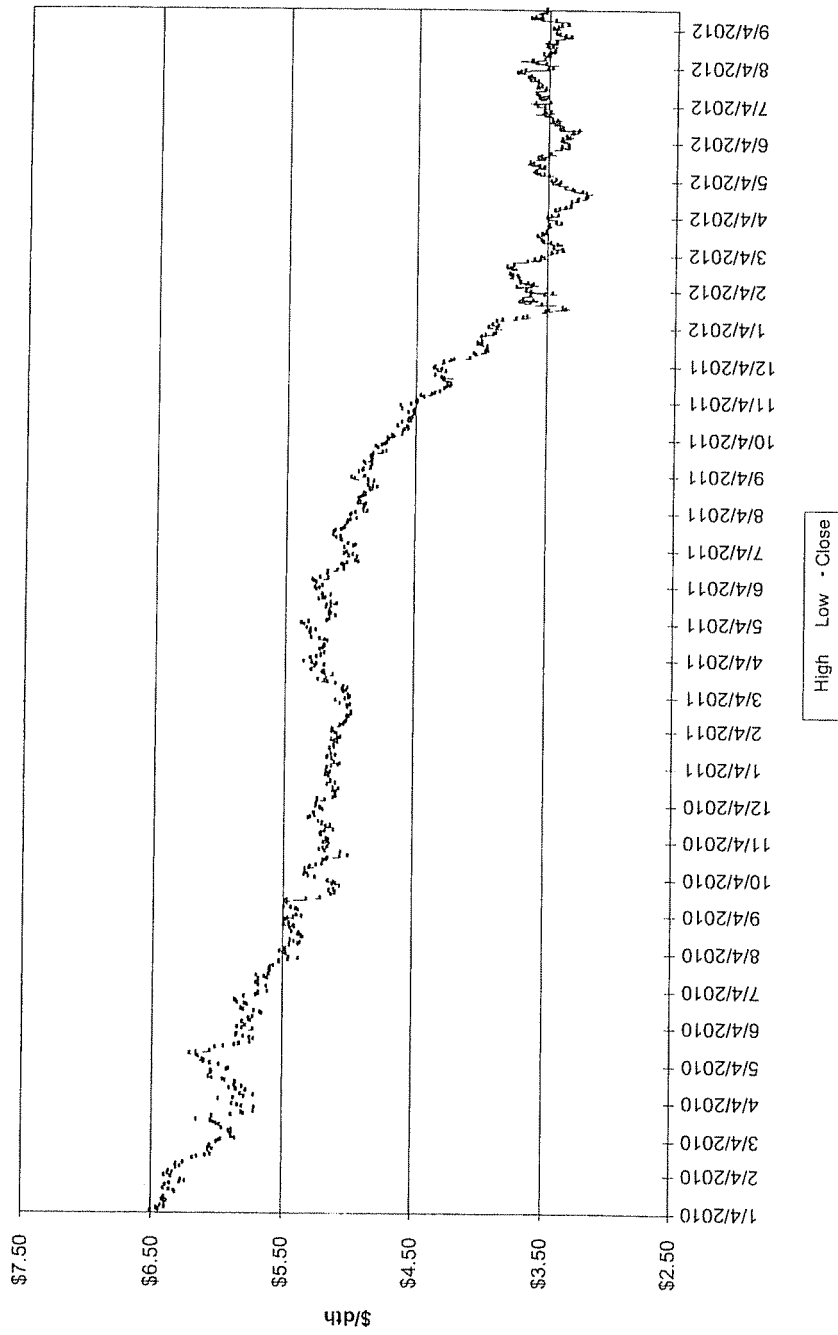
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**September 11, 2012 Release**

Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	3.26
Feb-10	5.32	Feb-11	4.09	Feb-12	2.50	Feb-13	3.33
Mar-10	4.29	Mar-11	3.97	Mar-12	2.18	Mar-13	3.21
Apr-10	4.03	Apr-11	4.25	Apr-12	1.95	Apr-13	3.19
May-10	4.14	May-11	4.31	May-12	2.43	May-13	3.25
Jun-10	4.80	Jun-11	4.55	Jun-12	2.46	Jun-13	3.32
Jul-10	4.63	Jul-11	4.42	Jul-12	2.95	Jul-13	3.35
Aug-10	4.32	Aug-11	4.05	Aug-12	2.84	Aug-13	3.38
Sep-10	3.89	Sep-11	3.90	Sep-12	2.77	Sep-13	3.27
Oct-10	3.43	Oct-11	3.56	Oct-12	2.84	Oct-13	3.36
Nov-10	3.71	Nov-11	3.24	Nov-12	2.97	Nov-13	3.49
Dec-10	4.25	Dec-11	3.17	Dec-12	3.19	Dec-13	3.70
Average 2010	\$ 4.387	Average 2011	\$ 4.000	Average 2012	\$ 2.646	Average 2013	\$ 3.343
Summer 2010	\$ 4.177	Summer 2011	\$ 4.149	Summer 2012	\$ 2.606	Summer 2013	\$ 3.303
Winter 2010-2011	\$ 4.102	Winter 2011-2012	\$ 2.752	Winter 2012-2013	\$ 3.192		

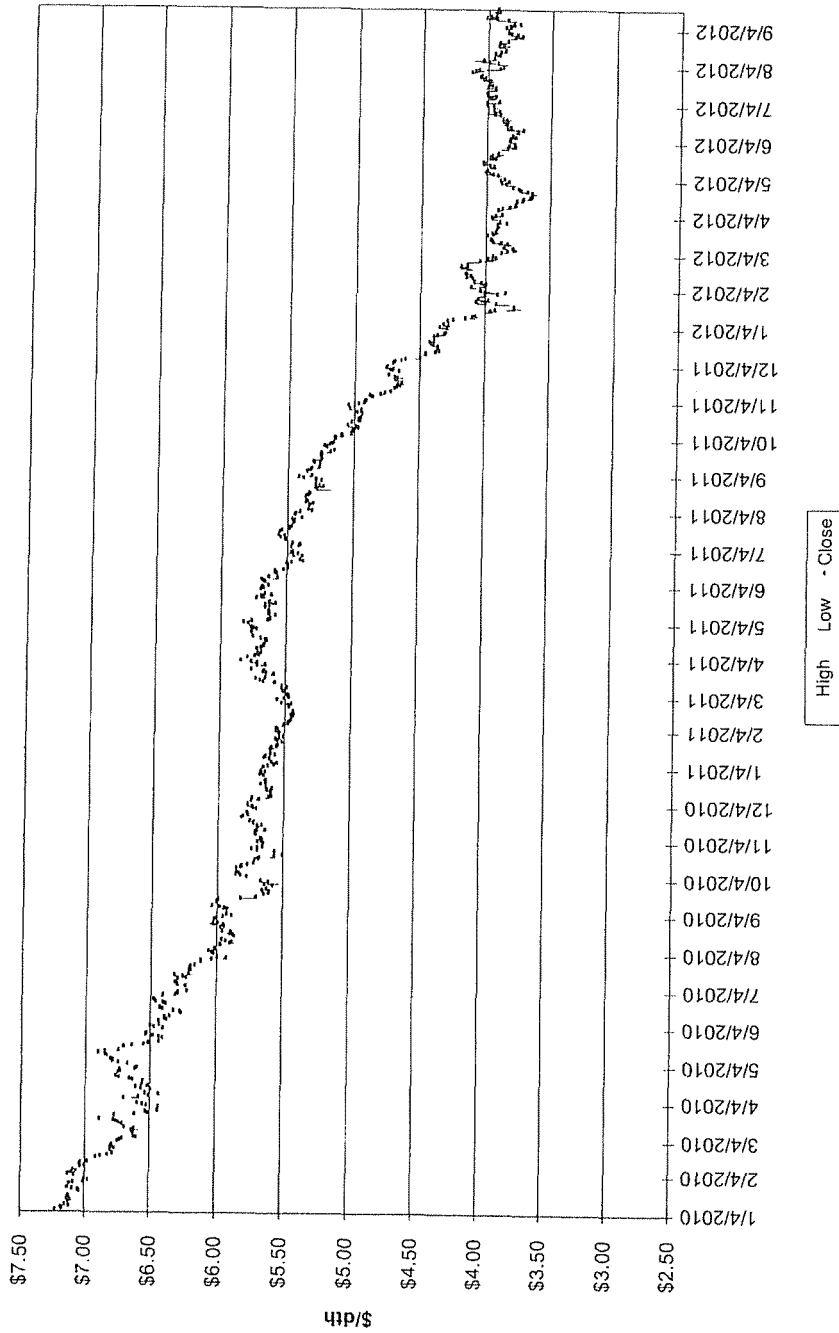
Winter Strip Nov12 - Mar13



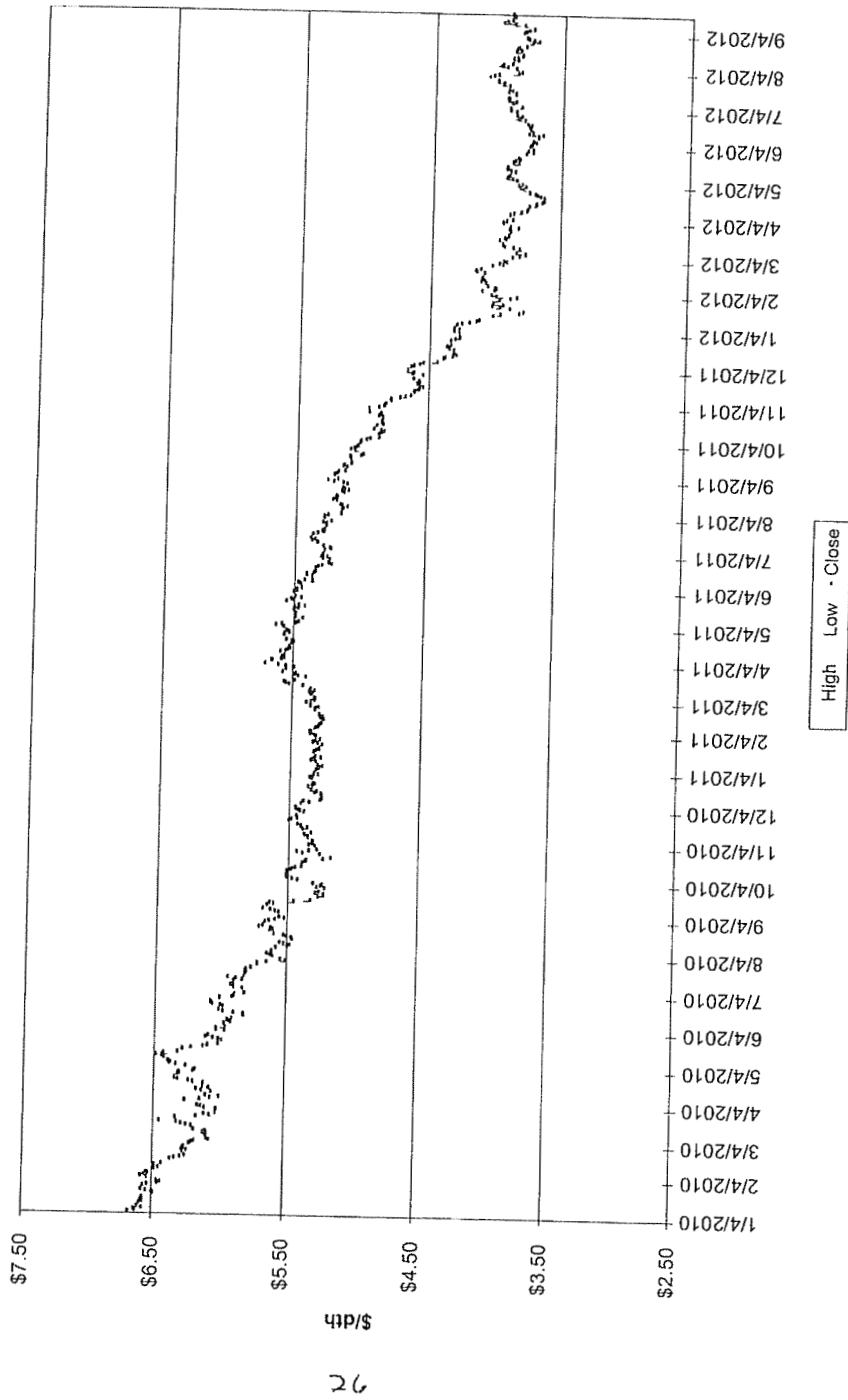
Summer Strip 2013



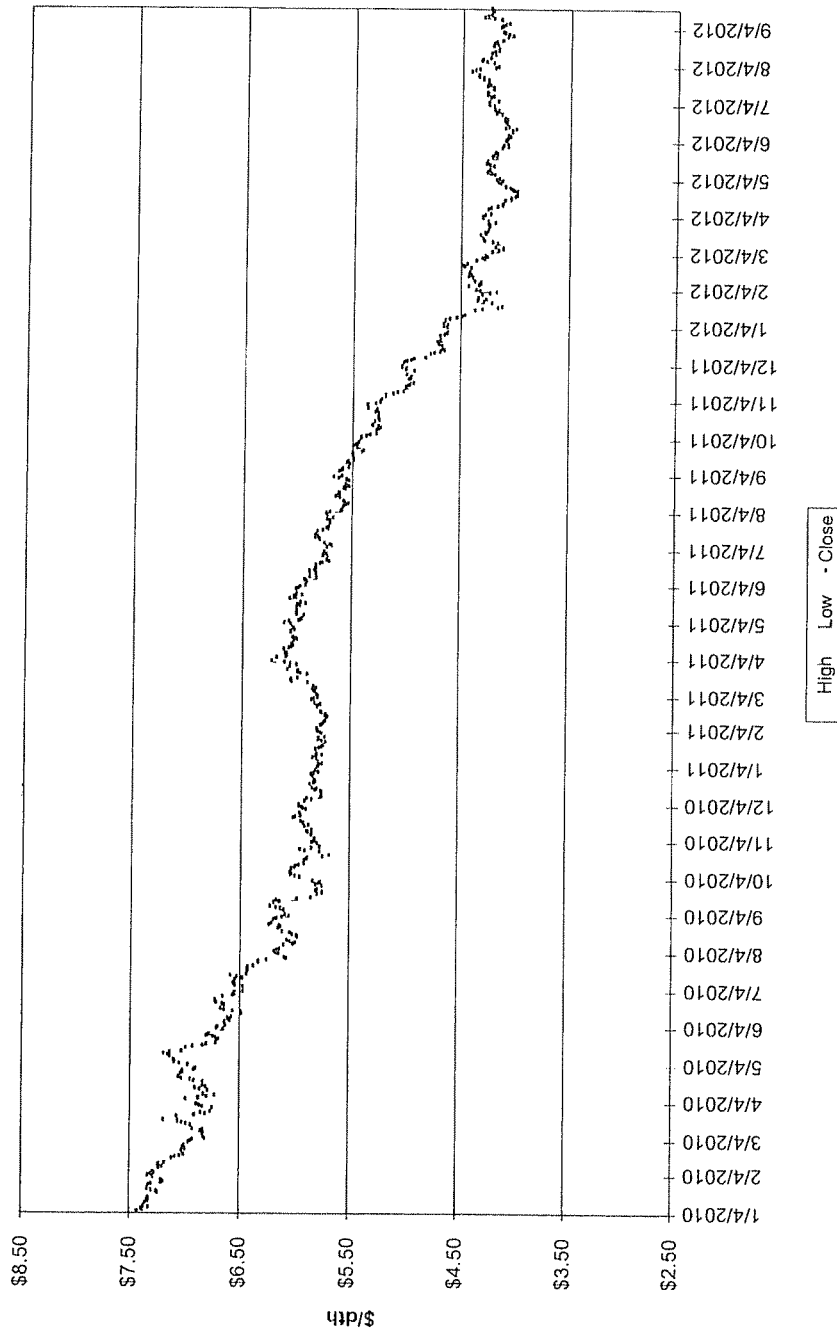
Winter Strip Nov13 - Mar14



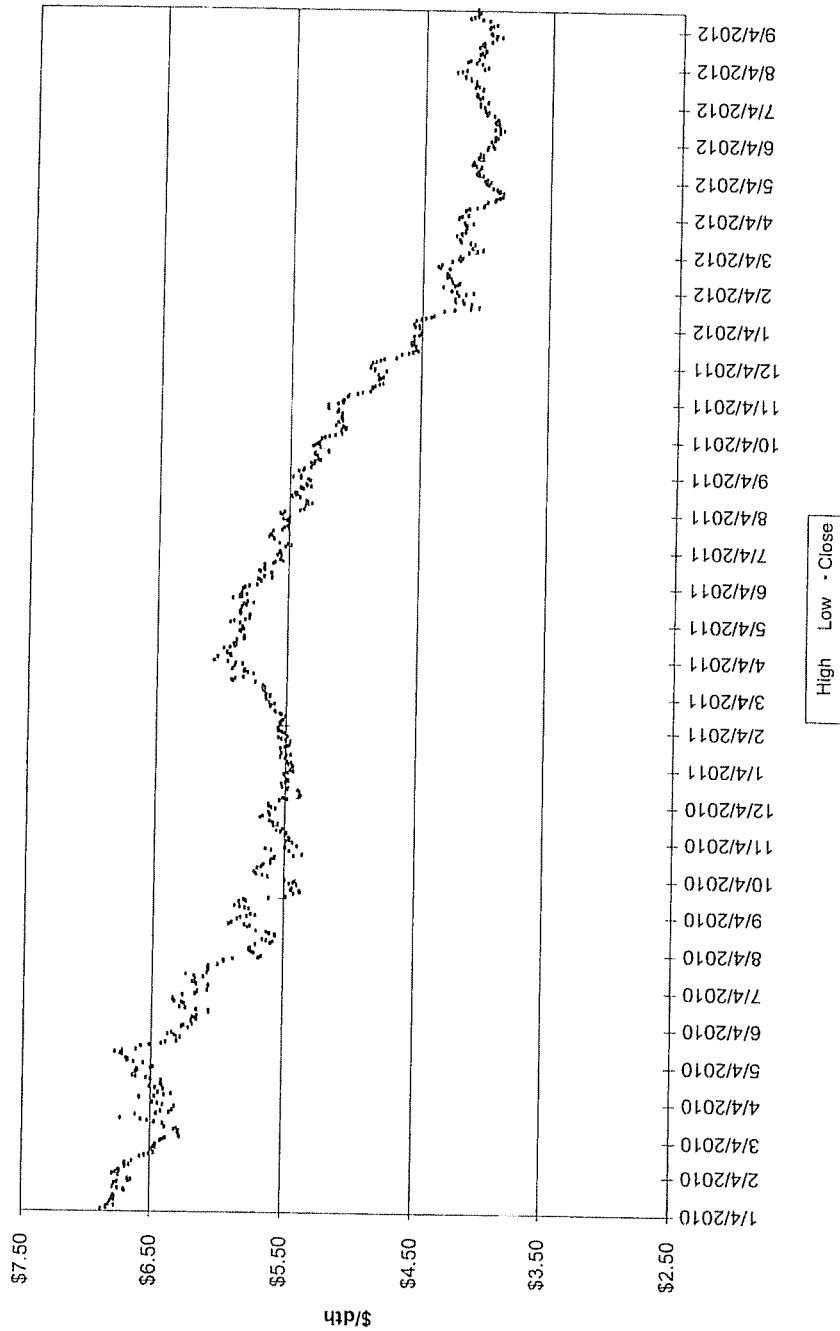
Summer Strip 2014



Winter Strip Nov14 - Mar15



Summer Strip 2015





*Independent Statistics & Analysis*

## U.S. Energy Information Administration

September 2012

### Short-Term Energy Outlook

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 69.8 billion cubic feet per day (Bcf/d) in 2012, an increase of 3.2 Bcf/d (4.8 percent) from 2011. Large gains in electric power use in 2012 more than offset declines in residential and commercial use. Projected consumption of natural gas in the electric power sector averages 25.2 Bcf/d in 2012, 21 percent higher than in 2011, primarily driven by the improved relative cost advantages of natural gas over coal for power generation in some regions. Consumption in the electric power sector during 2012 peaks at 31.1 Bcf/d in the third quarter, when electricity demand for air conditioning is highest.

Total natural gas consumption increases by 0.2 Bcf/d (0.2 percent) in 2013. Expected increases in residential, commercial, and industrial consumption offset expected declines in the electric power sector. A forecast of near-normal weather during the upcoming winter drives 2013 increases in residential and commercial consumption of 9.9 percent and 9.3 percent, respectively. Although higher natural gas prices contribute to an 8.4 percent decline in forecast natural gas consumption in the electric power sector in 2013, consumption in the power sector next year is still expected to be about 2.3 Bcf/d higher than 2011 levels.

**U.S. Natural Gas Production and Imports.** Total marketed production of natural gas grew by 4.8 Bcf/d (7.9 percent) in 2011. This strong growth was driven in large part by increases in shale gas production. EIA expects continued year-over-year growth in 2012 of 2.6 Bcf/d. EIA, however, expects a small drop in production in the coming months, reflecting both losses from hurricanes and declines related to recent drops in the rig count. Hurricane Isaac hit the Gulf of Mexico on August 28 and has affected natural gas production for several days, with shut-ins in the Gulf of Mexico totaling 27.9 Bcf through September 10. According to Baker Hughes, the natural gas rig count was 452 as of September 7, 2012, compared with 811 at the start of 2012.

EIA forecasts that production growth will slow to 0.5 Bcf/d in 2013, as the slowdown in drilling activity is offset by growth in production from liquids-rich natural gas production areas such as the Eagle Ford and wet areas of the Marcellus Shale, and associated gas from the growth in domestic crude oil production.

**Crude Oil Prices.** EIA projects the price of Brent crude oil will average \$112 per barrel in 2012 and \$103 per barrel in 2013, both about 3 percent higher than last month's Outlook. EIA expects the WTI price to average \$93 per barrel in the second half of 2012 and largely remain at



this level throughout the forecast period. EIA expects that the WTI crude oil spot price discount to the Brent crude oil spot price will continue, averaging \$17 per barrel in the fourth quarter of 2012 and then falling to \$9 per barrel by the end of 2013.



**Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 October 18, 2012**

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Nov 12-Jan 13)	↓	Long	NOAA predicting above average temperatures for November 2012--January 2013 over the majority of CONUS.	12
Mid Term Forecast (30-60 days)	↔	Long	November is predicted to be 3.4% colder than normal based on 10 year normals and December weather is predicted to be 1.9% warmer than normal.	13
Short Term Forecast (6-10 days)	↔	Short	Below temperatures on the West Coast during the period. Above and Much Above temperatures on Central Plains through the East Coast during the period.	14
Tropical Storm Activity	↔	Short	Tropical cyclone formation us not expected during the next 48 hours.	
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage injections for the week ending October 12th were 51 BCF. Storage levels are at 3.776 TCF which is 5.0% higher than last year and 7.1% higher than the 5 year average. EIA expects inventory levels at the end of October will set a record high of 3,903 Bcf. Canadian gas storage facilities are 96% full--looking for exports to US to relieve Canada's supply glut.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13 Summer 2013: [REDACTED]	↑ ↓	Long	GAS PRICE SCORECARD: Gas Price Outlook for November 2012--March 2013 "Bullish". Gas balances are shaping up to be tight enough to support a winter price rally.	16-17
Gas Daily--Gas Price Predictions	↑	Long	Fundamentals are pointing to a major tightening of the North American gas market. The gas market is turning from oversupplied to undersupplied in the next storage injection season. Winter weather forecasts are calling for an average or slightly warmer-than-average season. Without an increase in the current active rig count, we believe the market is undersupplied by 1.7 Bcf/d in 2013, 3.3 Bcf/d in 2014 and 4.5 Bcf/d in 2015. Analysts Projections: FirstEnergy Capital--\$4.10 average 2013, Canaccord--\$4.00 average 2013, FBR--\$4.50 average 2013	18-19
Gas Daily--LNG Exports	↑ ↓	Long	By 2022, 10 Bcf/d of LNG will be exported from 6 North American terminals according to Energy Venture and LCI Energy insight. DEO has received 31 applications to export LNG--the key criteria in determining the viability of the project was first mover status. Goldman Sachs indicates that political pressure, along with growing demand from manufactures and petrochemical plants could lead to very restrictive LNG exports.	20
Gas Daily--LNG Exports	↑	Long	FERC has approved Cheniere Energy's application to build facilities to export natural gas. In addition, Canada approved BC LNG exports from Kitimat, British Columbia.	20
LDC Forum Information	↑	Long	Many LDC participants expect price uncertainty to be at unprecedented levels resulting from record storage levels, increased production, regulation and debate over US gas exports. Power demand for gas has jumped 4.9 Bcf/d from last year due to coal switching. Electric generation will account for about 40% of overall demand by 2014. Chesapeake has flipped its rig activity from dry to wet rigs. In order for Chesapeake to increase dry production, prices would need to return to the \$4 to \$6/MMBtu range.	21
Gas Daily		Long	Lease sales planned for the Gulf of Mexico in March and August of 2011 will be pushed back until late next year at the earliest as part of a revamped offshore drilling plan.	24-25
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.308 Summer 2013: \$3.28	↓	Long	The projected Henry Hub natural gas spot price averages \$2.707/MMBtu for 2012 and \$3.345/MMBtu for 2013	21
<b>Technical Analysis</b>				
Winter 2012-13 Strip Chart	↑	Short	Closed at \$3.78	22
Summer 2013 Strip Chart	↑	Short	Closed at \$3.91	23
Winter 2013-14 Strip Chart	↑	Short	Closed at \$4.27	24
Summer 2014 Strip Chart	↑	Short	Closed at \$4.13	25
Winter 2014-15 Strip Chart	↑	Short	Closed at \$4.46	26
Summer 2015 Strip Chart	↑	Short	Closed at \$4.30	27
<b>Economy</b>				
Q1 Macro Update: 2011	↑	Long	Wood Mackenzie expects global GDP growth of 3.4% and 3.1% in 2011 and 2012 respectively. Stronger growth in the US up from 1.8% in 2011 to 3.1% in the US, this reflects further fiscal stimulus announced in December which is expected to boost the economy onto a self-sustaining growth trajectory.	25
Demand	↔	Long	EIA projects total natural gas consumption to grow by 4.7% to 69.8 Bcf/d in 2012 resulting from large gains in electric power generation. Consumption decreases in 2013 to an average of 69.6 Bcf/d or (0.2%)--this reduction is driven by a decline in the electric power sector.	28-29
Supply	↔	Long	Total marketed production grow by an estimated 4.8 Bcf/day or 7.9% in 2011, the largest volumetric increase in history. EIA expects year-over-year growth in 2012 of 2.6 Bcf/d. 2013 growth is expected to slow to 0.4 Bcf/d.	28-29
Oil Market	↔	Long	EIA expects Brent crude to average of \$111 per barrel for the fourth quarter of 2012 and average \$103 per barrel in 2013.	28-29

**Meeting Minutes: 428 Annex Conference Room - 1:00 pm**  
 Attendees: Jim Mahring, Jeff Kern, Mike Brumback, Joachim Fischesser, Terry Bates, Mitch Martin, Steve Niederbaumer  
 Discussed market fundamentals including weather, storage inventory levels, PIRA and EIA forecasts, independent analysts projections of supply and demand and the impact on gas prices, economic influences on supply and demand and technical analysis on Summer and Winter Strip prices. In addition, reviewed DEO and DEK's hedging program to date. Significant discussion took place regarding the high storage inventory level as well as EIA's estimate of the October 31st storage level balance. Based on previously discussed factors, a decision was made to hedge additional volumes at this time. After discussion, agreement was reached to contact suppliers to provide the following: Fixed price deal April 2014--October 2015--DEK [REDACTED] dth/d.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2011 - October 2012  
 As of 10/17/12

	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (Mcf)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Collar												
Collar												
Total Hedged (primary)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EOC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt. Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 10/17/12

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other *Withdrawals (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Cost Avg.												
Total Hedged (dth/day)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 10/17/12

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Total Hedged (amt/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 10/17/12

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

10/17/2012

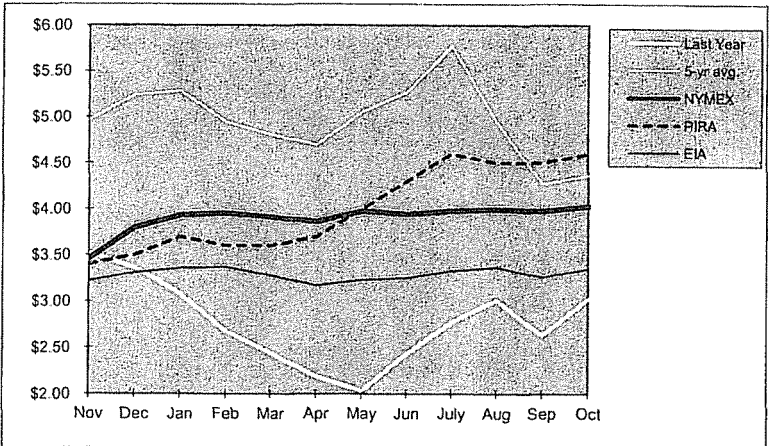
Duke Energy Kentucky  
 Hedging Program  
 Current Position

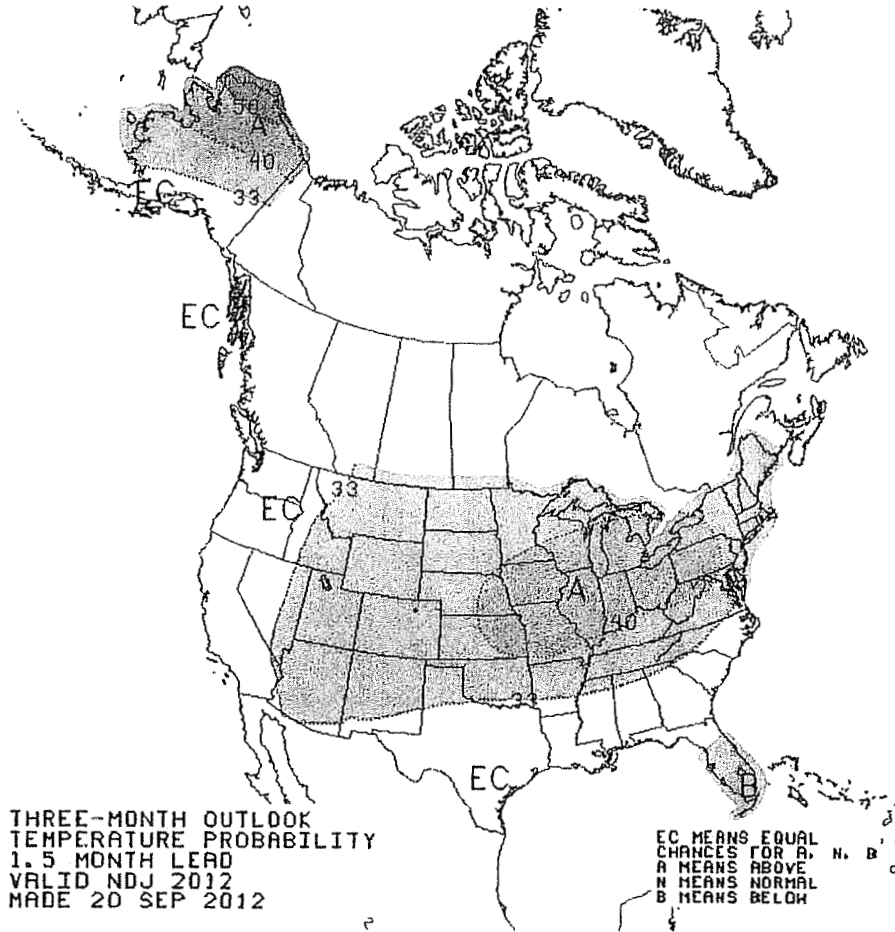
Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/12)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2012					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2012					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					



**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

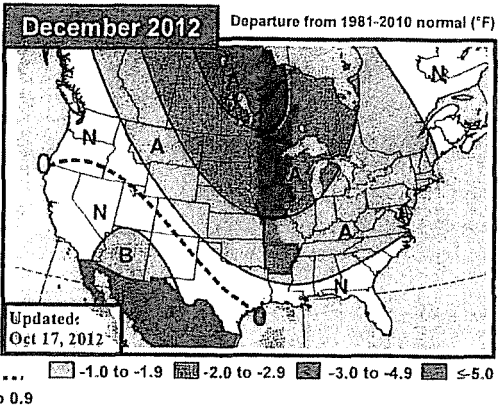
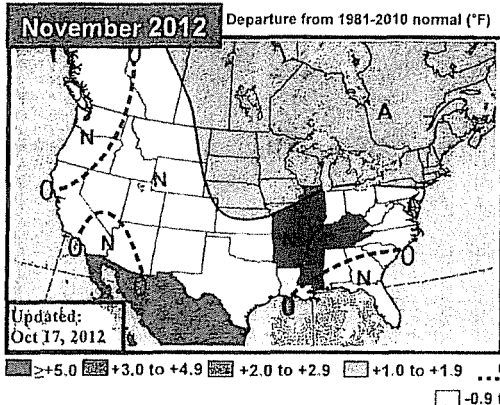
Historic Prices:						
NYMEX Closing Price						
	5-yr. avg. (07/08-11/12)	Last Year (2011-2012)		PIRA 21-Sep-12	EIA 10-Oct-12	NYMEX 18-Oct-12
Nov	\$4.97	\$3.52			\$3.220	\$3.457
Dec	\$5.24	\$3.36			\$3.310	\$3.796
Jan	\$5.28	\$3.08			\$3.360	\$3.933
Feb	\$4.95	\$2.68			\$3.370	\$3.957
Mar	\$4.81	\$2.45			\$3.280	\$3.912
Apr	\$4.70	\$2.19			\$3.170	\$3.860
May	\$5.06	\$2.04			\$3.230	\$3.980
Jun	\$5.27	\$2.43			\$3.250	\$3.943
July	\$5.78	\$2.77			\$3.330	\$3.982
Aug	\$4.95	\$3.01			\$3.370	\$3.997
Sep	\$4.28	\$2.63			\$3.260	\$3.980
Oct	\$4.36	\$3.02			\$3.350	\$4.030
12 Month Avg	\$4.97	\$2.77			\$3.292	\$3.902
Summer Average					\$3.280	\$3.967
Winter Average					\$3.308	\$3.811





# EarthSat's 30-60 Day Outlook

Wednesday, October 17, 2012 Meteorologists: SS/BH



**Previous** No change to forecast  
 Still warm across upper Midwest and Northeast

The November outlook remains unchanged with above normal temperatures still expected from the northern Plains into the upper Midwest and Northeast. The forecast is still primarily driven by long term signals, including the -PDO and the +AMO. Blocking is still a risk to the forecast, though both the American and European ensembles show the AO and NAO rising to near neutral for the beginning of the month, which should limit major, sustainable cold threats early on. Just as the past couple of months have, November should continue to offer plenty of variability. Confidence remains low in the exact details at this lead time.

Nov GWHDD** Forecasts	*10Y Normal updated to '02-11
Nov 2012 Fcst: <b>541.0</b>	10Y Normal* 523.4; 30Y Normal 555.7; Nov-2011 498.8;
No change	**National Population-Weighted HDDs

**Previous** Minor cool adjustment to Midwest  
 Still warm-dominated overall

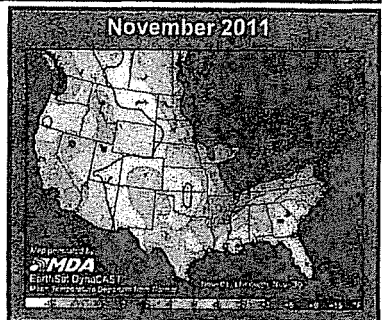
Only minor cool changes were made to the forecast, with the aboves backed off slightly in the eastern Midwest and central Plains. The overall forecast remains generally the same, however, with widespread aboves across the Rockies, Plains, Midwest, and East. Again, the forecast is still driven primarily by the -PDO and +AMO, and with no expected change in the weak ENSO signal, that is not likely to change soon. Still, there remains a colder risk due to blocking. The CFS monthly model is cooler than our outlook, showing some weak belows in the Midwest and weak aboves in the Southwest.

Dec GWHDD** Forecasts	*10Y Normal updated to '02-11
Dec 2012 Fcst: <b>839.0</b>	10Y Normal* 855.3; 30Y Normal 867.5; Dec-2011 770.2
Change: +2	**National Gas-Weighted HDDs

**Oct so far**

Final 60 Day Outlook    Final 30 Day Outlook    Current 10-15 Day Forecast (10-1-10-24)

With the forecast now valid out to the end of the month, it's becoming more apparent that the 30 and 60 Day outlooks will have been too warm across the Plains and Midwest and not warm enough in the Southwest or the Northeast. The strongest warm anomalies look to be in the Southwest, ranging from 3-6F above normal, with anomalies of 1-3F above normal in the Northeast. In the meantime, the strongest cold anomalies will be in the northern Rockies and northern Plains. Widespread warm anomalies in Midwest the 6-10 Day period are mitigated by a cooler 11-15 Day period.



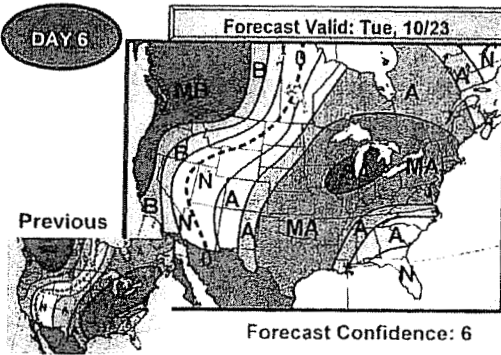
# 6-10 Day Forecast—Detailed

Thursday, October 18, 2012

Meteorologist: BH/AC

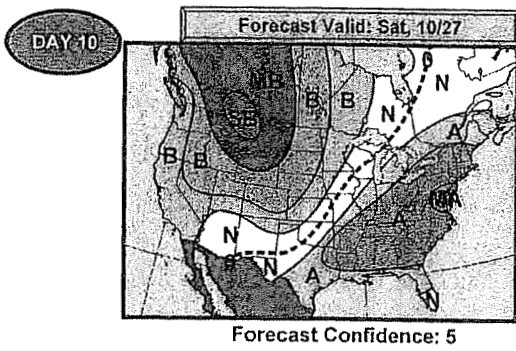
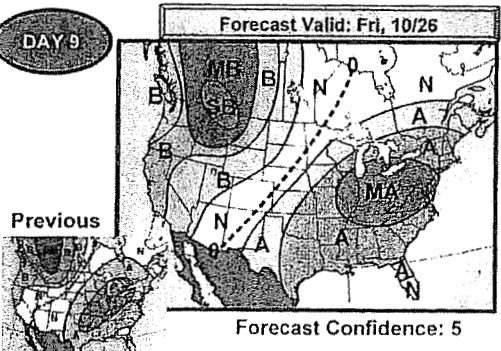
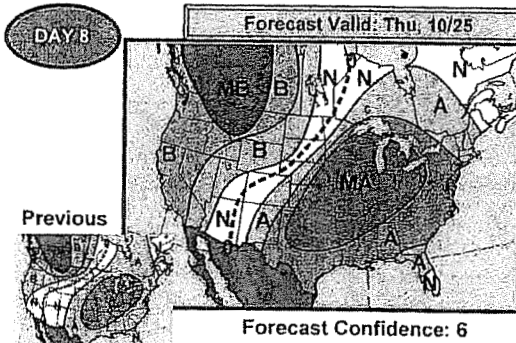
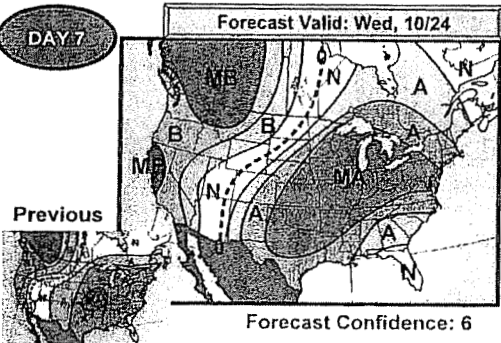


## Forecast Temperature Deviations



**\*Cool Air Firmly Settles Over Much Of West\***  
**\*Warmer Projections Into Midwest Early\***

Much of the eastern third of the country continues to stay on the warmer side through the forecast period with some potential for warmer readings still. Some parts of the Midwest might see readings climb high enough for more strong above normal temperatures to exist during the early period. With a ridge lingering in the East late, stronger than forecasted warmth could carry into period's end. Meanwhile, the cooler air begins to dive into the Plains and western Midwest late in the period, providing below normal readings for then, though timing concerns still exist. The cold air in the West through much of the period may still become more intense and widespread.



- A +3F to +4F  
  A +5F to +7F  
  MA +8F to +14F  
  SA +15 or Higher
- B -3F to -4F  
  B -5F to -7F  
  MB -8F to -14F  
  SB -15 or Lower

1 4 5 0 1 0 1 1

## Weekly Natural Gas Storage Report

Released: October 18, 2012 at 10:30 a.m. (eastern time) for the Week Ending October 12, 2012.  
 Next Release: October 25, 2012

### Working Gas in Underground Storage, Lower 48

other formats: [Summary TXT](#) [CSV](#)

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	10/12/12	10/05/12	Change	Year Ago (10/12/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	2,029	2,005	24	1,976	2.7	1,978	2.6
West	521	513	8	488	6.8	477	9.2
Producing	1,226	1,207	19	1,130	8.5	1,071	14.5
Total	3,776	3,725	51	3,595	5.0	3,527	7.1

#### Notes and Definitions

Beginning with the report period for the week ending March 16, 2012, EIA is including salt dome and nonsalt facility subtotals for the Producing Region in the Summary section. The sum of the components may not equal the total for the Producing Region, because of independent rounding.

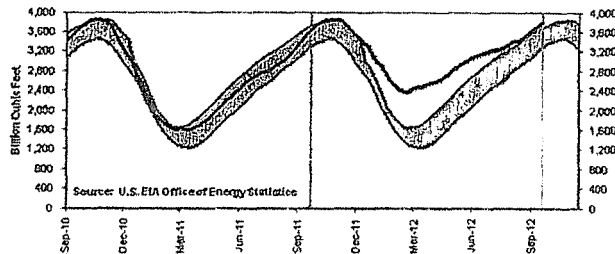
#### Summary

Working gas in storage was 3,776 Bcf as of Friday, October 12, 2012, according to EIA estimates. This represents a net increase of 51 Bcf from the previous week. Stocks were 181 Bcf higher than last year at this time and 249 Bcf above the 5-year average of 3,527 Bcf. In the East Region, stocks were 51 Bcf above the 5-year average following net injections of 24 Bcf. Stocks in the Producing Region were 155 Bcf above the 5-year average of 1,071 Bcf after a net injection of 19 Bcf. Stocks in the West Region were 44 Bcf above the 5-year average after a net addition of 8 Bcf. At 3,776 Bcf, total working gas is above the 5-year historical range.

Working gas stocks in the Producing Region, for the week ending October 12, 2012, totaled 1,226 Bcf with 271 Bcf in salt cavern facilities and 955 Bcf in nonsalt cavern facilities. Working gas stocks increased 11 Bcf in the salt cavern facilities and increased 8 Bcf in the nonsalt cavern facilities since October 5. An historical series of the salt and nonsalt subtotals of the Producing Region is available for download at [wnsr\\_producing\\_region\\_snl.xls](#).

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- Performance Evaluation
- Related Links
- Storage Basics
- Natural Gas Weekly Update
- Natural Gas Navigator

Working Gas in Underground Storage Compared with 5-Year Range



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2007 through 2011.  
 Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**September 21, 2012 Release**

Jan-10		Jan-11		Jan-12		Jan-13	
Feb-10		Feb-11		Feb-12		Feb-13	
Mar-10		Mar-11		Mar-12		Mar-13	
Apr-10		Apr-11		Apr-12		Apr-13	
May-10		May-11		May-12		May-13	
Jun-10		Jun-11		Jun-12		Jun-13	
Jul-10		Jul-11		Jul-12		Jul-13	
Aug-10		Aug-11		Aug-12		Aug-13	
Sep-10		Sep-11		Sep-12		Sep-13	
Oct-10		Oct-11		Oct-12		Oct-13	
Nov-10		Nov-11		Nov-12		Nov-13	
Dec-10		Dec-11		Dec-12		Dec-13	
Average 2010	\$	Average 2011	\$	Average 2012	\$	Average 2013	\$
Summer 2010	\$	Summer 2011	\$	Summer 2012	\$	Summer 2013	\$
Winter 2010-2011	\$	Winter 2011-2012	\$	Winter 2012-2013	\$		

16

**North American Gas Forecast Monthly**

September 21, 2012

NATURAL GAS

**U.S. GAS PRICE SCORECARD: NOVEMBER 2012 – MARCH 2013**

Bearish Neutral Bullish

Supply	Outlook	Commentary
<i>Lower BCF Production</i>		The sequential U.S. production trend has stalled, but bullish sentiment has taken hold of the market. PIRA's Q12 demand forecast is based on the fact that new bidding and processing capacity in the Marcellus and Utica basins is scheduled to come on line in the second quarter, which will offset production of 1 BCF/D in the first quarter. Although Y/Y comparisons would be roughly unchanged.
<i>Canadian Production/Exports</i>		Plummeting WCSB production throughout the summer prevented incremental Y/Y imports from Canada, despite record-high end-March storage. With future WCSB production pointed decidedly lower, PIRA foresees escalating import declines from Canada in the heating season, with Y/Y losses widening to over 1 BCF/D by 2Q13.
<i>U.S. Storage Levels</i>		September and October stock builds are forecast to contract as a result of a resulting storage carry into the heating season. PIRA's forecast for a reduction of 100 BCF in storage from 2012 to 2013 is based on the Hybrid Case assumption for storage levels of 100 BCF and 100 BCF in the first and second quarters, respectively.
Demand	Outlook	Commentary
<i>Electric Generation (EG)</i>		Based on our gas price "deck," gas-fired EG Y/Y growth should narrow to under 1 BCF/D in 4Q12. But higher 1Q13 gas prices would place much larger volumes at risk of gas-to-coal substitution during the later stages of the heating season. Powder River Basin coal will be a focal point of the gas-coal battle for market share in 4Q12. By midyear 2013 the focal point will shift to ILB coal given our price outlook.
<i>Industrial Sector</i>		Other than the 2 BCF/D bill that Hurricane Isaac took out in September, demand remains flat. PIRA's near-term view of industrial gas demand continues to anticipate tepid growth, except for HDD-related winter gains, growth of 1-2 BCF/D in heating should continue to overall gas demand expansion.
<i>Residential/Commercial (R/C)</i>		PIRA's Hybrid HDD assumption should cause R/C gas heating to increase Y/Y by almost 6 BCF/D, or ~900 BCF, from November through March 2013. Even in the advent of a 10% milder heating season than our Hybrid Case, heating loads would be higher Y/Y by ~2 BCF/D, or ~300 BCF.
Gas Prices	Outlook	Commentary
<i>November 2012 - March 2013</i>		Very tight fundamentals for winter EG gas balance and shipping capacity limit a high discount winter price rally "with gas" as was true of the rally in May. Also, bearish weather risk has already been combined by a mix of factors (e.g., domestic supply expansion, exports and coal-to-gas substitution) to level the playing field and a price premium.

**NYMEX Prices and Speculation**

Non-commercial traders are back to carrying a net NYMEX/ICE short futures position of ~23,000 lots as of 9/11, which contrasts with the consistent net length throughout much of the May 15-August 21 period that peaked at ~75,000 contracts. But the net short spec position is vastly below the ~190,000 lots held about a year ago. Although additional selling is entirely possible, stronger fundamentals look capable of sparking a NYMEX rally, which non-commercial buying could accentuate.

## **Gas Price Predictions**

### **Analysts see Gas Approaching \$4/Mcf in 2013**

US gas prices should average between \$3/Mcf and \$4/Mcf in 2013, according to three analysts. FirstEnergy Capital is calling for an average 2013 NYMEX price of \$4.10/MMBtu. "Fundamentals are now convincingly pointing to a major tightening of the North American gas market." The decline in rigs to 437 from about 800 in January is below the tipping point of 520 needed to sustain production at current levels.

Oppenheimer expects 2013 Henry Hub spot gas prices in the \$3 to \$4/Mcf range. Prices above \$4.50/Mcf or below \$2.50/Mcf are unsustainable.

Canaccord expects that 2013 prices should average \$4/Mcf with the market rolling over from being oversupplied to undersupplied in the next storage injection season. "Robust gas-fired power demand served its purpose in rebalancing the gas market".

### **Normal Winter Expected to Keep Prices Supported, with \$4/MMBtu Gas Possible**

Winter weather forecasts thus far are calling for an average or slightly warmer-than-average season. "With a consensus for a normal winter taking shape, sources said NYMEX natural gas futures prices will likely stay at or slightly above \$3.50/MMBtu, while some believe the \$4/MMBtu level could also be reached."

Among most forecasters, a near-normal winter is emerging. According to Jefferies and Company, "This implies exit inventories of 2 Tcf next spring compared to 2.5 Tcf this year. That would be the second-highest exit inventory on record, enough to stabilize gas in the \$3/MMBtu--\$3.50/MMBtu range, but not enough for a \$4 handle."

IAF Advisors forecast prices at the mid to upper \$3/MMBtu range based on a moderate winter. Barclays Capital, based on a more normal winter has revised their 4<sup>th</sup> quarter forecast to \$3.35/MMBtu from \$3/MMBtu. Forecasts for a normal winter could push demand 2 Bcf/d higher compared with last year.



### **FBR Raises 2013 Gas Price Forecast 29% to \$4.50/Mcf**

With the supply/demand balance is expected to tighten up. FBR has raised their 2013 gas price forecast to \$4.50/Mcf. "Without an increase in the current active rig count, we believe the market is undersupplied by 1.7 Bcf/d in 2013, 3.3 Bcf/d in 2014 and 4.5 Bcf/d in 2015.

### **Producers need \$4-\$5 Price to Trigger Dry-Gas Drilling**

Prices of \$4/MMBtu and \$5/MMBtu will trigger a return to large-scale dry-gas drilling. Recent prices in the \$3 to \$3.50/MMBtu range have caused a notable slowdown in the dry-gas region, but the spigot has not been closed—dry Marcellus development continues at a rapid pace.

### **Prices to Climb to \$4-5/MMBtu this Winter on Normal Weather**

ICF indicates that natural gas prices will rise to between \$4 and \$5/MMBtu this winter if the country returns to normal weather. ICF indicates that gas prices will be supported by modest economy recovery which will lead to an increase in industrial gas consumption.

### **Gas Glut Eroding as Demand Rises**

The oversupply of natural gas has dropped from about 4 Bcf/d in 2011 to about 1.5 Bcf/d currently as production is leveling off while demand is going up. "The market is going to balance."

Conoco's Duncan said producers have told him they will not "go look for natural gas" until spot prices reach \$7/ MMBtu "which means they're actually telling me \$6/MMBtu and they'll do it at \$5/MMBtu."

## LNG Exports

### **LNG Exports to Reach 10 Bcf/d by 2022**

According to Energy Venture Analysis and LCI Energy Insight, by 2022, 10 Bcf/d of LNG will be exported from six North American terminals. Two terminals are expected in the Lower-48, three in Canada and one in Alaska. The DOE has received 18 applications to export to free trade-agreement countries and 13 applications to export to non-FTA countries. The key criteria in determining the viability of the project was first mover status.

### **LNG Exports to be Very Restrictive**

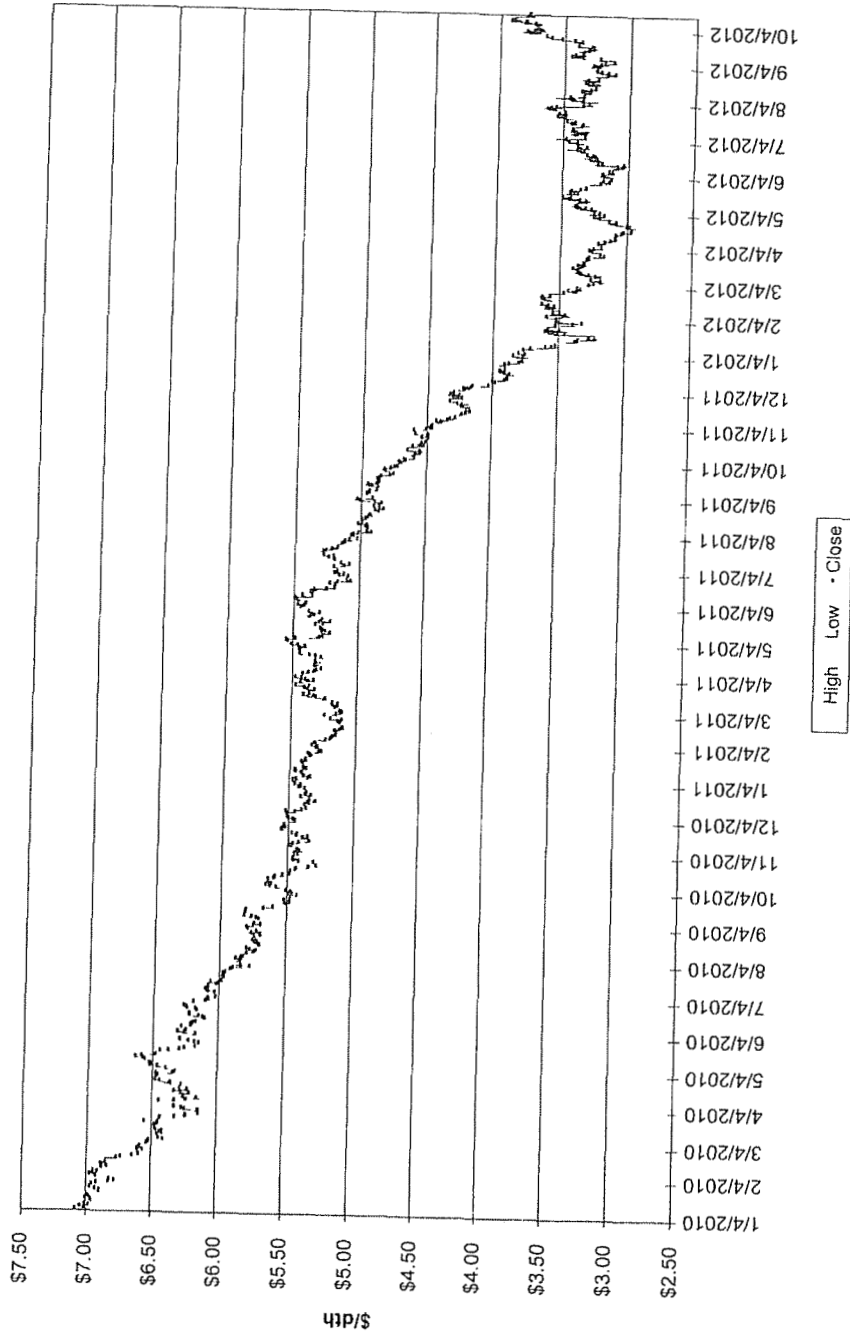
Goldman Sachs indicates that political pressure, along with growing demand from manufacturers and petrochemical plants could lead to very restrictive LNG exports. Goldman believes that only Sabine Pass project will proceed. That is due in part to the federal government reluctance to approve projects that could increase the price of gas domestically.

Bentek disagrees with Goldman in that Bentek believes that 4 LNG projects will move forward and believes that the export of 6 to 7 Bcf/d in 2020 will "give prices a little bit of a bump, but we don't expect it to be a large bump or a prolonged bump."

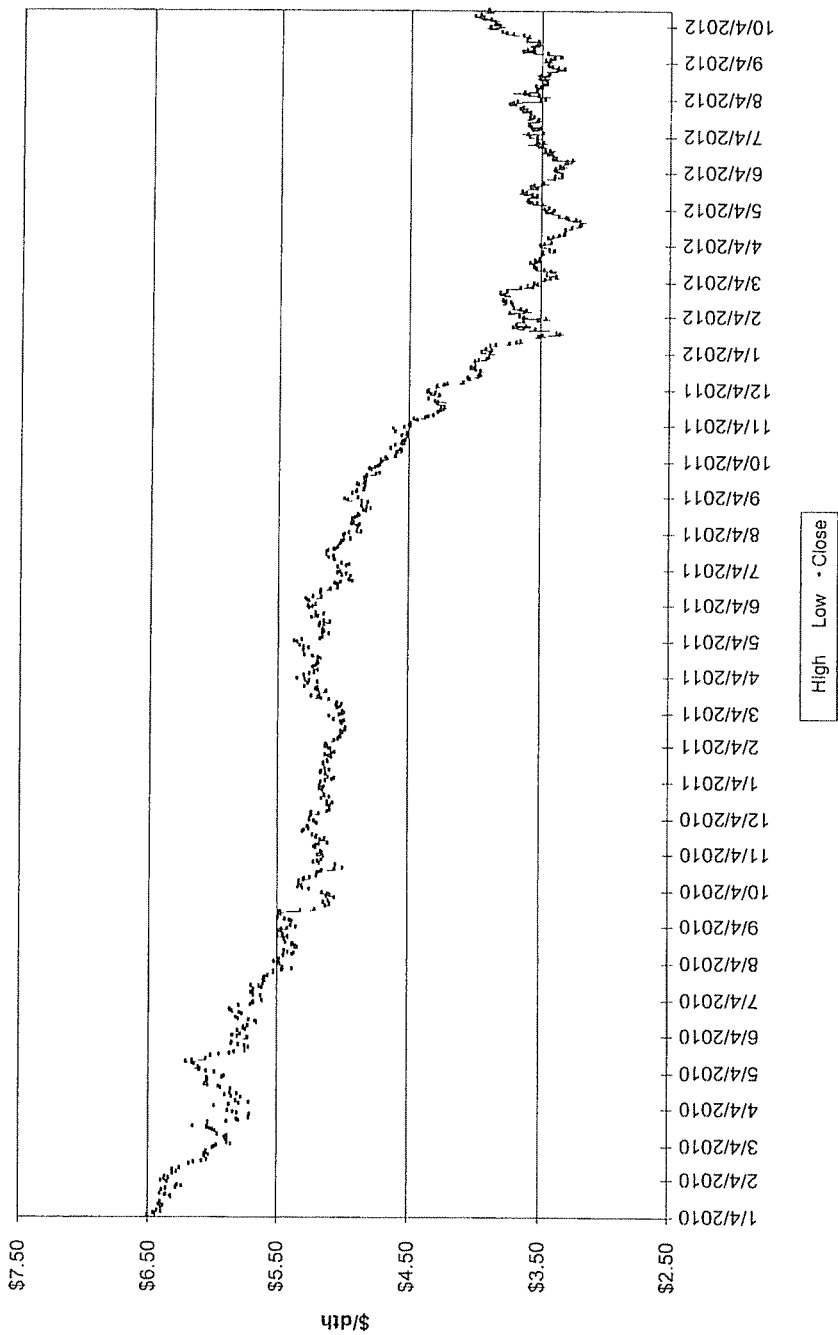
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**October 10, 2012 Release**

Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	3.36
Feb-10	5.32	Feb-11	4.09	Feb-12	2.50	Feb-13	3.37
Mar-10	4.29	Mar-11	3.97	Mar-12	2.18	Mar-13	3.28
Apr-10	4.03	Apr-11	4.25	Apr-12	1.95	Apr-13	3.17
May-10	4.14	May-11	4.31	May-12	2.43	May-13	3.23
Jun-10	4.80	Jun-11	4.55	Jun-12	2.46	Jun-13	3.25
Jul-10	4.63	Jul-11	4.42	Jul-12	2.95	Jul-13	3.33
Aug-10	4.32	Aug-11	4.05	Aug-12	2.84	Aug-13	3.37
Sep-10	3.89	Sep-11	3.90	Sep-12	2.85	Sep-13	3.26
Oct-10	3.43	Oct-11	3.56	Oct-12	3.12	Oct-13	3.35
Nov-10	3.71	Nov-11	3.24	Nov-12	3.22	Nov-13	3.48
Dec-10	4.25	Dec-11	3.17	Dec-12	3.31	Dec-13	3.69
Average 2010	\$ 4.387	Average 2011	\$ 4.000	Average 2012	\$ 2.707	Average 2013	\$ 3.345
Summer 2010	\$ 4.177	Summer 2011	\$ 4.149	Summer 2012	\$ 2.657	Summer 2013	\$ 3.280
Winter 2010-2011	\$ 4.102	Winter 2011-2012	\$ 2.752	Winter 2012-2013	\$ 3.308		

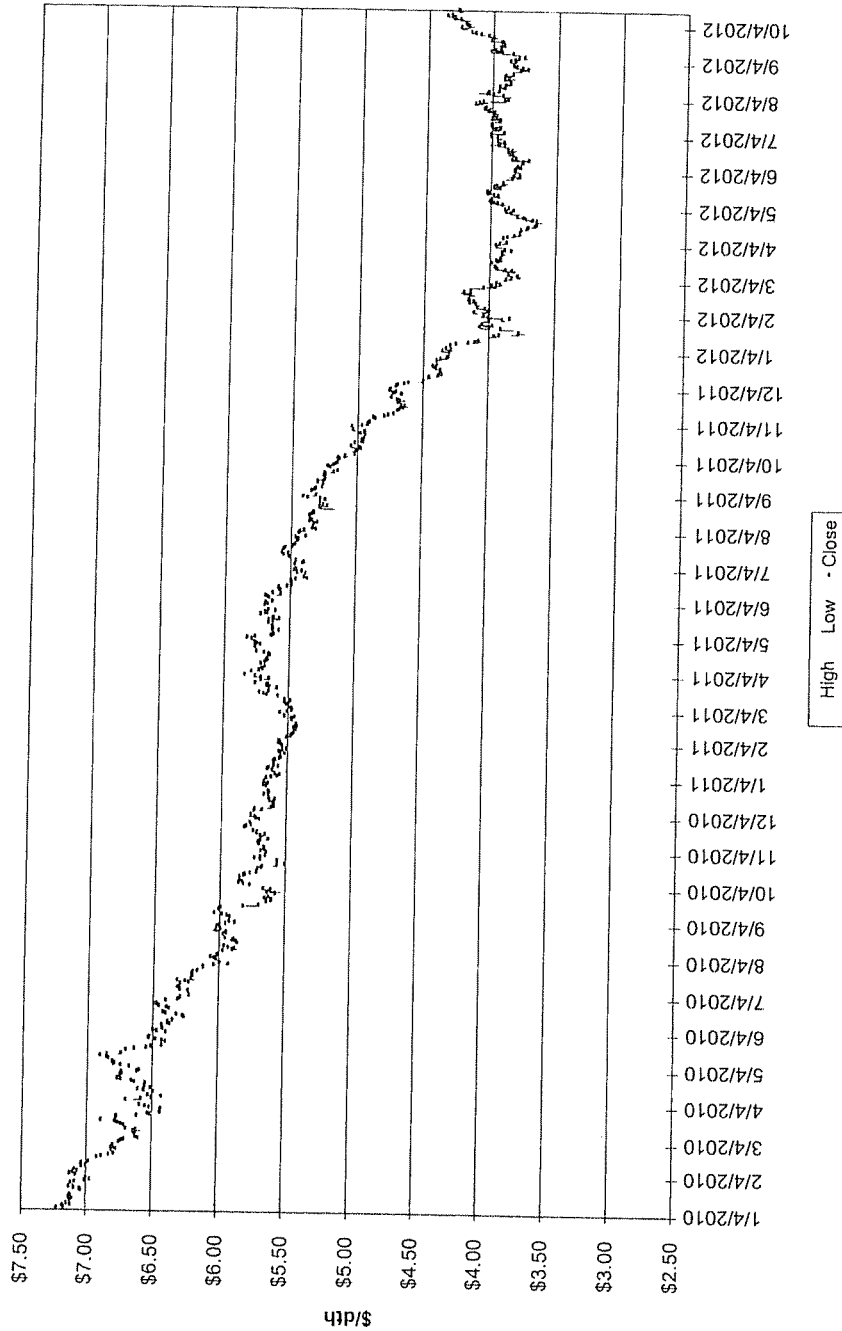
Winter Strip Nov12 - Mar13



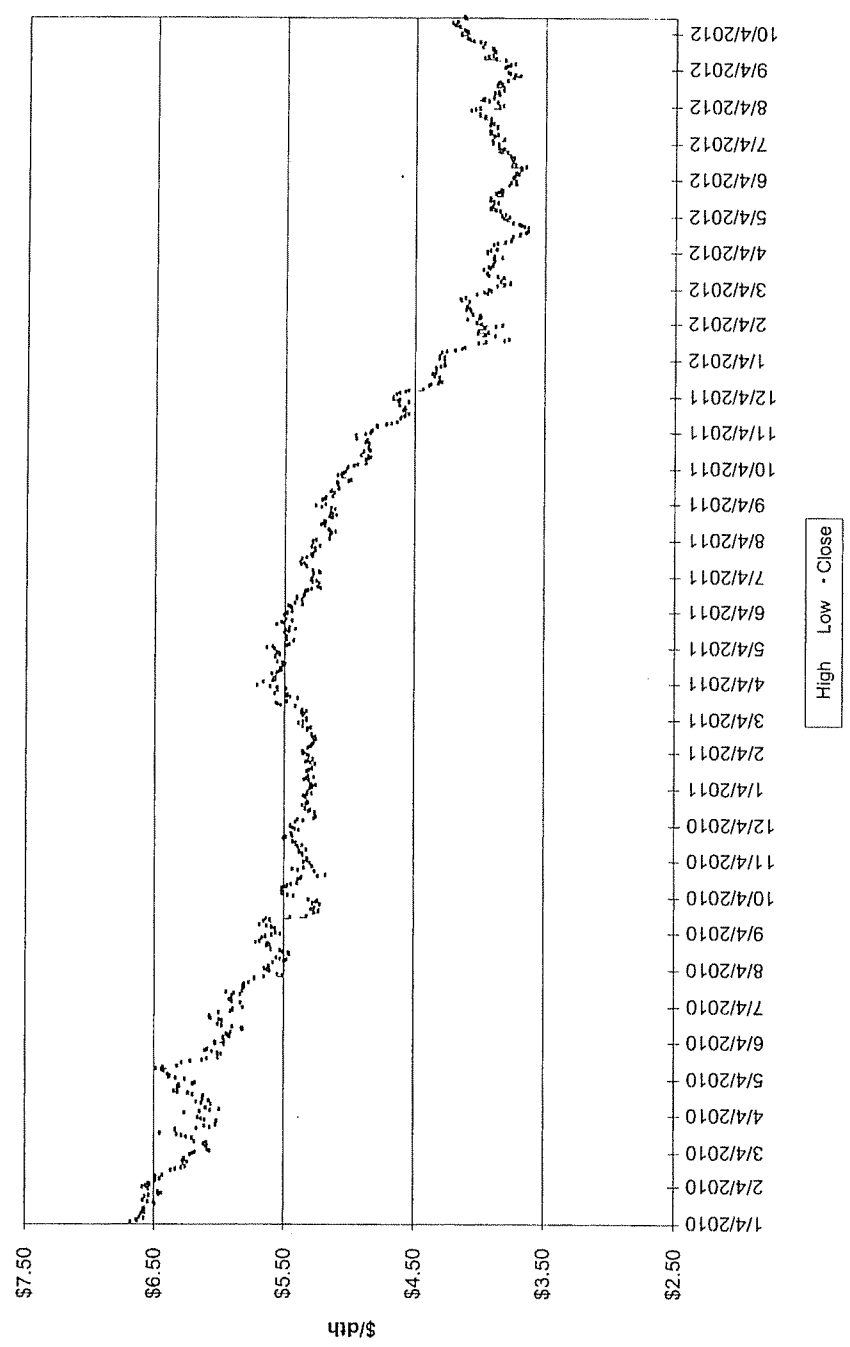
Summer Strip 2013



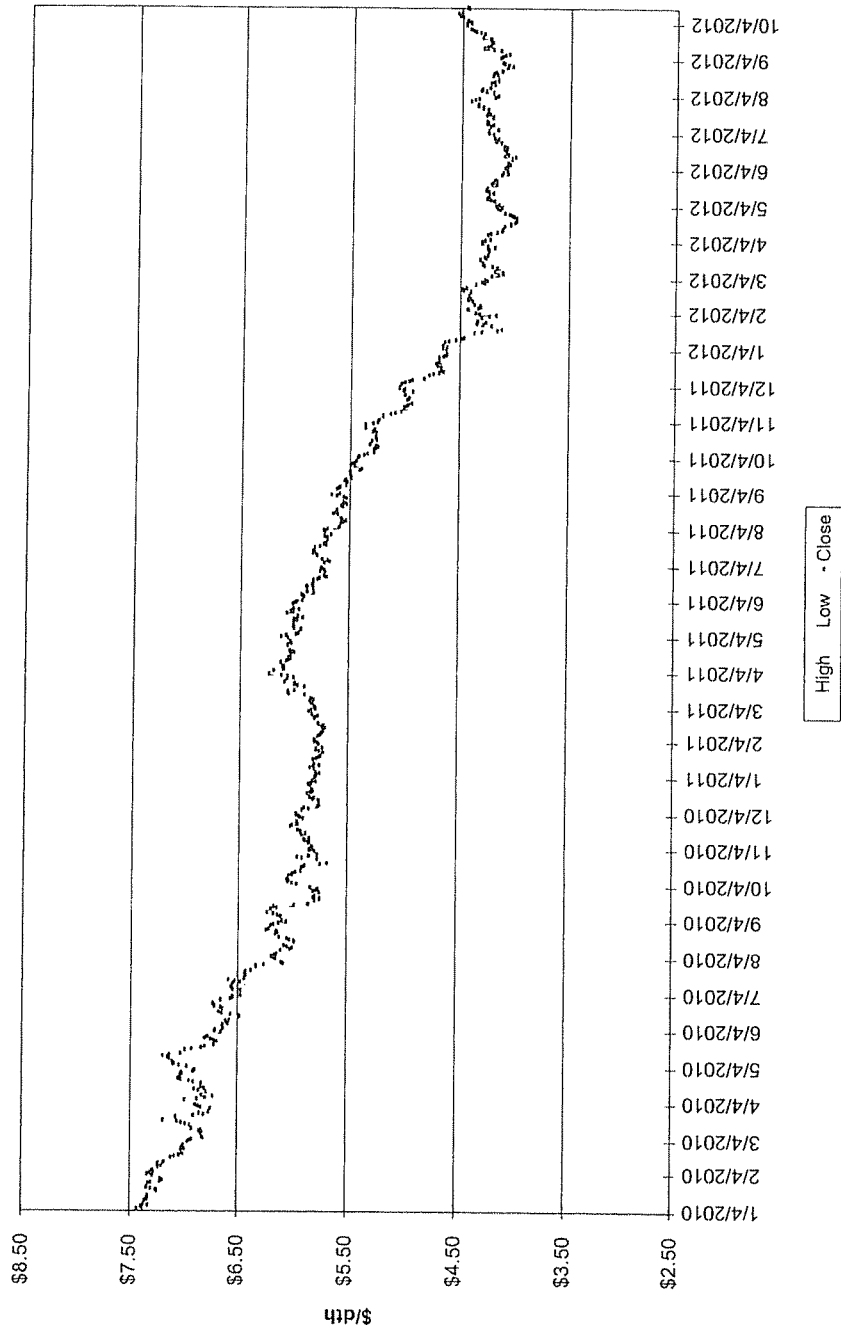
Winter Strip Nov13 - Mar14



Summer Strip 2014

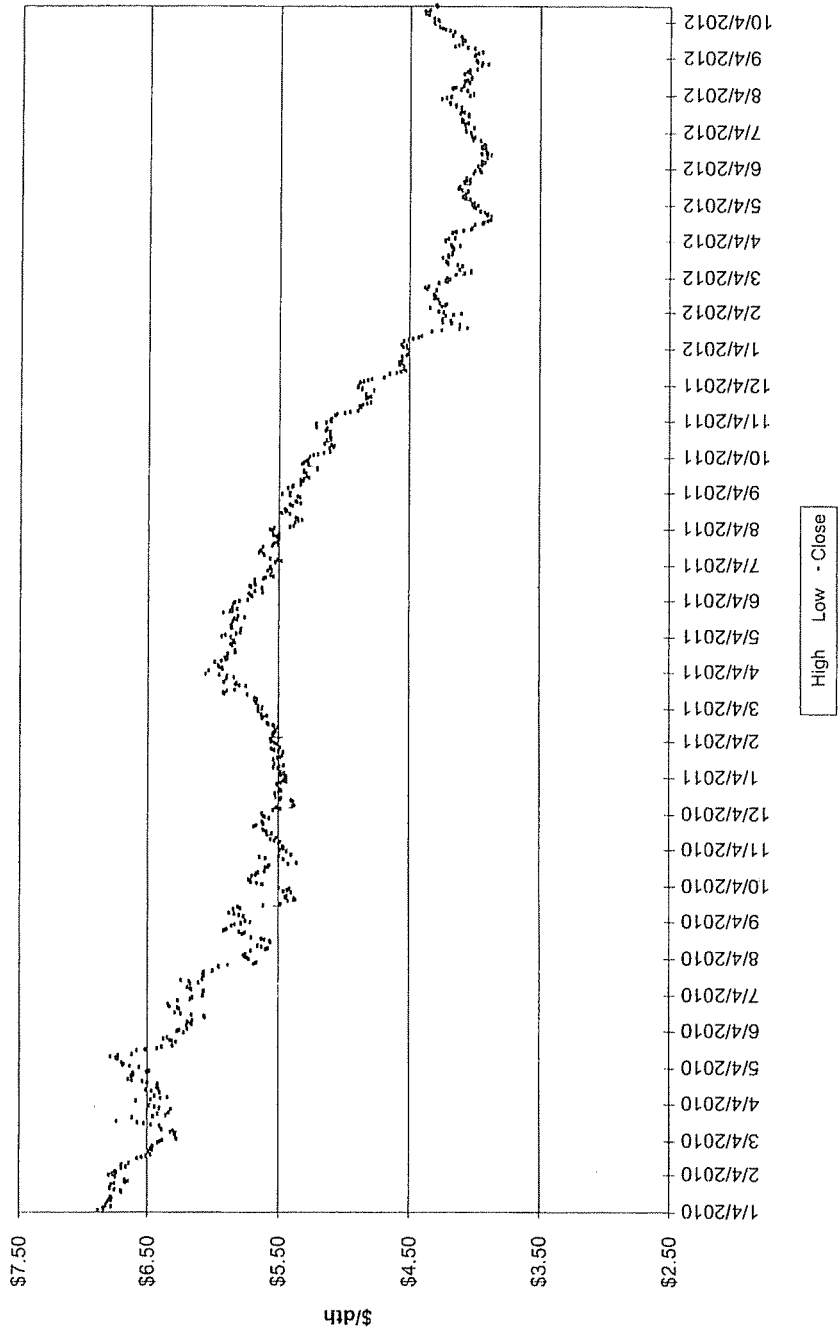


Winter Strip Nov14 - Mar15





Summer Strip 2015





*Independent Statistics & Analysis*

## U.S. Energy Information Administration

### Short-Term Energy and Winter Fuels Outlook

□

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 69.8 billion cubic feet per day (Bcf/d) in 2012, an increase of 3.1 Bcf/d (4.7 percent) from 2011. Large gains in electric power use in 2012 more than offset declines in residential and commercial use. Projected consumption of natural gas in the electric power sector averages 25.4 Bcf/d in 2012, 22 percent higher than in 2011, primarily driven by the improved relative cost advantages of natural gas over coal for power generation in some regions. Consumption in the electric power sector during 2012 was 35.1 Bcf/d in July 2012, when electricity demand for air conditioning was highest.

Projected total natural gas consumption decreases by 0.2 Bcf/d (0.2 percent) in 2013. Expected declines in the electric power sector offset increases in residential, commercial, and industrial consumption. A forecast of near-normal weather during the upcoming winter (i.e., colder than last year's abnormally warm winter) drives 2013 increases in residential and commercial consumption of 11.5 percent and 10.3 percent, respectively. Although projected higher natural gas prices contribute to a 10.4-percent decline in forecast natural gas consumption in the electric power sector in 2013, consumption in the power sector next year is still expected to be about 1.9 Bcf/d higher than 2011 levels and high by historical standards.

**U.S. Natural Gas Production and Imports.** Total marketed production of natural gas grew by 4.8 Bcf/d (7.9 percent) in 2011. This strong growth was driven in large part by increases in shale gas production. So far during 2012, production has fluctuated with small ups and downs, in contrast to the strong upward growth seen between 2009 and 2011. EIA expects some small declines in production in the coming months, related to recent drops in the rig count. According to Baker Hughes, the natural gas rig count was 437 as of October 4, 2012, compared with 811 at the start of 2012. EIA forecasts that total marketed production growth will slow to 2.6 Bcf/d in 2012 and 0.4 Bcf/d in 2013, as the reduction in drilling activity is offset by growth in production from liquids-rich natural gas production areas such as the Eagle Ford and wet areas of the Marcellus Shale, and associated gas from the growth in domestic crude oil production.

**U.S. Natural Gas Inventories.** Working natural gas inventories remain at historically high levels for this time of year. As of September 28, 2012, according to EIA's, working inventories totaled 3,653 Bcf, which is 272 Bcf greater than last year's level and 281 Bcf above the five-year average. EIA expects that inventory levels at the end of October 2012 will set a record high of 3,903 Bcf. Because of very high inventories at the start of the summer injection season this year, working inventories have remained

high and stock builds have been below both the five-year average and last year's level since April 2012, with a few exceptions. The projected increase of 1,426 Bcf in working gas inventory during the 2012 injection season (from the beginning of April through the end of October) would be the smallest build since 1987.

EIA projects average household expenditures for heating oil and natural gas will increase by 19 percent and 15 percent, respectively, this winter (October 1 through March 31) compared with last winter. Projected household expenditures are 5 percent higher for electricity and 13 percent higher for propane this winter. Average expenditures for households that heat with heating oil are forecast to be higher than any previous winter on record.

The forecast for higher household expenditures primarily reflects a return to roughly normal winter temperatures east of the Rocky Mountains compared with last winter's unusual warmth. According to the National Oceanic and Atmospheric Administration's (NOAA) most recent projection of heating degree days, the Northeast, Midwest, and South will be about 2 percent warmer than the 30-year average (1971 – 2000), but still 20 percent to 27 percent colder than last winter, while the West is projected to be only about 1 percent colder than last winter.

**Global Crude Oil and Liquid Fuels Overview.** EIA expects the oil market to loosen in the fourth quarter of 2012, as global liquid fuels consumption falls from its seasonal peak and output from countries outside of the Organization of the Petroleum Exporting Countries (OPEC) recovers from unplanned outages and scheduled maintenance. Persistent unplanned production outages in non-OPEC countries helped keep the spot price for Brent crude oil near \$110 per barrel in the third quarter of 2012. EIA forecasts that Brent crude, a benchmark for the global oil price, will average \$111 per barrel for the fourth quarter of 2012. In 2013, EIA projects the Brent crude price to fall to an average of \$103 per barrel, although a lingering supply risk because of instability in the Middle East and North Africa could keep prices higher. EIA also expects global inventory builds in the first half of 2013 to reach higher levels relative to the same period in 2012, mostly due to an increase in non-OPEC supply.

Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2012-13

		Dth/Day					Total	% System Supply
		November	December	January	February	March		
<u>Duke Energy Ohio</u>								
Previously Hedged								
	Col Gulf Mainline							
	Col Gulf Mainline							
	Col Gulf Mainline							
	Gulf South							
	Tex Gas Zone 1							
Total								
System Supply								
<u>Duke Energy Kentucky</u>								
Previously Hedged								
	Col Gulf Mainline							
	Col Gulf Mainline							
	Col Gulf Mainline							
Total								
System Supply								
<u>Duke Energy--Total</u>								
Previously Hedged								
Total								

Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 November 30, 2012

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Dec 12-Feb 13)	↑ ↓	Long	NOAA predicting above average temperatures for December 2012-February 2013 Mid-CONUS westward. WSI predicts below average temperatures from December through February in the northern half of the country, with above-normal temperatures in the South.	12
Mid Term Forecast (30-60 days)	← →	Long	December is predicted to be 2.4% warmer than normal based on 10 year normals and January weather is predicted to be 2.3% colder than normal.	13
Short Term Forecast (9-10 days)	↓	Short	Above and Much Above temperatures cover the majority of the CONUS for most of the period.	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage injections for the week ending November 23rd were 4 BCF. Storage levels are at 3.877 TCF which is 0.7% higher than last year and 5.2% higher than the 5 year average.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13 Summer 2013: [REDACTED]	↑ ↓	Long	GAS PRICE SCORECARD: Gas Price Outlook for November 2012-March 2013 "Bullish". Recent storage reports have reinforced the view that WY gains of production have slimmed dramatically.	16-17
PIRA Energy-Implications of the Election	↑	Long	The reelection of the President, a Democratic-controlled Senate, and a Republican-controlled House is likely to have a negligible impact on oil and gas markets in the near term and a limited impact in the long term. Comprehensive energy or climate change legislation will take a back seat to fiscal cliff and debt reduction. No federal moratorium on fracturing, slow but steady development and implementation of federal regulations on carbon and other pollutants, LNG exports will be allowed but not unrestricted volumes, and a final decision on Keystone XL pipeline.	18
Gas Daily-Gas Price Predictions	↑	Long	Slower Marcellus production resulting from slower infrastructure build-out could lead to higher prices according to FBR Capital. Credit Suisse expects prices to be capped over the next 18 to 24 months due to drilling efficiencies, higher level of production and reduced fuel switching. Raymond James raised their forecast citing normal weather alone could tighten the gas market by up to 6 Bcf/d this winter. A survey of oil and gas executives finds that gas prices will average below \$4/MMBtu in 2013. Analysts Projections: Raymond James-\$4.25 1st Qtr 2013, Gas Executives Survey-Below \$4.00 average 2013, FBR-\$4.50 average 2013.	19-20
Gas Daily-Coal-to-Gas Switching	↓	Long	Higher gas prices will lead to gas becoming less competitive, prompting many utilities to switch back to coal. The high level of power demand for gas will be hard to replicate going forward. Credit Suisse predicts gas could lose from 2.4 Bcf/d to 5.1 Bcf/d of market share to coal at gas prices between \$3.50/MMBtu and \$4.50/MMBtu. According to Barclay's if prices average around \$4/MMBtu in 2013, coal displacement could fall back to 2011 levels of about 3.5 Bcf/d.	21
Gas Daily-LNG Exports	↑	Long	FERC has approved Cheniere Energy's application to build facilities to export natural gas. In addition, Canada approved BC LNG exports from Kitimat, British Columbia.	20
LDC Forum Information	↑	Long	Many LDC participants expect price uncertainty to be at unprecedented levels resulting from record storage levels, increased production, regulation and debate over US gas exports. Power demand for gas has jumped 4.9 Bcf/d from last year due to coal switching. Electric generation will account for about 40% of overall demand by 2014. Chesapeake has flipped its rig activity from dry to wet rigs. In order for Chesapeake to increase dry production, prices would need to return to the \$4 to \$8/MMBtu range.	21
Gas Daily		Long	Lease sales planned for the Gulf of Mexico in March and August of 2011 will be pushed back until late next year at the earliest as part of a revamped offshore drilling plan.	24-25
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.530 Summer 2013: \$3.411	↓	Long	The projected Henry Hub natural gas spot price averages \$2.768/MMBtu for 2012 and \$3.490/MMBtu for 2013.	22
<b>Technical Analysis</b>				
Summer 2013 Strip Chart	↑	Short	Closed at \$3.74	23
Winter 2013-14 Strip Chart	↑	Short	Closed at \$4.13	24
Summer 2014 Strip Chart	← →	Short	Closed at \$4.04	25
Winter 2014-15 Strip Chart	← →	Short	Closed at \$4.35	26
Summer 2015 Strip Chart	← →	Short	Closed at \$4.16	27
Winter 2015-16 Strip Chart	← →	Short	Closed at \$4.48	28
<b>Economy</b>				
Q1 Macro Update: 2011	↑	Long	Wood Mackenzie expects global GDP growth of 3.4% and 3.1% in 2011 and 2012 respectively. Stronger growth in the US up from 1.8% in 2011 to 3.1%. In the US, this reflects further fiscal stimulus announced in December which is expected to boost the economy onto a self-sustaining growth trajectory.	25
Demand	← →	Long	EIA projects total natural gas consumption to grow by 4.8% to 69.7 Bcf/d in 2012 resulting from large gains in electric power generation. Consumption decreases in 2013 to an average of 69.2 Bcf/d or (0.7%) - this reduction is driven by a decline in the electric power sector.	29-30
Supply	← →	Long	Total marketed production grew by an estimated 4.8 Bcf/day or 7.9% in 2011, the largest volumetric increase in history. During 2012, production has fluctuated slightly around an average of 69 Bcf/d. EIA expects small declines in production in the coming months related to recent drops in the rig count.	29-30
Oil Market	← →	Long	EIA expects Brent crude to average of \$112 per barrel for the fourth quarter of 2012 and average \$103 per barrel in 2013.	29-30

Meeting Minutes: 426 Annex Conference Room - 1:00 pm  
 Attendees: Jim Mohring, Jeff Kern, Mike Brunback, Joachim Fischesser (by telephone), Tony Bates, Mitch Martin, Steve Niederbaumer  
 Reviewed the results of the transaction resulting from the October 18, 2012 Hedging Meeting. A Fixed price deal for DEK was completed on October 18, 2012 with [REDACTED] for [REDACTED] Div'd for the period April 1, 2014-October 31, 2015 at a price of [REDACTED]. Three suppliers were contacted with bids of [REDACTED] respectively. Discussed market fundamentals including weather, storage inventory levels, PIRA and EIA forecasts for the Winter 2012/13 and Summer 2013, independent analysts projections of supply and demand and the impact on gas prices, economic influences on supply and demand and technical analysis on Summer and Winter Strip prices. In addition, updated DEO and DEK's hedging program to reflect changes to target levels to reflect the revised "Next Target" data. Significant discussion took place around the record storage level and the expected warm weather for the next 6 to 10 days. Based on these factors, a decision was made not to hedge additional volumes at this time.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 11/29/12

Nov-12 Dec-12 Jan-13 Feb-13 Mar-13 Apr-13 May-13 Jun-13 Jul-13 Aug-13 Sep-13 Oct-13

**Load Forecast**  
 City Gate Load Forecast (Mcf)  
 TCO FSS Injections (Mcf)  
 Total Requirements (Mcf)

TCO FSS Withdrawals (Mcf)  
 Other "Withdrawals" (Mcf)  
 Total Withdrawals (Mcf)

**Amount Hedged (dth/day)**

Fixed Price  
 Fixed Price  
 Fixed Price  
 Fixed Price  
 Cost Avg.  
 Total Hedged (dth/day)  
 Total Hedged (dth)

**Types of Hedging Products (1)**

Fixed Price  
 Price Caps  
 No-Cost Collars

**Embedded Hedged Cost**

Winter  
 Summer

**Estimated EGC per Dth at City Gate**

Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

**AmI Hedged with Storages @ City Gate**

Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (incl. Injections) (Dth)  
 % Hedged & Storage  
 Seasonal %

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 11/29/12

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated EGC per Dth at City Gate</b>												
Estimated System Supply (Gross)												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 11/29/12

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
[Redacted Data]												

**Load Forecast**

City Gate Load Forecast (Mcf)  
 TCO FSS Injections (Mcf)  
 Total Requirements (Mcf)  
 TCO FSS Withdrawals (Mcf)  
 Other "Withdrawals" (Mcf)  
 Total Withdrawals (Mcf)

**Amount Hedged (dth/day)**

Fixed Price  
 Fixed Price  
 TBD  
 Total Hedged (dth/day)  
 Total Hedged (dth)

**Types of Hedging Products (1)**

Fixed Price  
 Price Caps  
 No-Cost Collars

**Embedded Hedged Cost**

Winter  
 Summer

**Estimated EGC per Dth at City Gate**

Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

**Amt Hedged with Storage @ City Gate**

Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (incl. Injections) (Dth)  
 % Hedged & Storage  
 Seasonal %

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.



Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2015 - October 2016  
 As of 11/29/12

Nov-15    Dec-15    Jan-16    Feb-16    Mar-16    Apr-16    May-16    Jun-16    Jul-16    Aug-16    Sep-16    Oct-16

**Load Forecast**  
 City Gate Load Forecast (Mcf)  
 TCO FSS Injections (Mcf)  
 Total Requirements (Mcf)  
 TCO FSS Withdrawals (Mcf)  
 Other "Withdrawals" (Mcf)  
 Total Withdrawals (Mcf)

**Amount Hedged (dth/day)**  
 TBD  
 TBD  
 TBD  
 Total Hedged (dth/day)  
 Total Hedged (dth)

**Types of Hedging Products (1)**  
 Fixed Price  
 Price Caps  
 No-Cost Collars

**Embedded Hedged Cost**  
 Winter  
 Summer

**Estimated EGC per Dth at City Gate**  
 Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

**Amt. Hedged with Storage @ City Gate**  
 Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (incl. Injections) (Dth)  
 % Hedged & Storage  
 Seasonal %

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

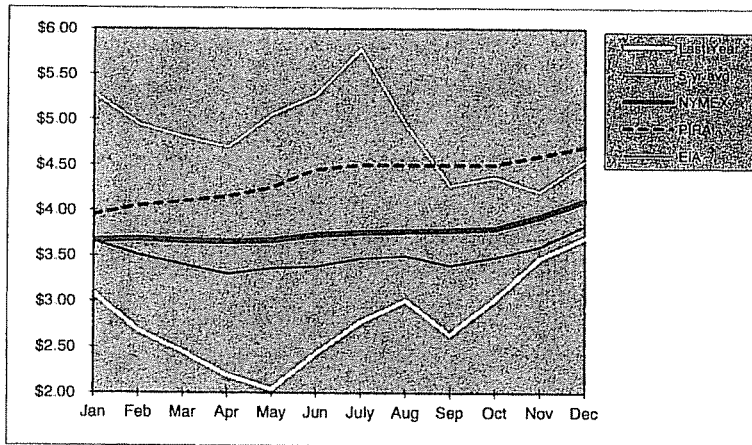
11/29/2012

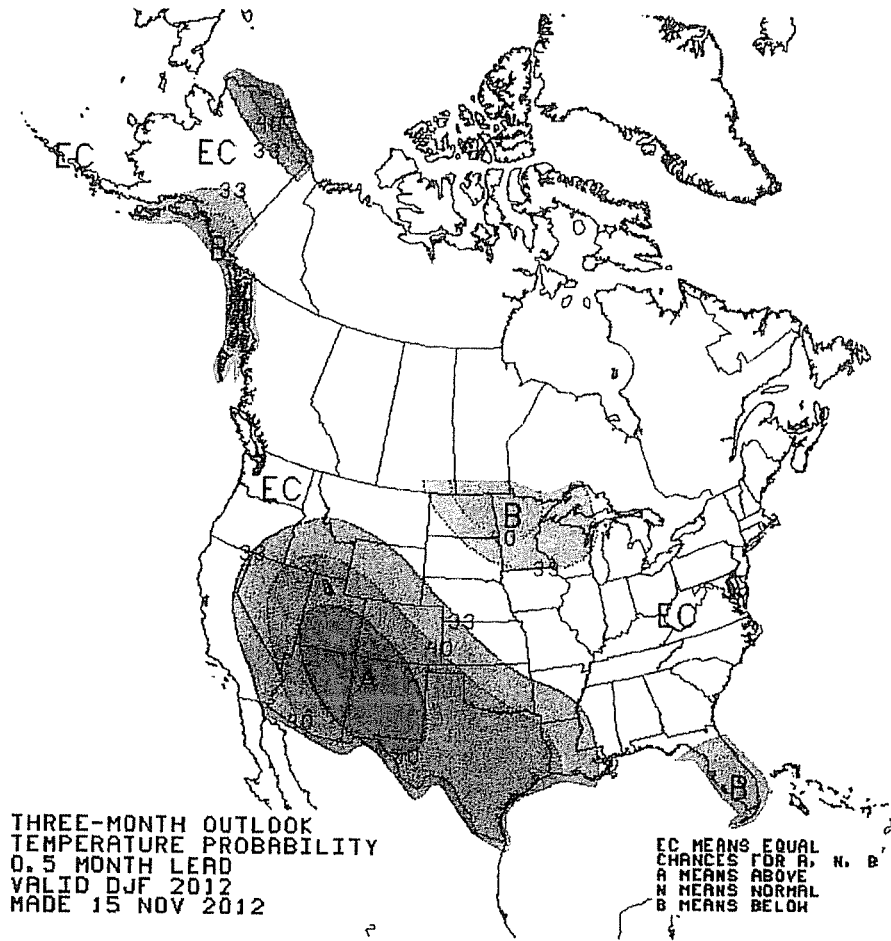
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (3/31/12)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2013					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2013					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					
Nov-15					
Dec-15					
Jan-16					
Feb-16					
Mar-16					
Winter 15/16					
Target Levels By October 31, 2013					

**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (07/08-11/12)	Last Year (2011-2012)		PIRA 26-Oct-12	EIA 6-Nov-12	NYMEX 30-Nov-12		
Jan	\$5.28	\$3.08			\$3.660	\$3.664		
Feb	\$4.95	\$2.68			\$3.510	\$3.683		
Mar	\$4.81	\$2.45			\$3.400	\$3.661		
Apr	\$4.70	\$2.19			\$3.300	\$3.653		
May	\$5.06	\$2.04			\$3.360	\$3.667		
Jun	\$5.27	\$2.43			\$3.380	\$3.729		
July	\$5.78	\$2.77			\$3.470	\$3.755		
Aug	\$4.95	\$3.01			\$3.500	\$3.770		
Sep	\$4.28	\$2.63			\$3.390	\$3.780		
Oct	\$4.36	\$3.02			\$3.480	\$3.800		
Nov	\$4.21	\$3.47			\$3.600	\$3.930		
Dec	\$4.54	\$3.70			\$3.830	\$4.107		
12 Month Avg	\$4.85	\$2.79			\$3.490	\$3.767		
Summer Average					\$3.411	\$3.736		
Winter Average					\$3.600	\$3.809		

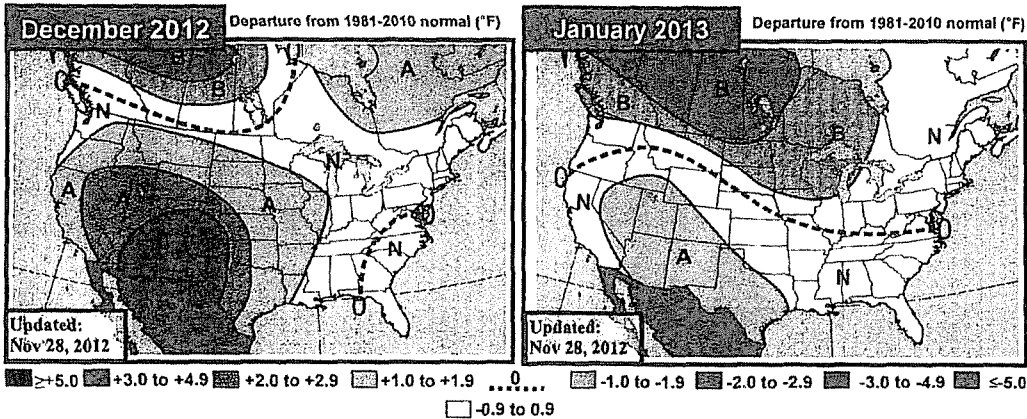




# EarthSat's 30-60 Day Outlook



Wednesday, November 28, 2012 Meteorologists: SS/PV/BH



**December 2012 Previous**

**Substantial warm changes**  
 Unseasonably warm in the Southwest

In our final December outlook, significant changes were made in the warmer direction across most of the US. The area of aboves was extended into the western Midwest, and areas of +2F and +3F anomalies were added to the Southwest and southern Rockies, while belows were removed from the Southeast. The significant warm changes stem from the notable warming seen in our current 1-15 day forecast out to the first 1/3 of December. An active Pacific flow is the culprit, and a positive-trending NAO through the first week of the month lends to the warmth as well. The AO and NAO do look to return to negative heading into the middle of the month, which could lend to some colder risks in the back-end of the month, but given the very warm anomalies through the first week the month could end up even warmer than forecast in spots.

Dec GW HDD** Forecasts	*10Y Normal updated to '02-'11
Dec 2012 Fcst:	835.0
	10Y Normal* 855.3
	30Y Normal 867.5
	Dec-2011 770.2
Change:	-32

**January 2013 Previous**

**Slight warm changes**  
 Blocking may lead to colder risks

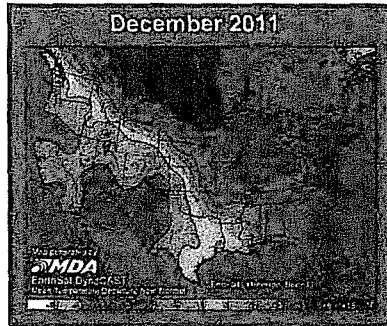
Changes in January were very modest compared to December with just some slight warm adjustments in parts of the Northwest and the upper Midwest. Overall the pattern remains the same with cold extending from Western Canada into the northern Plains and upper Midwest while warmth continues in the Southwest and Texas. The long-term -PDO signal may portend to some cooler risk in the Northwest and a warmer risk in the South and East, but blocking in the upper-latitudes may lead to some cold intrusions into the South and East. The CFS model shows good agreement with the overall pattern, but allows for colder conditions in the Northeast.

Jan GW HDD** Forecasts	*10Y Normal updated to '02-'11
Jan 2013 Fcst:	953.0
	10Y Normal* 931.3
	30Y Normal 946.3
	Jan-2012 809.5
Change:	-2

\*\*National Gas-Weighted HDDs

**Nov so far**

The Final 30 Day outlook seems to have matched the overall shape of the pattern that we've seen in November, but there are certainly some significant differences in the anomalies, with anomalies of 3-5F above normal across much of the Interior West, Rockies and Plains and 3-5F below normal in much of the South and East. Estimating with our forecast for Nov 28-30, the month looks to total 563 national GW HDDs, which is above the 30-year and 10-year normal and would be the coldest November nationally since 2008.

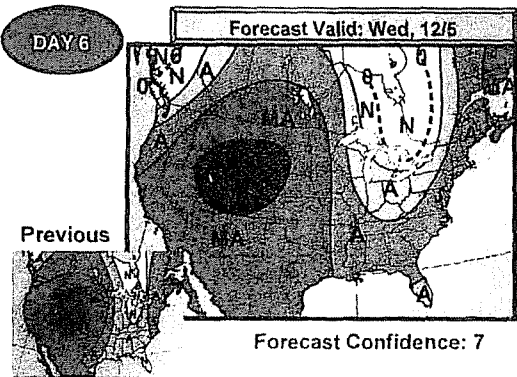


# 6-10 Day Forecast—Detailed

Friday, November 30, 2012 Meteorologist: BH/AC

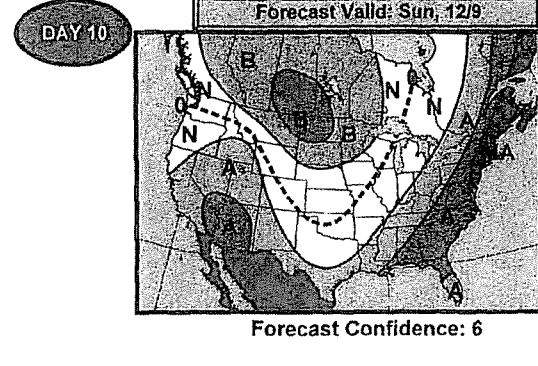
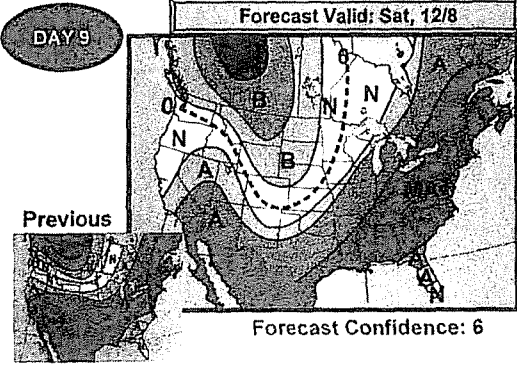
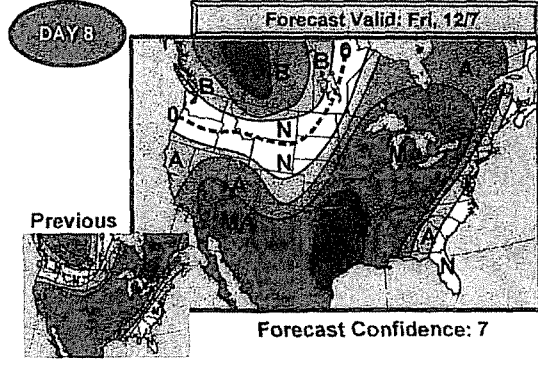
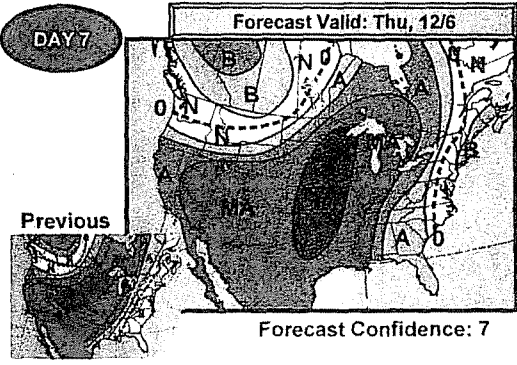


## Forecast Temperature Deviations



**\*Cool Down Occurs Late Across Parts Of Plains, MW\***  
**\*Stronger Warmth Returns To NE In Mid-Period\***

Some cool risks are associated with a colder air mass diving into the East Coast for the early part of the period. However, the presence of this cooler air should be brief across the region as a warmer flow returns during the middle of the period. This rebound of warmth could yield warmer than forecasted temperatures across the East Coast. Behind this warmer air, some additional cool variability begins to descend upon the Mid-Centinent late. Models are projecting below normal temperatures across parts of the Plains and Midwest through the latter part of the period. The operational models are a little more aggressive on this air mass' intensity.



- A +3F to +4F
  A +5F to +7F
  MA +8F to +14F
  SA +15 or Higher
- B -3F to -4F
  B -5F to -7F
  MB -8F to -14F
  SB -15 or Lower

Weekly Natural Gas Storage Report

Page 1 of 1



Home > Natural Gas > Weekly Natural Gas Storage Report

Weekly Natural Gas Storage Report

[Glossary](#)

[Release Schedule](#)  
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Released: November 28, 2012 at 10:30 a.m. (eastern time) for the Week Ending November 23, 2012.  
 Next Release: December 6, 2012

Working Gas In Underground Storage, Lower 48

other formats: [Summary](#) [TXT](#) [CSV](#)

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	11/23/12	11/16/12	Change	Year Ago (11/23/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	2,042	2,054	-12	2,079	-1.8	2,037	0.2
West	548	544	4	515	6.4	498	10.0
Producing	1,287	1,275	12	1,257	2.4	1,152	11.7
Total	3,877	3,873	4	3,851	0.7	3,687	5.2

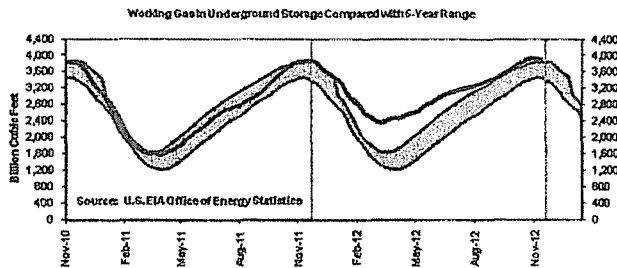
Notes and Definitions

The Energy Information Administration (EIA) is changing the Weekly Natural Gas Storage Report (WNGSR) web products. The implementation of these changes will be preceded by a public testing period, commencing on November 27, 2012. An example of the new webpage and more information about the public testing period, including specific times, can be found at: <http://ir.eia.gov/ngs/notice.html>.

Summary

Working gas in storage was 3,877 Bcf as of Friday, November 23, 2012, according to EIA estimates. This represents a net increase of 4 Bcf from the previous week. Stocks were 26 Bcf higher than last year at this time and 190 Bcf above the 5-year average of 3,687 Bcf. In the East Region, stocks were 5 Bcf above the 5-year average following net withdrawals of 12 Bcf. Stocks in the Producing Region were 135 Bcf above the 5-year average of 1,152 Bcf after a net injection of 12 Bcf. Stocks in the West Region were 50 Bcf above the 5-year average after a net addition of 4 Bcf. At 3,877 Bcf, total working gas is above the 5-year historical range.

Working gas stocks in the Producing Region, for the week ending November 23, 2012, totaled 1,287 Bcf, with 317 Bcf in salt cavern facilities and 970 Bcf in nonsalt cavern facilities. Working gas stocks increased 6 Bcf in the salt cavern facilities and increased 6 in the nonsalt cavern facilities since November 16. An historical series of the salt and nonsalt subtotals of the Producing Region is available for download at: [wngr\\_producing\\_region\\_salt.xls](http://ir.eia.gov/ngs/producing_region_salt.xls).



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2007 through 2011.  
 Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

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**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**November 27, 2012 Release**

Jan-10		Jan-11		Jan-12		Jan-13	
Feb-10		Feb-11		Feb-12		Feb-13	
Mar-10		Mar-11		Mar-12		Mar-13	
Apr-10		Apr-11		Apr-12		Apr-13	
May-10		May-11		May-12		May-13	
Jun-10		Jun-11		Jun-12		Jun-13	
Jul-10		Jul-11		Jul-12		Jul-13	
Aug-10		Aug-11		Aug-12		Aug-13	
Sep-10		Sep-11		Sep-12		Sep-13	
Oct-10		Oct-11		Oct-12		Oct-13	
Nov-10		Nov-11		Nov-12		Nov-13	
Dec-10		Dec-11		Dec-12		Dec-13	
Average 2010	\$	Average 2011	\$	Average 2012	\$	Average 2013	\$
Summer 2010	\$	Summer 2011	\$	Summer 2012	\$	Summer 2013	\$
Winter 2010-2011	\$	Winter 2011-2012	\$	Winter 2012-2013	\$		



**North American Gas Forecast Monthly**

November 27, 2012

**NATURAL GAS**

**U.S. GAS PRICE SCORECARD: DECEMBER 2012 – MARCH 2013**

Bearish Neutral Bullish

Supply	Outlook	Commentary
<b>Lower 48 Gas Production</b>		U.S. production growth has notably slowed with 4Q12 Y/Y gains likely to be limited to 0.5 BCF/D. Marcellus is surging once again — with gains even exceeding 4Q11, but shale gas from dry plays has teamed with conventional declines to provide a more material counter. As a result, Lower 48 production looks challenged to post growth even remotely close to a year ago in the months ahead.
<b>Canadian Production/Exports</b>		A recent production uptick reflects restored shut-ins removed from the market in 1Q12 when AECO-C prices were sub-\$2. Oil is expected to continue to dominate Canadian drilling, causing resumed production declines. Canada's R/C heating market got off to a fast start likely helping to trim stocks to near or below year-earlier levels even before December.
<b>U.S. Storage Levels</b>		A somewhat cold November is leading to a Y/Y end-month storage deficit expected to reach 60-70 BCF, barring a sudden shift to very mild weather. But the latest forecast of a mild start to December has tempered bullish enthusiasm tied to expected further widening storage deficits.
Demand	Outlook	Commentary
<b>Electric Generation (EG)</b>		Next month will provide the first major test of the resilience of coal-to-gas substitution, especially if HH prices move within striking distance of \$4/MMBtu, or ~20% above a year ago. Colder Y/Y weather, new gas-fired EG capacity and the generally positive impact of higher gas prices on electricity prices should inhibit gas-to-coal switching.
<b>Industrial Sector</b>		EIA's latest monthly data through August show industrial gas demand sustaining the upward momentum that was first evident in June. This winter's expected colder Y/Y weather will also give the sector an important gas demand boost.
<b>Residential/Commercial (R/C)</b>		November GWHDDs appear on track to best year ago by 13% and PIRA's hybrid by ~3%, but December's tally ultimately will far surpass this month in importance. If a predicted mild start does materialize, a sizable swing to colder-than-normal will be needed for the full month to average near normal.
Gas Prices	Outlook	Commentary
<b>November 2012 — March 2013</b>		The ultimate fear of gas bulls has been stoked by forecasts of another mild December. This outlook seems poised to push next month's bidweek price below recent levels. But such a downturn has a potential silver lining for bulls in that that lower prices would support coal-to-gas substitution. The past several weeks' storage reports also have reinforced the view that Y/Y gains of domestic production have slimmed dramatically, a crucial bullish factor looking ahead.

**NYMEX Prices and Speculation**

There is increasing evidence that the longstanding bearish bias collectively held by non-commercial traders has finally ended. Outside of a brief five-week period (8/28 through 9/25), speculators have held a combined NYMEX/ICE net long position since midyear as per the CFTC's weekly Commitment of Traders data. The latest snapshot of holdings as of 11/20 revealed that their net long futures position stood at ~57.5 thousand contracts, which was up W/W, but below the 12-month high of ~79 thousand lots booked on 10/30/12. Given a net short position of ~192 thousand lots in place just a year ago, additional buying would not be surprising. Regardless, changing perceptions at a minimum favor greater volatility.

### **Implications of the Elections**

The reelection of the President, a Democratic-controlled Senate, and a Republican-controlled House will have little impact on gas markets in the near term and a limited impact long term. Comprehensive energy or climate change legislation is likely to take a back seat to the fiscal cliff and deficit reduction. There is a backlog of Federal policy decisions over the next 6 to 12 months including LNG exports, Keystone XL pipeline and Hydraulic fracturing.

Expectations are that the Administration will allow some level of LNG exports but not unrestricted volumes, Keystone pipeline will be approved if environmental concerns are resolved and there will be no federal moratorium on fracking.

In addition, Greenhouse Gas (GHG) regulations on coal plants—proposed and likely to be finalized GHG regulations are effectively preventing new coal plant construction unless expensive carbon-capture controls are in place. The bigger question is if and when the Administration will decide to develop GHG rules for the existing coal fleet.

## **Gas Price Predictions**

### **Marcellus Slowdown to Boost Gas Prices in 2013**

Slower infrastructure build-out will lead to reduced natural gas production growth in the Marcellus Shale and that could lead to higher prices in 2013. "Marcellus production growth will slow to 1.3 Bcf/d over the next 12 months from 2.3 Bcf/d during the past year as many of the projects aimed at boosting takeaway capacity in the region are not expected to go online until the fourth quarter of 2013." According to FBR Capital Markets, the supply deficit could boost gas prices to an average of \$4.50/MMBtu for 2013 and beyond as other, higher-cost basins fill in the supply gap.

### **Credit Suisse—Gas price 'pause' likely until 2014**

Natural gas prices could be capped over the next 18 to 24 months due to increased drilling efficiencies, higher level of Haynesville Shale production, near-term surge of Marcellus Shale and reduced coal to gas switching.

### **Raymond James hikes Q1 price forecast 42%**

Gas traders can expect a volatile market with higher prices over the next year based on slowing supply growth and normal winter weather. Marshall Adkins raised his fourth quarter estimate by 27% to \$3.50/Mcf and increased his 1<sup>st</sup> quarter estimate 42% to \$4.25/Mcf. "We estimate that the normalizing of weather alone could tighten the entire gas market by as much as 6 Bcf/d this winter. We wouldn't be surprised to see prices touch as high as \$5/Mcf over the next six months."

### **Gas to Stay Below \$4 Next Year**

According to a survey of oil and gas executive by Deloitte natural gas prices will average below \$4/MMBtu in 2013. 40% of those think gas will average below \$3/MMBtu in 2013. Three-quarters of those surveyed said the US is already gas self-sufficient or will be within a decade. In addition, three-quarters of executives surveyed think the government will approve LNG exports and 93% don't believe LNG exports would raise domestic prices appreciably.

### **Gas Market could see Surprising Volatility**

Rising and sustained demand for natural gas by power generators and residential needs could increase gas prices that catch buyers off guard. "There are a lot of organic changes going on in the marketplace that aren't necessarily being reflected in prices." The price volatility could come with the industrial renaissance along with larger-than-expected amount of coal-fired generation being replaced by gas. "It is not out of question to see a \$4.25/MMBtu average on the front end of the curve. I think we're going to see spikiness and potential upside we haven't seen in a while."

## **Coal-to-Gas Switching**

### **Gas could lose up to 5 Bcf/d of Power Demand in 2013 as Users Revert to Coal**

With the assumption that near-term prices will increase on higher seasonal demand, analysts believe gas will become less competitive, prompting many utilities to switch back to coal. The high level of power demand for gas will be hard to replicate going forward. According to Morgan Stanley, higher gas prices will shut-off much of the incremental coal-to-gas switching that took place in 2012. With gas prices currently above \$3/MMBtu, coal-to-gas switching has declined significantly, having dropped from a high of 6 Bcf/d in early October 2011 to 2 Bcf/d currently. Credit Suisse predicts gas could lose from 2.4 Bcf/d to 5.1 Bcf/d of market share to coal at gas prices between \$3.50/MMBtu and \$4.50/MMBtu.

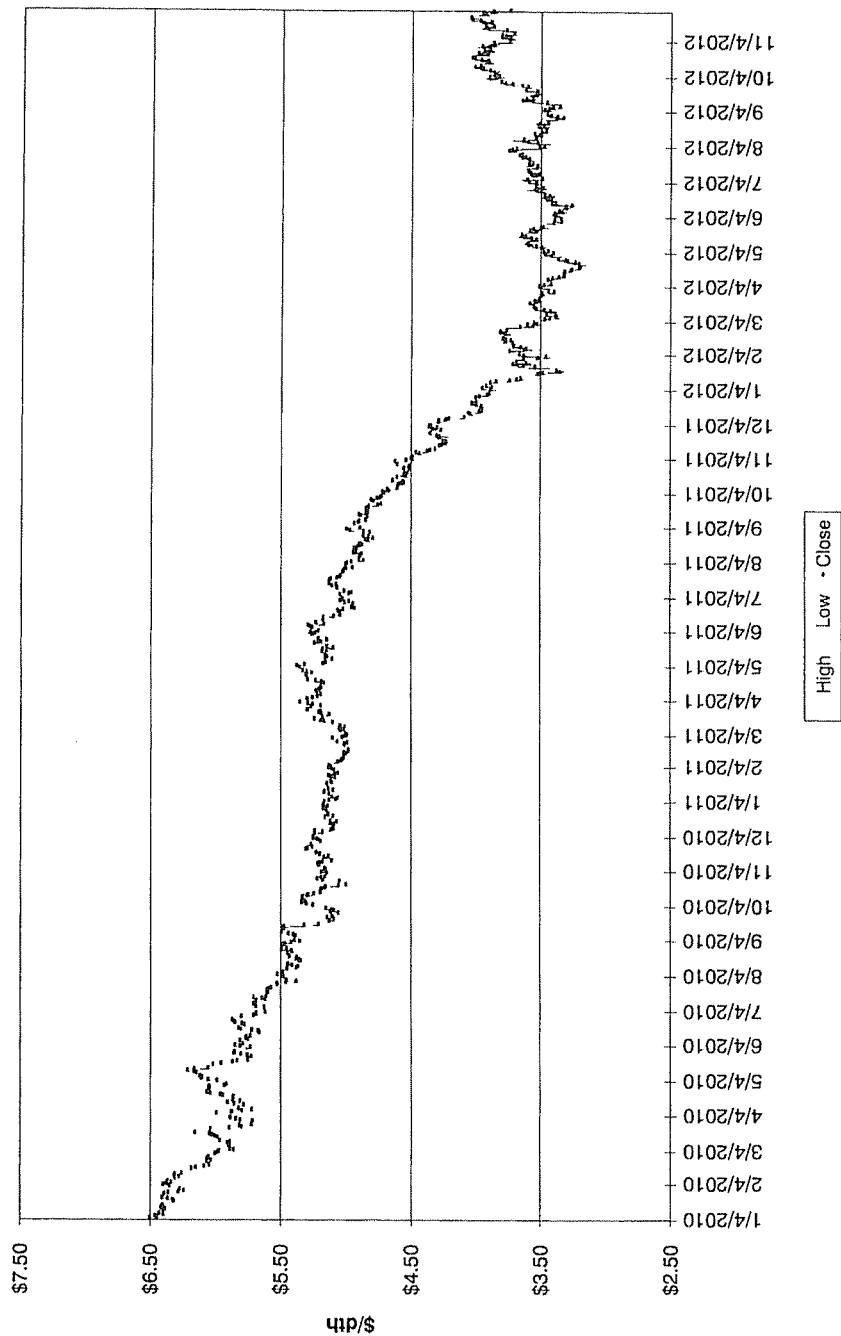
### **Coal-to-Gas Switching Forecast to ease this Winter on Gas Price Lift**

Coal-to-gas switching will ease in the winter months as gas prices continue to settle well above their lows earlier this year. Barclay's noted the highest levels of switching (9 Bcf/d) were in April when prices averaged \$2/MMBtu, but decreased significantly as gas prices increased to mid-\$3/MMBtu. If prices average around \$4/MMBtu in 2013, coal displacement could fall back to 2011 levels of about 3.5 Bcf/d.

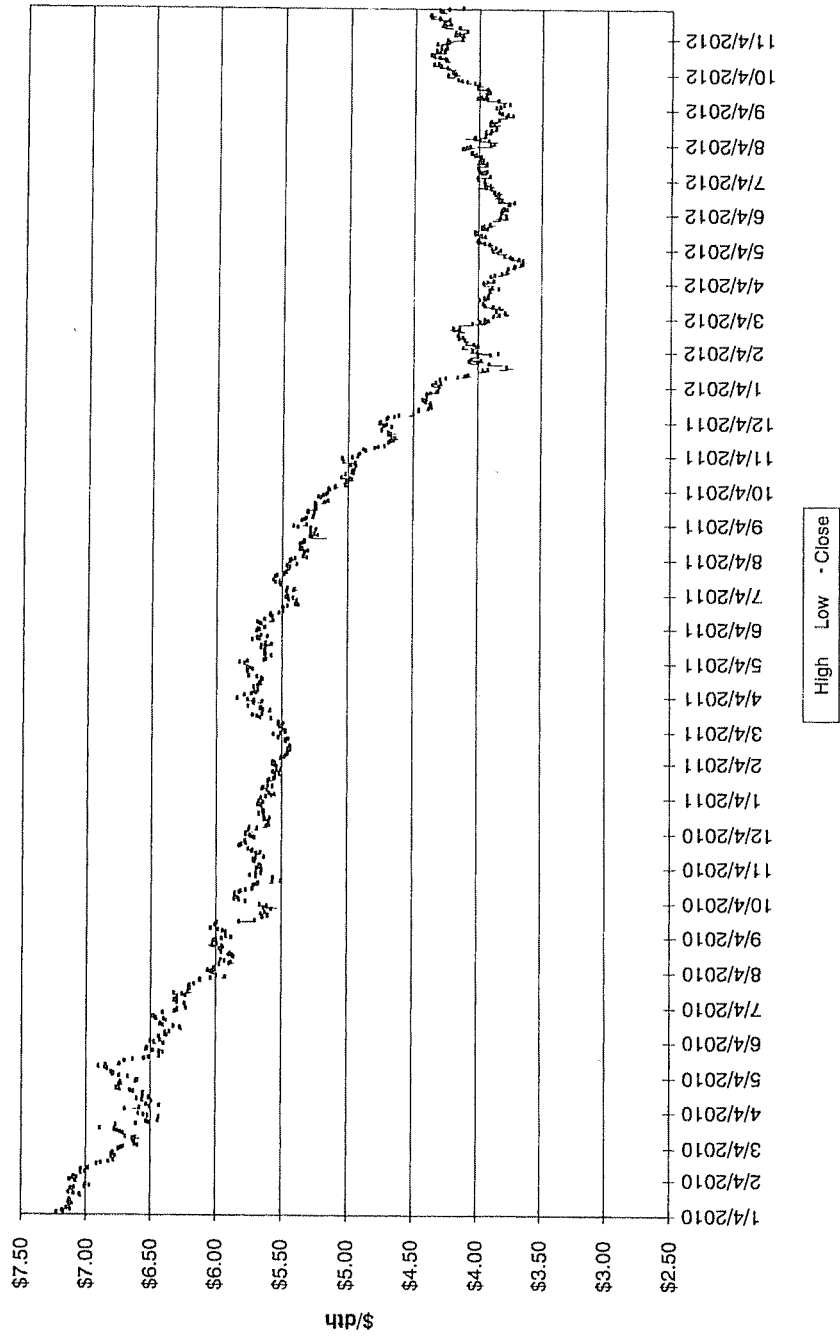
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**November 6, 2012 Release**

Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	3.66
Feb-10	5.32	Feb-11	4.09	Feb-12	2.50	Feb-13	3.51
Mar-10	4.29	Mar-11	3.97	Mar-12	2.18	Mar-13	3.40
Apr-10	4.03	Apr-11	4.25	Apr-12	1.95	Apr-13	3.30
May-10	4.14	May-11	4.31	May-12	2.43	May-13	3.36
Jun-10	4.80	Jun-11	4.55	Jun-12	2.46	Jun-13	3.38
Jul-10	4.63	Jul-11	4.42	Jul-12	2.95	Jul-13	3.47
Aug-10	4.32	Aug-11	4.05	Aug-12	2.84	Aug-13	3.50
Sep-10	3.89	Sep-11	3.90	Sep-12	2.85	Sep-13	3.39
Oct-10	3.43	Oct-11	3.56	Oct-12	3.31	Oct-13	3.48
Nov-10	3.71	Nov-11	3.24	Nov-12	3.52	Nov-13	3.60
Dec-10	4.25	Dec-11	3.17	Dec-12	3.56	Dec-13	3.83
Average 2010	\$ 4.387	Average 2011	\$ 4.000	Average 2012	\$ 2.768	Average 2013	\$ 3.490
Summer 2010	\$ 4.177	Summer 2011	\$ 4.149	Summer 2012	\$ 2.684	Summer 2013	\$ 3.411
Winter 2010-2011	\$ 4.102	Winter 2011-2012	\$ 2.752	Winter 2012-2013	\$ 3.530		

Summer Strip 2013



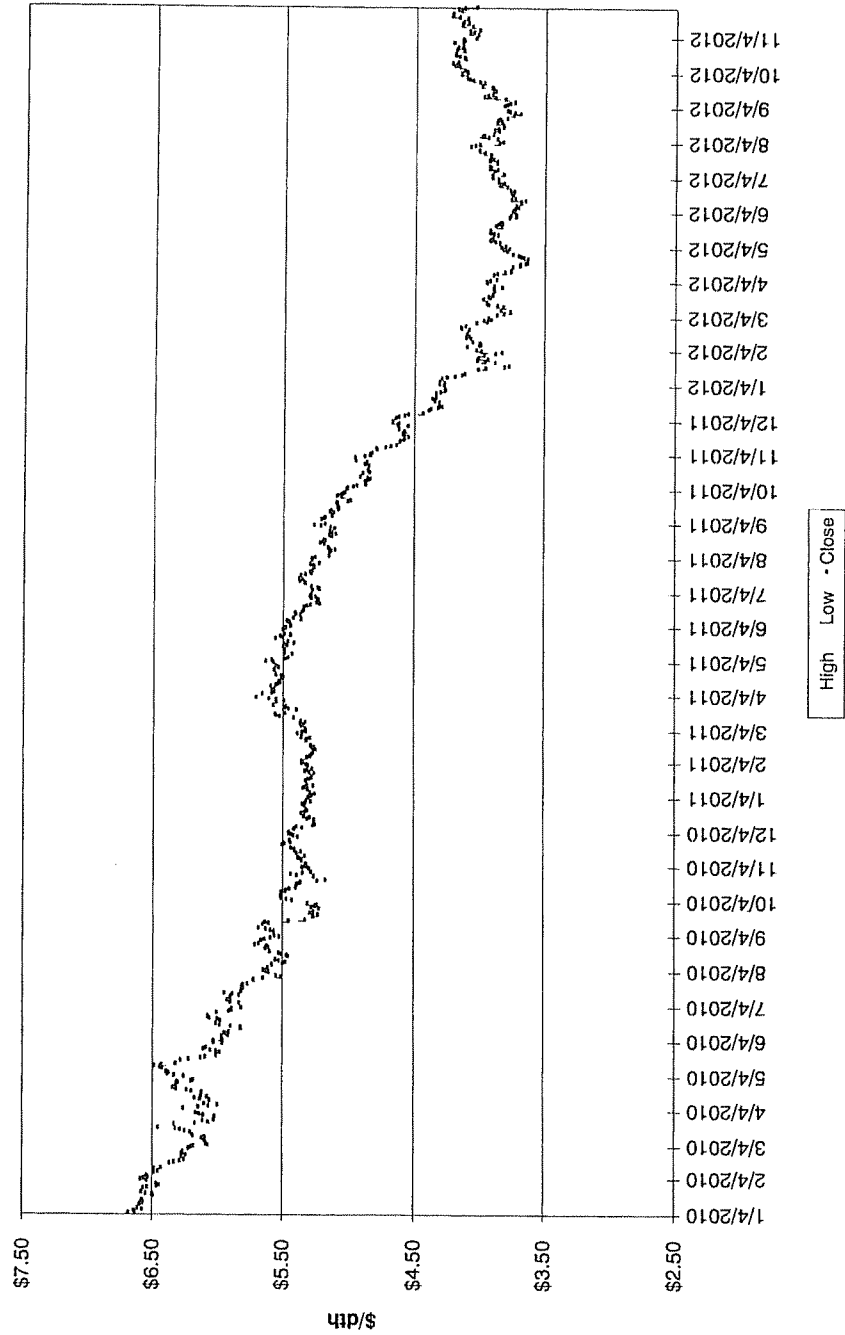
Winter Strip Nov13 - Mar14



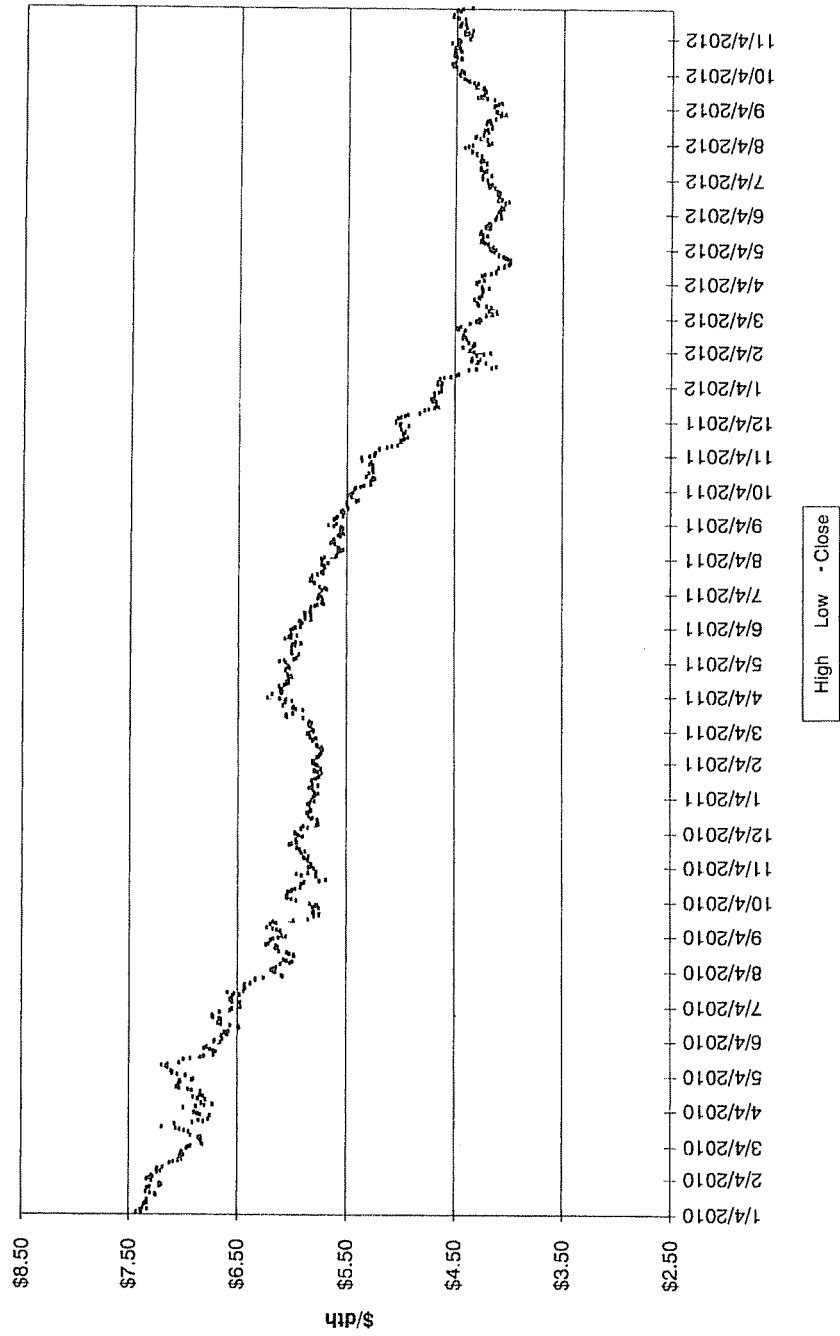
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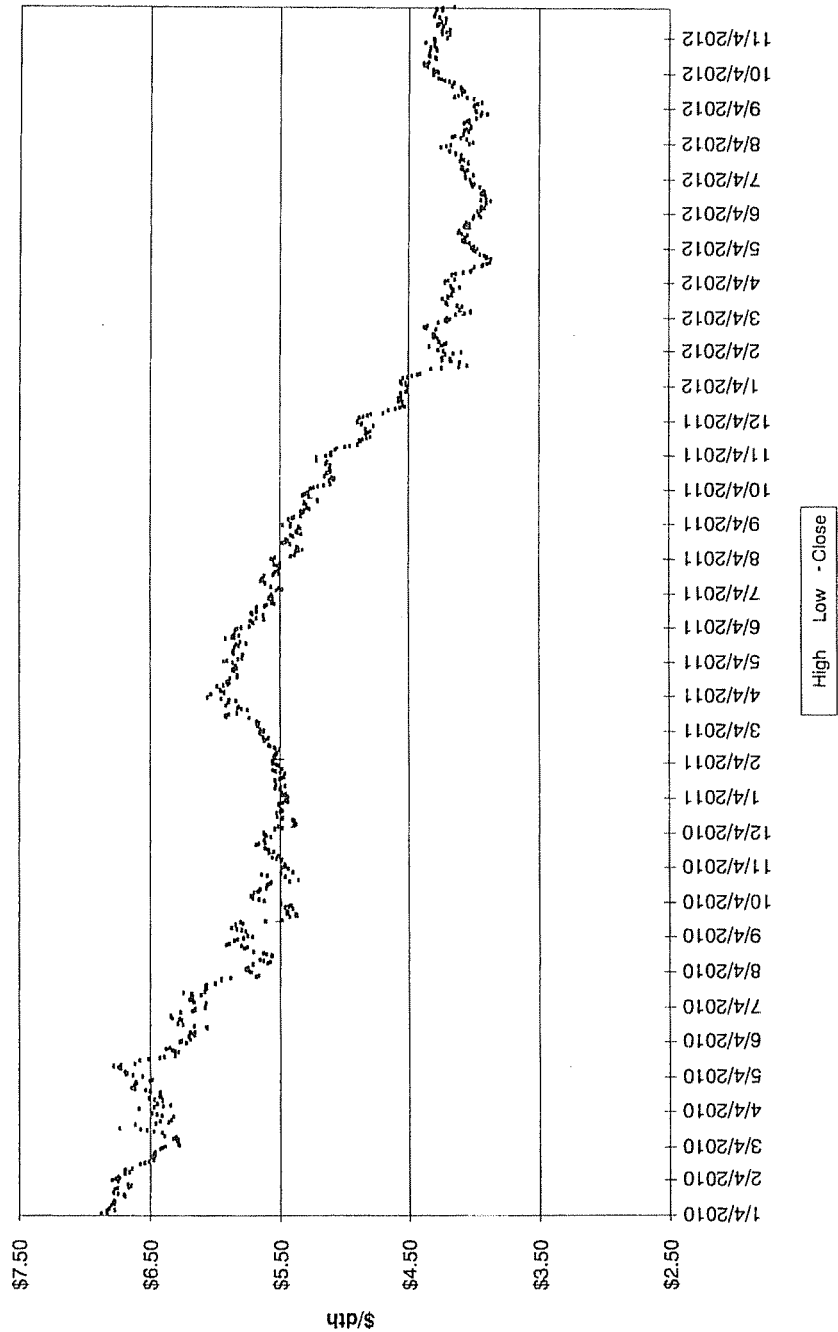
Summer Strip 2014



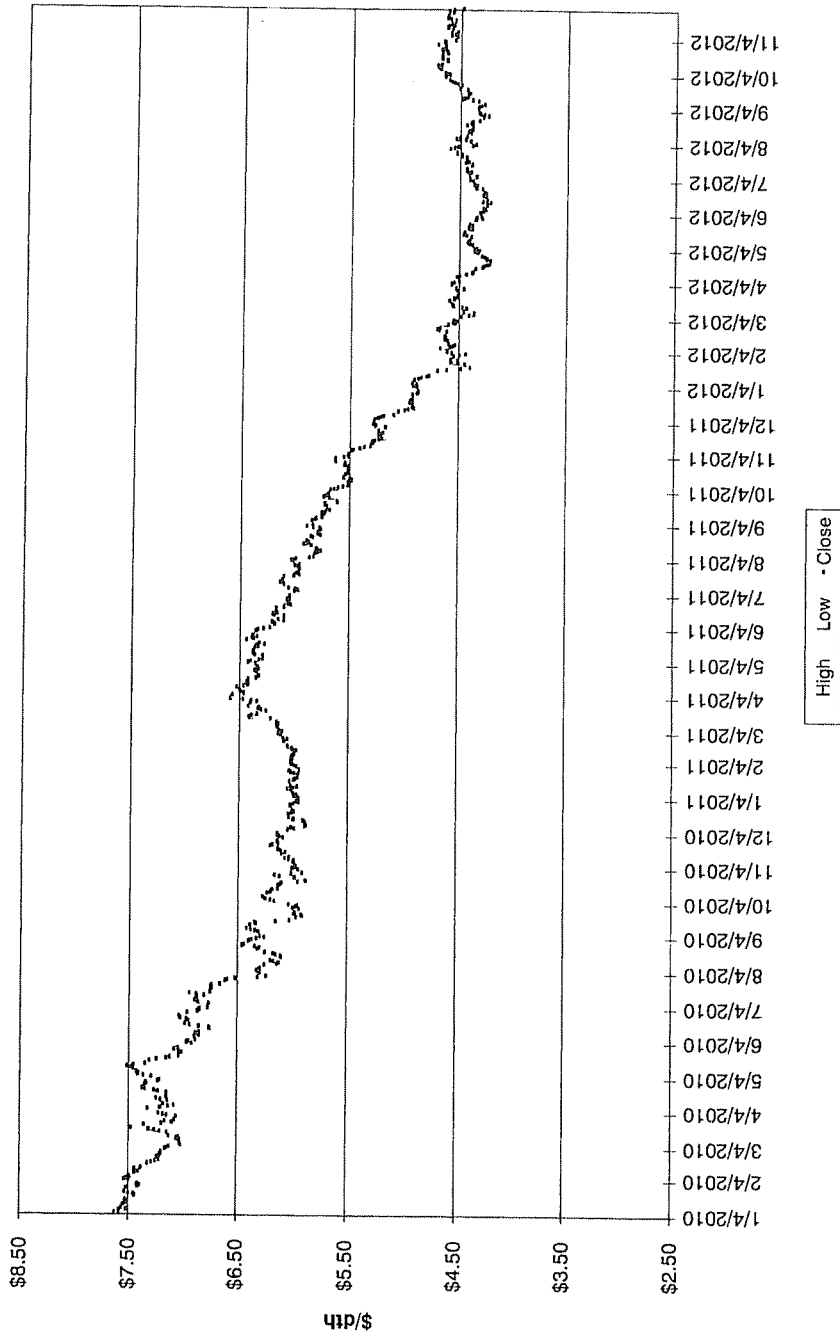
Winter Strip Nov14 - Mar15



Summer Strip 2015



Winter Strip Nov15 - Mar16





*Independent Statistics & Analysis*

## U.S. Energy Information Administration

November 2012

### Short-Term Energy Outlook

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 69.7 Bcf/d in 2012, an increase of 3.2 Bcf/d (4.8 percent) from 2011. Large gains in electric power use in 2012 more than offset declines in residential and commercial use. Projected consumption of natural gas in the electric power sector averages 25.4 Bcf/d in 2012, 22 percent higher than in 2011, primarily driven by the increased relative cost advantages of natural gas over coal for power generation in some regions. Consumption in the electric power sector during 2012 reached a record level of 35.3 Bcf/d in July 2012, when electricity demand for air conditioning was highest.

Projected total natural gas consumption decreases by 0.5 Bcf/d (0.7 percent) in 2013. Expected declines in the electric power sector offset increases in residential, commercial, and industrial consumption. A forecast of near-normal weather during the upcoming winter (but colder than last year's abnormally warm winter) drives 2013 increases in residential and commercial consumption of 11.5 percent and 10.2 percent, respectively. Although projected higher natural gas prices contribute to a 11.2-percent decline in forecast natural gas consumption in the electric power sector in 2013, consumption in the power sector next year is still expected to be about 1.8 Bcf/d higher than 2011 levels and high by historical standards. The consumption forecast for 2012 and 2013 is largely unchanged from last month's *Outlook*.

**U.S. Natural Gas Production and Imports.** Total marketed production of natural gas grew by 4.8 Bcf/d (7.9 percent) in 2011. EIA forecasts that total marketed production growth will slow in 2012, and that 2013 production will be near the 2012 level. So far during 2012, production has fluctuated slightly around an average of 69 Bcf/d, in contrast to the strong upward growth seen between 2009 and 2011. EIA expects some small declines in production in the coming months, related to recent drops in the rig count. According to Baker Hughes, the natural gas rig count was 424 as of November 2, 2012, compared with 811 at the start of 2012. EIA expects that growth in associated gas from crude oil, as well as continued drilling in liquids-rich areas, will help offset the decline in drilling activity. This month's 2013 forecast represents a downward revision of 0.4 Bcf/d from last month's *Outlook*.

**U.S. Natural Gas Inventories.** Working natural gas inventories are at a record high level. As of October 26, 2012, according to EIA's *Weekly Natural Gas Storage Report*, working inventories totaled 3,908 Bcf, which is 56 Bcf greater than the previous weekly high of 3,852 Bcf on November 18, 2011. Inventories are 136 Bcf greater than last year's level and 259 Bcf above the five-year average. EIA expects that inventory levels at the end of October 2012 will total 3,935 Bcf, and injections are likely to continue for a few weeks in November. Because of very high

inventories at the start of the summer injection season this year, working inventories have remained high and weekly stock builds have been below both the five-year average and last year's level since April 2012, with a few exceptions. The projected increase of 1,458 Bcf in working gas inventory during the 2012 injection season (from the beginning of April through the end of October) would be the smallest build since 1991. Last year's inventory build from April through October, for comparison, was 2,224 Bcf.

**Crude Oil Prices.** EIA projects the price of Brent crude oil will average \$112 per barrel in 2012 and \$103 per barrel in 2013, both mostly unchanged from last month's Outlook. EIA expects the WTI price to average \$89 per barrel in the fourth quarter of 2012, about \$4 lower than last month's Outlook, and to mostly remain at this level throughout the forecast period averaging \$88 per barrel in 2013. After increasing to \$22 per barrel in October of this year, the WTI crude oil spot price discount to the Brent crude oil spot price will average \$20 per barrel in the fourth quarter of 2012 before falling to \$11 per barrel by the end of 2013, according to EIA.

Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2012-13

		Dth/Day					Total	% System Supply
		November	December	January	February	March		
<b>Duke Energy Ohio</b>								
Previously Hedged								
	Col Gulf Mainline							
	Col Gulf Mainline							
	Col Gulf Mainline							
	Gulf South							
	Tex Gas Zone 1							
<b>Total</b>								
<b>System Supply</b>								
<b>Duke Energy Kentucky</b>								
Previously Hedged								
	Col Gulf Mainline							
	Col Gulf Mainline							
	Col Gulf Mainline							
<b>Total</b>								
<b>System Supply</b>								
<b>Duke Energy--Total</b>								
Previously Hedged								
<b>Total</b>								

Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 December 20, 2012

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Jan 13--Mar 13)	↓	Long	NOAA predicting above average temperatures for January 2013--March 2013 Mid-CONUS southward.	12
Mid Term Forecast (30-60 days)	↔	Long	January is predicted to be 0.9% colder than normal based on 10 year normals and February weather is predicted to be 5.7% warmer than normal.	13
Short Term Forecast (6-10 days)	↔	Short	Above temperatures early in the period in the East with Below temperatures in the West and Central portions of the CONUS. End of period weather is Below in West and Normal in East.	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage withdraws for the week ending December 14th were 82 BCF. Storage levels are at 3.724 TCF which is 1.8% higher than last year and 10.2% higher than the 5 year average.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13: [REDACTED] Summer 2013: [REDACTED]	↑	Long	GAS PRICE SCORECARD: Gas Price Outlook for November 2012--March 2013 "Bullish". Recent storage reports have reinforced the view that Y/Y gains of production have slimmed dramatically.	16-17
Gas Daily--Gas Price Predictions	↑	Long	Barclays increases 2013 estimate to \$3.70/MMBtu citing decline in production, increased industrial demand, falling imports and return to more normal weather. According to S&P, gas prices will stay below \$4/Mcf in 2013 due to weak demand growth for C&I customers. All major demand drivers are several years away. Barclays predicts the supply/demand balance will be tighter this winter but, a significant amount of coal displacement will still be needed to offset growing production. Analysts Projections: Barclays--\$3.50 1st Qtr 2013, S&P--Below \$4.00 average 2013, Barclays--\$3.70 average 2013	18
Gas Daily--LNG Exports	↑	Long	DOE's LNG study indicates that gas prices would increase up to 33 cents/Mcf but the economic benefits will outweigh the negative impacts on customers. DOE must approve exports with FTA countries but can limit exports to Non-FTA countries. According to Representative Markey, the study is deeply flawed and may lead to conclusions that underestimate the negative impacts of LNG exports.	19
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.664 Summer 2013: \$3.631	↑ ↓	Long	The projected Henry Hub natural gas spot price averages \$2.778/MMBtu for 2012 and \$3.678/MMBtu for 2013	20
<b>Technical Analysis</b>				
Summer 2013 Strip Chart	↓	Short	Closed at \$3.57	21
Winter 2013-14 Strip Chart	↓	Short	Closed at \$3.93	22
Summer 2014 Strip Chart	↓	Short	Closed at \$3.93	23
Winter 2014-15 Strip Chart	↓	Short	Closed at \$4.27	24
Summer 2015 Strip Chart	↔	Short	Closed at \$4.11	25
Winter 2015-16 Strip Chart	↔	Short	Closed at \$4.46	26
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to grow by 4.8% to 69.7 Bcf/d in 2012 resulting from large gains in electric power generation. Consumption decreases slightly in 2013 --this reduction is driven by a decline in the electric power sector.	27-28
Supply	↔	Long	Total marketed production grew by an estimated 4.8 Bcf/day or 7.9% in 2011, the largest volumetric increase in history. During 2012, production has fluctuated slightly around an average of 69 Bcf/d. This month's forecast has been revised upward as a result of the reversal of several months of declines that had taken place earlier in 2012. 2013 is forecasted to average 69.6 Bcf/d up slightly from 2012.	27-28
Oil Market	↔	Long	EIA expects Brent crude to average of \$112 per barrel for 2012 and average \$104 per barrel in 2013.	27-28

**Meeting Minutes: 426 Annex Conference Room - 1:00 pm**  
 Attendees: Jeff Kern, Terry Bates, Mitch Martin, Steve Niederbauer

Discussed current market conditions including weather forecasts, storage levels and various analysts projections as well as EIA's forecasts for natural gas and oil markets. Discussed the recent run-up in price, which after discussion, determined the short-term run-up was based on current weather. Based on the discussion, as well as the current position of the Hedging Program, no additional hedging is proposed.



**Duke Energy Kentucky**  
**Hedging Program - Current Position**  
 November 2012 - October 2013  
 As of 12/20/12

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/dav)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Cost Avg. (1)												
Total Hedged (quarterly)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Am't Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 12/20/12

Nov-13 Dec-13 Jan-14 Feb-14 Mar-14 Apr-14 May-14 Jun-14 Jul-14 Aug-14 Sep-14 Oct-14

**Load Forecast**  
 City Gate Load Forecast (Mcf)  
 TCO FSS Injections (Mcf)  
 Total Requirements (Mcf)

TCO FSS Withdrawals (Mcf)  
 Other "Withdrawals" (Mcf)  
 Total Withdrawals (Mcf)

**Amount Hedged (dt/draw)**

Fixed Price  
 Fixed Price  
 Fixed Price  
 Fixed Price  
 Total Hedged (dt/day)  
 Total Hedged (dt)

**Types of Hedging Products (1)**

Fixed Price  
 Price Caps  
 No-Cost Collars

**Embedded Hedged Cost**

Winter  
 Summer

Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

**Amt. Hedged with Storage @ City Gate**

Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (incl. Injections) (Dth)  
 % Hedged & Storage  
 Seasonal %

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

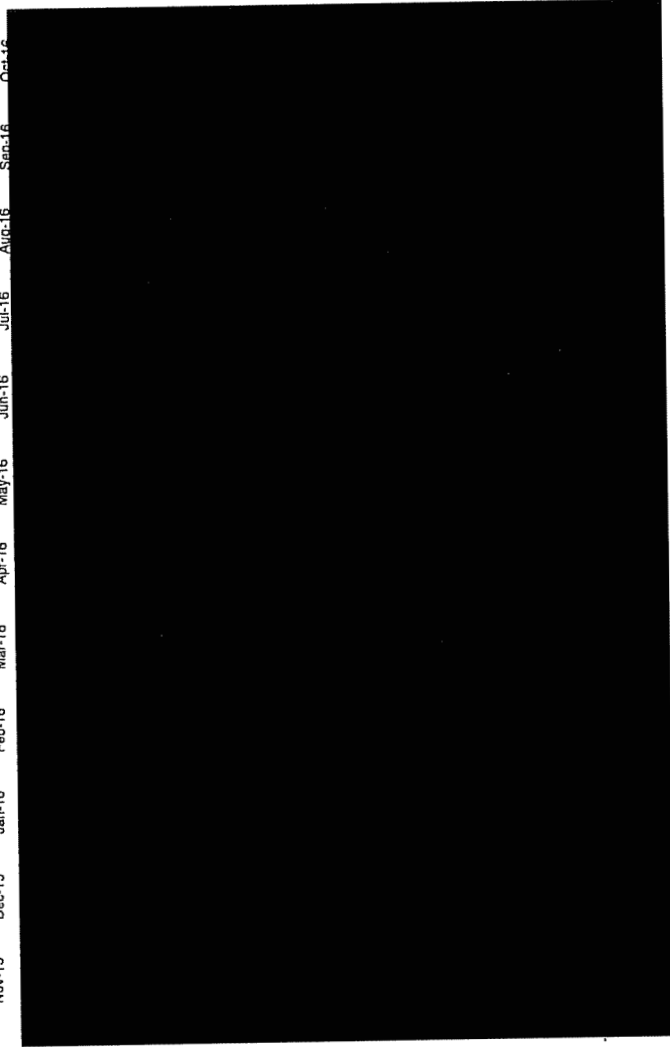
Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 12/20/12

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2015 - October 2016  
 As of 12/20/12

Nov-15 Dec-15 Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16



**Load Forecast**

City Gate Load Forecast (Mcf)  
 TCO FSS Injections (Mcf)  
 Total Requirements (Mcf)

TCO FSS Withdrawals (Mcf)  
 Other "Withdrawals" (Mcf)  
 Total Withdrawals (Mcf)

**Amount Hedged (dth/day)**

TBD  
 TBD  
 TBD  
 Total Hedged (dth/day)  
 Total Hedged (dth)

**Types of Hedging Products (1)**

Fixed Price  
 Price Caps  
 No-Cost Collars

**Embedded Hedged Cost**

Winter  
 Summer

Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

**Amount Hedged with Storage @ City Gate**

Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (incl. Injections) (Dth)  
 % Hedged & Storage  
 Seasonal %

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

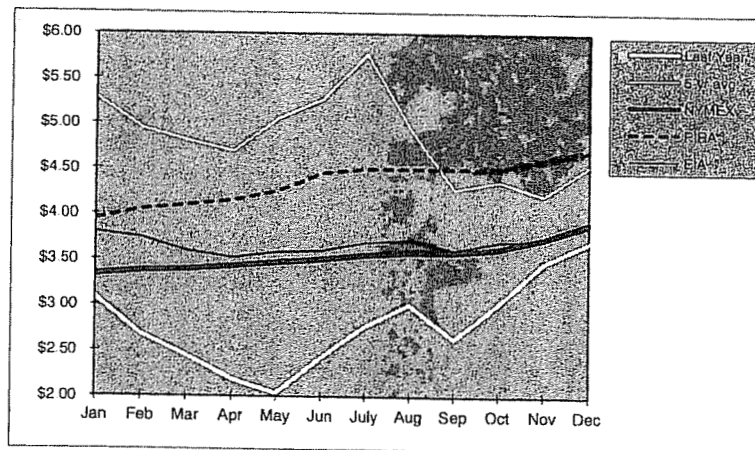
12/20/2012

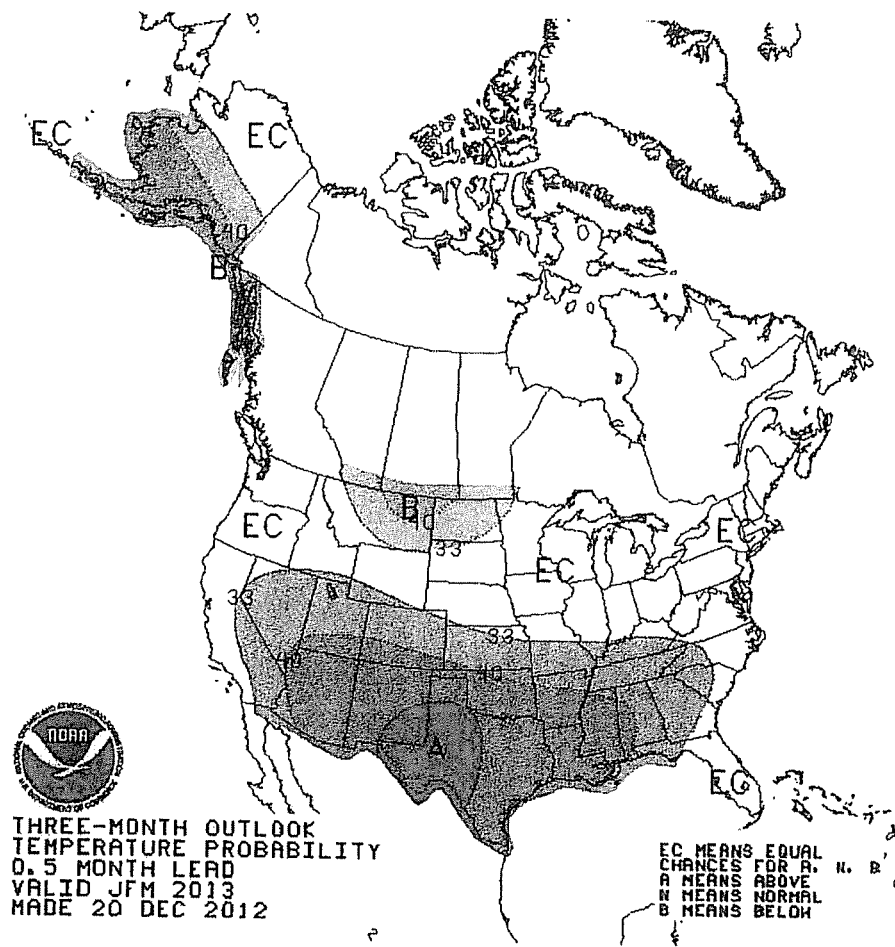
**Duke Energy Kentucky  
 Hedging Program  
 Current Position**

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (3/31/12)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2013					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2013					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					
Nov-15					
Dec-15					
Jan-16					
Feb-16					
Mar-16					
Winter 15/16					
Target Levels By October 31, 2013					

**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (07/08-11/12)	Last Year (2011-2012)		PIRA 27-Nov-12	EIA 11-Dec-12	NYMEX 19-Dec-12		
Jan	\$5.28	\$3.08			\$3.800	\$3.335		
Feb	\$4.95	\$2.68			\$3.740	\$3.375		
Mar	\$4.81	\$2.45			\$3.590	\$3.392		
Apr	\$4.70	\$2.19			\$3.520	\$3.428		
May	\$5.06	\$2.04			\$3.580	\$3.471		
Jun	\$5.27	\$2.43			\$3.600	\$3.503		
July	\$5.78	\$2.77			\$3.690	\$3.555		
Aug	\$4.95	\$3.01			\$3.720	\$3.580		
Sep	\$4.28	\$2.63			\$3.610	\$3.580		
Oct	\$4.36	\$3.02			\$3.700	\$3.625		
Nov	\$4.21	\$3.47			\$3.720	\$3.737		
Dec	\$4.54	\$3.70			\$3.870	\$3.905		
12 Month Avg	\$4.85	\$2.79			\$3.678	\$3.541		
Summer Average					\$3.631	\$3.535		
Winter Average					\$3.744	\$3.549		

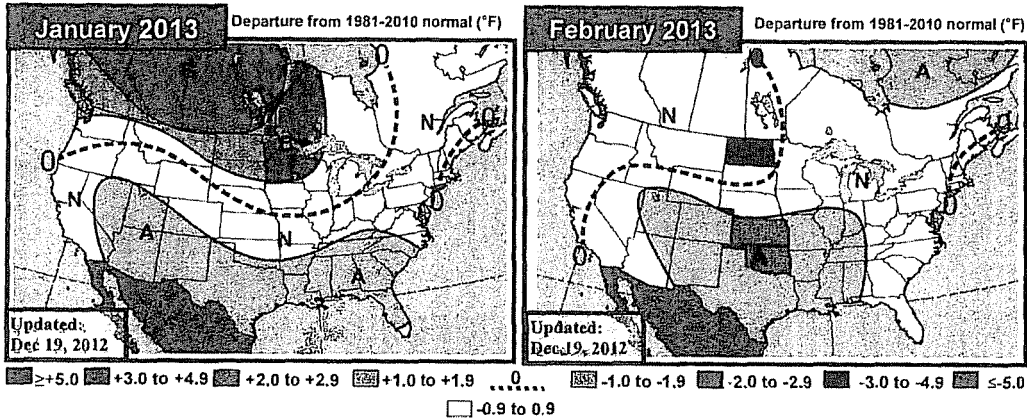




# EarthSat 30-60 Day Outlook

Wednesday, December 19, 2012

Meteorologists: SS/BH



**Previous** (Map: Dec 12, 2012)

**No changes to forecast**  
**Mixed signals lead to low forecast confidence**

The forecast is unchanged this week with warmth still expected across the southern tier and colder conditions spreading from Western Canada into the northern Plains. The lack of change this week is due to mixed signals coming from forecast guidance. December has certainly been warm-dominated due to Pacific flow, and that is projected to continue at least somewhat into the beginning of January. In the meantime, there is still blocking in the upper-latitudes, and while it has yet to yield a cold influence across the US it may do so if Pacific influences become less of a factor. There's also the MJO to consider, which may lead to a warmer risk through at least the first half of the month. Meanwhile, the CFS model does favor more cold in northern and western areas. Given the mixed signals, persistence is generally favored, but with low confidence.

**Jan GWHDD\*\* Forecasts** \*10Y Normal updated to '02-11

Jan 2013 Fcst:	940.0	10Y Normal*	931.3
		30Y Normal	946.3
		Jan-2012	809.5

No Change

**Previous** (Map: Dec 12, 2012)

**No changes to forecast**  
**Signals remain mixed**

Like January, there was no change to the February outlook this month, with aboves still expected in southern areas and no significant, sustained cold seen at this time. Also like January, it's still a low-confidence forecast due to mixed signals. The CFS model shows more cold across the northern tier, and there is still the chance that blocking could be more of a factor. However, persistence argues for a warmer outlook, especially if Pacific influences remain dominant.

**Feb GWHDD\*\* Forecasts** \*10Y Normal updated to '02-11

Feb 2013 Fcst:	753.0	10Y Normal*	798.8
		30Y Normal	774.1
		Feb-2012	699.1

No Change

\*\*National Gas-Weighted HDDs

**Dec so far**

**Final 60 Day Outlook**   **Final 30 Day Outlook**   **Current verif. - forecast (12/1-12/31)**

The current verification plus the forecast out to the end of the month still shows a rather warm December for most of the US, especially in Texas, the Midwest, and parts of the Mid-Atlantic and South. Our final 30 Day forecast underestimated the warmth in the East, and slightly over-estimated the warmth in the Southwest, while correctly showing the cold being limited to Western Canada. If this December 1-31 verification/forecast were to be correct, it would be the warmest December dating back to 1950 (with 730 national GWHDDs).





# EarthSat 6-10 Day Forecast—Detailed

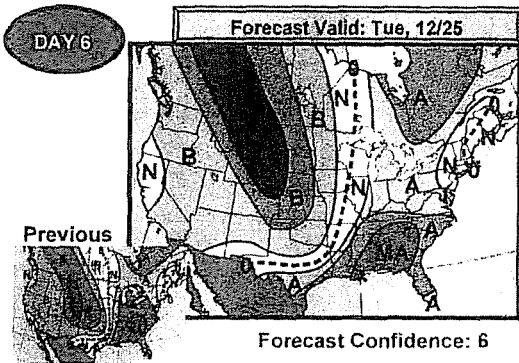
Thursday, December 20, 2012

Meteorologist: BH/AC



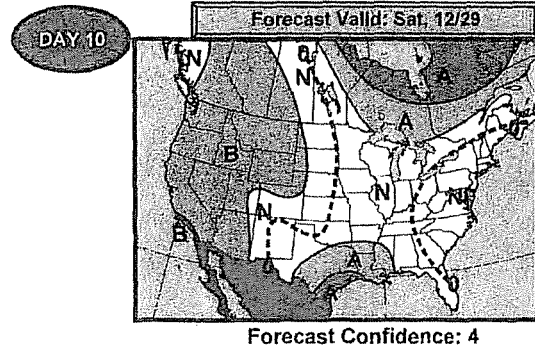
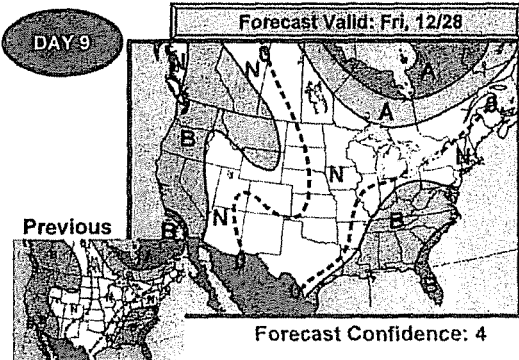
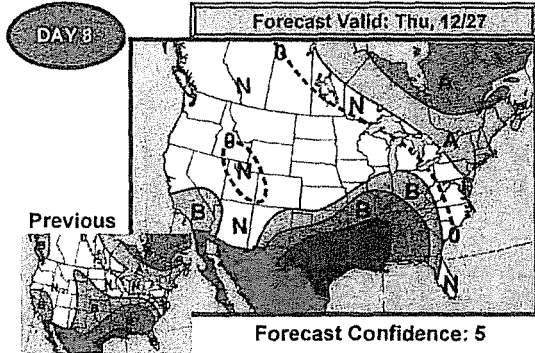
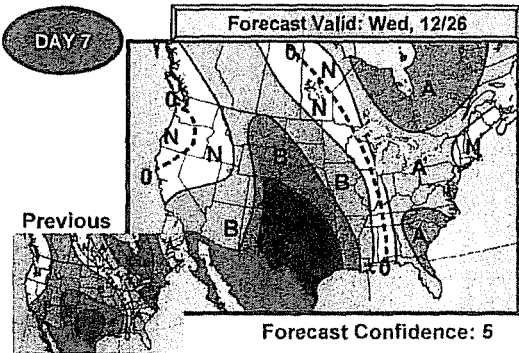
WEATHER SERVICES

## Forecast Temperature Deviations



**\*Shaky Details In Storm Systems Remain\***  
**\*Colder Temperatures Dive Into South In Mid-Period\***

With models still struggling to have a grasp on the development and timing of storm systems through the period, the confidence in the forecast is kept at moderate levels, at best. Storm details lately generally haven't come into better clarity until closer to the near term. The first half of the period could entail more colder air than forecasted across the South. Some of the colder risk may even advance into the Northeast late in the period, though of a marginal intensity. Several of the models have continually been projecting colder scenarios for the period, but this forecast is warmer as persistent Pacific influences may enable a warmer outlook than what the models portray.



A +3F to +4F  
  A +5F to +7F  
  MA +8F to +14F  
  SA +15 or Higher  
 B -3F to -4F  
  B -5F to -7F  
  MB -8F to -14F  
  SB -15 or Lower

**EIA** U.S. Energy Information Administration  
 Independent Statistics and Analysis  
[Home](#) > [Natural Gas](#) > [Weekly Natural Gas Storage Report](#)  
**Weekly Natural Gas Storage Report**

[Glossary](#)

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Released: December 20, 2012 at 10:30 a.m. (eastern time) for the Week Ending December 14, 2012  
 Next Release: December 28, 2012

**Working Gas in Underground Storage, Lower 48** other formats: [Summary TXT](#) [CSV](#)

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	12/14/12	12/07/12	Change	Year Ago (12/14/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,925	1,974	-49	1,963	-1.9	1,845	4.3
West	538	547	-9	477	12.8	457	17.7
Producing	1,261	1,285	-24	1,218	3.5	1,078	17.0
<b>Total</b>	<b>3,724</b>	<b>3,806</b>	<b>-82</b>	<b>3,658</b>	<b>1.8</b>	<b>3,379</b>	<b>10.2</b>

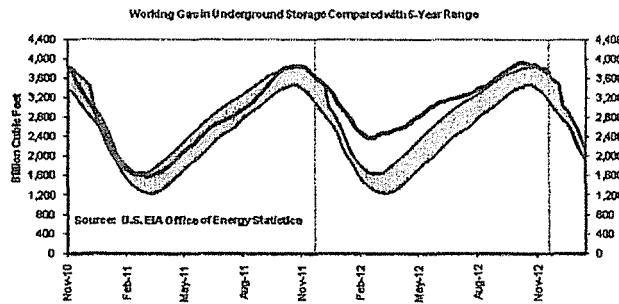
**Notes and Definitions**

**Summary**

Working gas in storage was 3,724 Bcf as of Friday, December 14, 2012, according to EIA estimates. This represents a net decline of 82 Bcf from the previous week. Stocks were 66 Bcf higher than last year at this time and 345 Bcf above the 5-year average of 3,379 Bcf. In the East Region, stocks were 80 Bcf above the 5-year average following net withdrawals of 49 Bcf. Stocks in the Producing Region were 183 Bcf above the 5-year average of 1,078 Bcf after a net withdrawal of 24 Bcf. Stocks in the West Region were 81 Bcf above the 5-year average after a net drawdown of 9 Bcf. At 3,724 Bcf, total working gas is above the 5-year historical range.

Working gas stocks in the Producing Region, for the week ending December 14, 2012, totaled 1,261 Bcf, with 312 Bcf in salt cavern facilities and 949 Bcf in nonsalt cavern facilities. Working gas stocks decreased 8 Bcf in the salt cavern facilities and decreased 17 in the nonsalt cavern facilities since December 7. An historical series of the salt and nonsalt subtotals of the Producing Region is available for download at: [wngsr\\_producing\\_region\\_salt.xls](#)

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- Performance Evaluation
- Related Links
- Storage Basics
- Natural Gas Weekly Update
- Natural Gas Navigator



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2007 through 2011.  
 Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**November 27, 2012 Release**

Jan-10		Jan-11		Jan-12		Jan-13	
Feb-10		Feb-11		Feb-12		Feb-13	
Mar-10		Mar-11		Mar-12		Mar-13	
Apr-10		Apr-11		Apr-12		Apr-13	
May-10		May-11		May-12		May-13	
Jun-10		Jun-11		Jun-12		Jun-13	
Jul-10		Jul-11		Jul-12		Jul-13	
Aug-10		Aug-11		Aug-12		Aug-13	
Sep-10		Sep-11		Sep-12		Sep-13	
Oct-10		Oct-11		Oct-12		Oct-13	
Nov-10		Nov-11		Nov-12		Nov-13	
Dec-10		Dec-11		Dec-12		Dec-13	
Average 2010	\$	Average 2011	\$	Average 2012	\$	Average 2013	\$
Summer 2010	\$	Summer 2011	\$	Summer 2012	\$	Summer 2013	\$
Winter 2010-2011	\$	Winter 2011-2012	\$	Winter 2012-2013	\$		

**North American Gas Forecast Monthly**

November 27, 2012

**NATURAL GAS**

**U.S. GAS PRICE SCORECARD: DECEMBER 2012 – MARCH 2013**

Bearish Neutral Bullish

Supply	Outlook	Commentary
<b>Lower 48 Gas Production</b>		U.S. production growth has notably slowed with 4Q12 Y/Y gains likely to be limited to ~0.5 BCF/D. Marcellus is surging once again — with gains even exceeding 4Q11, but shale gas from dry plays has teamed with conventional declines to provide a more material counter. As a result, Lower 48 production looks challenged to post growth even remotely close to a year ago in the months ahead.  A recent production uptick reflects restored shut-ins removed from the market in 1Q12 when AECO-C prices were sub-\$2. Oil is expected to continue to dominate Canadian drilling, causing resumed production declines. Canada's RC heating market got off to a fast start likely helping to trim stocks to near or below year-earlier levels even before December.
<b>Canadian Production/Exports</b>		A somewhat cold November is leading to a Y/Y end-month storage deficit expected to reach 50-70 BCF, barring a sudden shift to very mild weather. But the latest forecast of a mild start to December has tempered bullish enthusiasm tied to expected further widening storage deficits.
<b>U.S. Storage Levels</b>		
Demand	Outlook	Commentary
<b>Electric Generation (EG)</b>		Next month will provide the first major test of the resilience of coal-to-gas substitution, especially if HH prices move within striking distance of \$4/MMBtu, or ~20% above a year ago. Colder Y/Y weather, new gas-fired EG capacity and the generally positive impact of higher gas prices on electricity prices should inhibit gas-to-coal switching.
<b>Industrial Sector</b>		EIA's latest monthly data through August show industrial gas demand sustaining the upward momentum that was first evident in June. This winter's expected colder Y/Y weather will also give the sector an important gas demand boost.
<b>Residential/Commercial (R/C)</b>		November GWHDDs appear on track to best year ago by 13% and PIRA's hybrid by ~3%, but December's tally ultimately will far surpass this month in importance. If a predicted mild start does materialize, a sizable swing to colder-than-normal will be needed for the full month to average near normal.
Gas Prices	Outlook	Commentary
<b>November 2012 – March 2013</b>		The ultimate fear of gas bulls has been averted by forecasts of another mild December. This outlook seems poised to push next month's 5-dayweek price below recent levels. But such a downturn has a potential silver lining for bulls in that that lower prices would support coal-to-gas substitution. The past several weeks' storage reports also have reinforced the view that Y/Y gains of domestic production have slimmed dramatically, a crucial bullish factor looking ahead.
NYMEX Prices and Speculation		
<p>There is increasing evidence that the longstanding bearish bias collectively held by non-commercial traders has finally ended. Outside of a brief five-week period (8/28 through 9/25), speculators have held a combined NYMEX/ICE net long position since midyear as per the CFTC's weekly Commitment of Traders data. The latest snapshot of holdings as of 11/20 revealed that their net long futures position stood at ~67.5 thousand contracts, which was up W/W, but below the 12-month high of ~79 thousand lots booked on 10/30/12. Given a net short position of ~192 thousand lots in place just a year ago, additional buying would not be surprising. Regardless, changing perceptions at a minimum favor greater volatility.</p>		

## **Gas Price Predictions**

### **Barclay's Ups 2013 Price Call as Balance Tightens—Dec 6, 2012**

Citing an expected decline in dry gas production, an uptick in industrial demand, falling net imports and the return to normal weather, Barclays increases price forecast for 2013 to \$3.70/MMBtu from \$3.25/MMBtu. Barclay's estimates that gas prices will need to rise to \$4/ MMBtu to \$4.50/MMBtu before a meaningful increase in dry gas drilling will occur.

"In aggregate, the return to normal weather, further growth of industrial consumption and declining net imports as poised to tighten the balances enough to halve the need for coal displacement next year, but not to eliminate it."

### **Gas to Stay Below \$4 in 2013 Due to Stagnant Demand—Dec 6, 2012**

According to S&P, gas prices will stay below \$4/Mcf in 2013 due to weak demand growth for industrial and commercial customers. S&P expects gas production to remain flat to slightly down in the next 12 months. "All of the major demand drivers—liquefied natural gas exports, gas as transportation fuel and expanded use by the petrochemical industry are still several years away from creating substantial demand." Also capping gas prices is the record amount of gas in storage, coupled with the backlog of gas wells drilled but awaiting completions or pipeline takeaway capacity.

### **Market Balance Tighter than Last Winter—December 17, 2012**

Barclays predicts that the supply/demand balance will be tighter this winter than last year but, a significant amount of coal displacement will still be needed to offset growing production. Normal winter weather should lead to average prices for the first quarter to be around \$3.50/MMBtu. If the winter is 5% colder-than-normal, demand would lift prices to \$4.25/MMBtu, allowing coal to regain significant market share from gas generation. If winter temperatures are 5% warmer-than-normal Barclay's sees prices below \$3/MMBtu.

## **LNG Exports**

### **Benefits Outweigh Costs of LNG Exports—Dec 6, 2012**

DOE's long-awaited study LNG study indicates that exports would initially increase domestic gas prices by up to 33 cents/Mcf but the economic benefits to the broader economy will outweigh the negative impact on consumers.

"Congressional and industry leader came away with divergent views of the study, with some claiming it backed the case to expand LNG exports and others saying it did just the opposite given the expected increase in gas prices."

The studies are crucial in helping the DOE make a decision regarding whether to approve pending applications to ship LNG abroad. By law, DOE must approve exports to countries that have free trade agreements with the US, but DOE can limit or block exports to Non-FTA countries if it finds they are not in the public interest. DOE will accept public comment for 45 days and reply comments will be accepted for 30 days. A decision will not be made until February or later.

### **LNG Exports Likely to be Phased In—Dec 11, 2012**

The Obama administration will allow more and more LNG exports over time as part of a phased gas export strategy. According to Shell, "We'll see a level of exports that's considered acceptable from a policy standpoint and then over the next decade my expectations would be that as we see these natural gas resources continue to be developed and prove themselves in the US we'll have a stronger belief in the resilience and the duration of these resources and more exports of LNG."

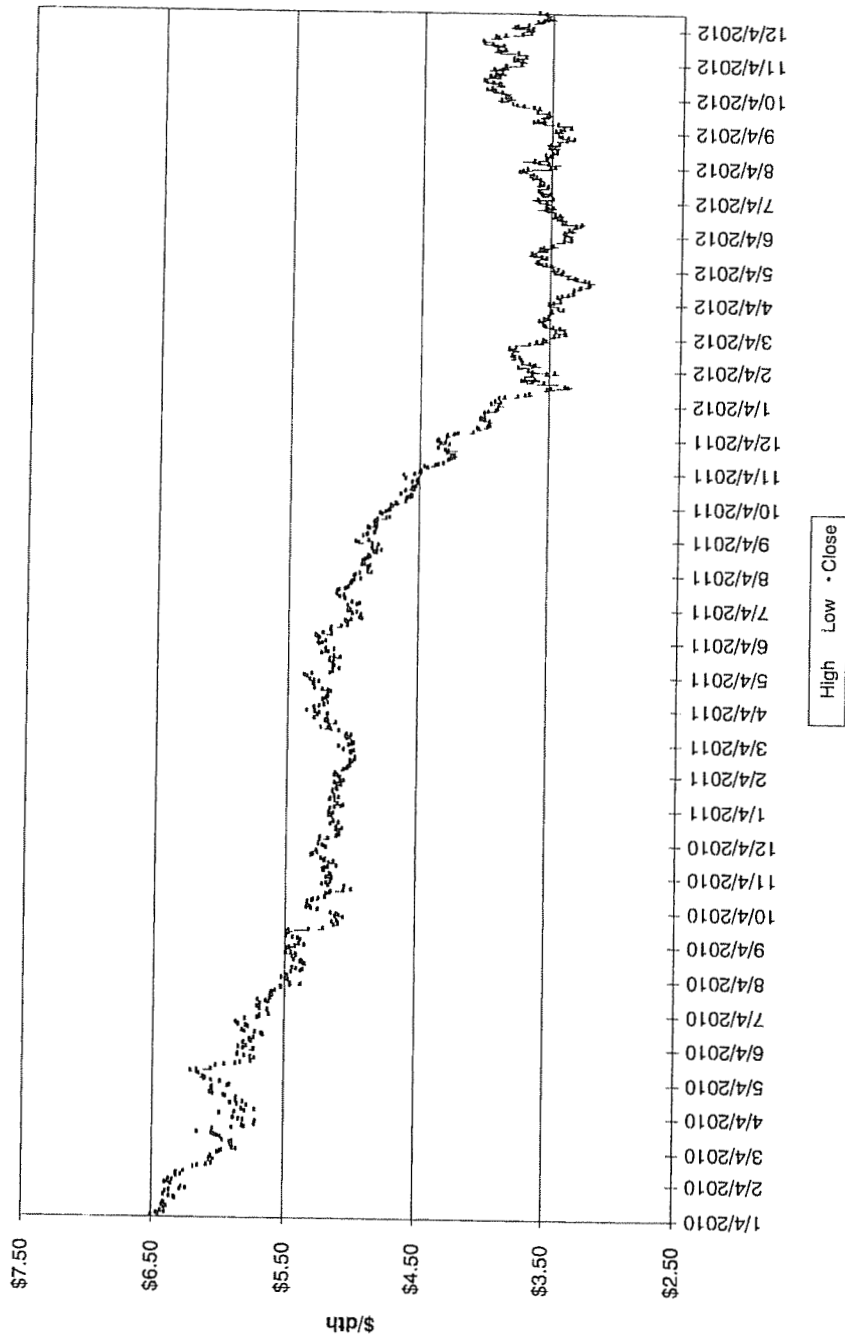
### **Rep. Markey Questions Findings of LNG Export Study—Dec 18, 2012**

According to Representative Markey, the DEO's study on the economic impact of large-scale US LNG exports relied in outdated data, misinterpreted a previous analysis and made inaccurate assumptions about potential benefits. The study used a "deeply flawed methodology that may have led to conclusion that severely underestimates the negative impacts of large-scale natural gas exporting." The data does not take into account recent coal-to-gas switching for electric generation, new investments by industrial users and the potential growth in natural gas vehicles. "This data badly underestimates the growth that has already occurred in domestic natural gas demand as well as demand that is expected in the future."

**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**December 11, 2012 Release**

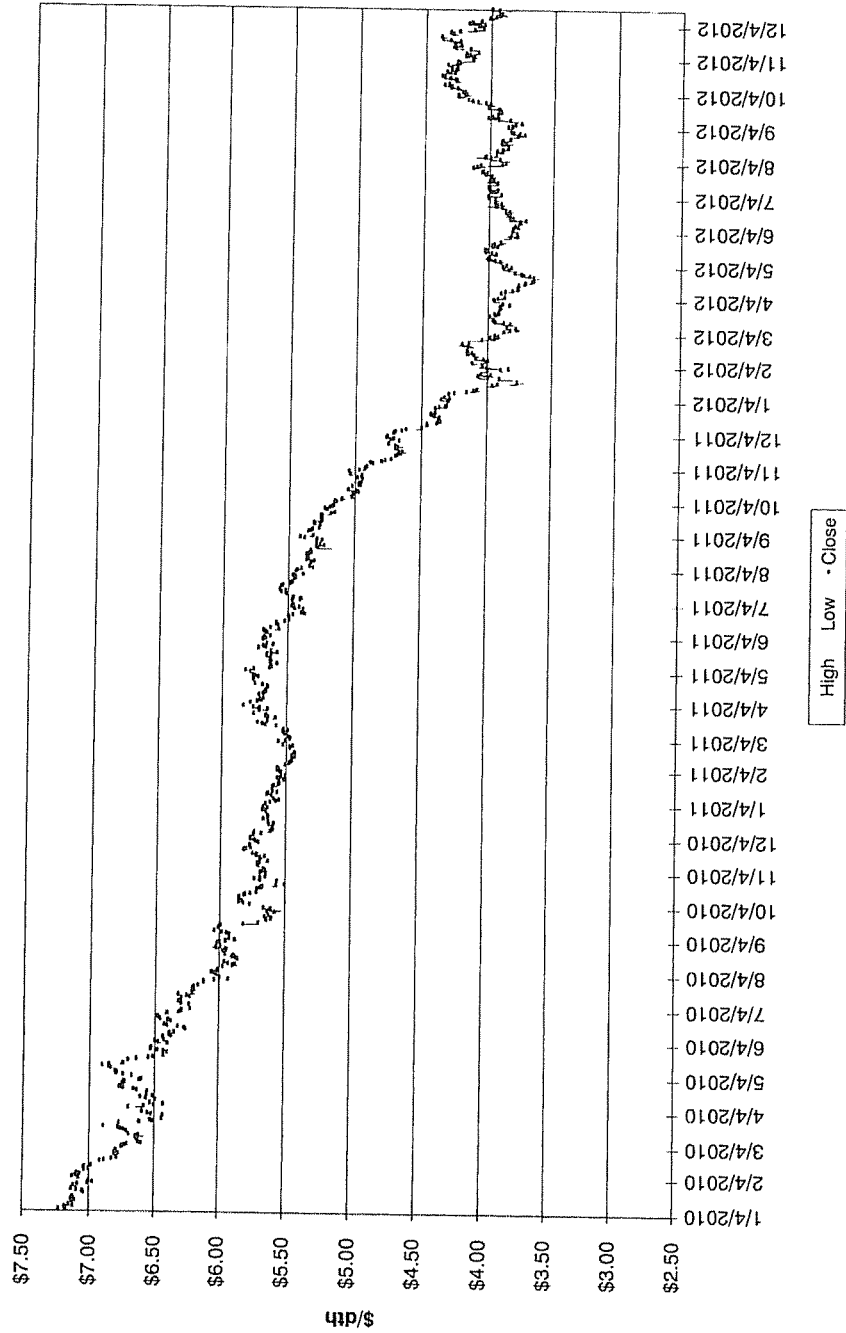
Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	3.80
Feb-10	5.32	Feb-11	4.09	Feb-12	2.50	Feb-13	3.74
Mar-10	4.29	Mar-11	3.97	Mar-12	2.18	Mar-13	3.59
Apr-10	4.03	Apr-11	4.25	Apr-12	1.95	Apr-13	3.52
May-10	4.14	May-11	4.31	May-12	2.43	May-13	3.58
Jun-10	4.80	Jun-11	4.55	Jun-12	2.46	Jun-13	3.60
Jul-10	4.63	Jul-11	4.42	Jul-12	2.95	Jul-13	3.69
Aug-10	4.32	Aug-11	4.05	Aug-12	2.84	Aug-13	3.72
Sep-10	3.89	Sep-11	3.90	Sep-12	2.85	Sep-13	3.61
Oct-10	3.43	Oct-11	3.56	Oct-12	3.31	Oct-13	3.70
Nov-10	3.71	Nov-11	3.24	Nov-12	3.54	Nov-13	3.72
Dec-10	4.25	Dec-11	3.17	Dec-12	3.65	Dec-13	3.87
Average 2010	\$ 4.387	Average 2011	\$ 4.000	Average 2012	\$ 2.778	Average 2013	\$ 3.678
Summer 2010	\$ 4.177	Summer 2011	\$ 4.149	Summer 2012	\$ 2.684	Summer 2013	\$ 3.631
Winter 2010- 2011	\$ 4.102	Winter 2011- 2012	\$ 2.752	Winter 2012- 2013	\$ 3.664		

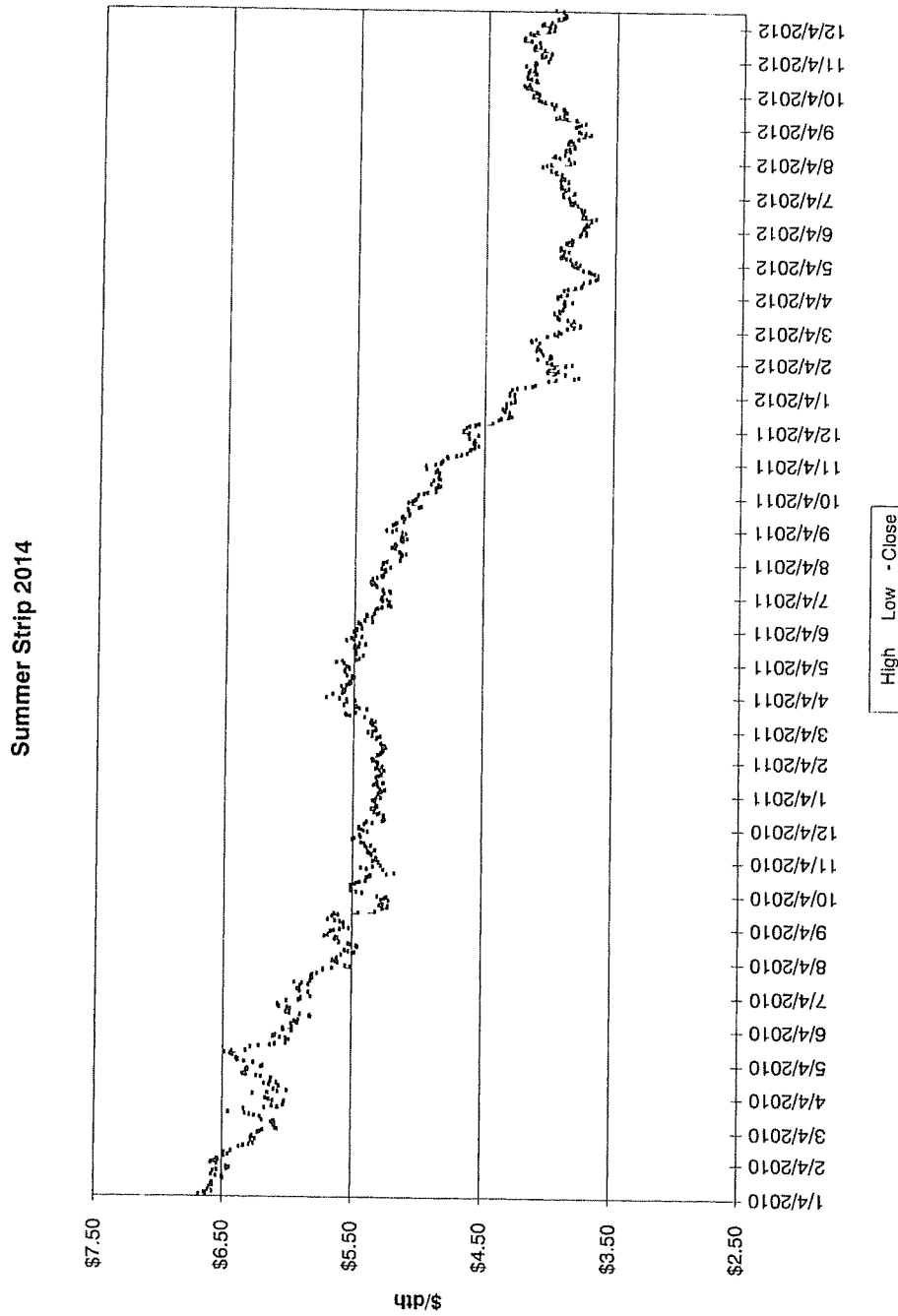
Summer Strip 2013



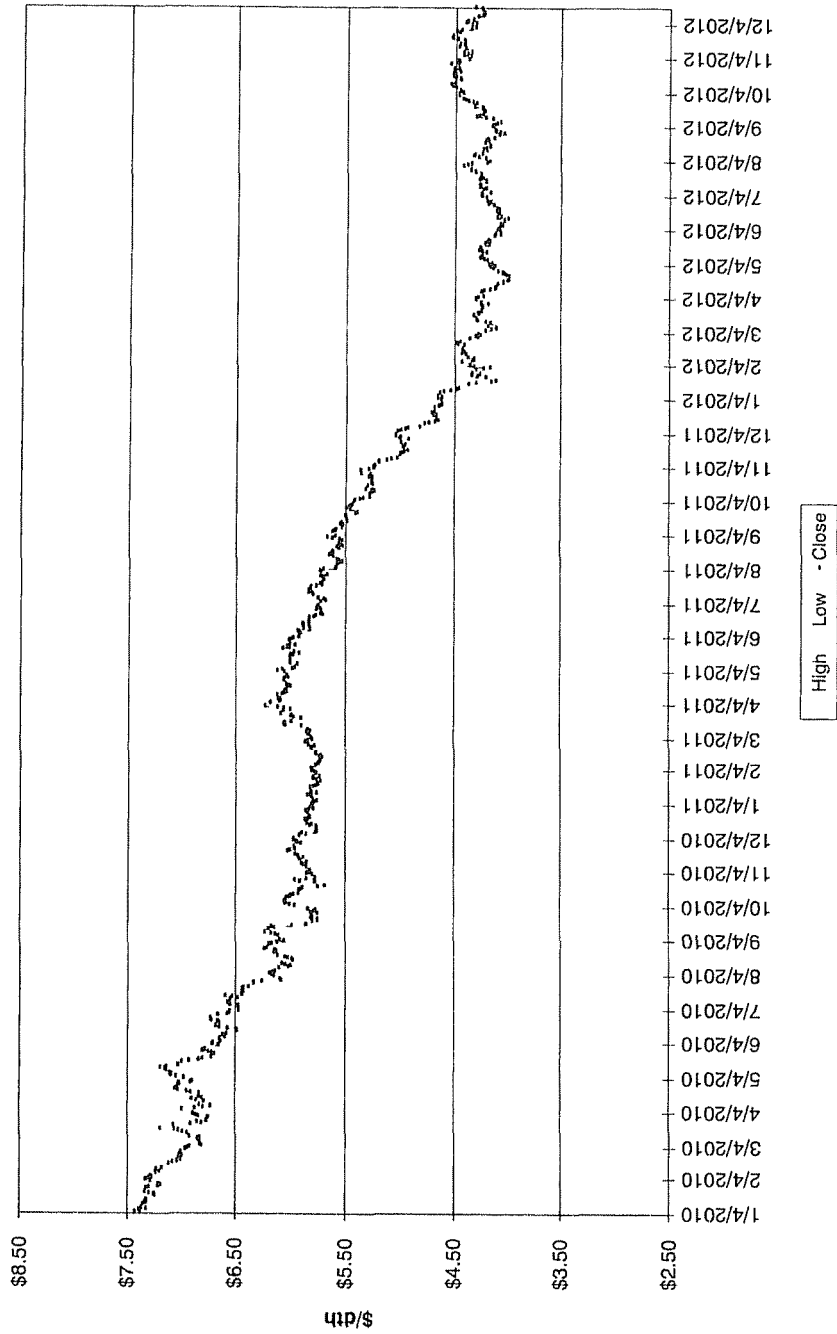


Winter Strip Nov13 - Mar14

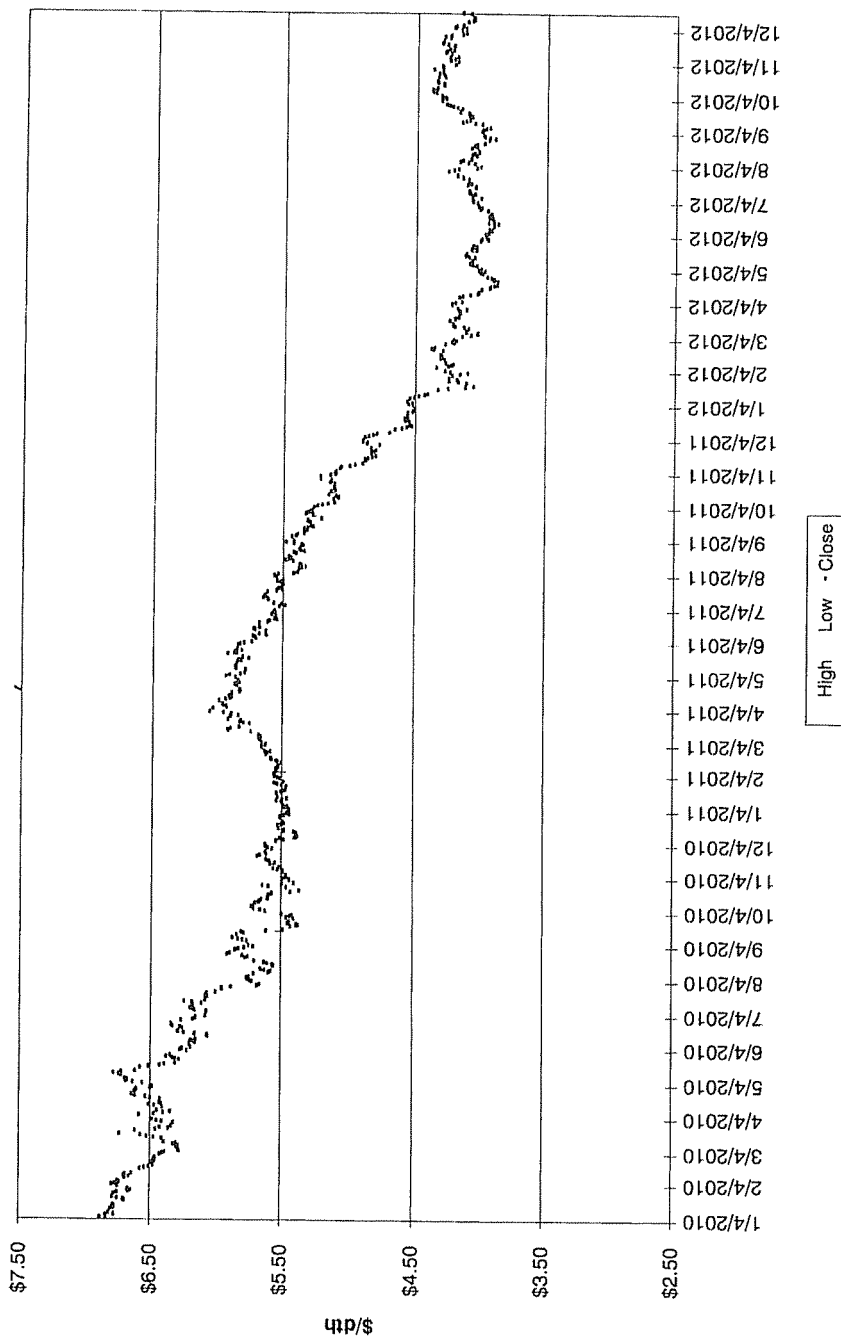




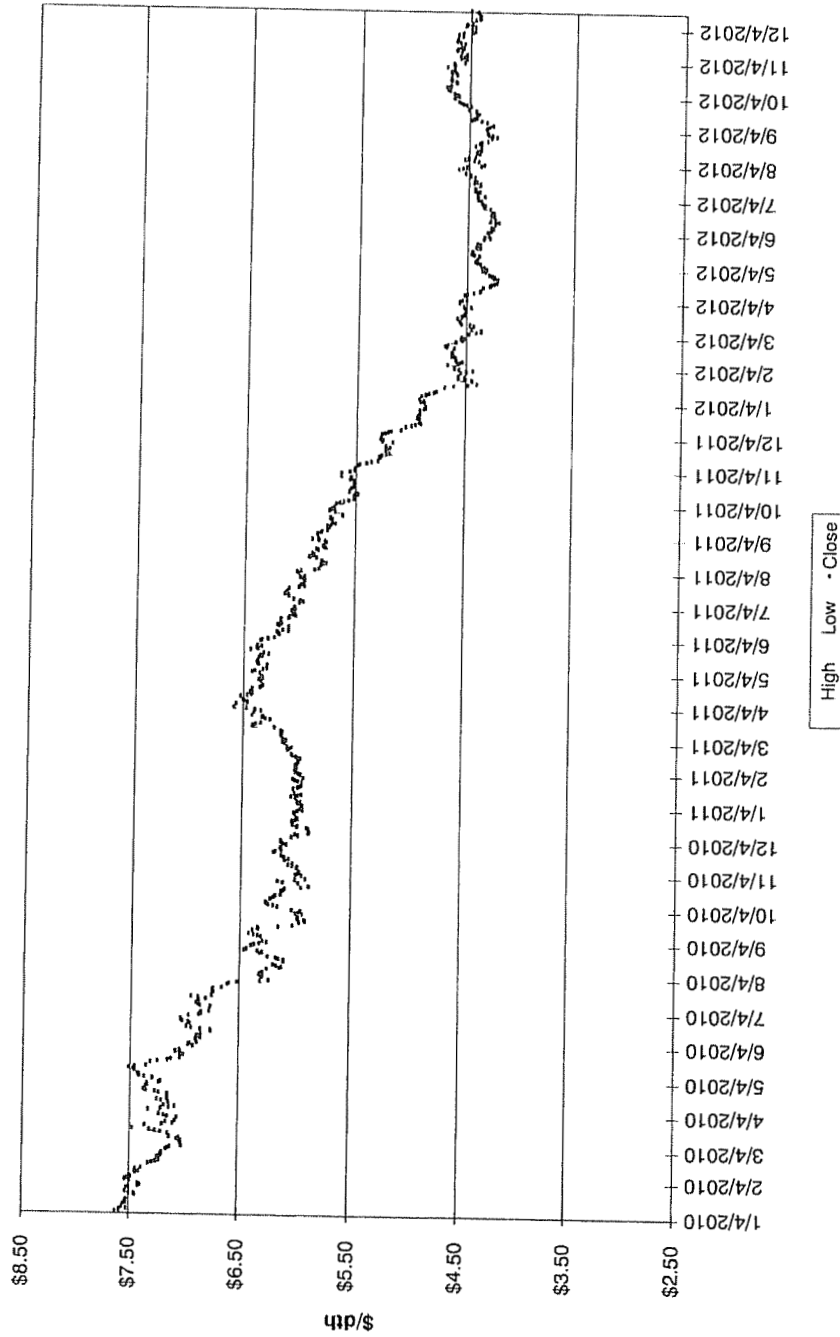
Winter Strip Nov14 - Mar15



Summer Strip 2015



Winter Strip Nov15 - Mar16





*Independent Statistics & Analysis*

## U.S. Energy Information Administration

### Short-Term Energy Outlook (STEO)

□

#### Natural Gas

##### U.S. Natural Gas Consumption.

EIA expects that natural gas consumption will average 69.7 billion cubic feet per day (Bcf/d) in 2012, an increase of 4.8 percent from 2011. Large gains in electric power use in 2012 more than offset declines in residential and commercial use. EIA projects consumption of natural gas for power generation in 2012 will exceed the previous year's level by 21.3 percent. Consumption of natural gas for power generation was particularly high in 2012 because of an unusually hot summer combined with relatively low gas prices. While consumption of gas for power generation is expected to decline 10.4 percent in 2013 to 22.6 Bcf/d, natural gas for power generation remains high by historical standards and reflects a structural shift toward using more natural gas for power generation.

Projected consumption in 2013 declines slightly from 2012, as increases in residential and commercial consumption offset the declines in electric power use. The National Oceanic and Atmospheric Administration projects temperatures that are near normal this winter, but much colder than last year's mild winter. The weather forecasts imply large increases in use of natural gas for heating.

**U.S. Natural Gas Production and Imports.** This month's STEO revises upward the forecast for marketed production for 2012 by 0.4 Bcf/d to 69.2 Bcf/d. While the revision is relatively small, the cause of the revision is significant. EIA's production survey indicated a 9 percent increase in production between August and September 2012. Part of this increase is a recovery from Hurricane Isaac-related declines in August, but the increase also reverses several months of declines that had taken place earlier in 2012. At 69.4 Bcf/d, marketed production in September was slightly higher than January 2012 and the highest since February 1973 despite the decline in the natural gas rig count this year. According to Baker Hughes, the natural gas rig count was 417 as of December 7, 2012, compared with 811 at the start of 2012.

EIA forecasts that total marketed production will average 69.6 Bcf/d in 2013, slightly up from 2012. Even with the projected increases in the second half of 2012, production growth has slowed from its strong upward trajectory seen in 2009–11. EIA expects that growth in associated gas from crude oil production, as well as continued drilling in liquids-rich areas, will continue to offset the decline in drilling activity.

**U.S. Natural Gas Inventories.** While inventories ended the injection season at a record high, it was due mainly to a high level of gas going into the injection season, rather than strong injection levels. The increase of 1,446 Bcf in working gas inventory during the 2012 injection season (from the beginning of April through the end of October) is small by historical standards. Last year's inventory build from April through October, for comparison, was 2,224 Bcf.

**Crude Oil Prices.** EIA projects the spot price of Brent crude oil will average \$112 per barrel in 2012 and \$104 per barrel in 2013, both mostly unchanged from last month's STEO. EIA expects the WTI price to average \$89 per barrel in the fourth quarter of 2012, \$1 per barrel lower than in last month's STEO, and to average \$88 per barrel in 2013. EIA projects the WTI crude oil spot price discount to the Brent crude oil spot price will average \$21 per barrel in the fourth quarter of 2012 before falling to \$11 per barrel by the end of 2013.

Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2012-13

	Dth/Day					Total	% System Supply
	November	December	January	February	March		
<b>Duke Energy Ohio</b>							
Previously Hedged							
Col Gulf Mainline							
Col Gulf Mainline							
Col Gulf Mainline							
Gulf South							
Tex Gas Zone 1							
<b>Total System Supply</b>							
<b>Duke Energy Kentucky</b>							
Previously Hedged							
Col Gulf Mainline							
Col Gulf Mainline							
Col Gulf Mainline							
<b>Total System Supply</b>							
<b>Duke Energy--Total</b>							
Previously Hedged							
<b>Total</b>							



Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 January 17, 2013

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Feb 13–Apr 13)	↓	Long	NOAA predicting above average temperatures for February 2013–April 2013 for south central and southwestern portions of CONUS. New England area also predicted to have Above normal temperatures.	12
Mid Term Forecast (30-60 days)	↔	Long	February is predicted to be 1.7% warmer than normal based on 10 year normals and March weather is predicted to be 3.6% colder than normal.	13
Short Term Forecast (6-10 days)	↑	Short	Strong Below and Much Below in the Midwest and Northeast early in the period, with above temperatures in the west. Normal temperatures in the Midwest and East later in the period.	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage withdraws for the week ending January 11th were 148 BCF. Storage levels are at 3.168 TCF which is 4.4% lower than last year and 11.1% higher than the 5 year average.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13 Summer 2013: [REDACTED]	↑	Long	GAS PRICE SCORECARD: Gas Price Outlook for December 2012–March 2013 "Bullish". Bullish fundamentals include Canadian Production/Exports, US Storage levels, Industrial and Residential/Commercial Demand.	16-17
Gas Daily–Gas Price Predictions	↑ ↓	Long	Paribas cuts 2013 price 50 cents to \$3.50/MMBtu, citing infrequent outbreaks of cold weather. December is the 10th warmest and only 40% of winter demand left. Paribas expects \$3 gas either this quarter or next. Goldman Sachs reduced 2013 price to \$3.75 from \$4.25 citing mild winter weather and high levels of gas in storage. Raymond James reduced their 2013 estimate by 50 cent to \$3.25/Mcf and 2014 price estimate to \$3.75/Mcf citing mild December temperatures and forecasted normal to above normal weather.	18-19
Gas Daily–LNG Exports	↓	Long	Manufactures and public gas utilities have formed a lobby against unlimited exports of LNG. Citing \$90 billion in projects the manufacturing sector is planning, much of it driven by the low cost of gas as a feedstock, but uncertainty about LNG exports could hinder this investment.	20
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.548 Summer 2013: \$3.729	↑	Long	The projected Henry Hub natural gas spot price averages \$3.743/MMBtu for 2013 and \$3.903/MMBtu for 2014.	21
<b>Technical Analysis</b>				
Summer 2013 Strip Chart	↑	Short	Closed at \$3.59	22
Winter 2013-14 Strip Chart	↑	Short	Closed at \$3.99	23
Summer 2014 Strip Chart	↑	Short	Closed at \$3.99	24
Winter 2014-15 Strip Chart	↑	Short	Closed at \$4.32	25
Summer 2015 Strip Chart	↑	Short	Closed at \$4.15	26
Winter 2015-16 Strip Chart	↑	Short	Closed at \$4.49	27
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to be 69.7 Bcf/d in 2013 and 69.4 Bcf/d in 2014. Total consumption is unchanged from 2012 but the makeup of consumption changes. Increased usage for residential and commercial space heating being offset by declines in power generation.	28-29
Supply	↔	Long	Total marketed production will increase from 69.2 Bcf/d in 2012 to 69.8 Bcf/d in 2013, and drop slightly to 69.5 Bcf/d in 2014. Production has been rising despite large decreases in the natural gas rig count over the past year—the rig count was 431 as of December 28, 2012, compared with 811 at the start of 2012.	28-29
Oil Market	↔	Long	EIA expects Brent crude to average of \$112 per barrel for 2012, \$105 per barrel in 2013, and \$99 per barrel in 2014.	28-29

Meeting Minutes: 426 Annex Conference Room - 1:00 pm  
 Attendees: Jim Mehring, Jeff Kern, Mike Brumback, Joachim Fischesser, Terry Bates, Mitch Martin, Steve Niederbaumer  
 Discussed market fundamentals including weather, storage inventory levels, PIRA and EIA price forecasts, independent analysts projections of supply and demand and the impact on gas prices, economic influences on supply and demand and technical analysis on Summer and Winter Strip prices. In addition, reviewed DEO and DEK's hedging program to date. Significant discussion took place about around the recent run-up of NYMEX prices which has been tied to colder weather and colder weather forecasts for major consumption areas in the CONUS. Based on these factors, a decision was made not to hedge additional volumes.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 01/16/13

	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
<b>Load Forecast</b>										
City Gate Load Forecast (Mcf)										
TCO FSS Injections (Mcf)										
Total Requirements (Mcf)										
TCO FSS Withdrawals (Mcf)										
Other "Withdrawals" (Mcf)										
Total Withdrawals (Mcf)										
<b>Amount Hedged (dth/day)</b>										
Fixed Price										
Fixed Price										
Fixed Price										
Fixed Price										
Cost Avg.										
Total Hedged (dth/day)										
Total Hedged (dth)										
<b>Types of Hedging Products (1)</b>										
Fixed Price										
Price Caps										
No-Cost Collars										
<b>Embedded Hedged Cost</b>										
Winter										
Summer										
Estimated System Supply (Gross)										
Hedged % of System Supply										
Seasonal % of System Supply										
<b>Amt Hedged with Storage @ City Gate</b>										
Hedged (City Gate) (Dth)										
Storage Withdrawal (Dth)										
Market (Dth)										
Total (incl. Injections) (Dth)										
% Hedged & Storage										
Seasonal %										

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 01/16/13

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/daw)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 01/16/13

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2015 - October 2016  
 As of 01/16/13

	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16
<b>Lead Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
TBD												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

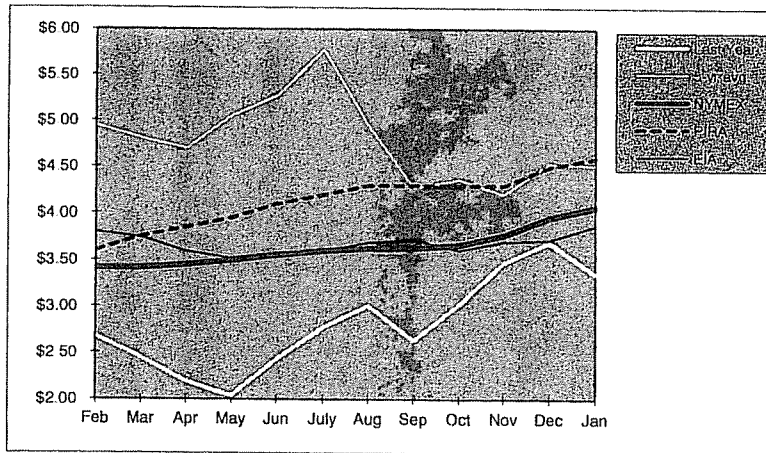
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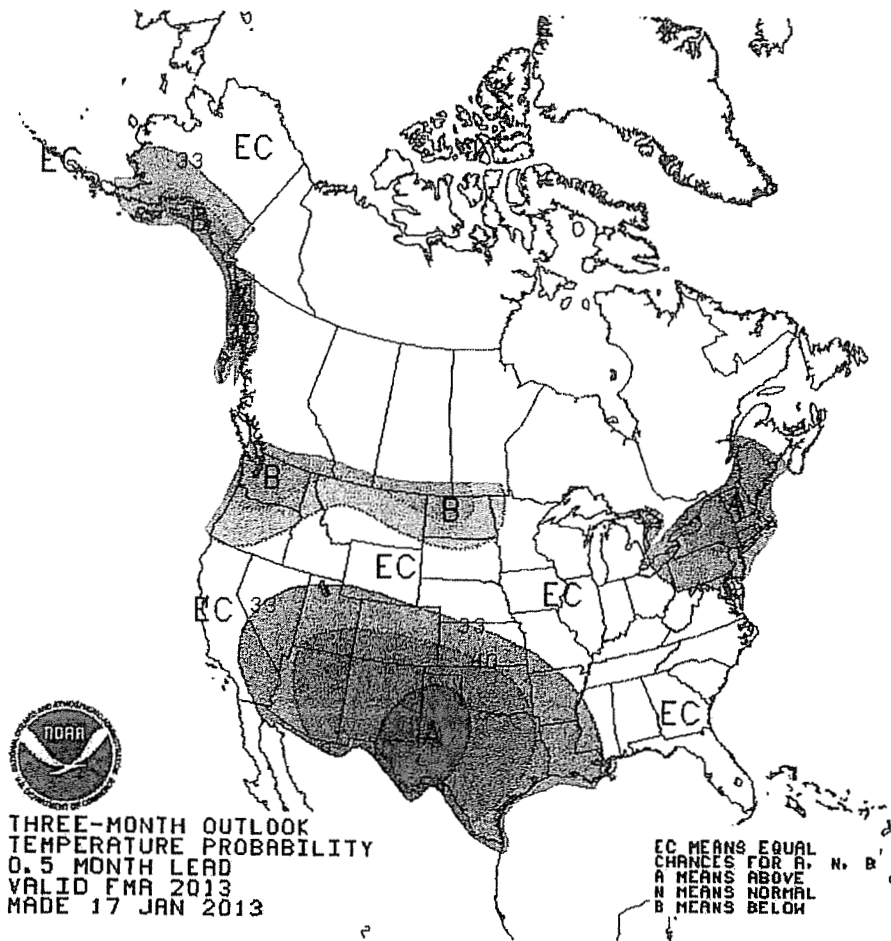
**Duke Energy Kentucky  
 Hedging Program  
 Current Position**

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (3/31/12)	
		Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2013					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2013					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					
Nov-15					
Dec-15					
Jan-16					
Feb-16					
Mar-16					
Winter 15/16					
Target Levels By October 31, 2013					

**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (08/09-12/13)	Last Year (2012-2013)		PIRA 21-Dec-12	EIA 8-Jan-13	NYMEX 17-Jan-13		
Feb	\$4.95	\$2.68			\$3.800	\$3.412		
Mar	\$4.81	\$2.45			\$3.740	\$3.415		
Apr	\$4.70	\$2.19			\$3.590	\$3.447		
May	\$5.06	\$2.04			\$3.520	\$3.498		
Jun	\$5.27	\$2.43			\$3.580	\$3.551		
July	\$5.78	\$2.77			\$3.600	\$3.599		
Aug	\$4.95	\$3.01			\$3.690	\$3.625		
Sep	\$4.28	\$2.63			\$3.720	\$3.631		
Oct	\$4.36	\$3.02			\$3.610	\$3.664		
Nov	\$4.21	\$3.47			\$3.700	\$3.767		
Dec	\$4.54	\$3.70			\$3.720	\$3.959		
Jan	\$4.52	\$3.35			\$3.870	\$4.069		
12 Month Avg	<b>\$4.79</b>	<b>\$2.81</b>			<b>\$3.678</b>	<b>\$3.636</b>		
Summer Average					\$3.616	\$3.574		
Winter Average					\$3.766	\$3.724		

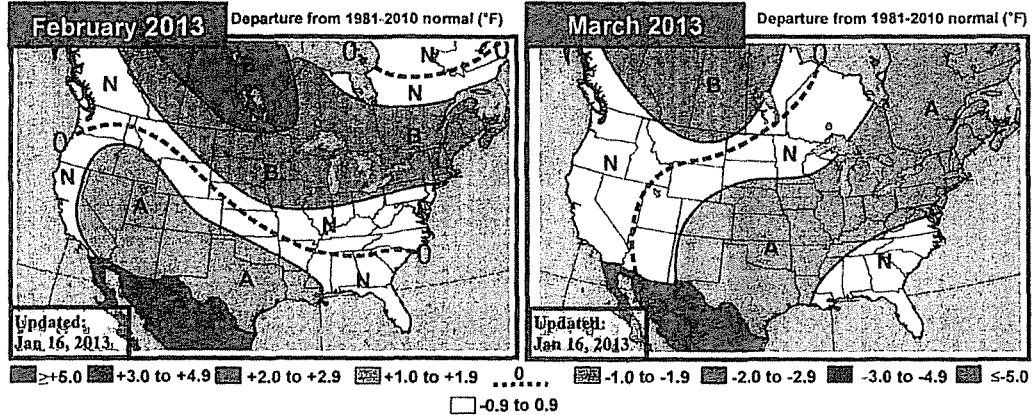






# EarthSat 30-60 Day Outlook

Wednesday, January 16, 2013 Meteorologists: JS/SS/BH



**Previous** Significant cold changes in the Midwest and East  
 Warmer in the West

Significant changes were made to the February forecast, with colder conditions now expected for much of the Midwest and East, while the West warms. The changes were spurred on by a transformation in the pattern taking place in the latter part of January, with weaker Pacific influences giving way to stronger blocking influences in the upper latitudes. There is at least some indication that colder influences will carry on into February as further supported by the MJO possibly heading into a colder phase 8, and the long range CFS and ECMWF monthly models showing good support for widespread cold across the eastern half. The risk may yet be to the cold side at least early in the month given the magnitude of the blocking shown by some of the models at the end of this month.

Feb GW HDD** Forecasts	*10Y Normal updated to '03-12
Feb 2013 Fcst: <b>785.0</b>	10Y Normal* 798.7
	30Y Normal 774.1
	Feb-2012 699.1
Change: +32	

**Previous** No changes to forecast  
 Warm signals favored with eastern/central US

The forecast is unchanged this week, with warmer than normal temperatures extending from Texas across the Midwest and into the northeastern reaches of the Continent. Only western Canada sees below normal temperatures in this update. Warm signals, including a -PDO, as well as warm projections by the ECMWF and CFSv2 models support this warm outlook. The CFSv2 solution would likely lead to the lowest GW HDD total of the two model runs. Colder changes to the northern and eastern US in February does seem to lessen confidence as persistence may prove to be less of a factor.

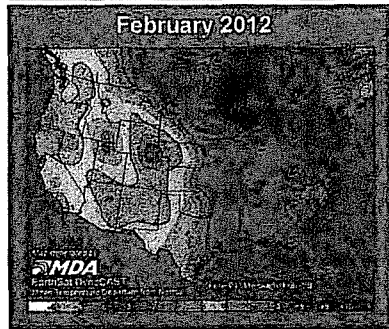
Mar GW HDD** Forecasts	*10Y Normal updated to '03-12
Mar 2013 Fcst: <b>605.0</b>	10Y Normal* 584.2
	30Y Normal 626.0
	Mar-2012 387.0
No Change	

\*\*National Gas-Weighted HDDs

**Jan so far**

Final 60 Day Outlook    Final 30 Day Outlook    Current 11-15 Day forecast (11-15)

The current verification/11-15 Day forecast map has trended colder than last week as a strong cold air mass is expected to affect much of the eastern half of the US next week. As a result, some of the warm anomalies are not as strong in the East, but the forecast is still warmer than our Final 30 Day outlook especially in the Southeast. Meanwhile, conditions are still colder than our 30/60 Day forecasts in the West with strong cold anomalies seen especially in the Interior West. The shape of the pattern is close to the 30 Day outlook, but the pattern remains more amplified.



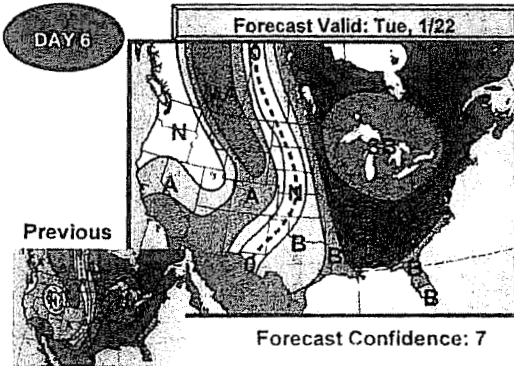
# EarthSat 6-10 Day Forecast—Detailed

Thursday, January 17, 2013

Meteorologist: BH/AC

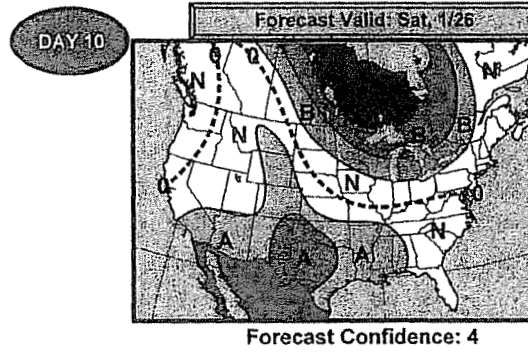
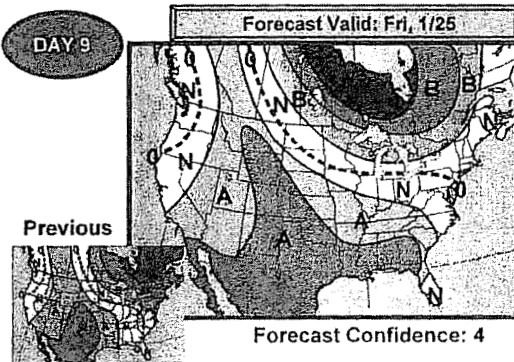
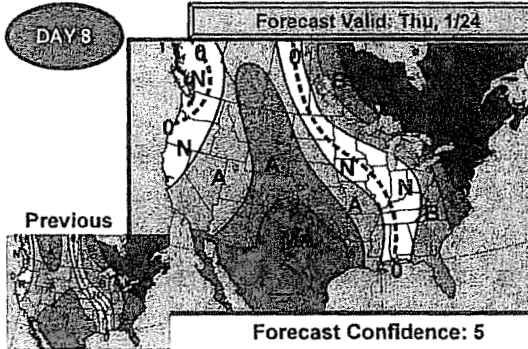
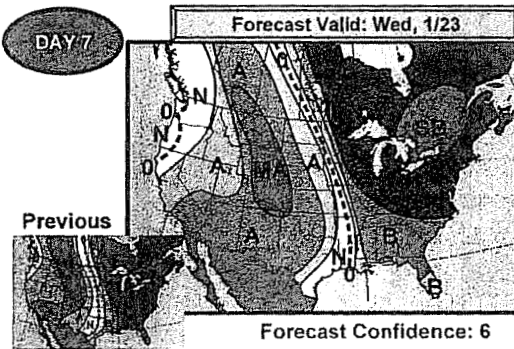


## Forecast Temperature Deviations



**\*Strong Belows In Midwest, Northeast Early\***  
**\*Warming For Midwest, East For 2nd Half\***

The strongest cold air will exist across the Midwest and Northeast at the onset of the period. The strongest anomalies are depicted in the European operational model, which shows the possibility of more widespread strong below normals. However, a rapid warm up occurs in the Midwest for the mid-period and into the East during the late period on many of the models. Some caution was taken with this warm up as the potential storm system could take a more southerly track and keep much of the warmer air to the south. Still, some warmer adjustments could be made in the coming days. Readings stay warm in the West through the early and middle periods, except for the West Coast where colder trends are seen late.



A +3F to +4F  
  A +5F to +7F  
  MA +8F to +14F  
  SA +15 or Higher  
 B -3F to -4F  
  B -5F to -7F  
  MB -8F to -14F  
  SB -15 or Lower

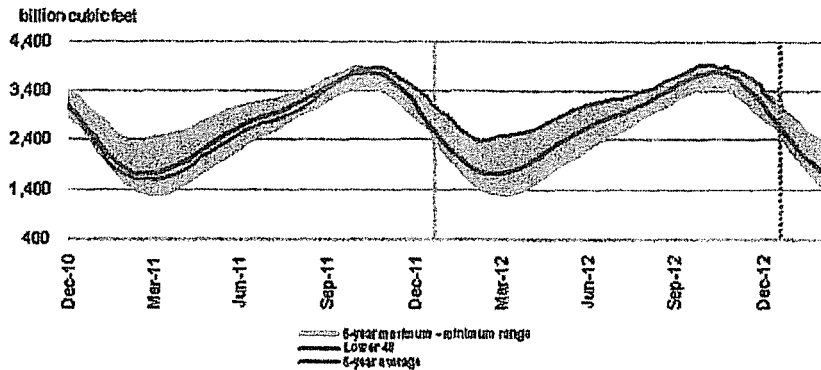
Summary text CSV JSN Working gas in underground storage, lower 48 states

Region	Stocks billion cubic feet (Bcf)			Historical Comparisons			
	01/11/13	01/04/13	change	Year ago (01/11/12)		5-Year average (2008-2012)	
				(Bcf)	% change	(Bcf)	% change
East	1,600	1,686	-86	1,710	-6.4	1,508	6.6
West	455	478	-23	436	4.4	387	17.3
Producing	1,113	1,152	-39	1,168	-4.7	957	16.3
Salt	275	283	-8	275	0.0	154	78.6
Nonsalt	837	870	-33	893	-6.3	802	4.0
<b>Total</b>	<b>3,168</b>	<b>3,316</b>	<b>-148</b>	<b>3,315</b>	<b>-4.4</b>	<b>2,852</b>	<b>11.2</b>

Summary

Working gas in storage was 3,168 Bcf as of Friday, January 11, 2013, according to EIA estimates. This represents a net increase of a net decline of 148 Bcf from the previous week. Stocks were 147 Bcf less than last year at this time and 31 Bcf above the 5-year average of 2,852 Bcf. In the East Region, stocks were 92 Bcf above the 5-year average following withdrawals of 86 Bcf. Stocks in the Producing Region were 156 Bcf above the 5-year average of 957 Bcf after a net withdrawal of 39 Bcf. Stocks in the West Region were 68 Bcf above the 5-year average after a net drawdown of 23 Bcf. 3,168 Bcf, total working gas is within the 5-year historical range.

Working gas in underground storage compared with the 5-year maximum and minimum



Source: U.S. Energy Information Administration

Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2008 through 2012.

Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**December 21, 2012 Release**

Jan-10		Jan-11		Jan-12		Jan-13	
Feb-10		Feb-11		Feb-12		Feb-13	
Mar-10		Mar-11		Mar-12		Mar-13	
Apr-10		Apr-11		Apr-12		Apr-13	
May-10		May-11		May-12		May-13	
Jun-10		Jun-11		Jun-12		Jun-13	
Jul-10		Jul-11		Jul-12		Jul-13	
Aug-10		Aug-11		Aug-12		Aug-13	
Sep-10		Sep-11		Sep-12		Sep-13	
Oct-10		Oct-11		Oct-12		Oct-13	
Nov-10		Nov-11		Nov-12		Nov-13	
Dec-10		Dec-11		Dec-12		Dec-13	
Average 2010	\$	Average 2011	\$	Average 2012	\$	Average 2013	\$
Summer 2010	\$	Summer 2011	\$	Summer 2012	\$	Summer 2013	\$
Winter 2010-2011	\$	Winter 2011-2012	\$	Winter 2012-2013	\$		

**North American Gas Forecast Monthly**

December 21, 2012

**NATURAL GAS**

**U.S. GAS PRICE SCORECARD: DECEMBER 2012 – MARCH 2013**

Bearish Neutral Bullish

Supply	Outlook	Commentary
<b>Lower 48 Gas Production</b>		Although the NYMEX 12-month strip rallied from a mid-April -\$2.50 low to -\$4 a month ago, mild weather concerns have renewed bearish sentiment in the gas patch. Recent NYMEX futures under the \$3.50 mark should weigh on gas drilling activity further. Also, ongoing NGL price weakness and struggling WTI crude oil prices present downside risks to PIRA's slightly upwardly trending 2013 production forecast. Canadian net exports will bear the burden of both weaker gas prices and a more moderate GWHDD outlook. Exports are forecast to average under 4.5 BCF/D in 1Q from an upwardly revised western Canada end-March storage forecast. But end-March storage still features a large Y/Y deficit.
<b>Canadian Production/Exports</b>		
<b>U.S. Storage Levels</b>		Despite expected record-breaking low December GWHDDs, a modest U.S. Y/Y storage deficit is forecast by end-month. That deficit is projected to widen to -0.4 TCF by end-March despite a 5% shortfall of GWHDDs in 1Q relative to the 10-year normal. Post-1Q reductions in storage deficits will still require a large-scale EG reversal of coal-to-gas switching.
Demand	Outlook	Commentary
<b>Electric Generation (EG)</b>		Mild weather and reduced coal-to-gas substitution are forecast to send December gas EG to its first Y/Y decline this year. In 1Q13, stronger Y/Y weather-driven overall EG, new gas-fired EG capacity and coal plant retirements mitigate the impact of higher Y/Y gas prices on coal-to-gas substitution.
<b>Industrial Sector</b>		Despite taking a hit from this month's subnormal heating loads, the sector's total estimated demand is higher Y/Y by 2.0-2.5%, or 3.5-4% weather adjusted. With help from colder weather and strength in key industries, total demand in 1Q13 is forecast to increase 0.8-1.0 BCF/D, or +5%.
<b>Residential/Commercial (R/C)</b>		December GWHDDs are on pace to be upwards of 15% below the 10-year normal and 4-5% below the low bar set last year, increasing the prospect of below-normal GWHDD's carrying forward into 1Q13. As such, PIRA has adjusted its Reference Case for the remainder of the 2012-2013 heating season to reflect GWHDDs that are 5% below the 10-year normal.
Gas Prices	Outlook	Commentary
<b>November 2012 – March 2013</b>		Within a month, the NYMEX nearby contract has cratered by -20% due to mild weather and forecasts palling for more of the same. The deferral of an offset from colder-than-normal temperatures is riddling memories of last year's "winter that wasn't" along with upwardly revised storage forecasts. Yet, the impact on gas fundamentals of lower 1Q13 prices than expected a month ago should circumvent any storage containment issues, even if GWHDDs remain sub-normal.
NYMEX Prices and Speculation		
<p>The NYMEX/ICE non-commercial futures net long position topped 71,000 lots in late November. Since then, short selling, coupled with a simultaneous reduction in long positions, has pared the reported speculative net long position toward 6,000 lots. Yet, this position still stands in stark contrast to a year ago when an overwhelming bearish bias yielded a net short position of -145,000 lots. The relatively neutral current outlook is rooted to expectations of slow U.S. gas production growth, which would mix bullishly with help from Mother Nature in the form of a colder Y/Y 1Q. But the record warmth in December at this point has stoked worries that mild temperatures will extend into 2013, which would prompt additional selling depending on the extent to which GWHDDs fall short of normal benchmarks.</p>		

## **Gas Price Predictions**

### **BNP Paribas Cuts 2013 Gas Price to \$3.50/MMBtu on Mild Winter**

BNP Paribas has cut their 2013 natural gas price forecast by 50 cents to \$3.50/MMBtu. "Infrequent outbreaks of cold weather in the eastern half of the US so far this winter have hampered the heating demand recovery that we were expecting. Indeed, we expect price rallies to be short-lived until more constructive fundamentals begin to emerge. More to the point, we see prices retesting \$3, either this quarter or next, because of the persistence of elevated inventories." December was the 10<sup>th</sup> warmest in the US on record and only 40% of winter demand is still left in the season.

### **Gas Prices to Rebound to mid-\$5 as Production Falls—Jan. 16, 2013**

Development of shale resources has put more gas in play and depressed prices in the short term, however according to Morningstar, prices are likely to rebound to the \$5.40/Mcf level over the next few years unless there is another technological revolution in drilling. "Outside of a radically improved production process or the emergence of a new, low-cost source of supply, we don't foresee any meaningful structure change in the cost to produce natural gas going forward." Morningstar looked at four factors impacting gas prices: dry gas rig productivity, the impact of associated gas and liquids-rich drilling, drilling efficiency gains, and the relationship between marginal cost and price. Morningstar noted that while in the short run, supply and demand imbalances can lead to a divergence of price and cost, over longer periods of time price and marginal cost of production are closely linked. Over the past 10 years, the marginal cost of US gas production has ranged between \$5 and \$7/mcf.

### **Analysts Trim Price Forecasts on Warm Winter—Jan. 8, 2013**

Analysts at 2 investment banks cut their 2013 gas price forecasts.

Goldman Sachs reduced their 2013 estimate to \$3.75/MMBtu from \$4.25/MMBtu, citing mild winter weather and high levels of gas in storage. In addition, Goldman Sachs indicated that higher levels of coal-to-gas switching would be needed to avoid approaching storage capacity—meaning that "natural gas will need to price lower." "We now expect 2.4 Bcf/d of coal-to-gas switching will be needed on average in 2013 to reach comfortable inventory levels of 3.85 Tcf by the end of the summer, up from 2.1

Bcf/d previously." Goldman Sachs predicted the average price in 2014 will be \$4.25/MMBtu.

Raymond James cut its' price estimate, citing mild December temperatures and forecasts calling for more normal to above-normal temperatures across key eastern US market areas. While gas prices could still rally on a January-February cold snap, it is cutting the 1<sup>st</sup> and 2<sup>nd</sup> quarter 2013 estimates by 75 cents to \$3.50/Mcf and \$3/Mcf respectively. Raymond James 2013 forecast was reduced by 50 cents to \$3.25/Mcf, 2014 forecast is \$3.75/Mcf.

## LNG Exports

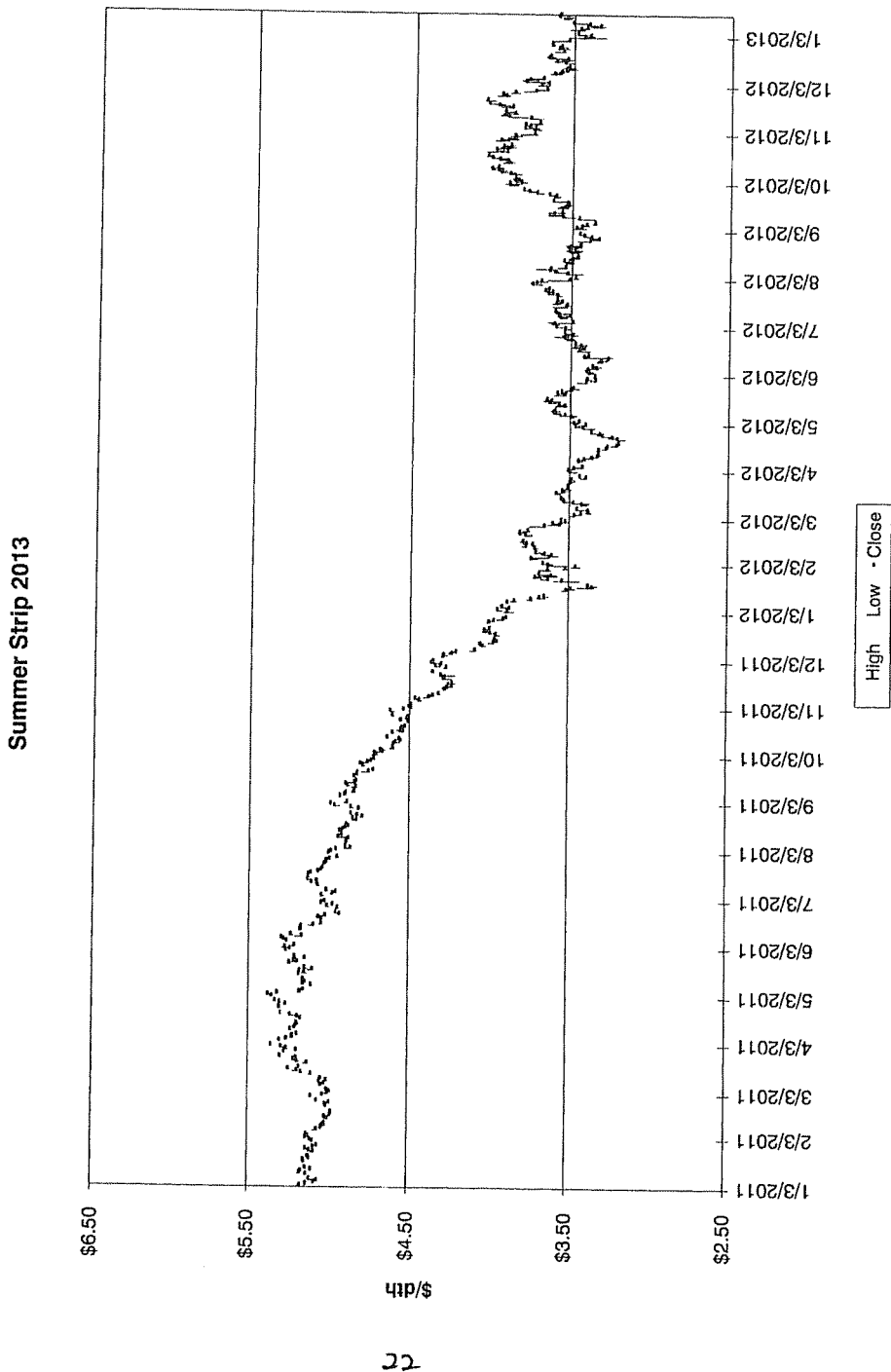
### **New Coalition Opposes Unfettered LNG Exports—Jan. 11, 2013**

Major manufactures and public gas utilities have formed a group to lobby against unlimited exports of LNG, which would hurt consumers and send jobs abroad. A survey found that 81% of voters think that LNG exports should be restricted until there is a better understanding of how exports will impact domestic gas prices. The manufacturing sector is planning \$90 billion of projects in the US—much of it driven by the low cost of gas as a feedstock—but uncertainty about LNG exports could hinder this investment. Supporters of LNG exports counter stating "Short-sighted efforts by a few industrial users to restrict exports in an apparent attempt to control prices would deprive American families of the wider benefits of lower costs and increased job creation."

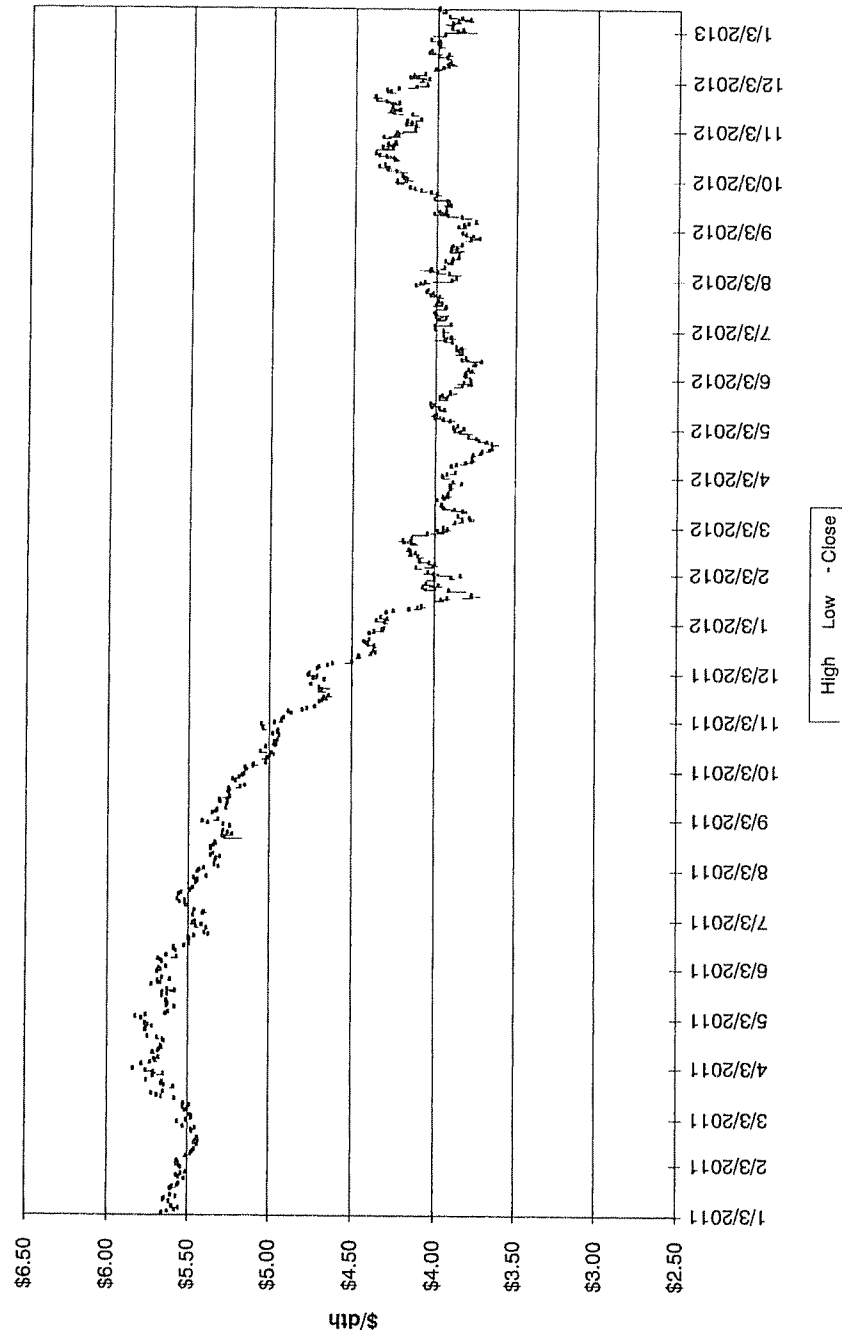


**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**January 8, 2013 Release**

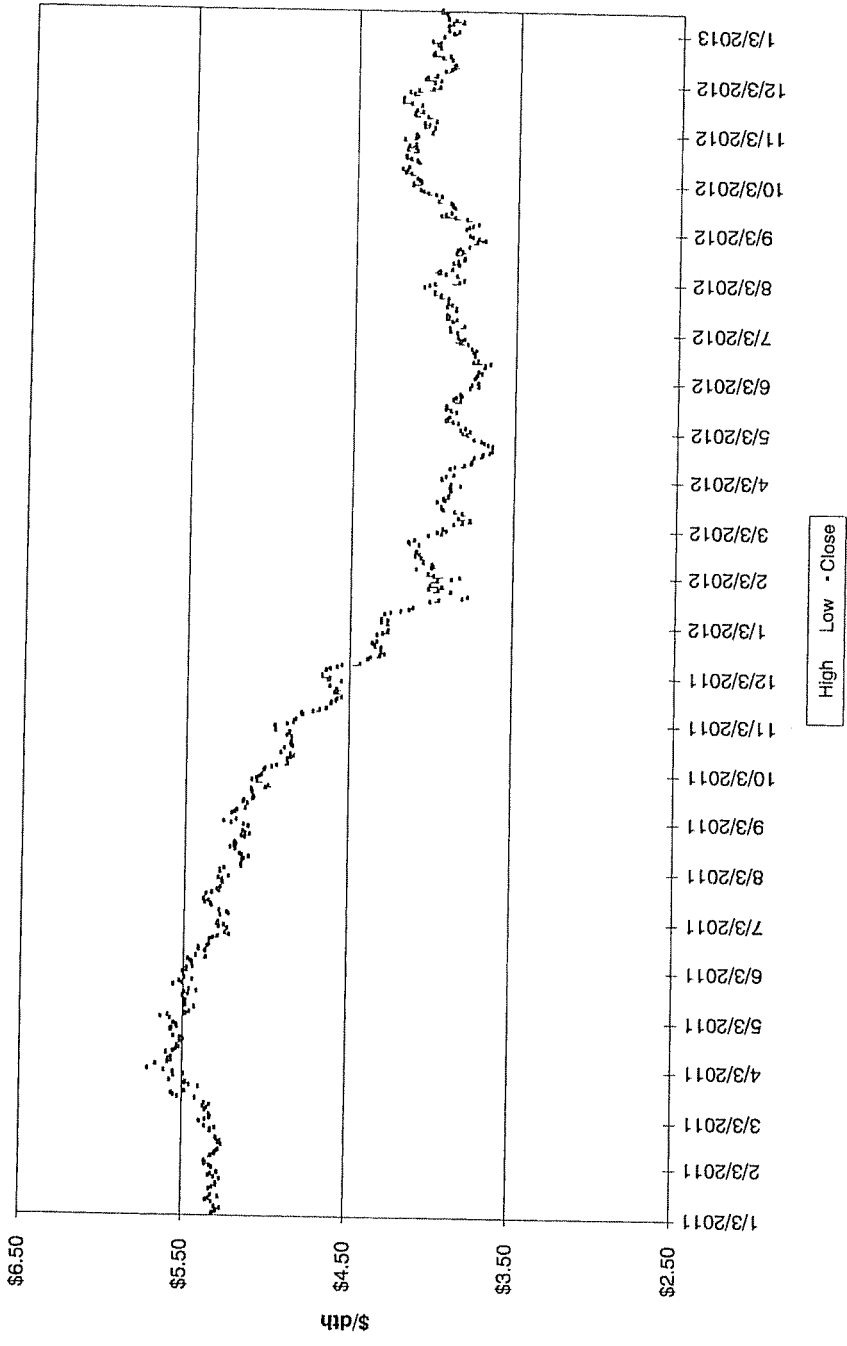
Jan-11	4.49	Jan-12	2.67	Jan-13	3.56	Jan-14	4.11
Feb-11	4.09	Feb-12	2.50	Feb-13	3.69	Feb-14	4.04
Mar-11	3.97	Mar-12	2.18	Mar-13	3.61	Mar-14	3.84
Apr-11	4.25	Apr-12	1.95	Apr-13	3.60	Apr-14	3.77
May-11	4.31	May-12	2.43	May-13	3.61	May-14	3.79
Jun-11	4.55	Jun-12	2.46	Jun-13	3.65	Jun-14	3.83
Jul-11	4.42	Jul-12	2.95	Jul-13	3.76	Jul-14	3.78
Aug-11	4.05	Aug-12	2.84	Aug-13	3.81	Aug-14	3.83
Sep-11	3.90	Sep-12	2.85	Sep-13	3.81	Sep-14	3.84
Oct-11	3.56	Oct-12	3.32	Oct-13	3.86	Oct-14	3.92
Nov-11	3.24	Nov-12	3.54	Nov-13	3.92	Nov-14	3.98
Dec-11	3.17	Dec-12	3.34	Dec-13	4.04	Dec-14	4.11
Average 2011	\$ 4.000	Average 2012	\$ 2.753	Average 2013	\$ 3.743	Average 2014	\$ 3.903
Summer 2011	\$ 4.149	Summer 2012	\$ 2.686	Summer 2013	\$ 3.729	Summer 2014	\$ 3.823
Winter 2011-2012	\$ 2.752	Winter 2012-2013	\$ 3.548	Winter 2013-2014	\$ 3.990		



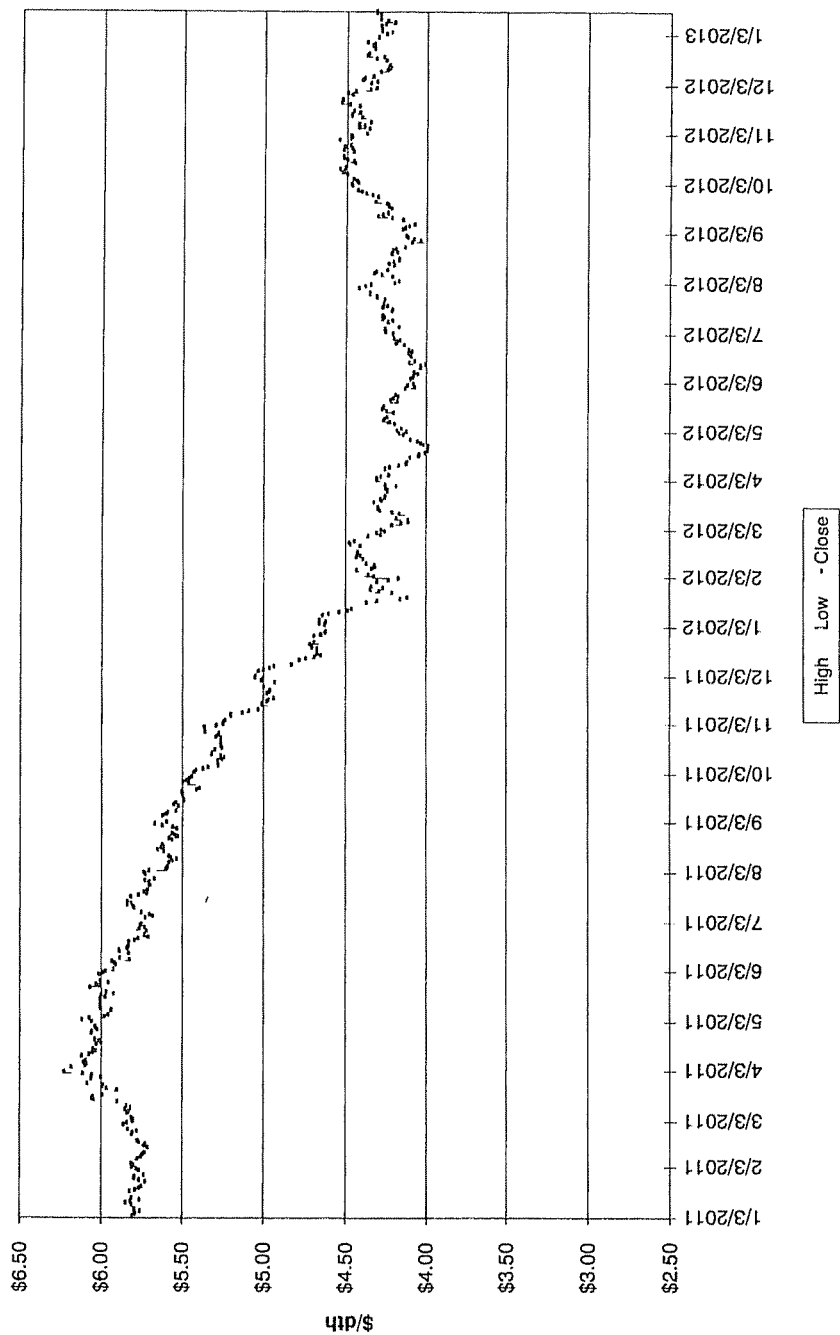
Winter Strip Nov13 - Mar14



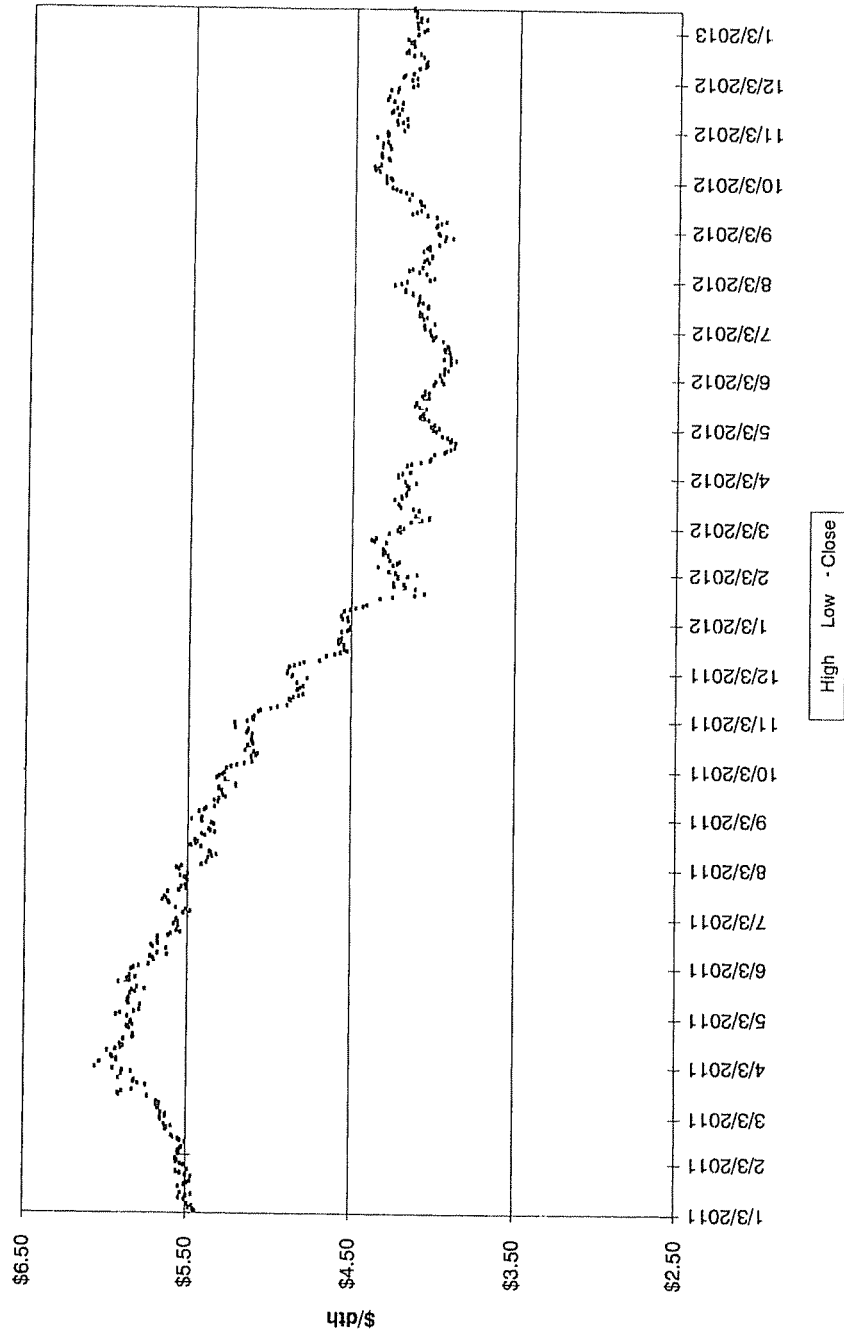
Summer Strip 2014



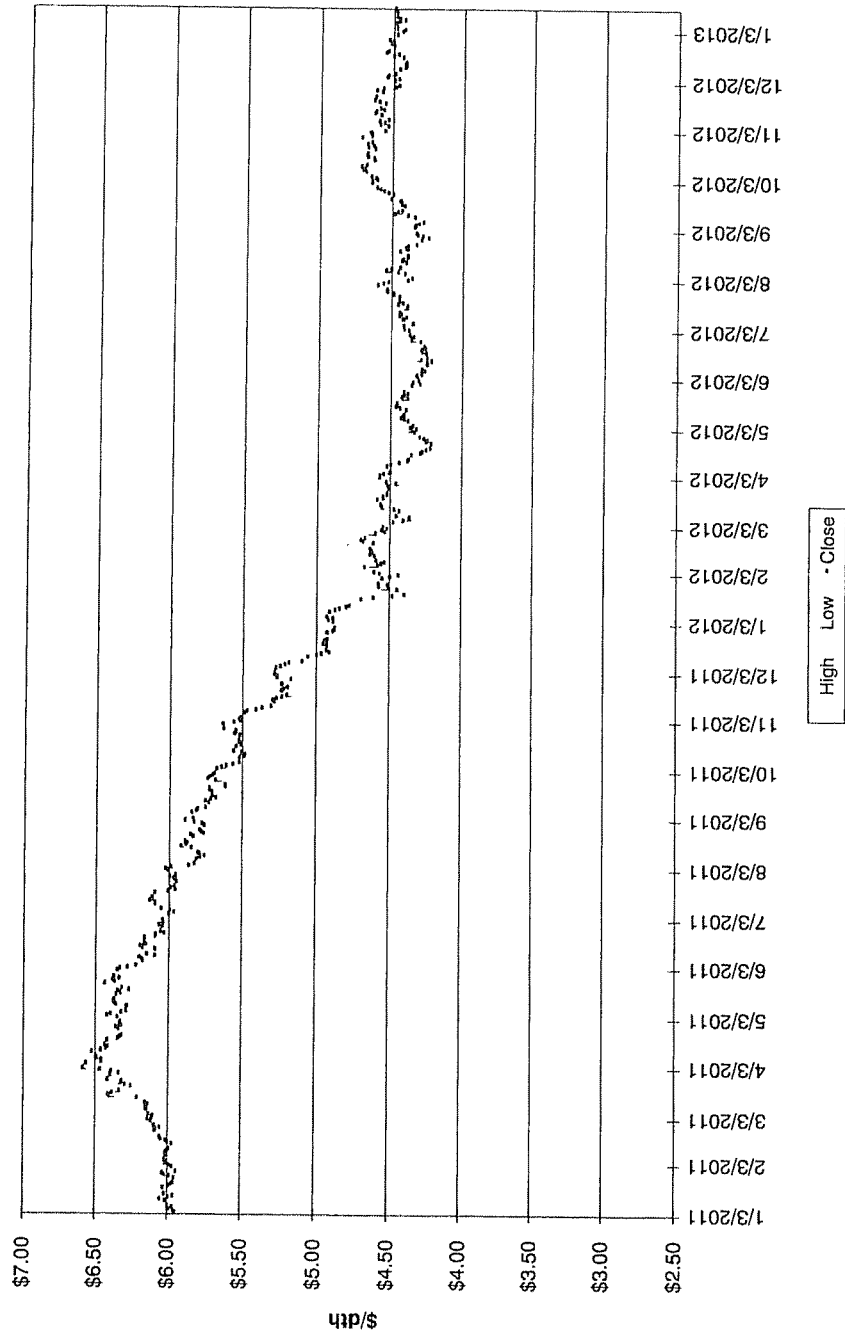
Winter Strip Nov'14 - Mar'15



Summer Strip 2015



Winter Strip Nov15 - Mar16





*Independent Statistics & Analysis*

## U.S. Energy Information Administration

### Short-Term Energy Outlook (STEO)

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 69.7 billion cubic feet per day (Bcf/d) in 2013 and 69.4 Bcf/d in 2014. While total consumption is relatively unchanged from 2012, the makeup of consumption changes. Because of a warm winter last year, 2012 residential and commercial consumption was very low, and the hot summer (as well as relatively low natural gas prices) led to record-high use of natural gas for power generation. Forecasts for closer-to-normal temperatures in 2013 and 2014 will lead to increases in natural gas used for residential and commercial space heating. These increases are offset by declines in natural gas for power generation, as summer temperatures are expected to be closer to normal, meaning cooler than they were in 2012.

Despite projected declines in electric power consumption from 2012 levels, consumption of natural gas for electric power generation remains high by historical standards and reflects a structural shift toward using more natural gas for power generation. While the shift toward more natural gas for power generation has been most evident in the Southeast, other major consuming areas have also increased natural gas consumption. Increased pipeline flows in New England during the summer months, for example, represent an increasing reliance on natural gas for power generation.

**U.S. Natural Gas Production and Imports.** This month's STEO expects continued growth in natural gas production, driven largely by onshore production in shale areas. In particular, production in the Marcellus Shale areas of Pennsylvania and West Virginia is expected to continue rising, as recently drilled wells become operational. Despite relatively low natural gas prices, Pennsylvania drilling continues at a strong pace as producers target combination oil-and gas wells. Production has been rising despite large decreases in the natural gas rig count over the past year. According to Baker Hughes, the natural gas rig count was 431 as of December 28, 2012, compared with 811 at the start of 2012. The oil rig count has also declined in recent months (oil rigs often produce associated natural gas), although declines have been much smaller than declines in the natural gas rig count. The declines in rig counts, coupled with continued production growth, suggest increases in rig efficiency, which will maintain production levels going forward.

This month's STEO expects that total marketed production will increase from 69.2 Bcf/d in 2012 to 69.8 Bcf/d in 2013, and drop slightly to 69.5 Bcf/d in 2014. EIA expects growth in Lower 48 onshore production will continue through 2014, and will be offset by Gulf of Mexico declines next year.



**U.S. Natural Gas Inventories.** Inventories of working natural gas in storage remain at high levels, after setting an all-time weekly record in November 2012. As of December 28, working gas stocks totaled 3,517 Bcf, which is 23 Bcf greater than the same time in 2011 and 389 Bcf greater than the previous five-year (2007-11) average, according to EIA's *Weekly Natural Gas Storage Report*. So far this winter, withdrawals have been limited, mainly because of warmer-than-normal temperatures in December. Five-year average weekly withdrawals in December are generally well above 100 billion cubic feet, but that occurred only during the last week of the month. For the week ending December 7, 2012, working gas inventories posted a net *injection* of 2 Bcf. Only two other net injections have been reported in the month of December: one in 2005 and the other time in 1998.

**Crude Oil Prices.** EIA expects that the Brent crude oil spot price, which averaged \$112 per barrel in 2012, will fall to an average of \$105 per barrel in 2013 and \$99 per barrel in 2014. The projected discount of West Texas Intermediate (WTI) crude oil to Brent, which averaged \$18 per barrel in 2012, falls to an average of \$16 per barrel in 2013 and \$8 per barrel in 2014, as planned new pipeline capacity lowers the cost of moving Mid-continent crude oil to the Gulf Coast refining centers

Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2012-13

	Dth/Day					Total	% System Supply
	November	December	January	February	March		
<b>Duke Energy Ohio</b>							
Previously Hedged							
[Redacted]							
Col Gulf Mainline							
Col Gulf Mainline							
Col Gulf Mainline							
Gulf South							
Tex Gas Zone 1							
<b>Total</b>							
<b>System Supply</b>							
<b>Duke Energy Kentucky</b>							
Previously Hedged							
[Redacted]							
Col Gulf Mainline							
Col Gulf Mainline							
Col Gulf Mainline							
<b>Total</b>							
<b>System Supply</b>							
<b>Duke Energy--Total</b>							
Previously Hedged							
<b>Total</b>							



**Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 February 21, 2013**

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Mar 13--May 13)	↓	Long	NOAA predicting above average temperatures for March 2013--May 2013 for the majority of CONUS.	12
Mid Term Forecast (30-60 days)	↔	Long	March is predicted to be 3.6% colder than normal based on 10 year normals and April weather is predicted to be 2.8% warmer than normal.	13
Short Term Forecast (6-10 days)	↔	Short	Below temperatures in the West and Central portions of CONUS moving to the East and South later in the period. Normal temperature band in the North during the period.	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage withdraws for the week ending February 15th were 127 Bcf. Storage levels are at 2,400 TCF which is 9.2% lower than last year and 17.7% higher than the 5 year average. Estimates of March 31 levels: Barclays 2,000 Bcf, Wells Fargo 2,050 Bcf, Societe Generale 1,900 Bcf, Credit Suisse 2,050 Bcf	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13 Summer 2013: [REDACTED]	↑	Long	GAS PRICE SCORECARD: Gas Price Outlook for February 2013--October 2013 "Bullish". Bullish fundamentals include Canadian Production/Exports, US Storage levels, Industrial and Residential/Commercial Demand.	16-17
Gas Daily--Gas Price Predictions	↑ ↓	Long	According to Credit Suisse, gas prices to be stable between \$3 and \$4 in 2013. Marcellus can provide a decade's worth of gas below \$4/MMBtu. BofA sees gas supply slowing and prices strengthening in 2013, average \$3.75 in 2013 and \$4.20/MMBtu in 2014. According to Barclays, price recovery will be modest: \$3.70 for 2013 and \$4.10 in 2014.	18-19
Gas Daily--LNG Exports	↑	Long	LNG export debate has perception lagging reality, due to the abundance of gas price increases will not impact manufacturing sector. Competition, costs will limit LNG export facilities. House and Senate propose bill to allow board LNG exports.	20
<b>Government Agencies</b>				
Energy Information Administration Summer 2013: \$3.524 Winter 2013/14: \$3.822	↑ ↓	Long	The projected Henry Hub natural gas spot price averages \$3.533/MMBtu for 2013 and \$3.839/MMBtu for 2014.	21
<b>Technical Analysis</b>				
Summer 2013 Strip Chart	↔	Short	Closed at \$3.47	22
Winter 2013-14 Strip Chart	↔	Short	Closed at \$3.88	23
Summer 2014 Strip Chart	↔	Short	Closed at \$3.94	24
Winter 2014-15 Strip Chart	↔	Short	Closed at \$4.28	25
Summer 2015 Strip Chart	↔	Short	Closed at \$4.14	26
Winter 2015-16 Strip Chart	↔	Short	Closed at \$4.47	27
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to be 70.3 Bcf/d in 2013 and 70.0 Bcf/d in 2014. Increased usage for residential and commercial space heating being offset by declines in power generation.	28-29
Supply	↔	Long	Total marketed production will increase from 69.2 Bcf/d in 2012 to 70.0 Bcf/d in 2013, and flat in 2014. EIA expects end of season level at about 2,000 Bcf.	28-29
Oil Market	↔	Long	EIA expects Brent crude to average of \$112 per barrel for 2012, \$109 per barrel in 2013, and \$101 per barrel in 2014.	28-29

**Meeting Minutes: 426 Annex Conference Room - 1:00 pm**  
*Attendees: Jim Mehring, Jeff Kern, Mike Brumback, Joachim Fischesser, Mitch Martin, Steve Niederbaumer*

Discussed the current market fundamentals including weather, storage levels (361Bcf above 5-year average), supply and demand and analyst thoughts on the current gas market conditions and LNG's impact on prices. In addition, discussed DEO and DEK's hedging programs, the amount of gas currently hedged within those programs and that the targets will be reset April 1st. Discussed the narrow price bands on the graphs and the expectation of that continued narrow band. Based on the fundamentals a decision was made not to hedge additional volumes.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 02/19/13

	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13		
<b>Load Forecast</b>																								
City Gate Load Forecast (Mcf)																								
TCO FSS Injections (Mcf)																								
Total Requirements (Mcf)																								
TCO FSS Withdrawals (Mcf)																								
Other "Withdrawals" (Mcf)																								
Total Withdrawals (Mcf)																								
<b>Amount Hedged (Mcf/day)</b>																								
Fixed Price																								
Fixed Price																								
Fixed Price																								
Cost Avg. (Mcf)																								
Total Hedged (Mcf/day)																								
Total Hedged (dth)																								
<b>Types of Hedging Products (1)</b>																								
Fixed Price																								
Price Caps																								
No-Cost Collars																								
<b>Embedded Hedged Cost</b>																								
Winter																								
Summer																								
<b>Estimated System Supply (Gross)</b>																								
Hedged % of System Supply																								
Seasonal % of System Supply																								
<b>Amt. Hedged with Storage @ City Gate</b>																								
Hedged (City Gate) (Dth)																								
Storage Withdrawal (Dth)																								
Market (Dth)																								
Total (incl. Injections) (Dth)																								
% Hedged & Storage																								
Seasonal %																								

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 02/19/13

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
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<b>Embedded Hedged Cost</b>												
Winter												
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<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt. Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 02/19/13

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>AmI Hedged with Storage @ City G</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2015 - October 2016  
 As of 02/19/13

	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
TBD												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amount Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.



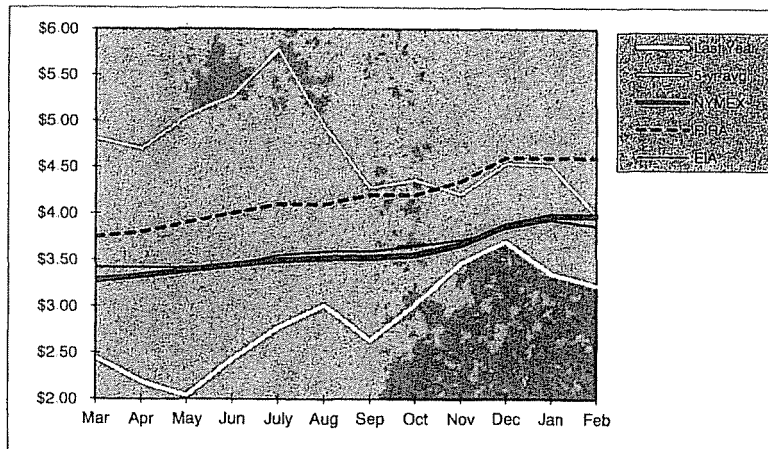
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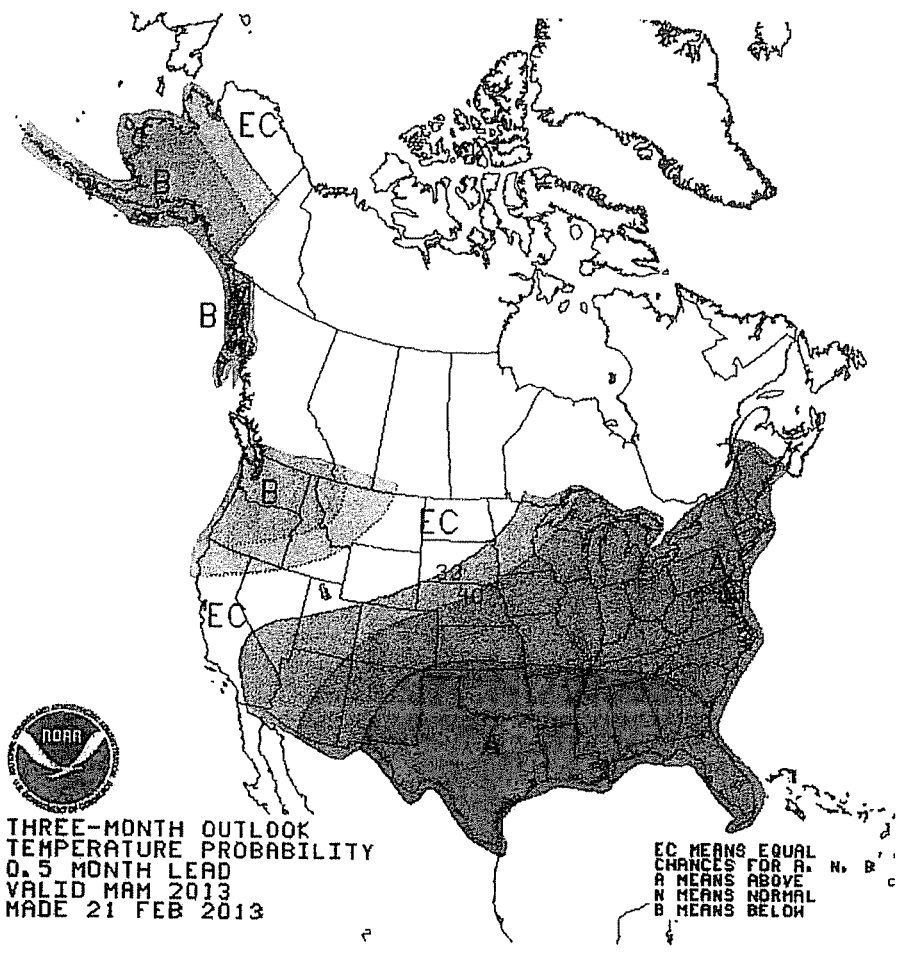
**Duke Energy Kentucky  
 Hedging Program  
 Current Position**

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (3/31/12)	
		Total		Required	Allowed
		Dth/day	Dth/mo	dth/day	dth/day
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2013					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14 Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
Target Levels By October 31, 2013					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
Target Levels By March 31, 2013					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2013					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
Target Levels By March 31, 2013					
Nov-15					
Dec-15					
Jan-16					
Feb-16					
Mar-16					
Winter 15/16					
Target Levels By October 31, 2013					

**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

Historic Prices:						
NYMEX Closing Price						
	5-yr. avg. (08/09-12/13)	Last Year (2012-2013)		PIRA 25-Jan-13	EIA 12-Feb-13	NYMEX 21-Feb-13
Mar	\$4.81	\$2.45			\$3.420	\$3.279
Apr	\$4.70	\$2.19			\$3.420	\$3.331
May	\$5.06	\$2.04			\$3.420	\$3.392
Jun	\$5.27	\$2.43			\$3.450	\$3.445
July	\$5.78	\$2.77			\$3.550	\$3.497
Aug	\$4.95	\$3.01			\$3.590	\$3.520
Sep	\$4.28	\$2.63			\$3.590	\$3.526
Oct	\$4.36	\$3.02			\$3.650	\$3.557
Nov	\$4.21	\$3.47			\$3.720	\$3.668
Dec	\$4.54	\$3.70			\$3.840	\$3.868
Jan	\$4.52	\$3.35			\$3.930	\$3.973
Feb	\$3.99	\$3.23			\$3.870	\$3.976
12 Month Avg	\$4.71	\$2.86			\$3.621	\$3.586
Summer Average					\$3.524	\$3.467
Winter Average					\$3.756	\$3.753





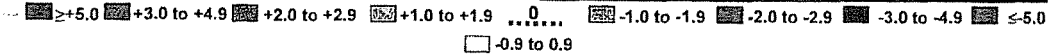
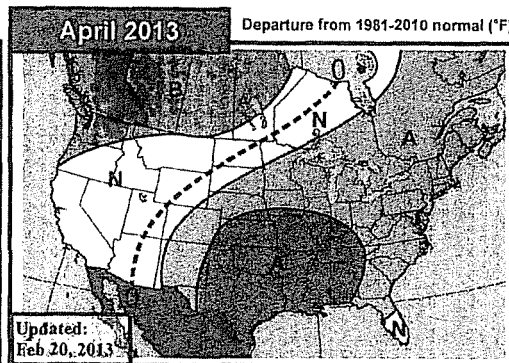
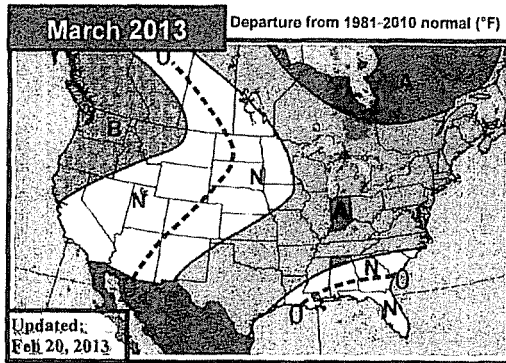
# EarthSat 30-60 Day Outlook



Wednesday, February 20, 2013

Meteorologists: SS/BH

WEATHER SERVICES



**Colder Midwest to South**  
**More uncertainty overall**

Notable cool changes were made to the forecast this week, though the forecast remains tilted to the warm side from the southern Plains to the Northeast and points in between. The elimination of the aboves in parts of the South and Plains and the moderation of the aboves in the Midwest is due to increased uncertainty given conflicting signals. The long-term -PDO still favors warmth, but models are now showing a less-influential MJO and a strong positive PNA signal early in the month, which favors cold especially into the South. Additionally, the current GFS and European ensembles out through the first week of the month show widespread cold, and the CFS model is cooler than last week. While there are mixed risks moving further out in time, the overall risk appears to be to the colder side at this point, especially across the South.



**No changes to the forecast**  
**CFS model has cooled since last week**

No changes were made to the forecast, which continues to favor widespread warmth across the eastern half, especially in the southern Plains and Mississippi Delta region. There's no compelling reason to change the forecast at this point, since the changes made to the March forecast were mainly due to medium-range signals. However, there is some risk that recent rain/snow will mitigate drought conditions across the Midwest and South, which may eliminate some of the perceived warmer risks in those areas. Additionally, the CFS model has trended cooler from last week, showing mainly near normal temperatures nationwide.

**Mar GWHDD\*\* Forecasts** \*10Y Normal updated to '03-12

<b>Mar 2013 Fcst:</b>	<b>605.0</b>	<b>10Y Normal*</b>	<b>584.2</b>
		<b>30Y Normal</b>	<b>626.0</b>
		<b>Mar-2012</b>	<b>387.0</b>

Change: +25

**Apr GWHDD\*\* Forecasts** \*10Y Normal updated to '03-12

<b>Apr 2013 Fcst:</b>	<b>325.0</b>	<b>10Y Normal*</b>	<b>334.4</b>
		<b>30Y Normal</b>	<b>354.3</b>
		<b>Apr-2012</b>	<b>312.3</b>

No change      \*\*National Gas-Weighted HDDs

**Feb so far**

Final 60 Day Outlook      Final 30 Day Outlook      Current ver 1 forecast (2/1-2/28)

The most recent forecast out to the rest of the month features more widespread cold across the mid-continent and less warmth in the East, and as a result the verification-forecast for the month of February has a colder look this week. Widespread belows are still seen in the Southwest, but some belows are also seen in the upper Midwest and aboves are limited to the Gulf Coast, the Northeast, and the northern Rockies. It appears that the Final 30 Day outlook will have been too warm overall.



# EarthSat 6-10 Day Forecast—Detailed

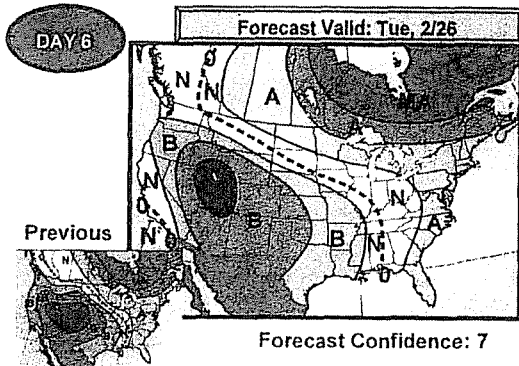
Thursday, February 21, 2013

Meteorologist: BH/AC



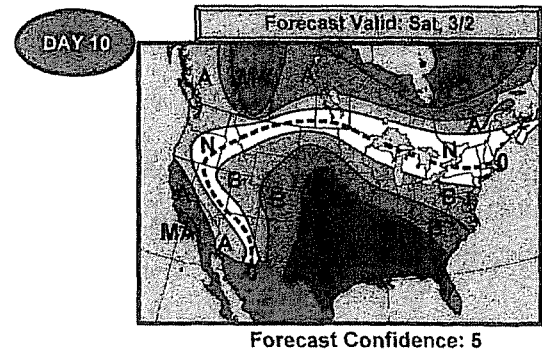
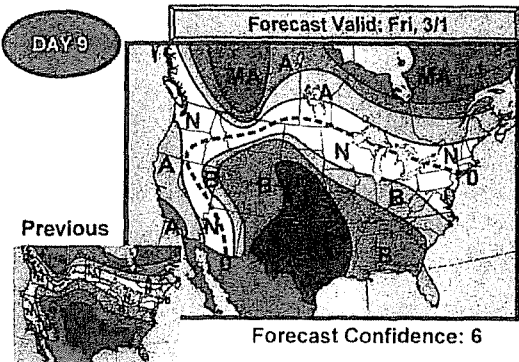
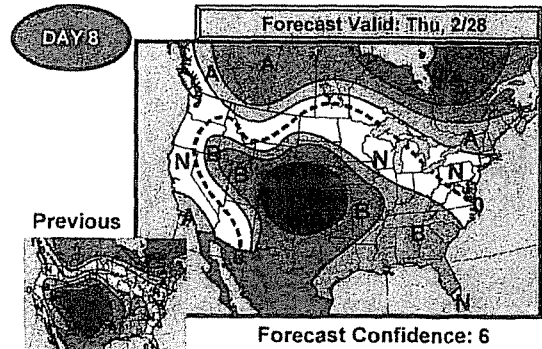
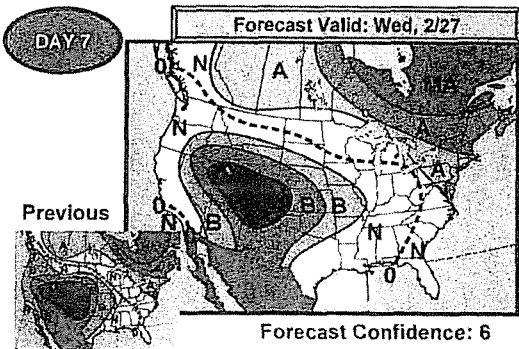
WEATHER SERVICES

## Forecast Temperature Deviations

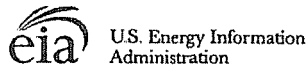


**\*Much Belows March Into Texas, South Late\***  
**\*Warming Late Along West Coast\***

Warmer adjustments were made along the West Coast for today's forecast. Models have depicted a better chance for above to much above normal temperatures to build along the West Coast for the latter part of the period. Some models even over-run some of this warmth into the Interior West at period's end. The cooling trend continues to take shape along the South as the period progresses where increasing chances for much below normal readings arrive late period. These cold anomalies may come in waves across the Plains and South instead of one large collective cold air mass, so some variability may be present across these areas at times.



A +3F to +4F  
  A +5F to +7F  
  MA +8F to +14F  
  SA +15 or Higher  
 B -3F to -4F  
  B -5F to -7F  
  MB -8F to -14F  
  SB -15 or Lower



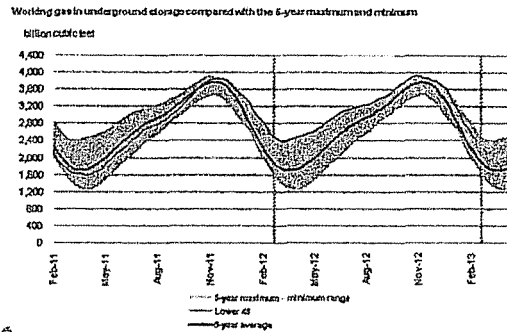
Weekly Natural Gas Storage Report

for week ending February 15, 2013. | Released: February 21, 2013 at 10:30 a.m. | Next Release: February 28, 2013

Region	Stocks billion cubic feet (Bcf)			Historical Comparisons			
	02/15/13	02/08/13	change	Year ago (02/15/12)		5-Year average (2008-2012)	
				(Bcf)	% change	(Bcf)	% change
East	1,109	1,107	-79	1,260	-12.1	1,006	10.1
West	367	380	13	373	-1.0	296	24.0
Producing	925	950	-35	1,010	8.4	737	25.5
Salt	225	234	9	224	0.4	107	110.3
Non-salt	699	726	-27	786	-11.1	630	11.0
<b>Total</b>	<b>2,400</b>	<b>2,527</b>	<b>-127</b>	<b>2,542</b>	<b>-9.2</b>	<b>2,039</b>	<b>17.7</b>

Summary

Working gas in storage was 2,400 Bcf as of Friday, February 15, 2013, according to EIA estimates. This represents a net decline of 127 Bcf from the previous week. Stocks were 242 Bcf less than last year at this time and 361 Bcf above the 5-year average of 2,039 Bcf. In the East Region, stocks were 102 Bcf above the 5-year average following net withdrawals of 79 Bcf. Stocks in the Producing Region were 188 Bcf above the 5-year average of 737 Bcf after a net withdrawal of 35 Bcf. Stocks in the West Region were 71 Bcf above the 5-year average after a net drawdown of 13 Bcf. At 2,400 Bcf, total working gas is within the 5-year historical range.



Source: U.S. Energy Information Administration

Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2008 through 2012.  
 Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**January 25, 2013 Release**

Jan-10		Jan-11		Jan-12		Jan-13	
Feb-10		Feb-11		Feb-12		Feb-13	
Mar-10		Mar-11		Mar-12		Mar-13	
Apr-10		Apr-11		Apr-12		Apr-13	
May-10		May-11		May-12		May-13	
Jun-10		Jun-11		Jun-12		Jun-13	
Jul-10		Jul-11		Jul-12		Jul-13	
Aug-10		Aug-11		Aug-12		Aug-13	
Sep-10		Sep-11		Sep-12		Sep-13	
Oct-10		Oct-11		Oct-12		Oct-13	
Nov-10		Nov-11		Nov-12		Nov-13	
Dec-10		Dec-11		Dec-12		Dec-13	
Average 2010	\$	Average 2011	\$	Average 2012	\$	Average 2013	\$
Summer 2010	\$	Summer 2011	\$	Summer 2012	\$	Summer 2013	\$
Winter 2010-2011	\$	Winter 2011-2012	\$	Winter 2012-2013	\$		

**North American Gas Forecast Monthly**

January 25, 2013

**NATURAL GAS**

**U.S. GAS PRICE SCORECARD: FEBRUARY 2013 – OCTOBER 2013**

Bearish Neutral Bullish

Supply	Outlook	Commentary
<b>Lower 48 Gas Production</b>		Since the inception of the Scorecard in December 2006, the expected impact of Lower 48 production on gas prices has been steadily positive — until now. Faster-than-expected downward momentum of late has raised the specter of potential Y/Y declines beyond the first quarter. At a minimum, narrow shale gas expansion and plummeting gas well completions are exposing production to stiffer headwinds.
<b>Canadian Production/Exports</b>		Since the last week of December, net Canadian exports have been sharply higher, rising from sub-5 BCF/D to over 7 BCF/D within the past week. Related storage draws will drive end-March deficits wider and set the stage for a 1 BCF/D, or larger, injection season net export shortfall.
<b>U.S. Storage Levels</b>		This month's hefty escalation of storage draws, tied to colder weather and weaker U.S. production, point to an end-March Y/Y increase in net of end-gas BCF. Injection season stock builds would need to add Y/Y by 2.3-3.5 BCF/D to areas such as a deficit for start October 2013.
Demand	Outlook	Commentary
<b>Electric Generation (EG)</b>		Higher Y/Y HH gas prices remain poised to reduce coal-to-gas substitution from last year's record-high averages by more than 2 BCF/D, but gas demand's exposure to coal-fired EG will be less than earlier PIRA projections, given our markdown of 2013 HH prices.
<b>Industrial Sector</b>		A massive EIA upward revision of industrial gas demand from 2012 to high October 2012, plus the center of this year's weather-driven growth in heat-trim balances, and higher gas demand intensity/gas use per lb. of finished product in 2012 continues to point to impressive Y/Y growth.
<b>Residential/Commercial (R/C)</b>		A projected R/C demand jump of +4 BCF/D Y/Y in January follows the -1 BCF/D decline in December. Net Y/Y gains over the next few months should approach 5 BCF/D, even with a 5% GWHDD shortfall versus the 10-year normal.
Gas Prices	Outlook	Commentary
<b>February 2013 — October 2013</b>		Altogether, our Scorecard's above categories (one bear, one neutral, four bullish) clearly signal a bullish HH price bias reverting sooner than current NYMEX futures prices. Yet, the persistent build-up of gas traders to envision such a gas change in U.S. gas balances should not be dismissed. In particular, a more conclusive case that production growth will be either minimal or negative, seems warranted, as well as a correction that U.S. storage will fall below -2 BCF by end-October 2013.

**NYMEX Prices and Speculation**

NYMEX/ICE speculators were collectively long during much of 4Q12 before above-normal temperatures sparked worries that another unusually mild heating season was in store. The net reported non-commercial short futures position neared 30,000 contracts in late December and early January, as opposed to a net long position above 79,000 lots on October 30th. This month's weather pattern shift, however, has prompted some traders to cover those shorts. Yet, risks still seem to favor buying in the form of additional short-covering, as well as the initiation of additional length, barring an early end to Y/Y heating demand gains.



## **Price Projections**

### **Gas Prices Likely to Remain Stable between \$3 and \$4 in 2013—February 8, 2013**

Natural gas prices will remain stable for 2013 according to a survey prepared by Credit Suisse. 72% of respondents believe that prices would remain between \$3/MMBtu and \$4/MMBtu in 2013. Of those respondents, 39% leaned toward a higher average of \$3.50/MMBtu to \$4/MMBtu. Participants believe gas demand would increase by as much as 2 Bcf/d in 2013.

In terms of oil expectations, 46% of those surveyed believe that Brent crude prices will average between \$100/barrel and \$109/barrel in 2013.

### **Marcellus can Provide Decade's Worth of Gas Below \$4/MMBtu—January 31, 2013**

Marcellus strong productivity and comparably low break-even prices will allow Marcellus to continue to gain market share over the other shale plays. Estimates have Marcellus containing 330 Tcf 's of equivalent reserves that can provide more than a decade's worth of gas at a price below \$4/MMBtu. Marcellus is more than two times the size of the next biggest play. Currently 90 rigs are working, producing about 8.4 Bcf/d and could reach 15 Bcf/d in an unconstrained environment.

### **BofA Sees Gas Supply Slowing, Prices Strengthening in 2013—January 29, 2013**

According to Bank of America, gas production will decline by 200,000 MMBtu/d in 2013, providing support to prices. BofA forecasts 2013 prices will average \$3.75 MMBtu and will average \$4.20 MMBtu in 2014. "The Marcellus remains the elephant in the room, experiencing unprecedented supply growth and overwhelming a large chunk of the dry gas declines experienced in other areas."

Longer-term, BofA estimates that retirement of coal plants and more federal emission regulations will lead to increased demand by the power sector by between 4 Bcf/d to 8.5 Bcf/d by 2017. In addition, BofA estimates LNG exports will start in late 2015 and rise to 2.8 Bcf/d in 2017.

**Prices to Rise Marginally Through 2014—January 24, 2013**

Natural gas prices will rise only slightly over the next two years according to Barclays. "The structural tightening of natural gas balances taking place this year is poised to persist into 2014. Yet, the recovery of prices will be only modest, in our view averaging \$4.10/MMBtu in 2014." In addition, Barclay's said prices will average \$3.70/MMBtu for 2013.

For 2015, Barclay's expect several big changes, acceleration of industrial demand, coal plant retirements, beginning of LNG exports and rising exports to Mexico.

## **LNG Exports**

### **LNG Export Debate has Perception Lagging Reality—February 15, 2013**

Fears that exporting LNG will raise domestic price enough to choke the manufacturing renaissance are unfounded according to CERA. “What affects the price of US gas is how much is produced, the export market will help keep investment dollars flowing into E & P, thereby keeping gas prices in check for end-users such as chemical and fertilizer makers.”

According to CERA, part of the public’s difficulty with the notion of exporting gas stems from the public perception of energy scarcity and the new reality of the abundance of natural gas in the US. Canada has made the decision to get shale gas into global markets and the US should be more motivated to do the same.

### **Competition, Costs will Limit LNG Export Facilities—February 6, 2013**

Due to the \$10 billion price tag and global competition, only five or fewer export facilities will be built. The DOE has received 23 applications to export LNG, including proposals to ship a total of 31.4 Bcf/d to countries with free-trade agreements and 24.8 Bcf/d to non-FTA countries. The majority of these projects will not be built due to the lack of construction financing and competition from existing export facilities in Australia. “LNG facilities may be built along the Gulf Coast due to the relative ease of siting such projects in oil and gas industry-friendly states, though he noted that facilities along the West Coast may have an economic advantage due to their proximity to the Asian market.”

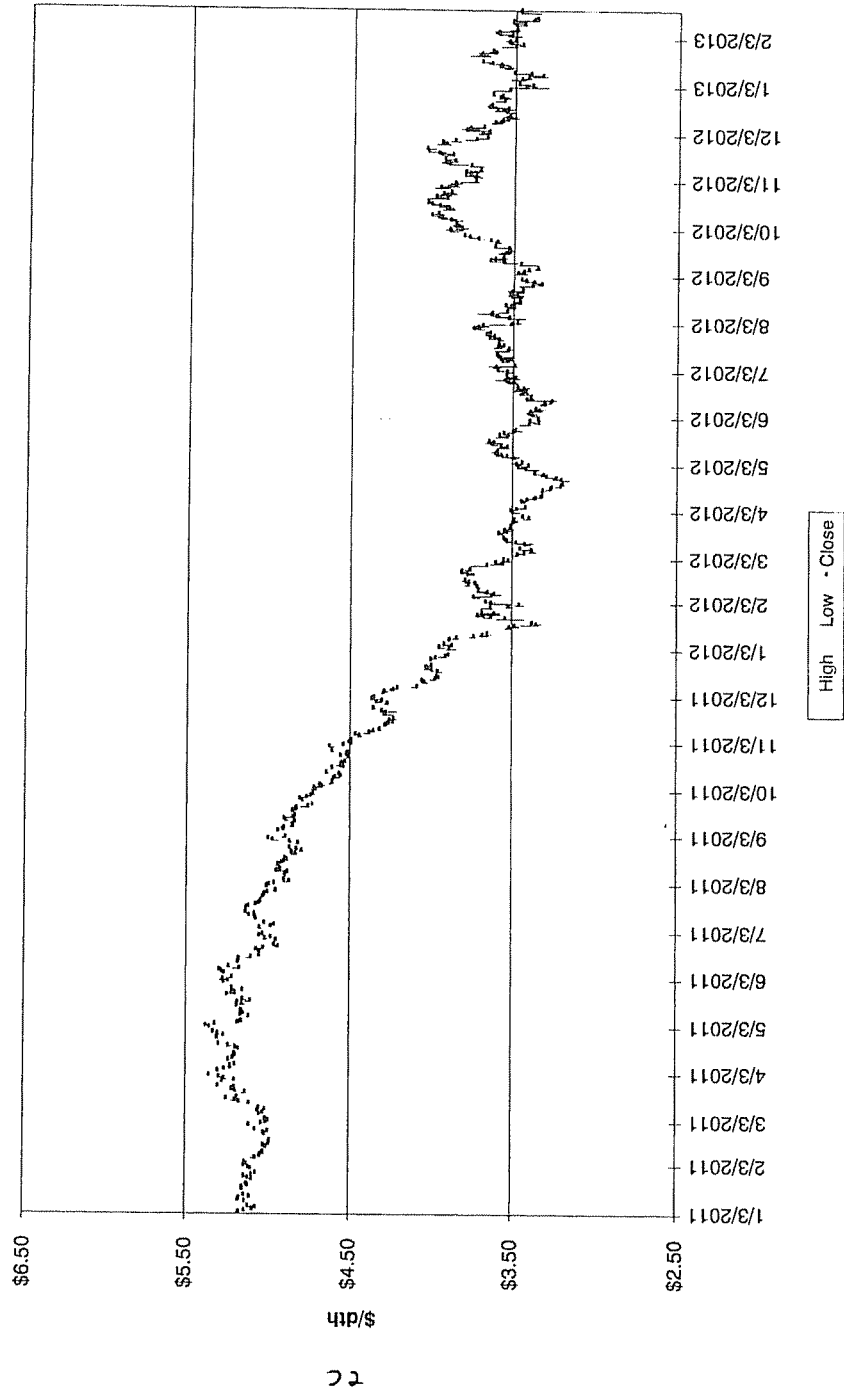
### **House and Senate Unveil Bill to Allow Broad LNG Exports—Feb. 7, and Feb. 1, 13**

Separate bills were introduced in the Senate and House to allow LNG exports to NATO members, Japan and other countries. LNG exports to key allies would help them diversify their energy resources, bolster their energy and national security, and strengthen our strategic alliances. Under current law, the DOE must quickly approve LNG exports to countries that have FTAs with the US. DOE can limit or block exports to non-FTA countries if they are not in the public interest. Cheniere’s Sabine Pass in Louisiana is the only facility with approval so far to export LNG to both FTA and non-FTA nations. Japan is not a FTA nation, but has requested approval to allow exports in the wake of the Fukushima earthquake that has shut down most nuclear plants.

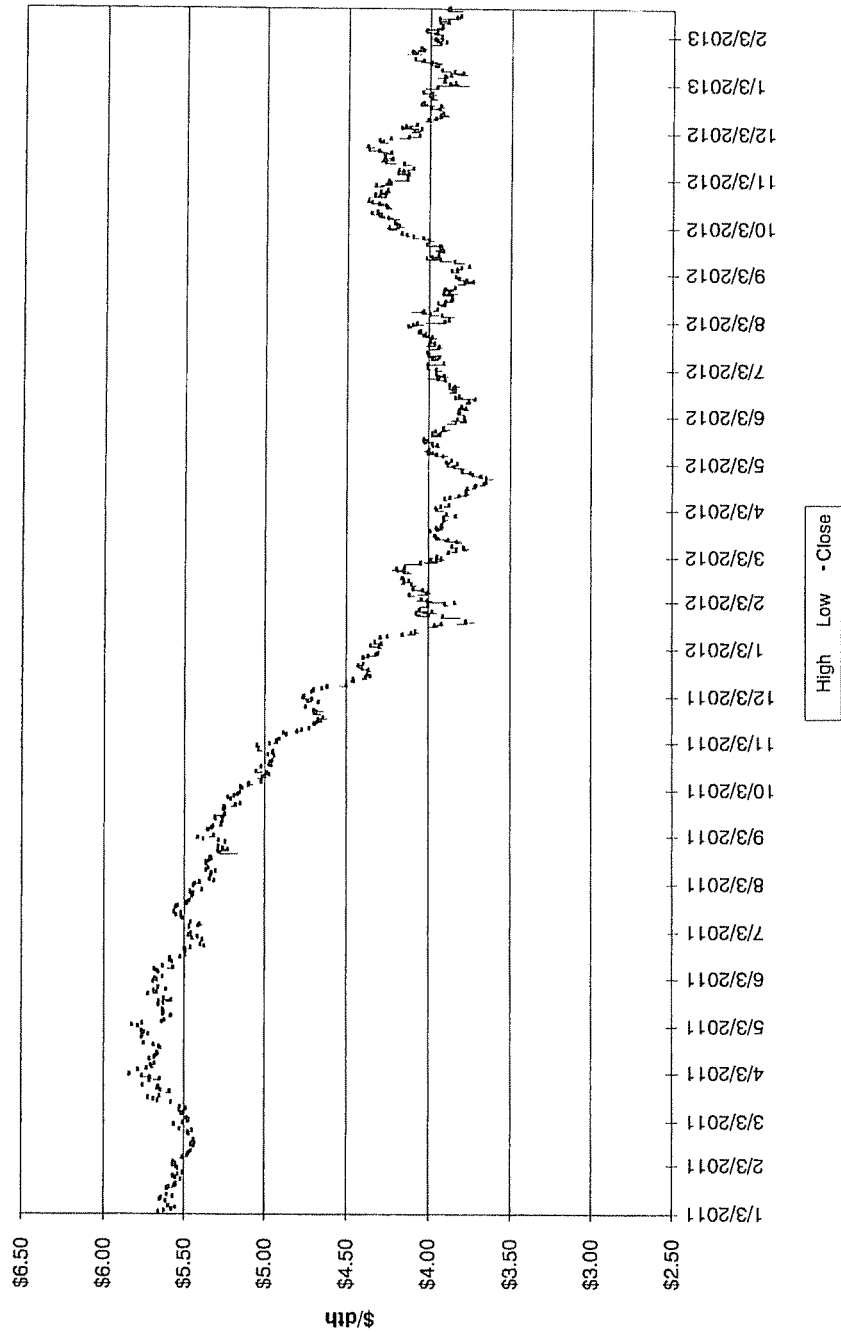
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**February 12, 2013 Release**

Jan-11	4.49	Jan-12	2.67	Jan-13	3.33	Jan-14	3.93
Feb-11	4.09	Feb-12	2.50	Feb-13	3.41	Feb-14	3.87
Mar-11	3.97	Mar-12	2.18	Mar-13	3.42	Mar-14	3.75
Apr-11	4.25	Apr-12	1.95	Apr-13	3.42	Apr-14	3.75
May-11	4.31	May-12	2.43	May-13	3.42	May-14	3.75
Jun-11	4.55	Jun-12	2.46	Jun-13	3.45	Jun-14	3.79
Jul-11	4.42	Jul-12	2.95	Jul-13	3.55	Jul-14	3.74
Aug-11	4.05	Aug-12	2.84	Aug-13	3.59	Aug-14	3.79
Sep-11	3.90	Sep-12	2.85	Sep-13	3.59	Sep-14	3.81
Oct-11	3.56	Oct-12	3.32	Oct-13	3.65	Oct-14	3.88
Nov-11	3.24	Nov-12	3.54	Nov-13	3.72	Nov-14	3.94
Dec-11	3.17	Dec-12	3.34	Dec-13	3.84	Dec-14	4.07
Average 2011	\$ 4.000	Average 2012	\$ 2.753	Average 2013	\$ 3.533	Average 2014	\$ 3.839
Summer 2011	\$ 4.149	Summer 2012	\$ 2.686	Summer 2013	\$ 3.524	Summer 2014	\$ 3.787
Winter 2011-2012	\$ 2.752	Winter 2012-2013	\$ 3.408	Winter 2013-2014	\$ 3.822		

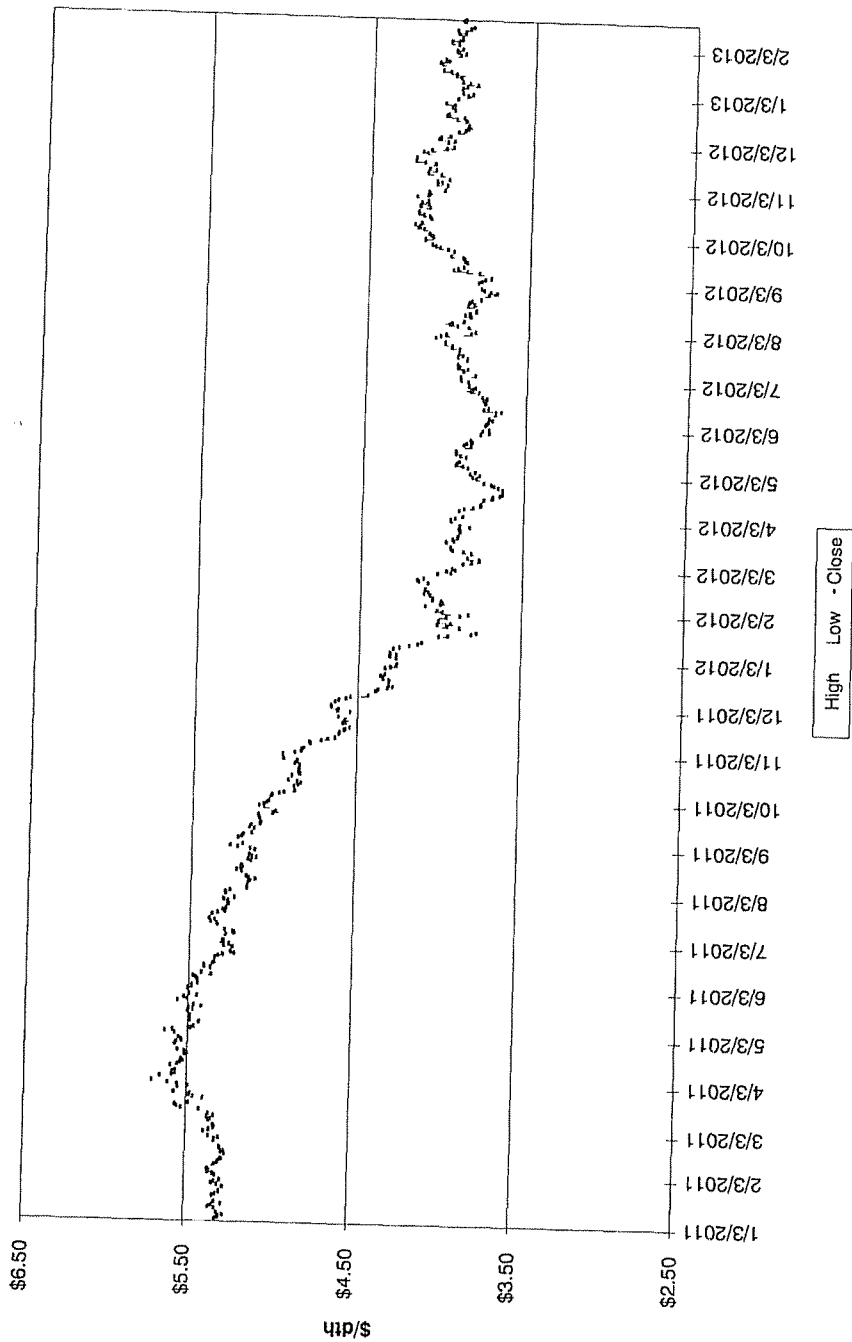
Summer Strip 2013



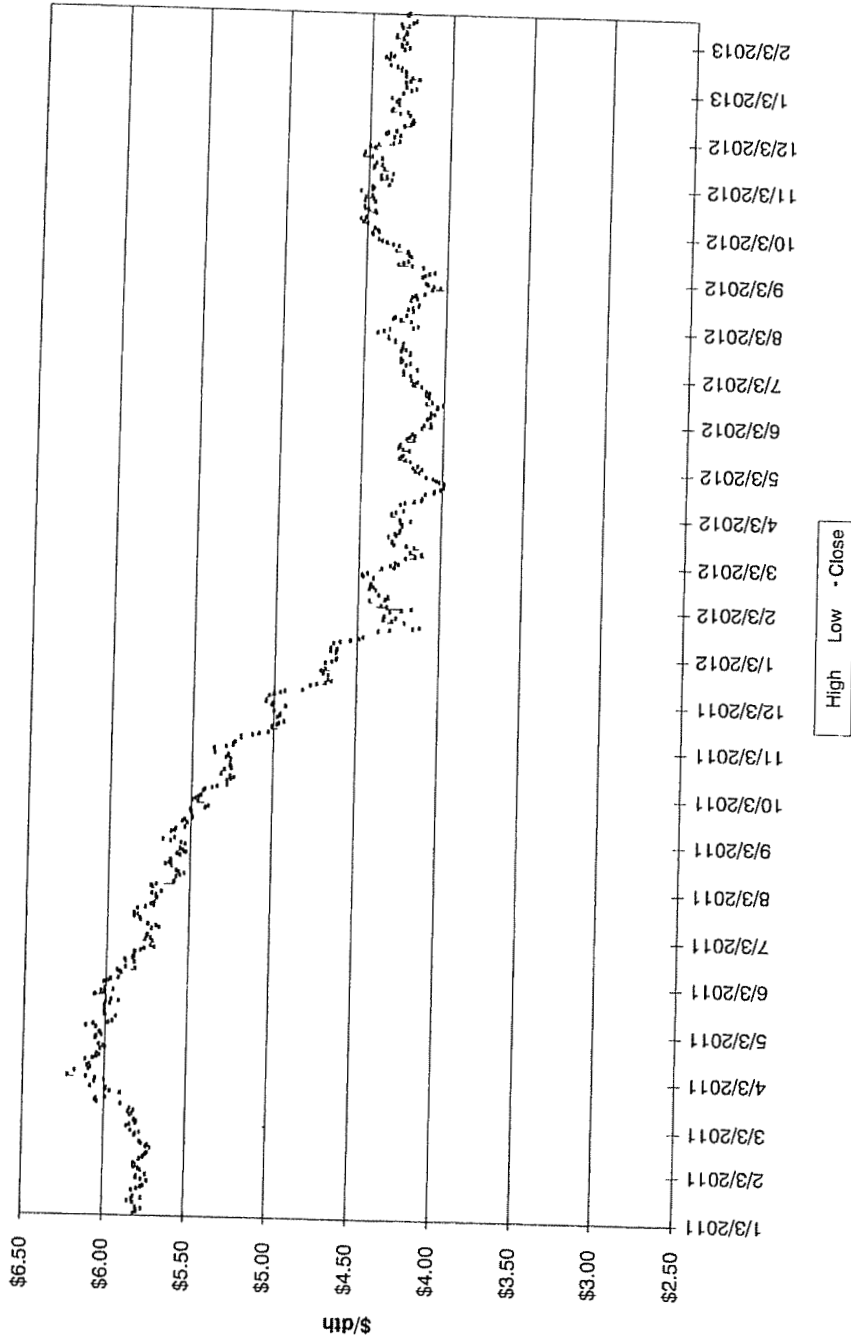
Winter Strip Nov13 - Mar14



Summer Strip 2014

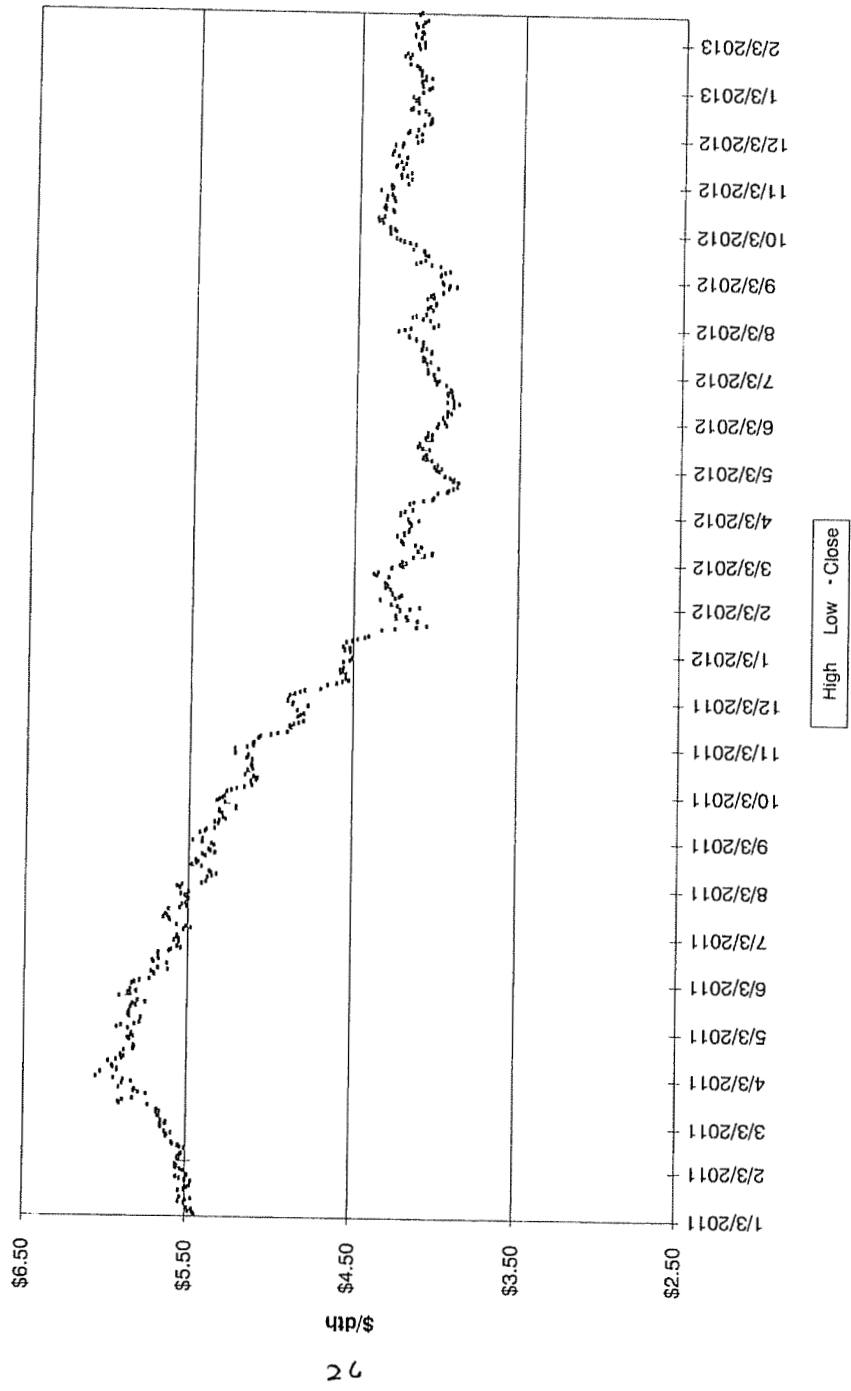


Winter Strip Nov14 - Mar15

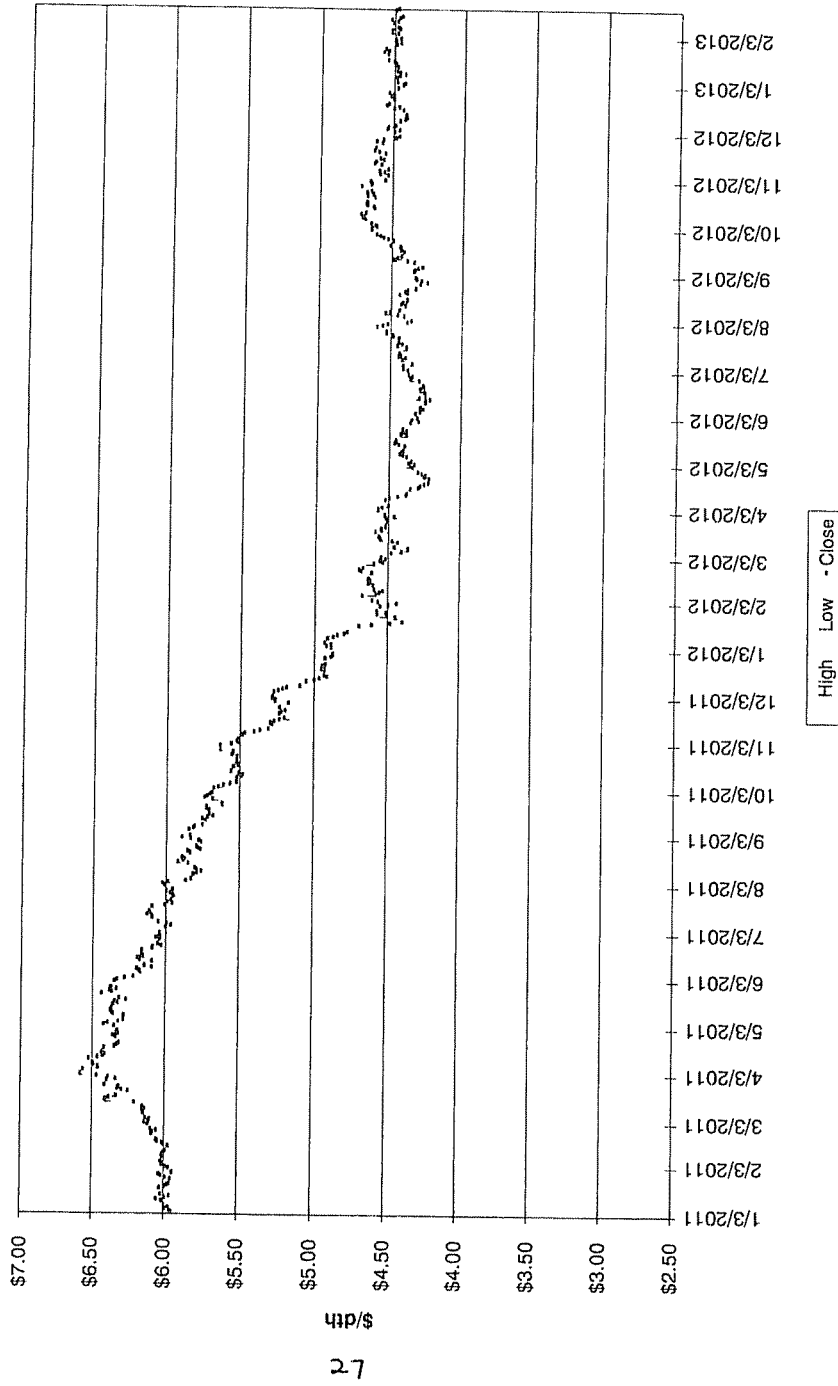




Summer Strip 2015



Winter Strip Nov15 - Mar16





February 2013

*Independent Statistics & Analysis*

## U.S. Energy Information Administration

### Short-Term Energy Outlook (STEO)

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 70.3 billion cubic feet per day (Bcf/d) in 2013 and 70.0 Bcf/d in 2014. This month's prediction is a significant upward revision from last month's expectation of 69.7 Bcf/d and 69.4 Bcf/d in 2013 and 2014, respectively. The upward revision is mostly the result of changes to historical industrial sector consumption data, which were revised upwards in the recent release of the EIA Natural Gas Annual.

Forecasts for closer-to-average winter temperatures in 2013 and 2014 (compared with the record-warm temperatures in 2012) lead to increases in natural gas used for residential and commercial space heating. Despite Punxsutawney Phil's recent forecast of an early spring this year, a 15-percent increase in U.S. population-weighted heating degree days from 2012 to 2013 is still projected.

The projected increase in natural gas prices contributes to a decline in natural gas used for electric power generation from 25.0 Bcf/d in 2012 to 23.1 Bcf/d in 2013 and 22.6 Bcf/d in 2014. Consumption over the forecast period is less than the record-high 2012 levels, but remains high by historical standards and reflects an ongoing structural shift toward using more natural gas for power generation.

**U.S. Natural Gas Production and Imports.** EIA's most recent monthly production data indicated that total U.S. average daily marketed production reached 70.4 Bcf/d in November 2012, 0.4 Bcf/d above the previous month, with upticks in the federal Gulf of Mexico, Oklahoma, Wyoming, and the category for other states, which includes Pennsylvania. Production in the Marcellus Shale areas of Pennsylvania and West Virginia is expected to continue rising, as recently drilled wells become operational. Despite relatively low natural gas prices, Pennsylvania drilling continues at a strong pace as producers target combination oil-and-gas wells. Projected marketed production increases from 69.2 Bcf/d in 2012 to 70.0 Bcf/d in 2013, and remains flat in 2014.

**U.S. Natural Gas Inventories.** As of February 1, 2013, working gas stocks totaled 2,684 Bcf, which is 226 Bcf less than at the same time in 2012, but 351 Bcf greater than the previous five-year (2008-12) average, according to EIA's *Weekly Natural Gas Storage Report*. While warmer-than-average temperatures in December limited withdrawals, cold temperatures in January 2013 led to several big storage drawdowns. EIA expects an end-of-March level of just under 2,000 Bcf, which is less than the unusually high 2,477 Bcf at the end of March 2012, but still

more than the five-year average of 1,726 Bcf.

**Crude Oil Prices.** EIA projects the Brent crude oil spot price will fall from an average of \$112 per barrel in 2012 to annual averages of \$109 per barrel and \$101 per barrel in 2013 and 2014, respectively, reflecting the increasing supply of liquid fuels from non-OPEC countries. After averaging \$94 per barrel in 2012, the projected WTI price averages \$93 per barrel in 2013 and \$92 per barrel in 2014. By 2014, several pipeline projects from the midcontinent to the Gulf Coast refining centers are expected to come on line, reducing the cost of transporting crude oil to refiners, which is reflected in a drop in the price discount of WTI to Brent from an average \$18 per barrel in 2012 to \$9 per barrel in 2014.

**Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2012-13**

	Dth/Day					Total	% System Supply
	November	December	January	February	March		
<b><u>Duke Energy Ohio</u></b>							
Previously Hedged							
[Redacted]							
Col Gulf Mainline							
Col Gulf Mainline							
Col Gulf Mainline							
Gulf South							
Tex Gas Zone 1							
<b>Total</b>							
<b>System Supply</b>							
<b><u>Duke Energy Kentucky</u></b>							
Previously Hedged							
[Redacted]							
Col Gulf Mainline							
Col Gulf Mainline							
Col Gulf Mainline							
<b>Total</b>							
<b>System Supply</b>							
<b><u>Duke Energy--Total</u></b>							
Previously Hedged							
<b>Total</b>							



**Gas Resources  
 Hedging Program  
 Market Indicators Summary  
 March 21, 2013**

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Mar 13--May 13)	↓	Long	NOAA predicting above average temperatures for April 2013--June 2013 for the majority of CONUS.	12
Mid Term Forecast (30-60 days)	↔	Long	April is predicted to be 1.6% colder than normal based on 10 year normals and May weather is predicted to be 3.6% warmer than normal.	13
Short Term Forecast (6-10 days)	↑	Short	Below and Much Below temperatures over the majority of CONUS during the period.	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↔	Long	Storage withdraws for the week ending March 15th were 62 Bcf. Storage levels are at 1,876 TCF which is 21.1% lower than last year and 9.5% higher than the 5 year average. March on track to be the coldest since 1995 with storage draws heaviest since 2002.	15-16
<b>Industry Publications</b>				
PIRA Energy Group Summer 2013: [REDACTED] Winter 2013/14: [REDACTED]	↑ ↓	Long	GAS PRICE SCORECARD: Gas Price Outlook for April 2013--October 2013 "Bullish". Bullish fundamentals include Canadian Production/Exports, US Storage levels, Industrial and Residential/Commercial Demand.	17-18
Gas Daily--Gas Price Predictions	↑	Long	CERI has developed four scenarios for price predictions through 2030. The most bullish has prices at \$6/MMBtu by 2017 and \$8/MMBtu by 2030 "Nowhere Fast" scenario has prices at \$3-\$3.50/MMBtu range through 2030. Prices \$3.13/MMBtu this Spring/Summer however, prices will be raising due to LNG exports, restrictions on coal-fired generation, climate change legislation, and demand from US transportation sector.	19
Gas Daily--Miscellaneous Information	↑	Long	Marcellus shale is where the only optimistic gas companies are located. Range--\$2/Mcf cost 75% hedged at \$4.16, EGT 53% profit at \$4/Mcf. Southern Co cautious about price volatility due to exports and increasing demand. Shell plans to build two projects to supply LNG for heavy truck	20
<b>Government Agencies</b>				
Energy Information Administration Summer 2013: \$3.371 Winter 2013/14: \$3.620	↓	Long	The projected Henry Hub natural gas spot price averages \$3.406/MMBtu for 2013 and \$3.632/MMBtu for 2014. EIA dropped its price for 2013 by \$ .13 and \$ .21 for 2014.	21
<b>Technical Analysis</b>				
Summer 2013 Strip Chart	↑	Short	Closed at \$4.03	22
Winter 2013-14 Strip Chart	↑	Short	Closed at \$4.29	23
Summer 2014 Strip Chart	↑	Short	Closed at \$4.14	24
Winter 2014-15 Strip Chart	↑	Short	Closed at \$4.43	25
Summer 2015 Strip Chart	↔	Short	Closed at \$4.22	26
Winter 2015-16 Strip Chart	↔	Short	Closed at \$4.53	27
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption will average 70.0 Bcf/d in 2013 and 2014. Increased usage for residential and commercial space heating being offset by declines in power generation.	28
Supply	↔	Long	Total marketed production will increase from 69.1 Bcf/d in 2012 to 69.6 Bcf/d in 2013, and flat in 2014. EIA expects end of season level at about 2,000 Bcf.	28
Oil Market	↔	Long	EIA expects Brent crude to average of \$112 per barrel for 2012, \$108 per barrel in 2013, and \$101 per barrel in 2014.	28

**Meeting Minutes: 426 Annex Conference Room - 1:00 pm**  
 Attendees: Jim Mehring, Jeff Kern, Mike Brumback, Joachim Fischesser, Mitch Martin, Rick Colvin, Steve Niederbaumer  
 Discussed market fundamentals such as weather, storage inventory levels, and economic factors such as supply and demand. Discussed analyst projections and PIRA, EIA and NYMEX pricing information. Discussed our current positions within the Ohio and Kentucky hedging plans. In addition, significant discussion took place regarding the cold weather that the service territory has experienced in March. March is expected to be 20% colder than normal and be the coldest March on record since 1995. As a result of this cold weather, storage levels have decreased significantly and front month NYMEX prices have moved from \$3.60 to \$4.00. Based on the current volatility in the markets a decision was made to reassess additional hedging opportunities at next months meeting.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 03/19/13

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
Fixed Price												
Fixed Price												
Fixed Price												
Cost Avg.												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Ant Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.



Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 03/19/13

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
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Fixed Price												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

**Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2014 - October 2015  
 As of 03/19/13**

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
<b>TCO FSS Withdrawals (Mcf)</b>												
Other Withdrawals (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
Fixed Price												
TBD												
Total Hedged (dth/day)												
<b>Types of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
<b>Hedged % of System Supply</b>												
<b>Seasonal % of System Supply</b>												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (Incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2015 - October 2016  
 As of 03/19/13

	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16
<b>Load Forecast</b>												
City Gate Load Forecast (Mcf)												
TCO FSS Injections (Mcf)												
Total Requirements (Mcf)												
TCO FSS Withdrawals (Mcf)												
Other Withdrawals (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
TBD												
TBD												
Total Hedged (dth/day)												
Total Hedged (dth)												
<b>Type of Hedging Products (1)</b>												
Fixed Price												
Price Caps												
No-Cost Collars												
<b>Embedded Hedged Cost</b>												
Winter												
Summer												
<b>Estimated System Supply (Gross)</b>												
Hedged % of System Supply												
Seasonal % of System Supply												
<b>Amt Hedged with Storage @ City Gate</b>												
Hedged (City Gate) (Dth)												
Storage Withdrawal (Dth)												
Market (Dth)												
Total (incl. Injections) (Dth)												
% Hedged & Storage												
Seasonal %												

(1) Maximum percentage allowed per type of hedging product is 25% for Winter months and 40% Summer months.

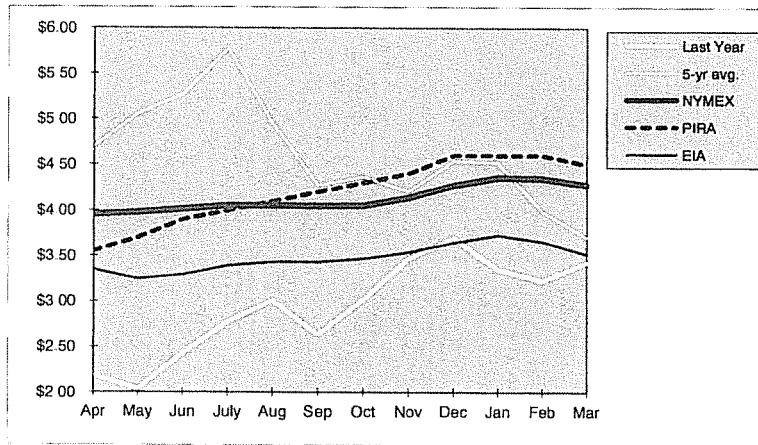
3/19/2013

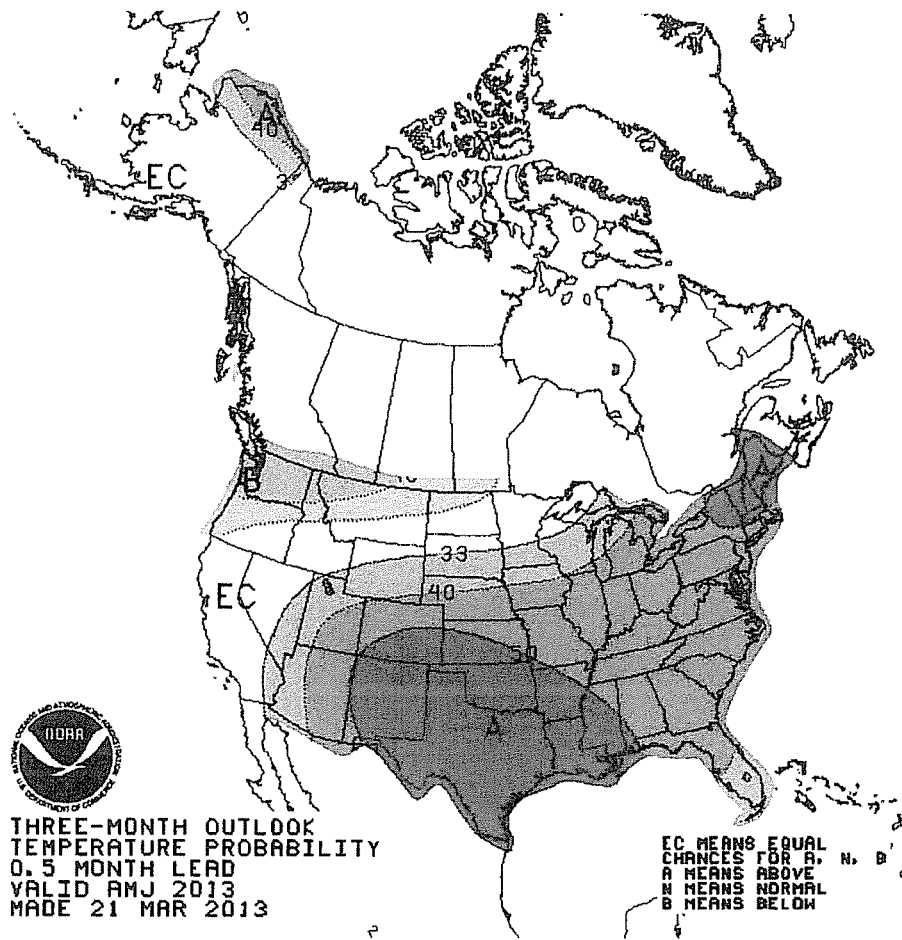
**Duke Energy Kentucky  
 Hedging Program  
 Current Position**

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (3/31/13)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
<b>Target Levels By March 31, 2013</b>					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14 Storage Gas					
Excluding Storage Gas					
Including Storage Gas					
<b>Target Levels By October 31, 2013</b>					
Apr-14					
May-14					
Jun-14					
Jul-14					
Aug-14					
Sep-14					
Oct-14					
Summer 2014					
<b>Target Levels By March 31, 2013</b>					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
<b>Target Levels By October 31, 2013</b>					
Apr-15					
May-15					
Jun-15					
Jul-15					
Aug-15					
Sep-15					
Oct-15					
Summer 2015					
<b>Target Levels By March 31, 2013</b>					
Nov-15					
Dec-15					
Jan-16					
Feb-16					
Mar-16					
Winter 15/16					
<b>Target Levels By October 31, 2013</b>					

**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

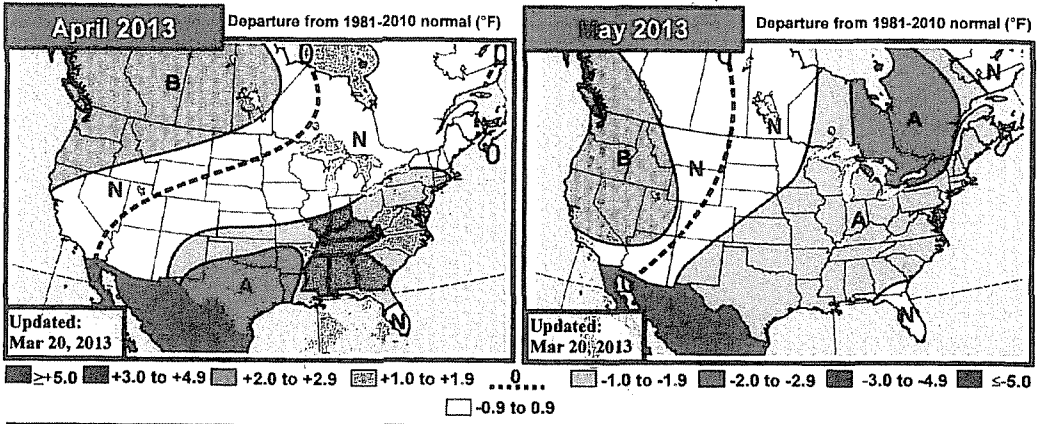
Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (09/09-12/13)	Last Year (2012-2013)		PIRA 22-Feb-13	EIA 12-Mar-13	NYMEX 21-Mar-13		
Apr	\$4.70	\$2.19			\$3.350	\$3.958		
May	\$5.06	\$2.04			\$3.240	\$3.978		
Jun	\$5.27	\$2.43			\$3.290	\$4.015		
July	\$5.78	\$2.77			\$3.390	\$4.052		
Aug	\$4.95	\$3.01			\$3.430	\$4.055		
Sep	\$4.28	\$2.63			\$3.430	\$4.050		
Oct	\$4.36	\$3.02			\$3.470	\$4.055		
Nov	\$4.21	\$3.47			\$3.540	\$4.140		
Dec	\$4.54	\$3.70			\$3.650	\$4.275		
Jan	\$4.52	\$3.35			\$3.730	\$4.360		
Feb	\$3.99	\$3.23			\$3.660	\$4.349		
Mar	\$3.71	\$3.43			\$3.520	\$4.281		
12 Month Avg	<b>\$4.61</b>	<b>\$2.94</b>			<b>\$3.475</b>	<b>\$4.131</b>		
Summer Average					\$3.371	\$4.023		
Winter Average					\$3.620	\$4.281		





# EarthSat 30-60 Day Outlook

Wednesday, March 20, 2013 Meteorologists: SS/BH WEATHER SERVICES



**Previous** (Mar 13, 2013)

**Early-month cold leads to colder changes**  
 Slightly warmer Southwest

Cold changes are seen in this week's April update though it is still warmer than normal across much of the southern and eastern US. Most of the change stems from the continuation of cold from the end of March into the beginning of April. However, that cold is expected to gradually weaken as upper-latitude blocking begins to falter. The latter two-thirds of the month is still favored to be warmer than normal as the blocking influence gives way to a warmer Pacific-driven pattern. It should be noted that the GWHDD change might appear larger than the map would seem to indicate due to the bulk of the cold change occurring early in the month when GWHDDs are climatologically higher as opposed to end of the month.

Apr GWHDD** Forecasts	*10Y Normal updated to '03-'12	
Apr 2013 Fcst:	340.0	
	10Y Normal*	334.4
	30Y Normal	354.3
	Apr-2012	312.3
Change: +12		

**Previous** (Mar 13, 2013)

**No changes to forecast**  
 Widespread warmth in East

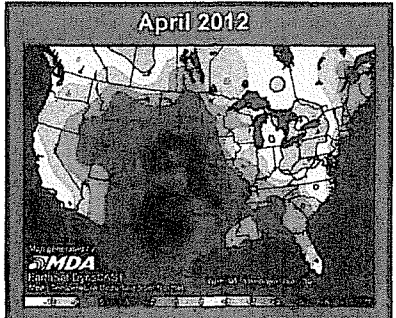
The May forecast remained unchanged this week with aboves across the eastern half and belows in the West. The forecast remains based upon the negative PDO and positive AMO. The latest CFS model does agree with the forecast to some extent, showing aboves in parts of the south-central and northeastern US, but the magnitude of the warmth is not as strong as our forecast. Drought remains a warm risk mainly in the Rockies and Plains, while the recently-reduced drought limits the warm risk in the Southeast

May PWCD** Forecasts	*10Y Normal updated to '03-'12	
May 2013 Fcst:	120.0	
	10Y Normal*	115.7
	30Y Normal	104.4
	May-2012	150.4
No Change		

\*\*National Gas-Weighted HDDs

**March so far**

March continues to trend colder as we head towards the end of the month. Adding the current forecast from March 20-31 to the verification of March 1-19 shows widespread anomalies of 5-8 degrees below normal from the northern Plains into the southern and western Midwest and Southeast and anomalies of 3-5 degrees below normal in much of the rest of the Plains, South, and Mid-Atlantic. This outcome would add up to 718 HDDs, 14th coldest March since 1950 and coldest since 1996. The final 30 day outlook, while showing cold across much of the Plains, Midwest, and South, was not nearly cold enough overall.

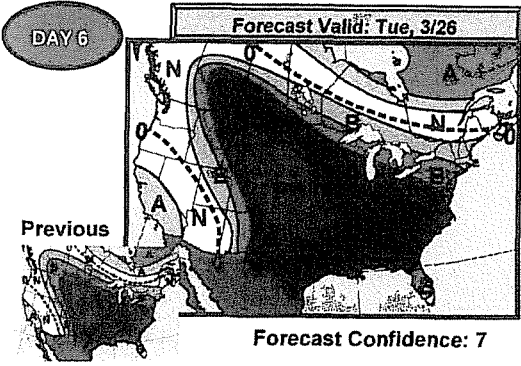


# EarthSat 6-10 Day Forecast—Detailed

Thursday, March 21, 2013 Meteorologist: BH/JS

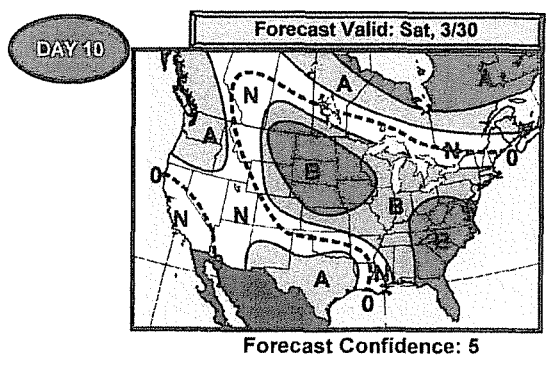
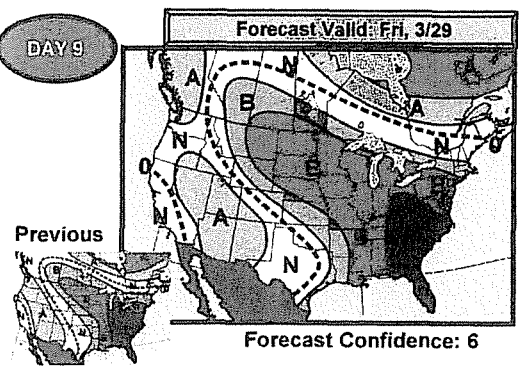
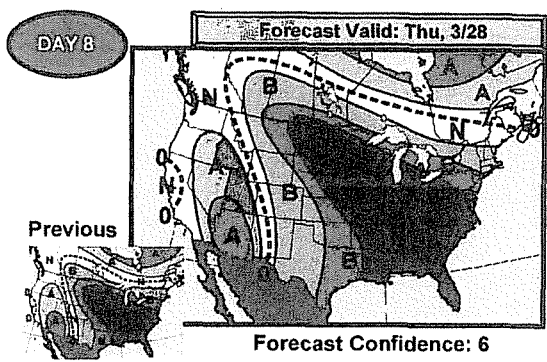
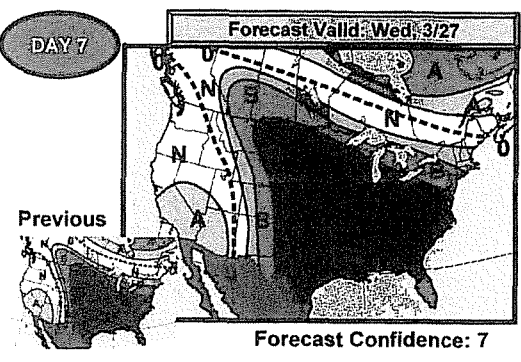


## Forecast: Temperature Deviations



**\*Strong Cold Dominates First Half\***  
**\*No Major Changes This Morning\***

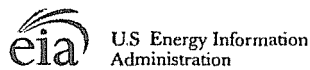
Yesterday's forecast has progressed nicely into today's, with very cold conditions extending from the Rockies to the East Coast and only small detail changes. These much below normal temperatures slowly shift eastward over the course of the period, eventually losing their intensity while settling in the Southeast. Risks are mostly the same as yesterday as well. There is *colder potential with the peak cold at the onset of the period*. Marginal warmer risks can be found in the Interior West at mid-period and Texas late, although the warmer risk in Texas holds less confidence as some models are slower with the departure of the cold.



- A +3F to +4F
  A +5F to +7F
  MA +8F to +14F
  SA +15 or Higher
- B -3F to -4F
  B -5F to -7F
  MB -8F to -14F
  SB -15 or Lower



Weekly Natural Gas Storage Report - EIA



Weekly Natural Gas Storage Report

for week ending March 15, 2013. | Released: March 21, 2013 at 10:30 a.m. | Next Release: March 28, 2013

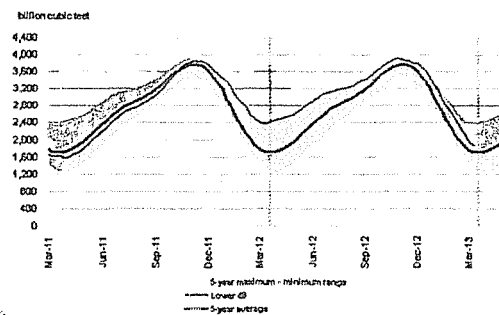
Region	Stocks billion cubic feet (Bcf)			Year ago (03/15/12)		5-Year average (2008-2012)	
	03/15/13	03/08/13	change	(Bcf)	% change	(Bcf)	% change
East	703	830	-47	1,650	-25.4	762	2.8
West	330	339	0	346	-2.0	262	20.4
Producing	754	769	-15	682	-23.2	691	9.1
Salt	180	175	5	231	-22.1	114	57.9
Nonseal	574	594	-20	751	-23.6	577	-0.5
<b>Total</b>	<b>1,876</b>	<b>1,930</b>	<b>-62</b>	<b>2,578</b>	<b>-21.1</b>	<b>1,714</b>	<b>9.5</b>

Reclassifications from base gas to working gas resulted in increased working gas stocks of approximately 4 Bcf for the week ending March 15, 2013 in Producing Region salt dome facilities.

Summary

Working gas in storage was 1,876 Bcf as of Friday, March 15, 2013, according to EIA estimates. This represents a net decline of 62 Bcf from the previous week. Stocks were 502 Bcf less than last year at this time and 162 Bcf above the 5-year average of 1,714 Bcf. In the East Region, stocks were 21 Bcf above the 5-year average following net withdrawals of 47 Bcf. Stocks in the Producing Region were 63 Bcf above the 5-year average of 691 Bcf after a net withdrawal of 15 Bcf. Stocks in the West Region were 77 Bcf above the 5-year average after no net change. At 1,876 Bcf, total working gas is within the 5-year historical range.

Working gas in underground storage compared with the 5-year maximum and minimum



Source: U.S. Energy Information Administration

Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly period from 2008 through 2012.

Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

## Storage

### **PIRA Gas Flash Weekly Special: Storage Update—3/18/2013**

If the latest weather outlook is accurate, this March will be the coldest since 1995 and the heaviest March storage draw since 2002. Due to unexpectedly large draws, front-month NYMEX prices have soared from the mid-\$3.60 to a high of almost \$4/MMBtu. "In PIRA's view, an already bullish fundamental landscape has become even more constructive due to massive pending 2Q13 Y/Y storage deficits. In short, still higher prices seem likely to be on the horizon to deal with such a wide storage gap at the onset of the injection season." For March as a whole, the latest weather forecast would push HDDs up to 710-720 or 20% above the 10-year normal.

### **145-Bcf Storage Draw Widens Year-On-Year Deficit—3/15/2013**

Larger than expected storage withdrawals and the continued cold weather have enabled futures prices to gain 8% so far this month. Teri Viswanath of BNP Paribas states "While end-of-season inventories are much more manageable than we anticipated at the start of the year, we are growing increasingly concerned that the fundamentals might not support these gains as the industry transitions into the injection season. Ironically, the more prices recover (as result of the growing year-over-year storage deficit or perceived tightness in the balances) the more likely it is that the supply/demand balances will loosen this summer."

**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**February 22, 2013 Release**

Jan-11		Jan-12		Jan-13		Jan-14	
Feb-11		Feb-12		Feb-13		Feb-14	
Mar-11		Mar-12		Mar-13		Mar-14	
Apr-11		Apr-12		Apr-13		Apr-14	
May-11		May-12		May-13		May-14	
Jun-11		Jun-12		Jun-13		Jun-14	
Jul-11		Jul-12		Jul-13		Jul-14	
Aug-11		Aug-12		Aug-13		Aug-14	
Sep-11		Sep-12		Sep-13		Sep-14	
Oct-11		Oct-12		Oct-13		Oct-14	
Nov-11		Nov-12		Nov-13		Nov-14	
Dec-11		Dec-12		Dec-13		Dec-14	
Average 2011	\$	Average 2012	\$	Average 2013	\$	Average 2014	\$
Summer 2011	\$	Summer 2012	\$	Summer 2013	\$	Summer 2014	\$
Winter 2011-2012	\$	Winter 2012-2013	\$	Winter 2013-2014	\$		

**North American Gas Forecast Monthly**

February 22, 2013

**NATURAL GAS**

**U.S. GAS PRICE SCORECARD: APRIL 2013 – OCTOBER 2013**

Bearish Neutral Bullish

Supply	Outlook	Commentary
<b>Lower 48 Gas Production</b>		For the second consecutive month, our near-term view has turned neutral from bearish, reflecting the increasing probability of little or no sequential production growth, which translates to sub-1 BCF/D Y/Y growth. This is in striking contrast to last year's Y/Y gains often several times that size until 4Q. The extent to which January's nearly 4 BCF/D Y/Y decline revealed future structural trends remains to be seen.
<b>Canadian Production/Exports</b>		Canadian Y/Y storage deficits are expected to enlarge by almost 80 BCF by end-February, and a further increase is likely in the month ahead given last year's anomalous zero net draw. Less supply for exports (domestic production less domestic demand), coupled with the storage deficit, should cause a sizable Y/Y shortfall of net exports.
<b>U.S. Storage Levels</b>		After a slow start, this month's heating loads have picked up considerably to trump Y/Y EG sector declines from less coal-to-gas switching. Resulting end-February storage deficits of nearly 350 BCF look poised to reach 500 BCF by end-March. Factor Y/Y injection season stock builds of 2.0-2.5 BCF/D would be needed to erase such a deficit by end-October.
Demand	Outlook	mentary
<b>Electric Generation (EG)</b>		Higher Y/Y gas prices are taking a major toll on gas EG so far this year due to less coal-to-gas substitution. For the full 2013 injection season, gas demand losses from reverse substitution are projected to average -3 BCF/D, a slightly higher volume than expected for 1Q13.
<b>Industrial Sector</b>		During 2H12, gas demand (ex. heating) jumped Y/Y by a hefty 4.7%, a notable pickup from 3% in 1H12. But full-year gas-intensive IP gained only 2.2%. Stronger gas-intensive exports and a pickup in business inventories look like plausible bullish factors in 2013.
<b>Residential/Commercial (R/C)</b>		For Jan/Feb. 2013, R/C heating is projected to increase by -4 BCF/D (-240 BCF), with an even larger 5-6 BCF/D gain in March based on an assumed 5% shortfall in GWHDD relative to a 10-year normal. In 2012, March was by far the most anomalously mild month.
Gas Prices	Outlook	ry
<b>April 2013 – October 2013</b>		Since last month, gas fundamentals generally have been price supportive except for bearish surprises in some weekly EIA storage reports. The trading market's bearish sentiments appear heavily influenced by producers anxious to hedge against lower prices from a very low starting point, and the reluctance of large consumers to hedge against higher prices. Ultimately, we expect storage deficits to cause these sentiments to shift to a more balanced view of price risks.

**NYMEX Prices and Speculation**

In the case of reported NYMEX/ICE noncommercial holdings, the hot money funds have increased their long futures position by more than the concurrent rise in shorts, leaving the large traders collectively long by more than 47,000 contracts as of last Tuesday. That marks a decided shift relative to a net short position as recent as mid-January. The overall long futures position of -485,000 lots is also at a record-high, having surpassed the former May 2012 peak of -455,000 lots. The impact of net non-commercial buying, though, has been countered by commercial selling by producers and swap dealers.

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## **Price Projections**

### **CERI Predicts Henry Hub Gas Prices may Average Around \$6/MMBtu by 2017—3/15/2013**

Henry Hub gas prices could average around \$6/MMBtu by 2017 and approach \$8/MMBtu by 2030 under the most bullish of four scenarios presented by CERA. On the other end of the spectrum is the “nowhere fast” scenario, according to CERA Henry Hub prices will be in the \$3-\$3.50/MMBtu range through 2030. Under the two other scenarios, prices rise to \$4.00/MMBtu and \$6.000/MMBtu by 2020.

### **Wisconsin Utility Sees More Coal Use in 2013, Citing Higher Gas Prices—3/13/2013**

Wisconsin Electric Power expects to generate more electricity from coal this year as natural gas prices continue to trend upward. During 2012 coal accounted for 43% of electric generation. WEP ran a 1,150-MW gas plant during 2012 as a base-load plant due to all-time low gas prices. Coal power is forecasted to make a strong resurgence to 56% of generation in 2013 resulting from higher gas prices and more normal summer weather.

### **Gas Prices Could Hit \$3.13/MMBtu this Spring, Summer—3/8/2013**

According to Weissman, the \$3.13/MMBtu price might be the best opportunity for energy consumers to cover their gas positions for the next two to three years. The gas market is “on the cusp of far-reaching changes”. Those changes include LNG exports, increased restrictions on coal-fired plants, reemergence of climate change legislation, and gas demand from the US transportation sector.

## **Miscellaneous Information**

### **Marcellus Firms Tout Profits Even with Low Prices—3/20/2013**

The only optimistic natural gas players at the Howard Weil Energy Conference this week had one thing in common: the Marcellus Shale. Range Resources a Marcellus pioneer has costs of \$2/Mcf to get gas out of the ground and has about 75% of its production hedged at \$4.16/MMBtu. Another Marcellus producer EQT has 6 TCF of proved reserves in Marcellus and is making 53% profits at \$4/Mcf.

According to Range, the future is bright "We're going to take market share from coal, Petchems are converting to ethane vs. naphtha from oil, and LNG is going to happen."

### **Bet on Natural Gas Tempered by Volatility Concerns—3/19/2013**

Southern Company has made a big bet on natural gas for power generation, but is cautious about overreliance on the fuel because of concern about price volatility due to exports and increased demand. Southern has increased the use of gas to fuel electric generation from 11% to 47% in the last five to six years. At the same time, coal's share has declined to 35% from 70%. "I am an enormous fan of natural gas, make no mistake, but I'm very public about being a little bit cautious about putting too many of our eggs in the very attractive basket." According to Southern's CEO.

Duke Energy's CEO in late February told analysts the company is exploring increasing its gas hedging activities and is concerned state regulators will push for an overreliance on gas-fired generation. Duke would like to have the following fuel mix: 1/3 coal, 1/3 gas, and 1/3 nuclear and renewable.

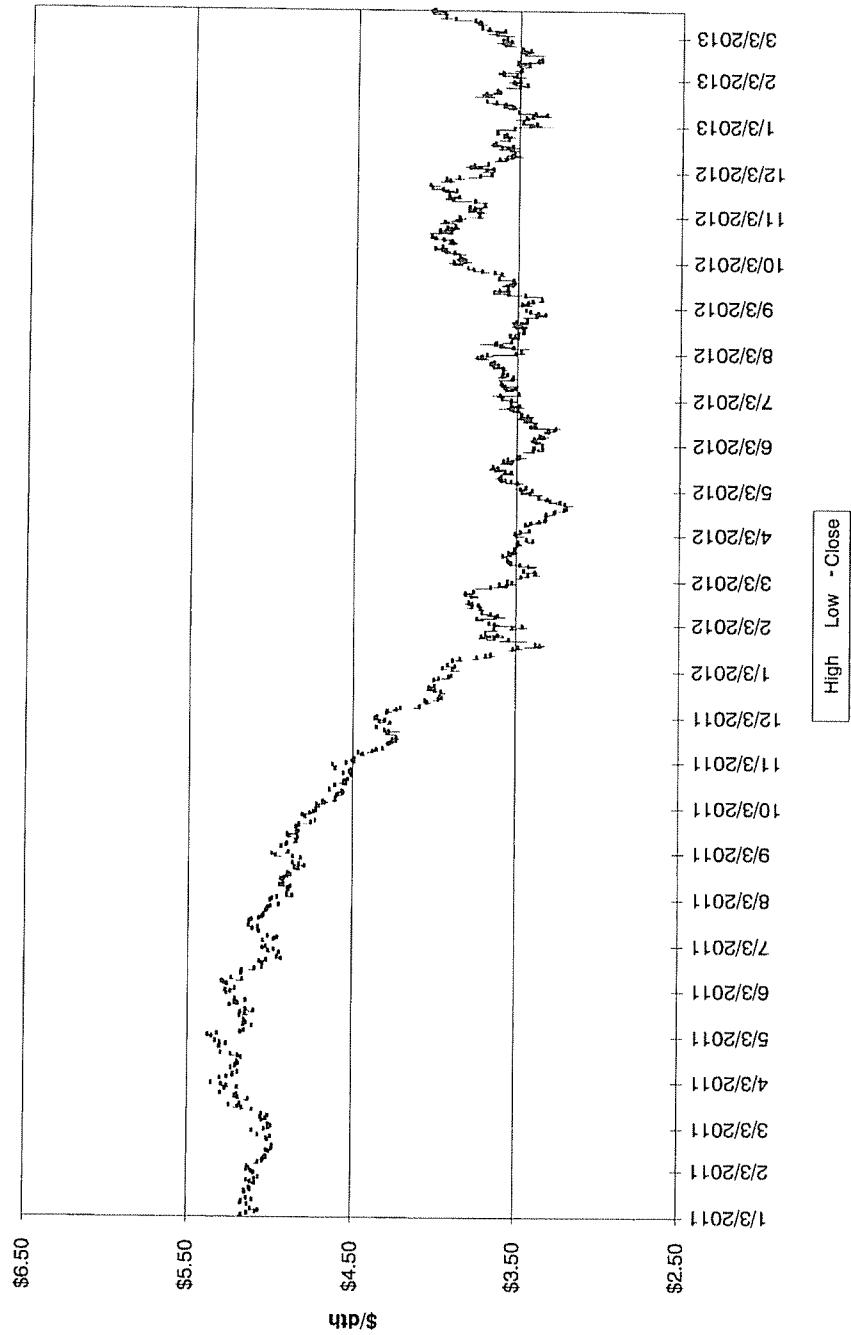
### **Shell Plan Seen Opening Door to Broad NGV Use—3/6/2013**

Shell's plan to build two projects to supply LNG to heavy trucks and large ships in the US and Canada bring large-scale usage of LNG as a transportation fuel closer to reality. The Gulf Coast project will supply LNG along the Mississippi River, the Intracoastal Waterway and to the Gulf of Mexico. The Great Lakes project will supply LNG to the Great Lakes, their bordering US states and Canadian provinces and the St. Lawrence Seaway.

**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**March 12, 2013 Release**

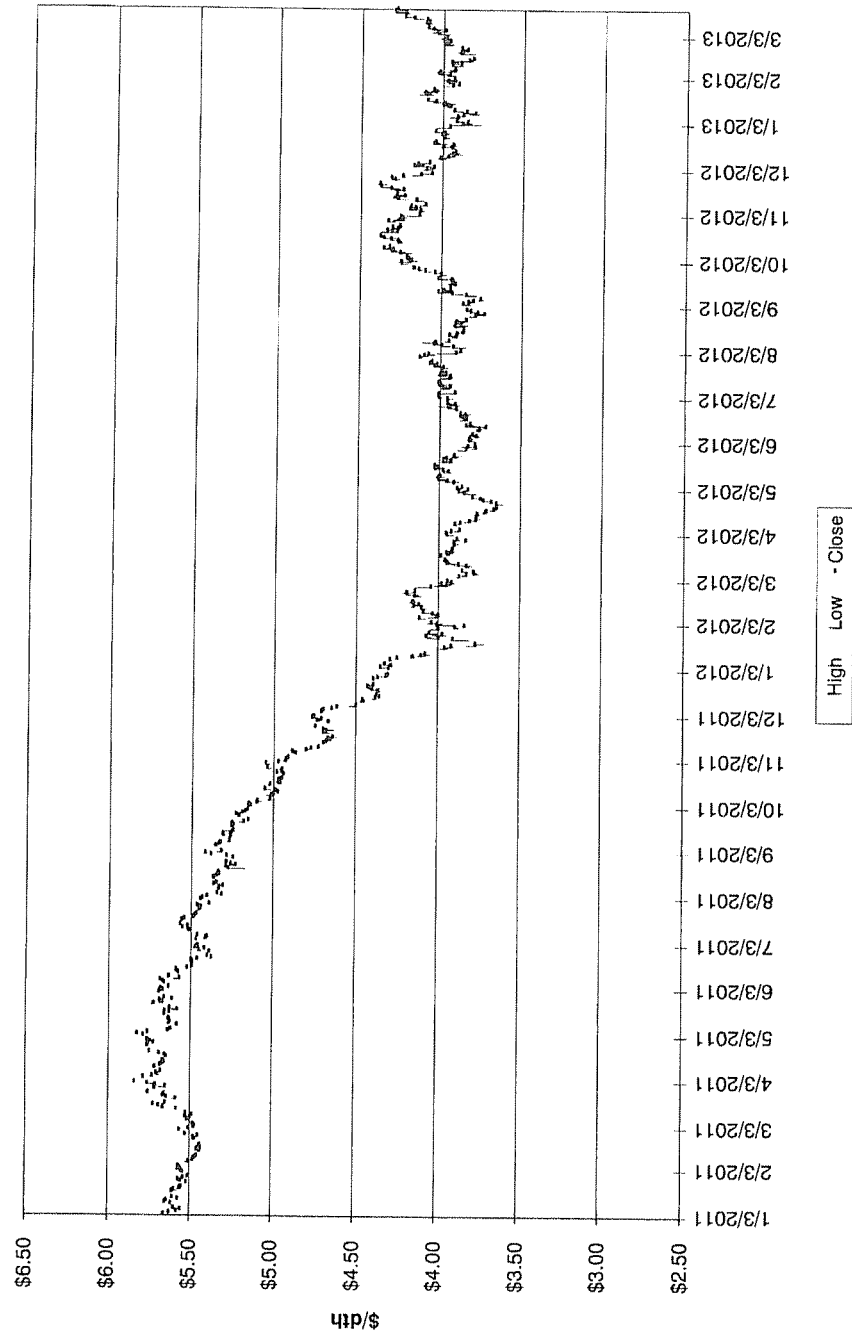
Jan-11	4.49	Jan-12	2.67	Jan-13	3.33	Jan-14	3.73
Feb-11	4.09	Feb-12	2.50	Feb-13	3.33	Feb-14	3.66
Mar-11	3.97	Mar-12	2.18	Mar-13	3.42	Mar-14	3.52
Apr-11	4.25	Apr-12	1.95	Apr-13	3.35	Apr-14	3.42
May-11	4.31	May-12	2.43	May-13	3.24	May-14	3.47
Jun-11	4.55	Jun-12	2.46	Jun-13	3.29	Jun-14	3.59
Jul-11	4.42	Jul-12	2.95	Jul-13	3.39	Jul-14	3.56
Aug-11	4.05	Aug-12	2.84	Aug-13	3.43	Aug-14	3.61
Sep-11	3.90	Sep-12	2.85	Sep-13	3.43	Sep-14	3.64
Oct-11	3.56	Oct-12	3.32	Oct-13	3.47	Oct-14	3.71
Nov-11	3.24	Nov-12	3.54	Nov-13	3.54	Nov-14	3.77
Dec-11	3.17	Dec-12	3.34	Dec-13	3.65	Dec-14	3.90
Average 2011	\$ 4.000	Average 2012	\$ 2.753	Average 2013	\$ 3.406	Average 2014	\$ 3.632
Summer 2011	\$ 4.149	Summer 2012	\$ 2.686	Summer 2013	\$ 3.371	Summer 2014	\$ 3.571
Winter 2011 2012	\$ 2.752	Winter 2012 2013	\$ 3.392	Winter 2013 2014	\$ 3.620		

Summer Strip 2013

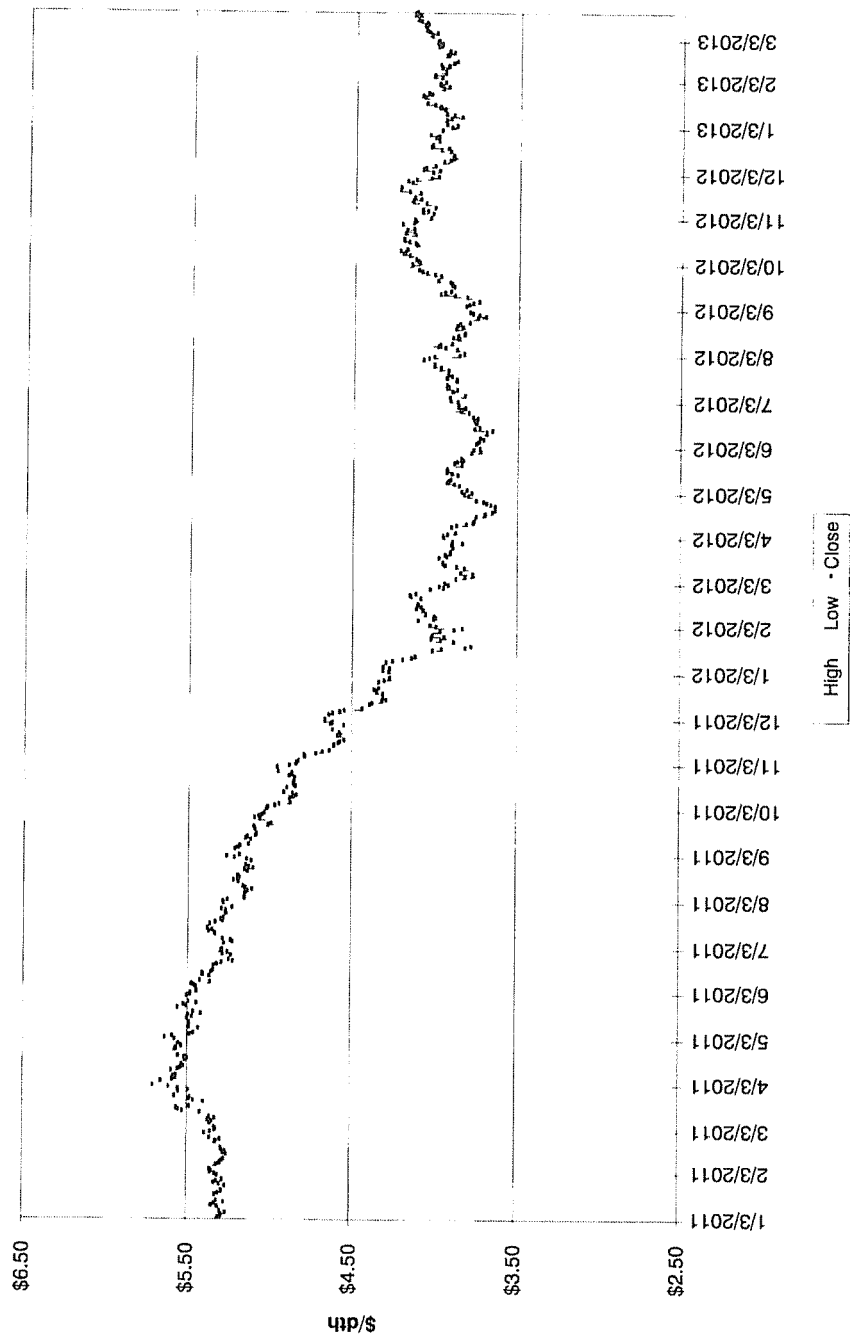




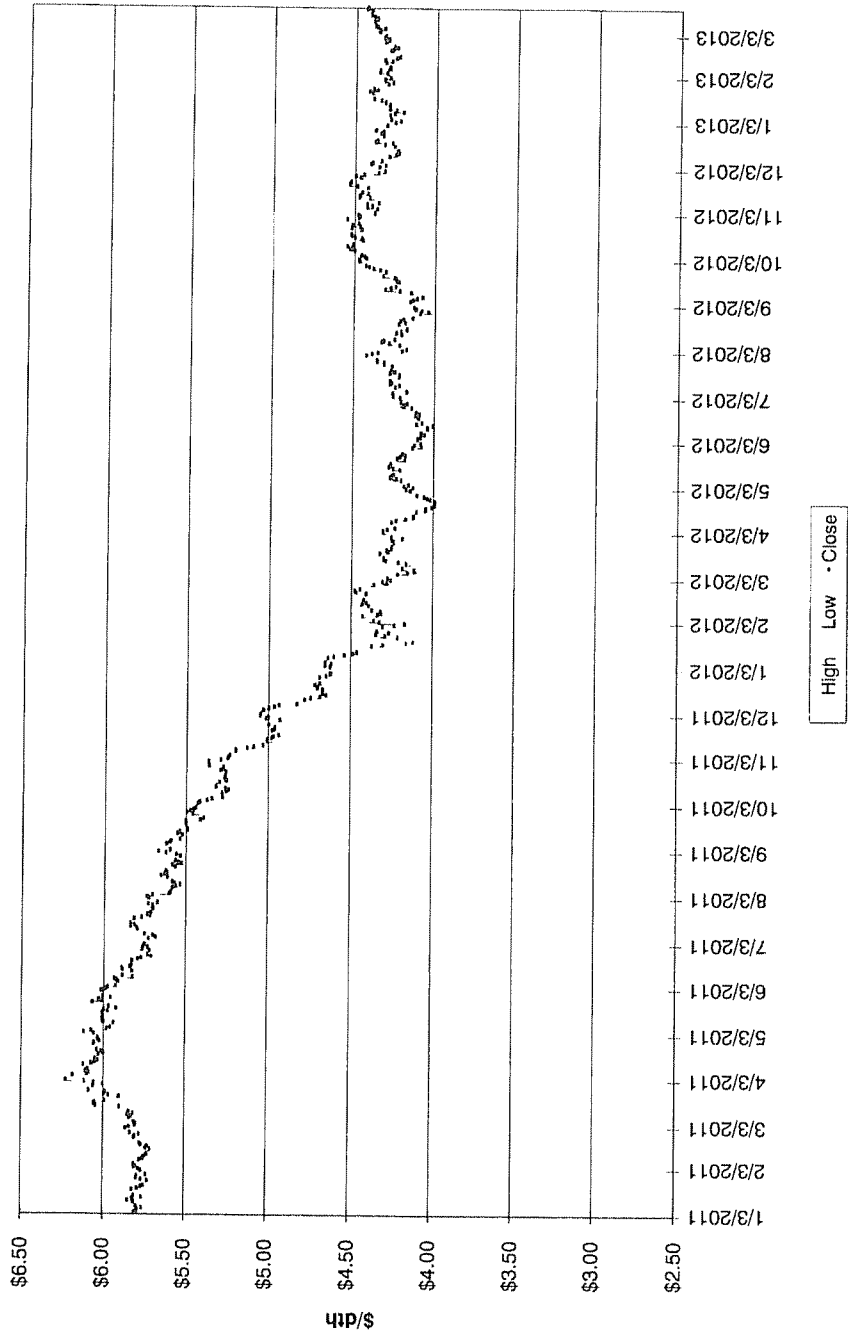
Winter Strip Nov13 - Mar14

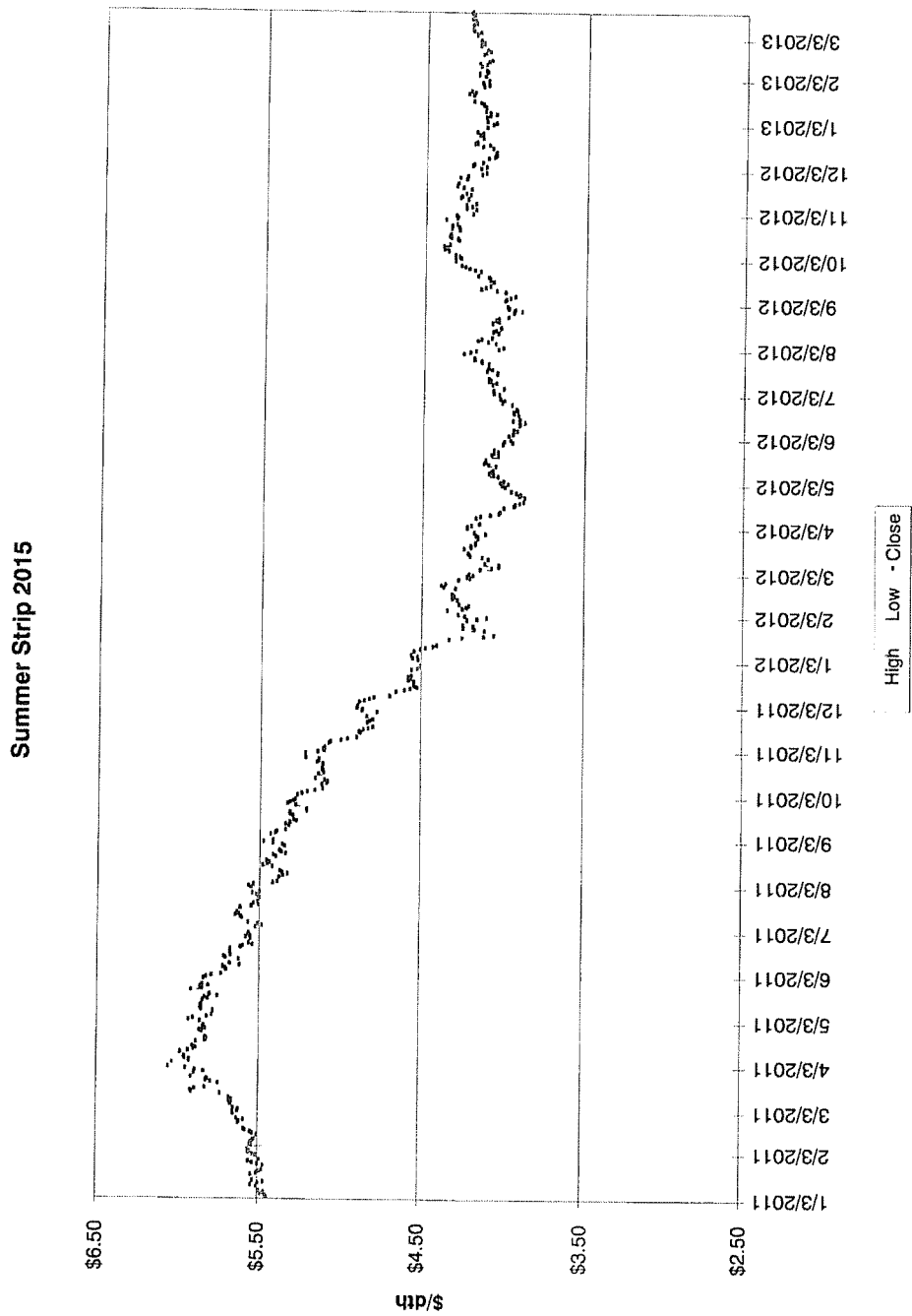


Summer Strip 2014

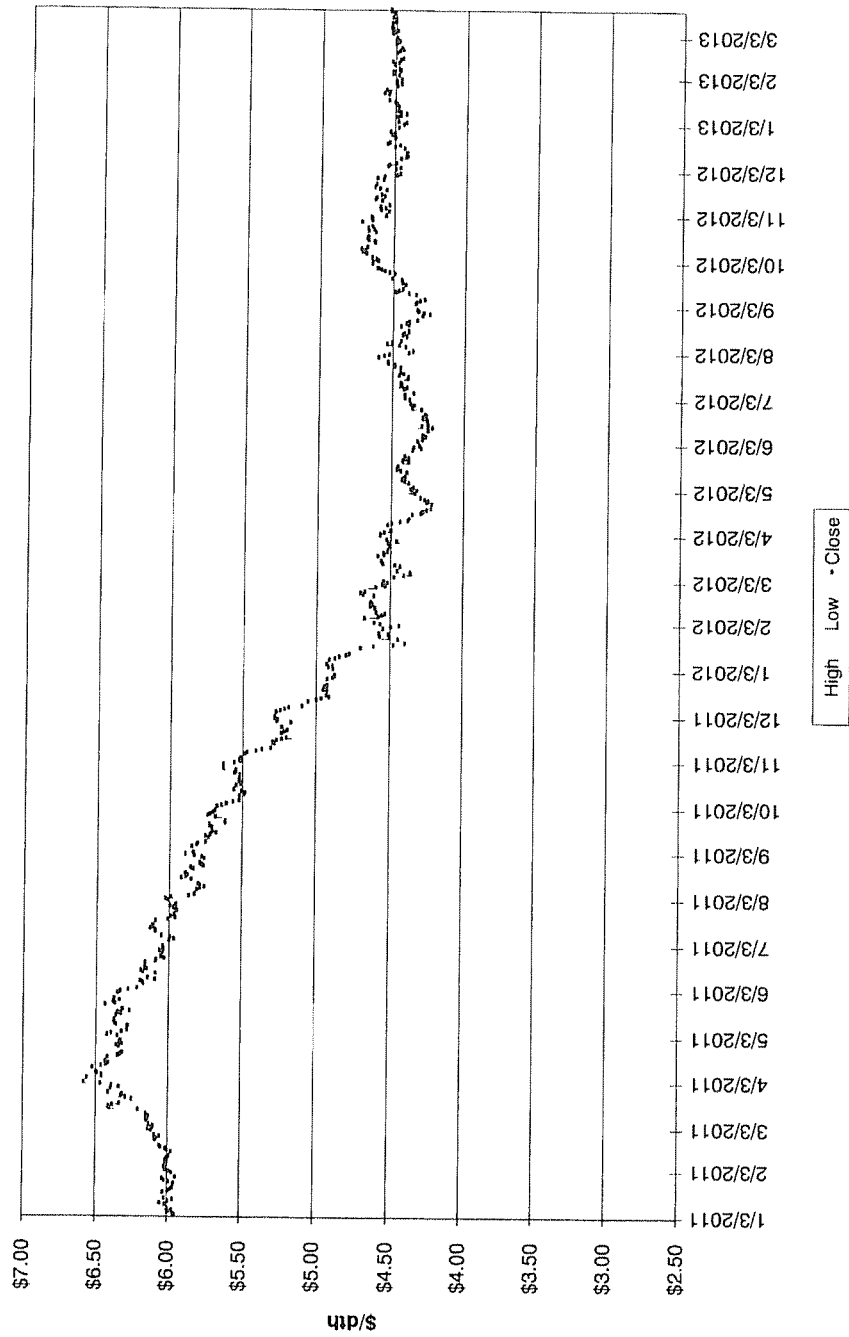


Winter Strip Nov14 - Mar15





Winter Strip Nov15 - Mar16





*Independent Statistics & Analysis*

## U.S. Energy Information Administration

### Short-Term Energy Outlook (STEO)

#### Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that natural gas consumption will average 70.0 Bcf/d in both 2013 and 2014. Forecasts for closer-to-average winter temperatures in 2013 and 2014 (compared with the record-warm temperatures in 2012) lead to increases in natural gas used for residential and commercial space heating. The projected increase in natural gas prices contributes to a decline in natural gas used for electric power generation from 25.0 Bcf/d in 2012 to 23.1 Bcf/d in 2013 and 22.7 Bcf/d in 2014.

**U.S. Natural Gas Production and Imports.** Projected natural gas marketed production increases from 69.1 Bcf/d in 2012 to 69.6 Bcf/d in 2013, and remains flat in 2014. Onshore production increases slightly over the forecast period, while GOM production declines. Natural gas pipeline gross imports, which have declined over the last five years, are projected to remain near their 2012 level over the forecast period. Liquefied natural gas (LNG) imports are expected to remain at minimal levels of less than 0.5 Bcf/d in both 2013 and 2014.

**U.S. Natural Gas Inventories.** As of March 1, 2013, working gas stocks totaled 2,083 Bcf, which is 361 Bcf less than at the same time in 2012, but 269 Bcf greater than the five-year (2008-12) average. EIA expects an end-of-March level of just under 2,000 Bcf, which is less than the unusually high 2,477 Bcf at the end of March 2012, but still well above the five-year average of 1,726 Bcf.

#### Crude Oil Prices

EIA expects that the Brent crude oil spot price, which averaged \$112 per barrel in 2012 and rose to \$119 per barrel in early February 2013, will average \$108 per barrel in 2013 and \$101 per barrel in 2014. The projected discount of West Texas Intermediate (WTI) crude oil to Brent, which increased to a monthly average of more than \$20 per barrel in February 2013, will average \$16 per barrel in 2013 and \$9 per barrel in 2014, as planned new pipeline capacity lowers the cost of moving mid-continent crude oil to the Gulf Coast refining centers.