



DUKE ENERGY CORPORATION

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**VIA OVERNIGHT DELIVERY**

May 14, 2012

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

RECEIVED

MAY 15 2012

PUBLIC SERVICE  
COMMISSION

Re: **Duke Energy Kentucky, Inc.'s 2012 Natural Gas Hedging Plan**

Dear Mr. Derouen:

Enclosed please find an original and twelve copies of *Duke Energy Kentucky, Inc.'s Application for Approval of New Hedging Plan* and the *Petition of Duke Energy Kentucky, Inc. for Confidential Treatment Contained in the Hedging Report of April 1, 2011 through March 31, 2012*. Also enclosed is one copy of the Confidential Material to be Filed Under Seal as requested in the Petition for Confidential Treatment.

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

Sincerely,

Kristen Cocanougher

cc: Larry Cook (w/enclosures)

COMMONWEALTH OF KENTUCKY

BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF )  
DUKE ENERGY KENTUCKY, INC. TO )  
IMPLEMENT A HEDGING PROGRAM ) CASE NO. 2012-\_\_\_\_\_  
TO MITIGATE PRICE VOLATILITY )  
IN THE PROCUREMENT OF )  
NATURAL GAS )

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**PETITION OF DUKE ENERGY KENTUCKY, INC.  
FOR CONFIDENTIAL TREATMENT OF INFORMATION CONTAINED IN  
THE ANNUAL REPORT ON HEDGING ACTIVITY FOR APRIL 1, 2011  
THROUGH MARCH 31, 2012,  
AND REPORT ON ONGOING GAS HEDGING ACTIVITY FOR FUTURE GAS  
DELIVERIES**

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Duke Energy Kentucky, Inc. (Duke Energy Kentucky), pursuant to 807 KAR 5:001, Section 7, respectfully requests the Commission to classify and protect as confidential certain information that is contained in its Annual Report on Hedging Activity for April 1, 2011 through March 31, 2012 and Report on Ongoing Gas Hedging Activity for Future Gas Deliveries in this proceeding, which is being filed contemporaneously with this petition. In support thereof, Duke Energy Kentucky states:

1. Duke Energy Kentucky has filed today documents containing sensitive and confidential information relating to the volumes of gas that Duke Energy Kentucky purchased through the use of hedging instruments for its hedging plan. Disclosure of this information would damage Duke Energy Kentucky by alerting suppliers as to how much gas Duke Energy Kentucky intends to purchase through hedging instruments at any

particular point in time, which could allow suppliers to raise the cost of their hedging instruments to Duke Energy Kentucky, thus making it more costly to Duke Energy Kentucky to acquire hedging instruments for future gas supply. As required by 807 KAR 5:001, Section 7(2)(b), Duke Energy Kentucky is providing one copy of the hedging program volume information under seal.

2. Certain attachments contain copyrighted documents published by PIRA Energy Group not available for reproduction to the general public. This information is subject to copyright protection and has been obtained through paid company subscriptions.

3. The Kentucky Open Records Act exempts from disclosure certain commercial information. KRS 61.878 (1)(c). To qualify for this exemption and, therefore, maintain the confidentiality of the information, a party must establish that disclosure of the commercial information would permit an unfair advantage to competitors of that party.

4. The hedging volume information described above contains sensitive commercial information, the disclosure of which would injure Duke Energy Kentucky for the reasons stated above. Duke Energy Kentucky's purchases of hedging instruments are confidential. Public release of this information would allow other suppliers to have access to this information and could enable such suppliers to charge higher prices to Duke Energy Kentucky for hedging instruments. The Commission previously granted confidential treatment to similar information on March 31, 2011.

5. The information for which Duke Energy Kentucky is seeking confidential treatment is not known outside of Duke Energy Kentucky, and it is not disseminated

within Duke Energy Kentucky except to those employees with a legitimate business need to know and act upon the information.

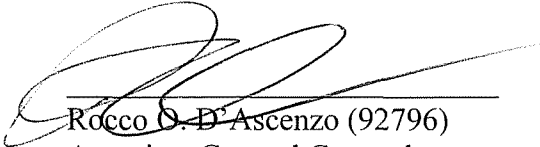
6. This information was, and remains, integral to Duke Energy Kentucky's effective execution of business decisions. And such information is generally regarded as confidential or proprietary. Indeed, as the Kentucky Supreme Court has found, "information concerning the inner workings of a corporation is generally accepted as confidential or proprietary." *Hoy v. Kentucky Industrial Revitalization Authority, Ky.*, 904 S.W.2d 766, 768.

7. The public interest will be served by granting this Petition, in that Duke Energy Kentucky's ability to obtain low cost gas supplies will be fostered and the cost of gas to Duke Energy Kentucky's customers will thereby be minimized.

WHEREFORE, Duke Energy Kentucky respectfully requests that the Commission classify and protect as confidential the specific information described herein.

Respectfully submitted,

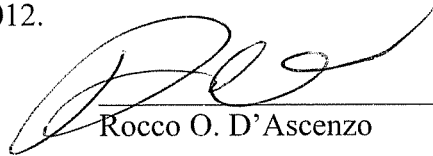
DUKE ENERGY KENTUCKY, INC.



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CERTIFICATE OF SERVICE

I certify that a copy of the foregoing Petition for Confidential Treatment was served to the parties listed below by regular United States mail, postage prepaid, this 10<sup>th</sup> day of May 2012.

  
\_\_\_\_\_  
Rocco O. D'Ascenzo

Hon. Larry Cook  
Assistant Attorney General  
Capital Center Drive, Suite 200  
Frankfort, Kentucky 40601-8204

**BEFORE THE KENTUCKY  
PUBLIC SERVICE  
COMMISSION**

**RECEIVED**

**MAY 15 2012**

**PUBLIC SERVICE  
COMMISSION**

**Annual Report on Hedging Activity  
For April 1, 2011 – March 31, 2012  
And Report on Hedging Activity  
For Future Gas Deliveries**

**By  
Duke Energy Kentucky**

**May, 2012**

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 2012 is attached, along with the information reviewed during each meeting (see Attachment A).

A summary of the amounts hedged for delivery during the 12 months ended March 31, 2012 and hedged prior to March 31, 2012 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 a hedging agreement each time.

Strike Date	Supplier	Type	Price Per Dth	Delivery Point	Volume Dth/day	Month(s)	Seasonal Volume
<b>Summer 2011</b>							
4/8/2009*		Fixed		CGT-M		Nov 09 – Oct 11	
9/9/2009*		Fixed		CGT-M		Apr 11 – Mar 12	
11/17/2009*		Fixed		CGT-M		Nov 10 – Oct 12	
6/23/2010**		Collar		CGT-M		Apr 10-- Mar 12	
<b>Winter 2011/12</b>							
9/9/2009*		Fixed		CGT-M		Apr 11 – Mar 12	
11/17/2009*		Fixed		CGT-M		Nov 10 – Oct 12	
6/23/2010**		Collar		CGT-M		Apr 10- Mar 12	
12/20/2010**		Fixed		CGT-M		Nov 11 – Mar 13	
8/10/2011		Fixed		CGT-M		Dec 11 – Mar 12	
<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	

Strike Date	Supplier	Type	Price Per Dth	Delivery Point	Volume Dth/day	Month(s)	Seasonal Volume
<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	
01/23/2012		Fixed		CGT-M		Nov 13 – Mar 15	
<b>Summer 2014</b>							
01/23/2012		Fixed		CGT-M		Nov 13 – Mar 15	
<b>Winter 2014/15</b>							
01/23/2012		Fixed		CGT-M		Nov 13 – Mar 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

[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, 2012	Total System Supply	Total Hedged	% Hedged	% Hedged And Storage*
Summer 2011				
Winter 2011/12				
Summer 2012				
Winter 2012/13				
Summer 2013				
Winter 2013/14				
Summer 2014				
Winter 2014/15				

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

**Winter 2011-12 Fixed Price with [REDACTED] and 2 Year Fixed Price with [REDACTED] – August 10, 2011**

During the hedging meeting on July 28, 2011, discussion focused on the fundamentals including weather (Tropical Storm Don), storage inventory levels, PIRA (early bird 2012 forecast) 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, and current positions in the



Hedging Program. Significant discussion took place around the impact of the Federal government debt ceiling on gas prices. The decision was made not to hedge additional volumes; however, at that time it was stated to monitor the market for significant price movements. On August 8, 2011, Jim Mehring, Jeff Kern and Steve Niederbaumer met to discuss additional hedging in light of current market conditions. NYMEX prices for November 2011—March 2012 strip decreased significantly from the July 28, 2011 meeting of \$4.624 to \$4.286 based on August 8<sup>th</sup> price levels. Discussion focused on the volatility in the financial markets, the current heat wave and its impact on storage levels and the return to more normal weather. After discussion, a determination was made to hedge additional volumes. Discussed several hedging opportunities and determined to hedge [REDACTED] Dth/day for December 2011 through March 2012 converting a FOMI base gas to a fixed price and hedge [REDACTED] Dth/day for April 2012 through March 2014. Contacted [REDACTED] to convert FOMI base gas to a fixed price on [REDACTED] [REDACTED] and contacted [REDACTED] to gauge their interest in bidding on the Duke Energy Kentucky volumes. (Similar deals were priced for Duke Energy Ohio on August 9, 2011 and earlier on August 10, 2011.) [REDACTED] responded with a price of \$ [REDACTED] for [REDACTED] Dth/day for December 1, 2011 through March 31, 2012. [REDACTED] responded with a price of \$ [REDACTED] for [REDACTED] Dth/day, April 2012 through March 2014. After review of the market both bids were accepted.

The EIA storage report released on August 4, 2011 indicated that as of July 29, 2011, total U.S. amount of gas in storage was 2,758 Bcf (71% full), which was 186 Bcf lower than the previous year and 68 Bcf lower than the five-year average. Duke Energy Kentucky's storage with [REDACTED] was approximately [REDACTED] Bcf ([REDACTED] full).

The table below compares the futures price data for August 10th with the most recently available forecasts from PIRA and EIA and the locked in price that Duke Energy Kentucky agreed to pay [REDACTED] for base gas to be delivered December 1, 2011 through March 31, 2012 at Columbia Gulf Mainline.

	Dec 11	Jan 12	Feb 12	Mar 12	Weighted Average
<b>Price Forecasts</b>					
PIRA (7/26/11)	\$4.90	\$5.00	\$4.90	\$4.80	<b>\$4.900</b>
EIA (8/09/11)	\$4.32	\$4.43	\$4.33	\$4.29	<b>\$4.343</b>
<b>NYMEX (8/10/2011)</b>					
High	\$4.405	\$4.500	\$4.500	\$4.470	<b>\$4.468</b>
Low	\$4.402	\$4.497	\$4.497	\$4.467	<b>\$4.465</b>
Close	\$4.402	\$4.497	\$4.497	\$4.467	<b>\$4.465</b>
<b>Fixed Price (8/10/2011)</b>					
Iberdrola ([REDACTED] dth/day 12/1/11—3/31/12)					[REDACTED]

The table below compares the futures price data for August 10th with the most recently available forecasts from PIRA and EIA and the locked in price that Duke Energy Kentucky agreed to pay [REDACTED] for base gas to be delivered April 1, 2012 through March 31, 2014 at Columbia Gulf Mainline. Please note that PIRA's and EIA's forecasts do not cover the entire term.

Month	Price Forecasts		NYMEX Futures Price			Fixed Price
	PIRA	EIA	High	Low	Close	
Apr 12	\$4.700	\$4.240	\$4.425	\$4.418	\$4.418	
May 12	\$4.700	\$4.170	\$4.450	\$4.443	\$4.443	
Jun 12	\$4.800	\$4.150	\$4.475	\$4.474	\$4.474	
Jul 12	\$4.800	\$4.170	\$4.515	\$4.512	\$4.512	
Aug 12	\$4.700	\$4.370	\$4.535	\$4.535	\$4.535	
Sep 12	\$4.300	\$4.440	\$4.540	\$4.539	\$4.539	
Oct 12	\$4.400	\$4.620	\$4.575	\$4.569	\$4.569	
Nov 12	\$4.600	\$4.730	\$4.739	\$4.713	\$4.725	
Dec 12	\$4.700	\$5.020	\$4.987	\$4.934	\$4.950	
Jan 13			\$5.100	\$5.069	\$5.077	
Feb 13			\$5.054	\$5.049	\$5.049	
Mar 13			\$5.000	\$4.980	\$4.980	
Apr 13			\$4.844	\$4.799	\$4.812	
May 13			\$4.824	\$4.810	\$4.824	
Jun 13			\$4.856	\$4.846	\$4.856	
Jul 13			\$4.895	\$4.892	\$4.892	
Aug 13			\$4.912	\$4.900	\$4.912	
Sep 13			\$4.917	\$4.917	\$4.917	
Oct 13			\$4.952	\$4.939	\$4.952	
Nov 13			\$5.086	\$5.086	\$5.086	
Dec 13			\$5.331	\$5.313	\$5.313	
Jan 14			\$5.427	\$5.427	\$5.427	
Feb 14			\$5.396	\$5.396	\$5.396	
Mar 14			\$5.313	\$5.300	\$5.313	
2 Yr. Wtd. Ave.						

**Summer 2012 Costless Collar with [REDACTED] and 1 Year Fixed Price with [REDACTED] - October 26, 2011**

During the hedging meeting on October 20, 2011, discussion focused on the fundamentals of the market such as weather (end of the hurricane season), storage levels, PIRA and EIA price forecasts, analyst's forecasts for future price movements, and current position in the Hedging Program. Significant discussion took place regarding the NYMEX pricing for April 2012 through October 2013. Prices for this period were at historical lows. After discussion, it was determined that additional hedging should take place however, per the terms of the Asset Management Agreement, Duke Energy Kentucky is required to give [REDACTED] a chance to bid on supply through October 2012. Since [REDACTED] has not been approved by Duke Energy's Credit Department for hedging transactions greater than one year, the hedge was split into one for the Summer 2012 and one for November 2012 through October 2013. Further, to comply with the Hedging Program, a costless collar would be utilized for the Summer 2012 and a fixed price for November 2012 through October 2013. Suppliers were contacted to determine interest in a Costless Collar for the Summer 2012 strip ([REDACTED] Dth/day) and a one year Fixed Price deal ([REDACTED] Dth/day). Three suppliers were contacted and asked to provide a floor for a ceiling set at [REDACTED]. The results were: [REDACTED] --\$[REDACTED], [REDACTED] --\$[REDACTED], [REDACTED] --\$[REDACTED]. [REDACTED] was awarded the Costless Collar. Three suppliers were contacted for the fixed price deal. [REDACTED] was the lowest bidder at \$[REDACTED], with [REDACTED] and [REDACTED] bidding \$[REDACTED] and \$[REDACTED] respectively. The fixed price with [REDACTED] was selected as the lowest bid.

The EIA storage report released on October 13, 2011 indicated that as of October 7, 2011, total U.S. amount of gas in storage was 3,521 bcf (86% full), which was 56 bcf lower than the previous year and 68 bcf higher than the five-year average. Duke Energy Kentucky's storage with [REDACTED] was approximately [REDACTED] ([REDACTED] full).

The table below compares the futures price data for October 26th with the most recently available forecasts from PIRA and EIA and the collared price that Duke Energy Kentucky agreed to pay [REDACTED] for base gas to be delivered April 1, 2012 through October 31, 2012 at Columbia Gulf Mainline. Since a single collar was locked in for all 7 months, a row showing the average price is provided for comparison purposes.

Month	Price Forecasts		NYMEX Futures Price			Collar Price
	PIRA	EIA	High	Low	Close	
Apr 12	\$4.000	\$4.240	\$3.971	\$3.870	\$3.892	[REDACTED]
May 12	\$4.100	\$4.240	\$4.002	\$3.905	\$3.928	
Jun 12	\$4.200	\$4.230	\$4.010	\$3.968	\$3.968	
Jul 12	\$4.300	\$4.220	\$4.055	\$4.014	\$4.014	
Aug 12	\$4.300	\$4.250	\$4.103	\$4.027	\$4.040	
Sep 12	\$4.200	\$4.310	\$4.106	\$4.024	\$4.042	
Oct 12	\$4.300	\$4.470	\$4.153	\$4.068	\$4.080	
<b>Weighted Ave.</b>	<b>\$4.200</b>	<b>\$4.280</b>	<b>\$4.058</b>	<b>\$3.983</b>	<b>\$3.995</b>	
<b>No Cost Collar (10/26/11)</b>						
Floor						[REDACTED]
Ceiling						[REDACTED]

The table below compares the futures price data for October 26th with the most recently available forecasts from PIRA and EIA and the locked in price that Duke Energy Kentucky agreed to pay [REDACTED] for base gas to be delivered November 1, 2012 through October 31, 2013 at Columbia Gulf Mainline. Please note that PIRA's and EIA's forecasts do not cover the entire term.

Month	Price Forecasts		NYMEX Futures Price			Fixed Price
	PIRA	EIA	High	Low	Close	
Nov 12	\$4.400	\$4.550	\$4.240	\$4.228	\$4.228	[REDACTED]
Dec 12	\$4.600	\$4.790	\$4.525	\$4.485	\$4.485	
Jan 13			\$4.635	\$4.627	\$4.627	
Feb 13			\$4.655	\$4.604	\$4.613	
Mar 13			\$4.570	\$4.557	\$4.557	
Apr 13			\$4.451	\$4.435	\$4.449	
May 13			\$4.467	\$4.453	\$4.467	
Jun 13			\$4.497	\$4.474	\$4.497	
Jul 13			\$4.562	\$4.520	\$4.534	
Aug 13			\$4.554	\$4.543	\$4.554	
Sept 13			\$4.558	\$4.538	\$4.558	
Oct 13			\$4.592	\$4.592	\$4.592	
<b>Weighted Ave.</b>						

**Winter 2012-2013 Fixed Price with [REDACTED] and Winter 2013-2014 Fixed Price with [REDACTED] - November 21, 2011**

During the hedging meeting on November 17, 2011, discussion focused on the fundamentals of the market such as weather, storage levels, PIRA and EIA price forecasts, analyst's forecasts 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, and current position in the Hedging Program. Discussion focused on the Winter 2012-2013 and Winter 2013-2014 strips, additional hedging was required prior to March 31, 2012 to meet the minimum amount of hedging per the Hedging Program. Both of these strips have seen in excess of \$0.30 reduction in price since the last meeting and these prices are at historical lows. After discussion, it was determined that additional hedging should take place and the suppliers should be contacted to determine interest in Fixed Price transactions for the Winter 2012-2013 ([REDACTED] Dth/day) and Winter 2013-2014 ([REDACTED] Dth/day). Three suppliers were contacted and told to expect a call from Duke Energy Kentucky at 1:00 pm on November 21, 2011 to price these deals. For the Winter 2012-2013 strip [REDACTED] was the lowest bidder at \$[REDACTED], with [REDACTED] and [REDACTED] bidding \$[REDACTED] and [REDACTED] respectively. The fixed price with [REDACTED] was selected as the lowest bid for the Winter 2012-2013 Fixed Price. For the Winter 2013-2014 strip [REDACTED] was the lowest bidder at \$[REDACTED], with [REDACTED] and [REDACTED] bidding \$[REDACTED] and [REDACTED] respectively. The fixed price with [REDACTED] was selected as the lowest bid.

The EIA storage report released on November 17, 2011 indicated that as of November 11, 2011, total U.S. amount of gas in storage was 3,850 bcf (94% full), which was 14 bcf higher than the previous year and 224 bcf higher than the five-year average. Duke Energy Kentucky's storage with [REDACTED] was approximately [REDACTED] bcf ([REDACTED] full).

The table below compares the futures price data for November 21st with the most recently available forecasts from PIRA and EIA and the locked in price that Duke Energy Kentucky agreed to pay [REDACTED] for base gas to be delivered November 1, 2012 through March 31, 2013 at Columbia Gulf Mainline. Please note that PIRA's and EIA's forecasts do not cover the entire term.

Month	Price Forecasts		NYMEX Futures Price			Fixed Price
	PIRA	EIA	High	Low	Close	
Nov 12	\$4.400	\$4.330	\$3.960	\$3.853	\$3.946	[REDACTED]
Dec 12	\$4.600	\$4.540	\$4.244	\$4.135	\$4.231	
Jan 13			\$4.375	\$4.275	\$4.362	
Feb 13			\$4.350	\$4.350	\$4.350	
Mar 13			\$4.315	\$4.223	\$4.304	
Weighted Ave.						

The table below compares the futures price data for November 21st with the most recently available forecasts from PIRA and EIA and the locked in price that Duke Energy Kentucky agreed to pay [REDACTED] for base gas to be delivered November 1, 2013 through

March 31, 2014 at Columbia Gulf Mainline. Please note that PIRA's and EIA's forecasts were not available for the period November 1, 2013 through March 31, 2014.

Month	NYMEX Futures Price			Fixed Price
	High	Low	Close	
Nov 13	\$4.464	\$4.432	\$4.464	
Dec 13	\$4.700	\$4.642	\$4.700	
Jan 14	\$4.812	\$4.755	\$4.812	
Feb 14	\$4.795	\$4.735	\$4.789	
Mar 14	\$4.714	\$4.714	\$4.714	
Weighted Ave.				

**November 2012-March 2013 Cost Averaging with [REDACTED] – December 16, 2011**

During the hedging meeting on December 15, 2011, discussion focused on the fundamentals of the market such as weather, storage, analyst's forecasts for future price movements, and current positions in the Hedging Program. Significant discussion took place regarding the current NYMEX pricing for the Winter 2012-2013 strip and how to capture its' value. This strip is at an all-time low, currently trading below \$4.00. The Natural Gas Hedging Committee decided that cost averaging would provide the opportunity to lock in today's lower price as well as participate in further declines in pricing by accumulating prices between January 3, 2012 and February 29, 2012. Bids were sought for November 2012 through March 2013 for 4,000 dth per day to be delivered at Columbia Gulf Mainline. [REDACTED], [REDACTED], and [REDACTED] were each contacted by phone on December 16, 2011 requesting a bid. [REDACTED] bid was \$-[REDACTED], [REDACTED] bid was \$-[REDACTED], and [REDACTED] bid was \$-[REDACTED]. [REDACTED] bid was accepted. The price will be the average of the NYMEX closing price for the November 2012, December 2012, January 2013, February 2013 and March 2013 NYMEX contracts from January 3, 2012 through February 29, 2012 minus \$-[REDACTED] for 4,000 dth/day delivered to Columbia Gulf Mainline. The final result was a price of \$-[REDACTED] per dth. (See Attachment B).

**Fixed Price with [REDACTED] – January 23, 2012**

During the hedging meeting on January 19, 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 around the storage levels and the current NYMEX prices (lowest in the last 10 years). Based on this information the Natural Gas Hedging Committee decided to hedge additional gas for the 17 month period November 2013 to March 2015. Duke Energy Kentucky contacted [REDACTED], [REDACTED], and [REDACTED] requested bids on 1,000 dth's/day on Columbia Gulf Mainline for the period beginning November 1, 2013 through March 31, 2015. [REDACTED] was the lowest bidder at \$-[REDACTED], with [REDACTED] and [REDACTED] bidding \$-[REDACTED] and \$-[REDACTED] respectively. The fixed price of [REDACTED] was selected as the lowest bid.

The EIA storage report released on January 19, 2012 indicated that as of January 13, 2012, total U.S. amount of gas in storage was 3,290 bcf (80% full), which was 539

bcf higher than the previous year and 566 bcf higher than the 5-year average. Duke Energy Kentucky's storage with [REDACTED] was approximately [REDACTED] ( [REDACTED] full).

The table below compares the futures price data for January 23rd and the locked in price that Duke Energy Kentucky agreed to pay [REDACTED] for base gas to be delivered November 1, 2013 through March 31, 2015 at Columbia Gulf Mainline. Please note that PIRA's and EIA's forecasts were not available for the period November 1, 2013 through March 31, 2015.

Month	NYMEX Futures Price			Fixed Price
	High	Low	Close	
Nov 13	\$3.714	\$3.498	\$3.705	
Dec 13	\$3.933	\$3.770	\$3.905	
Jan 14	\$4.036	\$3.864	\$4.011	
Feb 14	\$3.994	\$3.965	\$3.994	
Mar 14	\$3.941	\$3.921	\$3.941	
Apr 14	\$3.821	\$3.821	\$3.821	
May 14	\$3.833	\$3.800	\$3.833	
Jun 14	\$3.858	\$3.858	\$3.858	
Jul 14	\$3.894	\$3.880	\$3.894	
Aug 14	\$3.911	\$3.890	\$3.911	
Sep 14	\$3.914	\$3.900	\$3.914	
Oct 14	\$3.946	\$3.946	\$3.946	
Nov 14	\$4.028	\$4.028	\$4.028	
Dec 14	\$4.222	\$4.222	\$4.222	
Jan 15	\$4.320	\$4.320	\$4.320	
Feb 15	\$4.292	\$4.292	\$4.292	
Mar 15	\$4.214	\$4.214	\$4.214	
Weighted Ave.	[REDACTED]			

**Faux Storage Service with [REDACTED] - March 2012**

In February 2012, Duke Energy Kentucky contacted [REDACTED], [REDACTED], [REDACTED], [REDACTED], and [REDACTED] to provide a storage like service for the Winter of 2012/2013. Duke Energy Kentucky requested the suppliers bid on the following proposal:

- Maximum Daily Quantity: from 0 to 20,000 Dth/day
- Term Purchase Quantity: 1,000,000 Dth (must take)
- Delivery Point: Springboro (via ANR or TETCO)

This represents approximately 12% of the estimated load for the Winter of 2012/2013.

For analysis purposes the Commodity cost portion of the total cost was based on NYMEX closing price of the Summer 2012 Strip plus the MichCon basis on February 27, 2012. The results were as follows:

[REDACTED] \$ [REDACTED] /Dth  
[REDACTED] \$ [REDACTED] /Dth

██████████ /Dth  
██████████ /Dth

██████████ 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 2012 through October 2012 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, 2012 gas costs were about \$4.8 million 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 2011**

Supplier	Type	Dth/day	Total Dth	Receipt Point	Hedged Price \$/dth	IFERC FOMI \$/dth	Cost Increase/ (Savings)
<b>April</b>							
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.18	██████████
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.18	██████████
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.18	\$██████████
██████████	Collar (██████████)	██████████	██████████	CGT-M	\$██████████	\$4.18	██████████
<b>May</b>							
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.29	██████████
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.29	██████████
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.29	\$██████████
██████████	Collar (██████████)	██████████	██████████	CGT-M	\$██████████	\$4.29	██████████
<b>June</b>							
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.26	██████████
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.26	██████████
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.26	██████████
██████████	Collar (██████████)	██████████	██████████	CGT-M	\$██████████	\$4.26	██████████
<b>July</b>							
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.30	██████████
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.30	██████████
██████████	Fixed	██████████	██████████	CGT-M	\$██████████	\$4.30	\$██████████
██████████	Collar (██████████)	██████████	██████████	CGT-M	\$██████████	\$4.30	██████████

**Summer Season 2011 (Continued)**

Supplier	Type	Dth/day	Total Dth	Receipt Point	Hedged Price \$/dth	IFERC FOMI \$/dth	Cost Increase/ (Savings)
<b>August</b>							
	Fixed			CGT-M		\$4.32	
	Fixed			CGT-M		\$4.32	
	Fixed			CGT-M		\$4.32	
	Collar ( )			CGT-M		\$4.32	
<b>September</b>							
	Fixed			CGT-M		\$3.81	
	Fixed			CGT-M		\$3.81	
	Fixed			CGT-M		\$3.81	
	Collar ( )			CGT-M		\$3.81	
<b>October</b>							
	Fixed			CGT-M		\$3.67	
	Fixed			CGT-M		\$3.67	
	Fixed			CGT-M		\$3.67	
	Collar ( )			CGT-M		\$3.67	
<b>Season Total</b>							

**Winter Season 2011-12**

Supplier	Type	Dth/day	Total Dth	Receipt Point	Hedged Price \$/dth	IFERC FOMI \$/dth	Cost Increase/ (Savings)
<b>November</b>							
	Fixed			CGT-M		\$3.46	
	Fixed			CGT-M		\$3.46	
	Collar ( )			CGT-M		\$3.46	
	Fixed			CGT-M		\$3.46	
<b>December</b>							
	Fixed			CGT-M		\$3.29	
	Fixed			CGT-M		\$3.29	
	Collar ( )			CGT-M		\$3.29	
	Fixed			CGT-M		\$3.29	
	Fixed			CGT-M		\$3.29	
<b>January</b>							
	Fixed			CGT-M		\$3.01	
	Fixed			CGT-M		\$3.01	
	Collar ( )			CGT-M		\$3.01	
	Fixed			CGT-M		\$3.01	
	Fixed			CGT-M		\$3.01	
<b>February</b>							
	Fixed			CGT-M		\$2.63	
	Fixed			CGT-M		\$2.63	
	Collar ( )			CGT-M		\$2.63	
	Fixed			CGT-M		\$2.63	
	Fixed			CGT-M		\$2.63	



**Winter Season 2011-12 (Continued)**

Supplier	Type	Dth/day	Total Dth	Receipt Point	Hedged Price \$/dth	IFERC FOMI \$/dth	Cost Increase/ (Savings)
<b>March</b>							
	Fixed			CGT-M	\$	\$2.40	
	Fixed			CGT-M	\$	\$2.40	
	Collar ( )			CGT-M	\$	\$2.40	
	Fixed			CGT-M	\$	\$2.40	
	Fixed			CGT-M	\$	\$2.40	
<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, 2012. The prior year's hedging program continues to affect the AA portion of the GCA through August 31, 2011. Likewise, gas costs during the 12 months ended March 31, 2012 will continue to affect the AA portion of the GCA through August 31, 2012. 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 2011	+\$0.0502	+\$0.0195	+\$0.0697
May 2011	+\$0.0618	+\$0.0195	+\$0.0813
June 2011	+\$0.0744	+\$0.0174	+\$0.0918
July 2011	+\$0.0437	+\$0.0174	+\$0.0611
August 2011	+\$0.0795	+\$0.0174	+\$0.0969
September 2011	+\$0.0839	+\$0.0117	+\$0.0956
October 2011	+\$0.0685	+\$0.0117	+\$0.0802
November 2011	+\$0.0471	+\$0.0117	+\$0.0588
December 2011	+\$0.0367	+\$0.0061	+\$0.0428
January 2012	+\$0.0622	+\$0.0061	+\$0.0683
February 2012	+\$0.0509	+\$0.0061	+\$0.0570
March 2012	+\$0.0739	+\$0.0013	+\$0.0752

\*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, 2012. 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, 2011 and March 31, 2012, 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 \$ [REDACTED] /dth over the 12 months ended March 31, 2012.

	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-11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
May-11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Jun-11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Jul-11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Aug-11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Sep-11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Oct-11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Nov-11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Dec-11	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Jan-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Feb-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Mar-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Standard Deviation	[REDACTED]				[REDACTED]		
Reduction in Standard Deviation	[REDACTED]				[REDACTED]		

**Weather Analysis**

The table below lists heating degree days for November 2011 through March 2012 compared to normal.

	Nov	Dec	Jan	Feb	Mar	Total
Normal Heating Degree Days*	621	907	1,069	855	662	4,114
<b>2011/2012</b>						
Heating Degree Days	469	782	912	760	322	3,245
% Colder (Warmer) than Normal	(24%)	(14%)	(15%)	(11%)	(51%)	(21%)

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

The Winter 2011/2012 has been the warmest since Duke Energy Kentucky began maintaining records in 1915. As a result of the warm winter and supply, working gas in storage on a national basis is also at a high level. These factors have impacted the price of natural gas. Gas prices for the Winter Strip (November—March) have not been lower since the Winter of 2001/2002.

**Summary**

Gas prices for the 12 months ended March 2012 were consistent and historically low priced. The average NYMEX settlement price for the 12 month period ended March 31, 2012 was about \$3.70 with a range of \$1.93. The comparable 2011/2010 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 4%.

Attachment A  
Information Reviewed at Hedging Meetings

Gas Commercial Operations  
Hedging Program  
Market Indicators Summary  
April 21, 2011

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (May 11–July 11)	↑	Long	NOAA predicting above average temperatures for May 2011–July 2011 for large portions of the southern and western CONUS. Below normals in north central portion of CONUS.	12
Mld Term Forecast (30-60 days)	↔	Long	May is predicted to be 3.5% colder than normal based on 10 year normals and May weather is predicted to be 5.9% warmer than normal.	13
Short Term Forecast (6-10 days)	↔	Short	Much Above and Strong Above Dominate early period in Mid-West and South, Below and Much Below pushing eastward later in period.	14
Tropical Storm Activity	↑	Short	AccuWeather.com predicts an above-normal 2011 Atlantic hurricane season that will impact CONUS more than last year.	15
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↔	Long	Storage injections for the week ending April 15h were 47 BCF. Storage levels are at 1.654 Tcf which is 9.1% lower than last year and 1.4% higher than the 5 year average.	16
<b>Industry Publications</b>				
PIRA Energy Group Summer 2011: ██████████ Winter 2011/12: ██████████	↓	Long	GAS PRICE SCORECARD: April–Sept 2011 PIRA's price outlook is Neutral. This is PIRA's first "Non-Bearish" price opinion since July 2010.	17-18
Gas Daily	↓	Long	Strong US gas production throughout 2011 will outstrip demand and cause storage inventories to top 4 Tcf. Based on current pricing "there is no incentive to throttle back for producers."	19
Gas Daily	↓	Long	"Injection season is going to be bloody"—Bentek Energy expects overall US storage to exit the injection season at an all-time high of 4 Tcf.	20-21
Gas Daily	↓	Long	Hydro generation will be 35% higher than normal and prove bearish for electricity and gas prices in the West. Bentek expects about 295 Bcf of gas demand will be lost due to strong hydro generation.	22
Gas Daily	↓	Long	US gas supplies will grow substantially in 2011 despite a 10% drop in the gas rig count, keeping prices just below \$4/Mcf on average.	23-24
<b>Government Agencies</b>				
Energy Information Administration Summer 2011 : \$3.961 Winter 2011/12: \$4.542	↓	Long	The projected Henry Hub natural gas spot price averages \$4.10/MMBtu for 2011 and \$4.55/MMBtu for 2012. EIA expects the storage level to be at 3.677 Tcf at the end of the third quarter this year.	25
<b>Technical Analysis</b>				
Winter 2011-12 Strip Chart	↔	Short	Closed at \$4.87	26
Summer 2011 Strip Chart	↔	Short	Closed at \$4.38	27
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to rise slightly from 2010 levels to 66.7 Bcf/d, resulting from an increase in the industrial sector. In 2012, total consumption grows by 0.7% to 67.2 Bcf/day on gains by the power-generation and industrial sectors.	28
Supply	↓	Long	Total marketed natural gas production increased significantly in 2010 by an estimated 4.4%. EIA expects average total production to increase by 2.4% in 2011 and by 0.8% in 2012	28
Oil Market	↑	Long	Total world oil consumption grows by an annual average of 1.5 million bbl/d in 2011 and 2012. EIA projects WTI at \$106/bbl for 2011 and \$114/bbl in 2012.	28-29
<p><b>Meeting Minutes: 412 Annex Conference Room - 1:00 pm</b>  Attendees: Jim Mehring, Jeff Kern, Mitch Martin, Mike Brumback, Joachim Fischesser, Terry Bales, Steve Niederbauer  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 new Load Forecast for the period including the reduction in load for DEO and the increase in load for DEK from the previous forecast. Discussed the Ohio and Kentucky Hedging Programs including the addition of the 2013/2014 Winter season. Discussed the recent run-up in NYMEX pricing. Discussed the analysts projections for Full storage and its' implication on summer pricing. Discussed the 2011 hurricane forecast and its' impact on prices. 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.</p>				

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2010 - October 2011  
As of 04/19/11

Nov-10    Dec-10    Jan-11    Feb-11    Mar-11    Apr-11    May-11    Jun-11    Jul-11    Aug-11    Sep-11    Oct-11

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  
Collar  
Fixed Price  
Fixed Price  
Fixed Price  
Collar

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 %

5

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2011 - October 2012  
As of 04/19/11

Nov-11    Dec-11    Jan-12    Feb-12    Mar-12    Apr-12    May-12    Jun-12    Jul-12    Aug-12    Sep-12    Oct-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  
Collar  
Total Hedged (dth/day)  
Total Hedged (dth)

Types of Hedging Products (1)

Fixed Price  
Price Caps  
No-Cost Collars

Embedded Hedged Cost

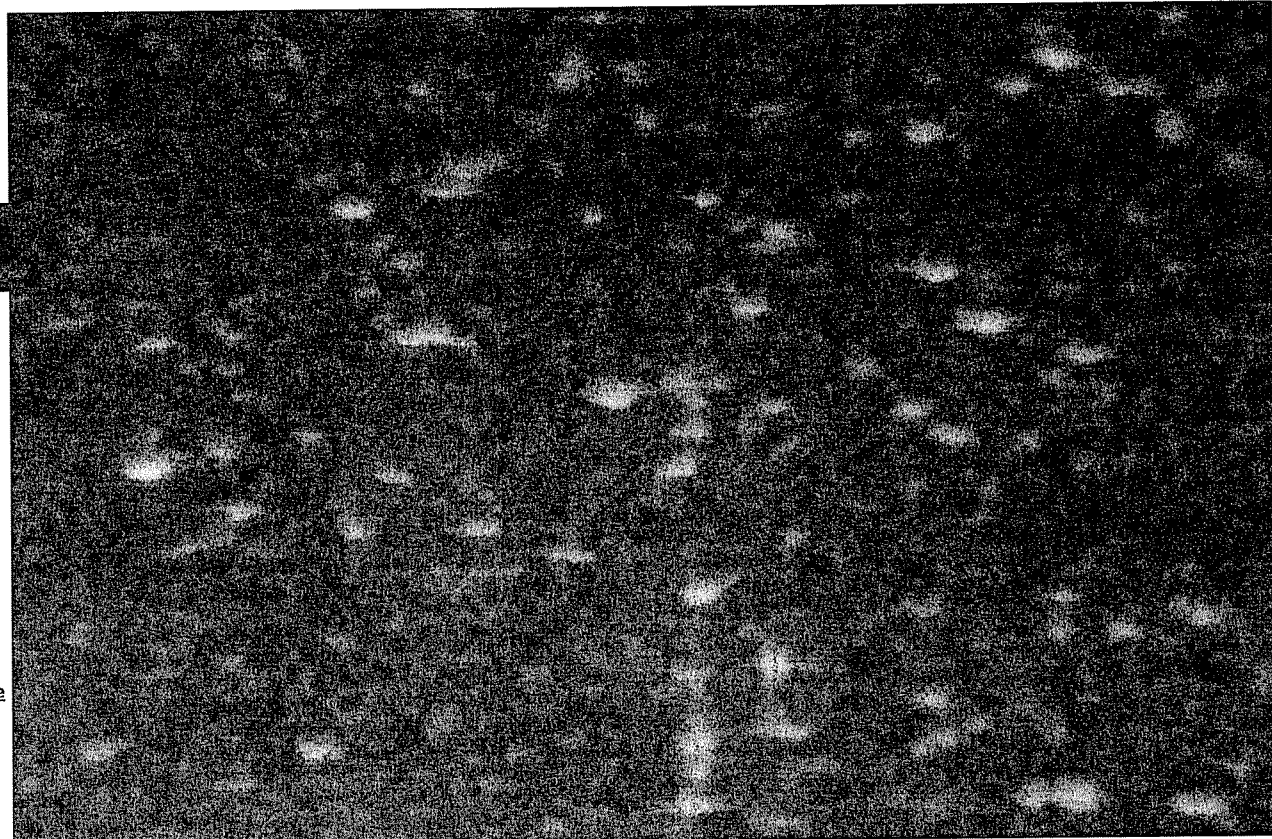
Winter  
Summer

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

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 04/19/11

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

Types of Hedging Products (1)

Fixed Price  
 Price Caps  
 No-Cost Collars

Embedded Hedged Cost

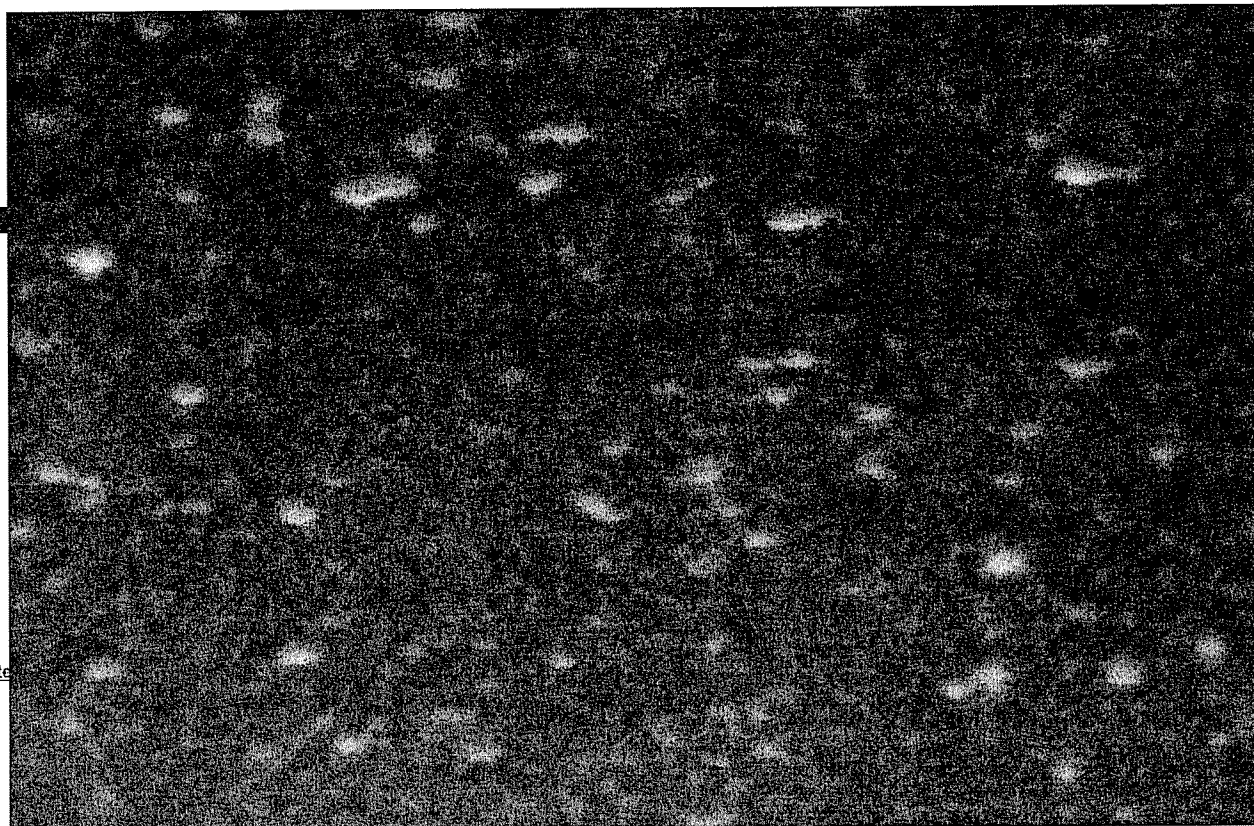
Winter  
 Summer

Estimated EGC per Dth at City Gate

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

Amf 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 04/20/11

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)

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

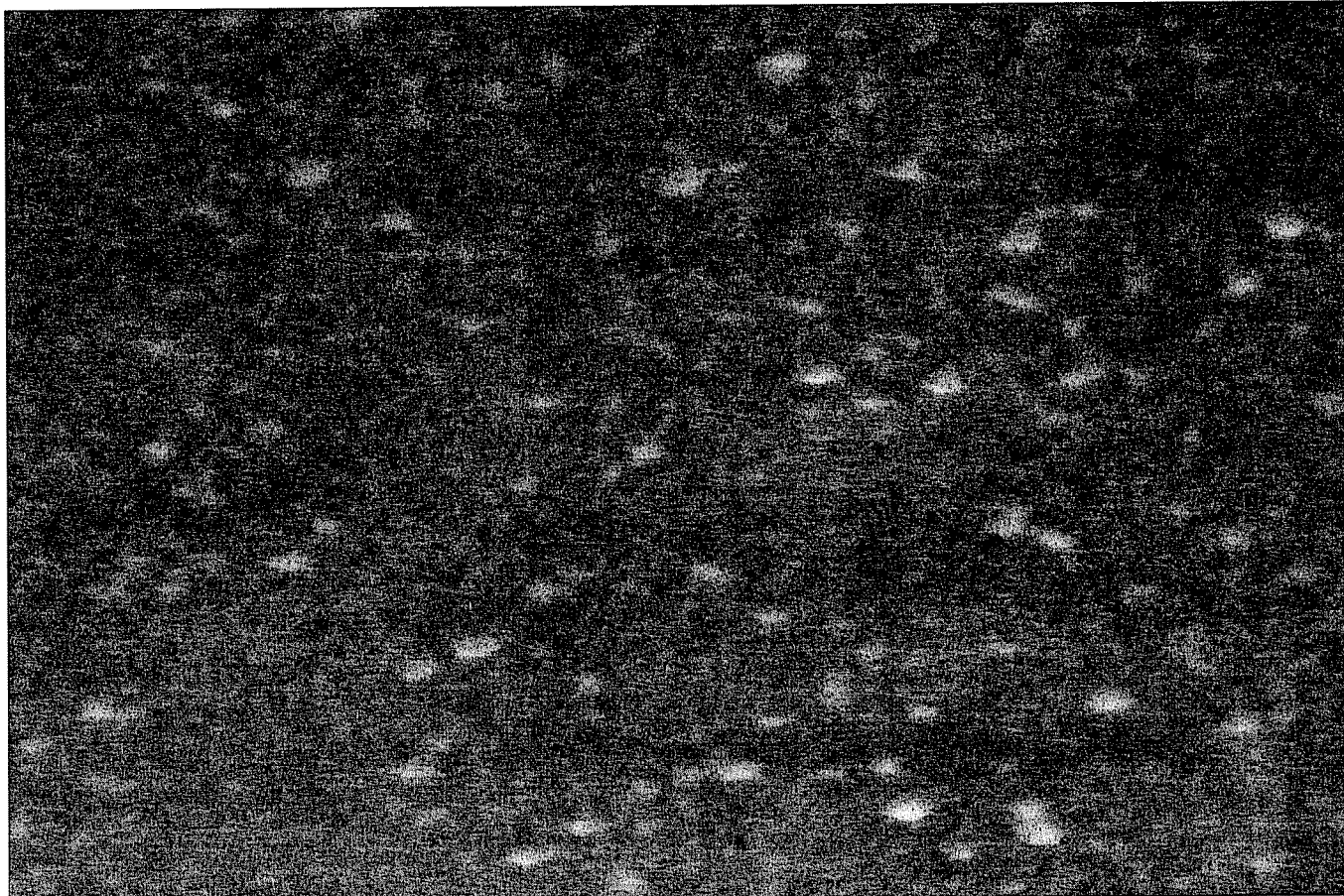
Winter  
 Summer

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.

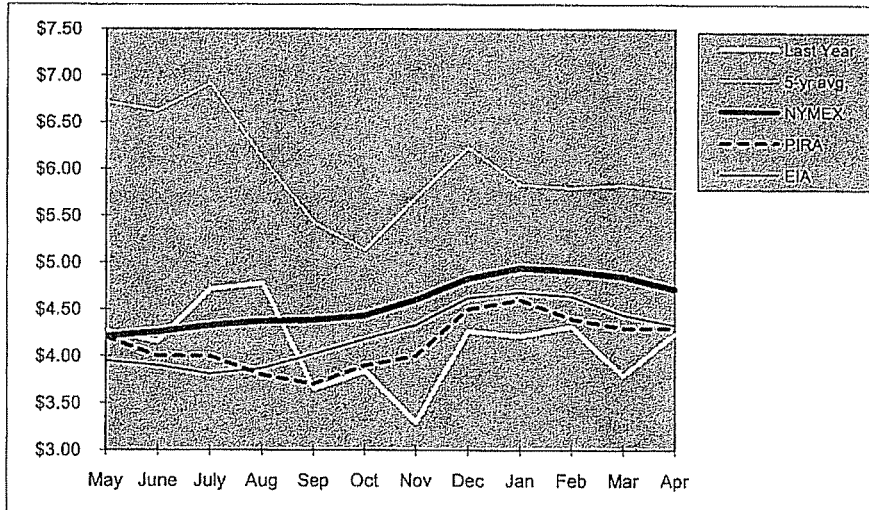
4/23/2011

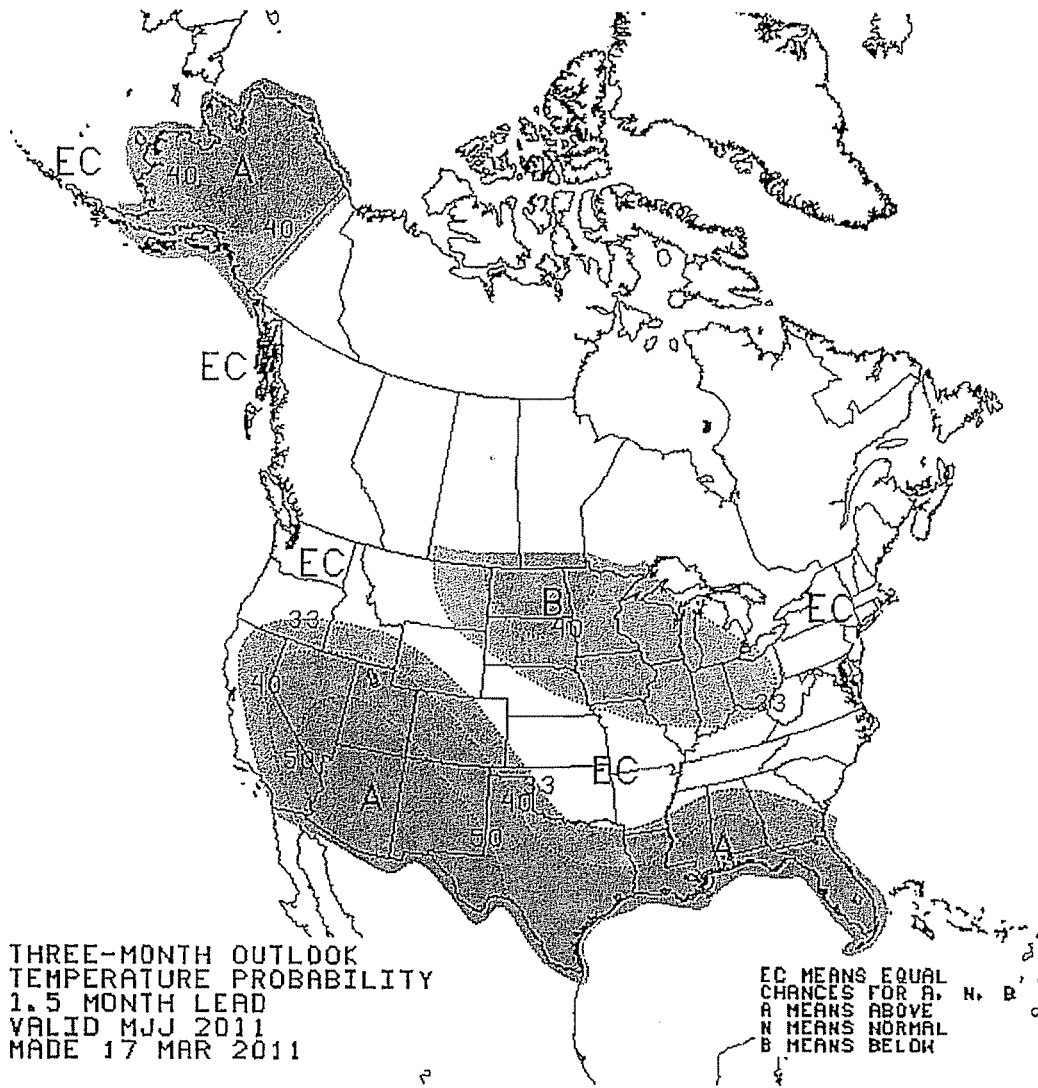
**Duke Energy Kentucky  
 Hedging Program  
 Current Position**

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/11)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Apr-11					
May-11					
Jun-11					
Jul-11					
Aug-11					
Sep-11					
Oct-11					
Summer 2011					
Target Levels By March 31, 2011					
Nov-11					
Dec-11					
Jan-12					
Feb-12					
Mar-12					
Winter 11/12					
Target Levels By October 31, 2011					
Apr-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2011					
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Target Levels By October 31, 2011					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2011					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2011					

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

Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (06/07-10/11)	Last Year (2010-2011)		PIRA 28-Mar-11	EIA 12-Apr-11	NYMEX 19-Apr-11		
May	\$6.72	\$4.27			\$3.950	\$4.211		
June	\$6.63	\$4.16			\$3.900	\$4.258		
July	\$6.92	\$4.72			\$3.810	\$4.326		
Aug	\$6.10	\$4.77			\$3.870	\$4.372		
Sep	\$5.43	\$3.65			\$4.020	\$4.386		
Oct	\$5.13	\$3.84			\$4.180	\$4.432		
Nov	\$5.69	\$3.29			\$4.330	\$4.597		
Dec	\$6.23	\$4.27			\$4.620	\$4.828		
Jan	\$5.84	\$4.22			\$4.680	\$4.940		
Feb	\$5.80	\$4.32			\$4.640	\$4.912		
Mar	\$5.83	\$3.79			\$4.440	\$4.850		
Apr	\$5.77	\$4.24			\$4.330	\$4.716		
12 Month Avg	\$6.01	\$4.13			\$4.231	\$4.569		
Summer Average					\$4.009	\$4.386		
Winter Average					\$4.542	\$4.825		

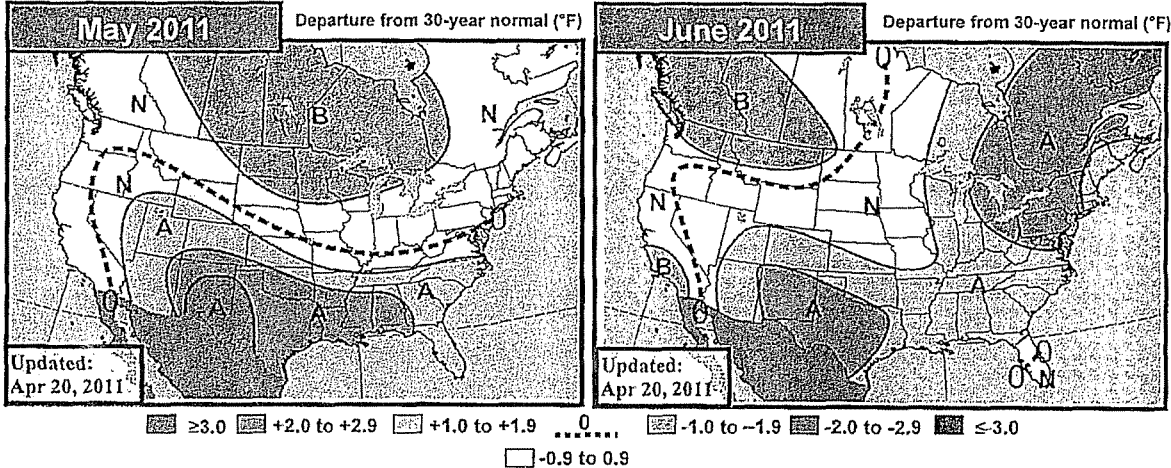




# EarthSat's 30-60 Day Outlook

Wednesday, April 20, 2011

Meteorologists: SS/BH/TH/RG



**Previous** No changes to forecast  
Drought-driven heat in Texas

The forecast has changed little, as above are still expected from the Central Rockies to the Southeast while a cool regime is anticipated across the North and along the West Coast. These themes are mostly consistent with the pattern typically found during a -NAO blocking set up, which tends to enforce a large temperature split from north to south in May. A classic Greenland ridge is slowly developing, and looks to become a strong forecast player later this month and into early May. This feature should direct cool Canadian air into the Northern tier, and would likely be slow to dissipate. While the North cools down, the South should stay warm. The -PNA, warm AMO, worsening drought conditions and the La Nina seasonal signal all argue for ridging to hold firm over the region. Expanding drought in the Southwest and Nino 3.4 analogs both support our mild forecast across much of the West, though coastal areas are expected to run cooler given the cold PDO and likelihood of onshore flow. If the pattern is more highly-driven by the Nina / +EPO / -PNA triecta, the Eastern half could be warmer while the West could turn cooler.

**May PWCCD\*\* Forecasts** \*10Y Normal updated to '01-10

May 2011 Fcst:	105.0	10Y Normal*	108.8
		30Y Normal	98.4
		May-2010	135.2

No Change \*\*National Pop-Weighted CDDs

Very slight cool adjustment in Northwest  
Still warm in the East

Aside from some cooler tweaks in the PNW, the June forecast is largely unchanged. More widespread aboves are expected to develop over the eastern half compared to the May outlook, while the PNW and coastal Calif. are expected to average cooler (belows) by comparison. Many of EarthSat's consensus analogs (including 2000, 2008) favor the unseasonable warmth all across the East, South, and much of the Midwest & Southwest. These Nina / warm AMO / cold PDO years also support relatively cool anomalies from western Canada to the North-Central US and along much of the West Coast. While the -NAO may remain, the Greenland ridge may simply hook up with an expected Eastern US ridge, as often happens within Nina patterns during June. Canadian air masses typically settle into the Northwest and Northern Rockies, where moist soils could have a feedback effect, limiting warming. The GOA low should promote onshore flow along the California coast, and generally act to keep Pacific air prevalent in the pattern. Higher-than-normal soil moisture from the Northern Plains to the Ohio Valley and Northeast presents a cool risk to our forecast, while the -NAO ridge could change its interaction with the Eastern ridge, suppressing the storm track and forcing the East and Midwest to average cooler than our forecast.

**June PWCCD\*\* Forecasts** \*10Y Normal updated to '01-10

Jun 2011 Fcst:	249.0	10Y Normal*	235.1
		30Y Normal	217.4
		Jun-2010	280.9

No Change \*\*National Pop-Weighted CDDs

**April so far**

**Final 60 Day Outlook** **Final 30 Day Outlook** **April Verification Forecast**

The April outlooks continue to be relatively well overall, supporting the overall pattern of widespread warmth from the Southwest into the central and southern Plains, South Midwest, and East. However, the magnitude of the warmth was still underestimated, at least in the continuing drought and a -PNA signal have allowed for anomalies of 1.5-3.0 above normal from Texas into the Delta and Tennessee Valley, and above a bit further north than forecast into the Northeast. It's also been a bit warmer than forecast in southern California. Meanwhile, the cold has been a bit stronger than expected across the Northwest into the northern Rockies. If our current 1-15 Day forecast is correct, the month of April will end up totaling 325 national GW-HDDs, warmer than normal and warmer than our final prediction of 355 GW-HDDs made on March 30.



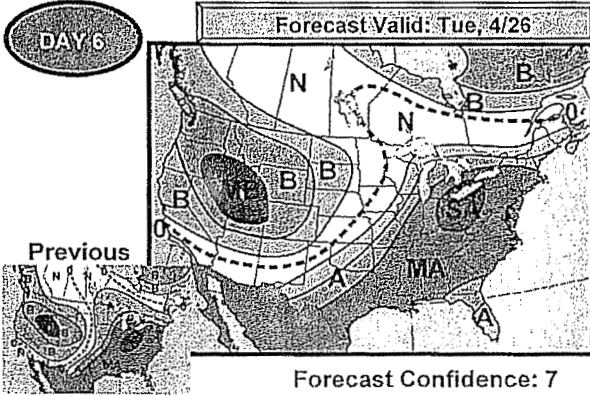
# 6-10 Day Forecast—Detailed

Thursday, April 21, 2011

Meteorologist: JS/BH

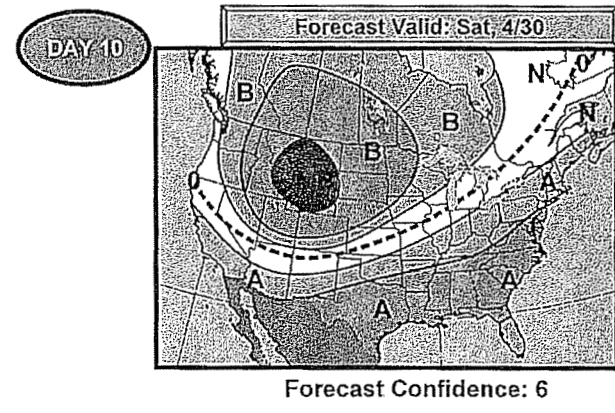
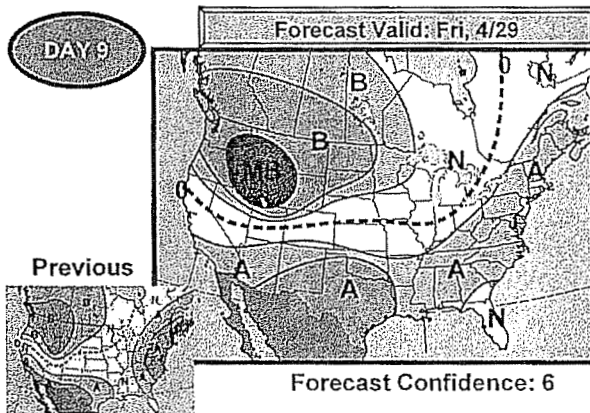
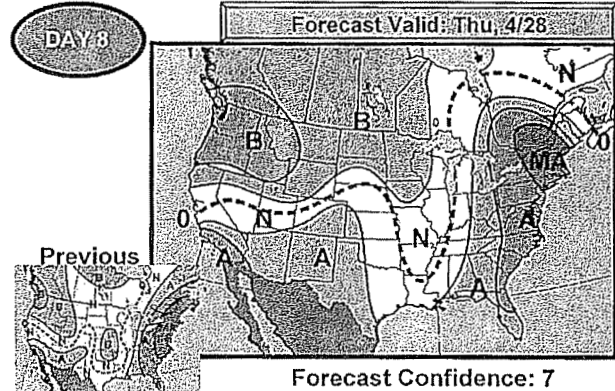
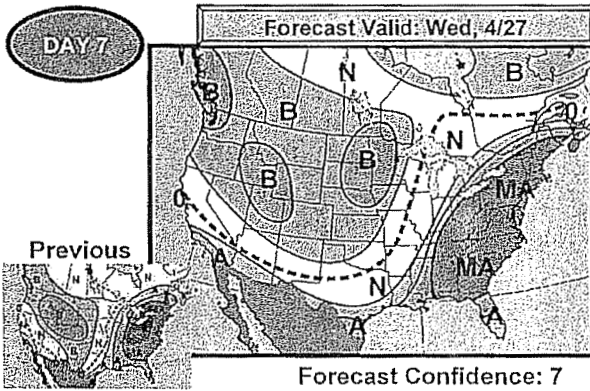


## Forecast Temperature Deviations



**\*Strong Warmth Shifts Into The East\***  
**\*Cooler Conditions Span Western States\***

The models remain in rather solid agreement with the progression of the pattern across the country, with cooling across the West spreading towards the Mid-Centiment both early and late while mid-week temperatures soar across the populated East. Stronger cold is possible during both the early and late events across the Plains and Midwest due to a faster progression of below normal temperatures. The more sustainable cold is to be found out West, with below to much below normal anomalies developing late setting the stage for a cool 11-15 day time frame. California does see some hotter risk, however, due to the threat for off-shore winds. Other warm risk lies across the North-east early and the Mid-Centiment in between cold pushes.



A +3F to +4F  
 B +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

# Gas Daily

Friday, April 1, 2011

## AccuWeather.com sees active 2011 hurricane season, more US impact

Private forecaster AccuWeather.com on Thursday predicted an above-normal 2011 Atlantic hurricane season and said it expects the US will see more effects than it did in 2010.

The company said its meteorologists are forecasting 15 named storms, of which eight will become hurricanes. Of those, AccuWeather.com is predicting that three will become severe storms of Category 3 or above.

A normal season has 10 tropical storms, six of which become hurricanes and two of which become major hurricanes, AccuWeather.com said.

While the 2010 Atlantic hurricane season was unusually active, with 19 named storms, 12 hurricanes and five major hurricanes, most of the storms tracked well east of the US.

That is unlikely to reoccur in 2011, AccuWeather.com said. "It looks like we're going to have more impact on the mainland of the US coming up this year compared to last year," forecaster Paul Pastelok said. "We had a lot of storms last year, but not a lot of impact on the US."

The company said it sees an early season hurricane threat in the western Gulf of Mexico and the southern Caribbean, with the highest probabilities for landfall along the Texas and Louisiana coasts.

That will shift by the middle and late parts of the season to the eastern Gulf and Caribbean, with a high probability of landfall occurring along the Florida peninsula and in the Carolinas, the forecaster said.

Further, AccuWeather.com said another mid- to late-season concern for landfall will occur in northern New England and the Canadian Maritime provinces.

The Atlantic hurricane season runs from June 1 through November 30. — Jeff Barber

## Weekly Natural Gas Storage Report

Released: April 21, 2011 at 10:30 a.m. (eastern time) for the Week Ending April 15, 2011.  
Next Release: April 28, 2011

### Working Gas in Underground Storage, Lower 48

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

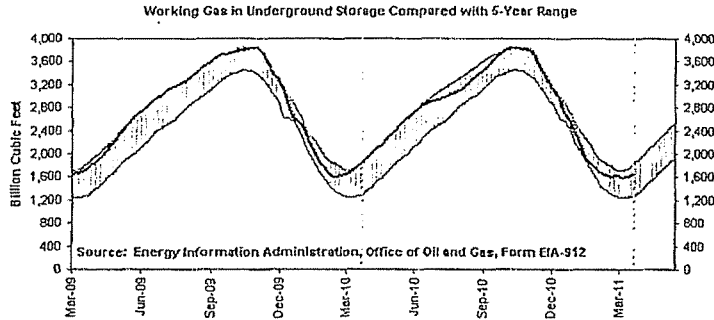
Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	04/15/11	04/08/11	Change	Year Ago (04/15/10)		5-Year (2006-2010) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	652	623	29	824	-20.9	726	-10.2
West	222	221	1	303	-26.7	253	-12.3
Producing	780	763	17	692	12.7	652	19.6
<b>Total</b>	<b>1,654</b>	<b>1,607</b>	<b>47</b>	<b>1,819</b>	<b>-9.1</b>	<b>1,631</b>	<b>1.4</b>

#### Notes and Definitions

##### Summary

Working gas in storage was 1,654 Bcf as of Friday, April 15, 2011, according to EIA estimates. This represents a net increase of 47 Bcf from the previous week. Stocks were 165 Bcf less than last year at this time and 23 Bcf above the 5-year average of 1,631 Bcf. In the East Region, stocks were 74 Bcf below the 5-year average following net injections of 29 Bcf. Stocks in the Producing Region were 128 Bcf above the 5-year average of 652 Bcf after a net injection of 17 Bcf. Stocks in the West Region were 31 Bcf below the 5-year average after a net addition of 1 Bcf. At 1,654 Bcf, total working gas is within the 5-year historical range.

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- 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 2006 through 2010.  
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**  
**March 28, 2011 Release**

Jan-09		Jan-10		Jan-11		Jan-12	
Feb-09		Feb-10		Feb-11		Feb-12	
Mar-09		Mar-10		Mar-11		Mar-12	
Apr-09		Apr-10		Apr-11		Apr-12	
May-09		May-10		May-11		May-12	
Jun-09		Jun-10		Jun-11		Jun-12	
Jul-09		Jul-10		Jul-11		Jul-12	
Aug-09		Aug-10		Aug-11		Aug-12	
Sep-09		Sep-10		Sep-11		Sep-12	
Oct-09		Oct-10		Oct-11		Oct-12	
Nov-09		Nov-10		Nov-11		Nov-12	
Dec-09		Dec-10		Dec-11		Dec-12	
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		

**North American Gas Forecast Monthly**



March 28, 2011

**NATURAL GAS**

**GAS PRICE SCORECARD: APRIL 2011 – SEPTEMBER 2011**

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
U.S. Production		The recovery from weather-depressed output has been disappointing and vertical/directional rigs have plummeted. Beginning to look like the reduction in drilled but uncompleted wells will be later than previously assumed.
LNG Imports		Global turmoil obviously will have an impact on international gas trade, but the U.S. market for LNG imports seems bound to remain at a bare bones minimum and similar Y/Y.
Canadian Trade		The large expected end-March storage deficit could seriously inflate 2Q11 Y/Y declines of exports to the U.S. depending on the pace at which the storage deficits are narrowed.
Mexican Trade		The recovery of associated gas production will dampen the call for incremental imports from the U.S. Of late, that recovery exceeds the positive impact of reduced flaring.
Storage Levels		An abrupt return to unusually cold weather in late March will widen early 2Q11 storage deficits to over 100 BCF and likely extend deficits into midyear.
U.S. Demand Issues	Outlook	Commentary
Economy		Commodities and stock markets have responded to recent traumatic global events with remarkable calm sustaining a strong sense of optimism surrounding the U.S. economy in general, and the industrial sector in particular.
Electric Generation		Gas-fired CCGT is forecast to continue to make strong gains against steam coal in Eastern Grid power markets, but gas prices of \$4.50 and above would jeopardize those gains.
Industrial Sector		The slowdown of weather-adjusted industrial gas demand in recent months looks poised for stronger near-term growth based on the ISM and Dallas Fed forward looking surveys.
Res/Com Heating		Unusually mild weather in April 2010 means that R/C gas heating should achieve another sizable Y/Y gain if temperatures are near the 30-year normal or colder.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation		Gas futures have garnered more support from the bullish tone of recent U.S. storage reports. The improvement in the technical picture is also prompting some speculative short-covering and fresh buying.
Medium-Term Prices		Steadily growing optimism relative to the front of the gas price curve was boosted by Japan's nuclear tragedy, leading some of this more bullish medium-term price perception to spill over into near-month dated contracts.
Overall Assessment	Outlook	Commentary
Price Outlook		A lower end-March storage carry is weaker than expected, production recovery from Jan./Feb. weather disturbances, and perceptions of tighter mid-decade gas balances point to further upside near-term price risks. But we still see more bearish price pressures taking hold before 2H11.

# Gas Daily

Thursday, April 14, 2011

## With no letup in drilling, storage seen topping 4-Tcf mark

Continually strong US gas production throughout 2011 will outstrip demand and could cause underground storage inventories to top 4 Tcf by year's end, a Societe General Energy executive said Tuesday.

SocGen Managing Director Bryan Hassler told the LDC Gas Forum Southeast conference in Atlanta that some projections show stocks pushing maximum capacity, reaching 4.12 Tcf by November 1 unless prices drop to a level that stalls drilling.

With the current nine-month NYMEX gas futures strip hovering in the \$4.40s/MMBtu, "there is no incentive to throttle back for producers," he said. "With that price curve, we may see 4.5 Tcf in the ground."

He reasoned that production will peak at 64.5 Bcf/d in 2011, outpacing any increases in demand from gas-fired power generators or industrial consumers. "It will take time for the market to grow, and price is the ultimate indicator," Hassler said.

In a separate presentation, panelist Jack Weixel, Bentek Energy's client services director, said storage is expected to fill by October as the market will be oversupplied by nearly 1 Bcf/d this year.

"Dry gas production is at its highest level we've seen since 1973," said Weixel, whose firm is a division of Platts. "Where do you find demand for that? You won't."

One trend should help bridge that gap, however: Weixel said fuel-switching from coal is expected to add 1.8 Bcf/d of gas demand this year.

But one of the biggest question marks remains the weather. None of the panelists expect a repeat of the unseasonable heat last summer, which capped storage injections, or the exceptionally cold fall and winter that ate into inventories and caused some production disruptions due to well freeze-offs.

"During that time, we've been living in an artificial world of demand," Weixel said. — *Adam Bennett*

# Gas Daily

Friday, April 8, 2011

## Storage glut feared as producing region fills

Gas storage inventories in the producing region hit another all-time high last week, creating worry among some traders and analysts that facilities could reach capacity well before refill season ends November 1.

"Injection season is going to be bloody," a trader remarked Thursday after the Energy Information Administration reported that producing-region stocks rose by 2 Bcf for the week ending April 1 — the fourth consecutive weekly net injection there. Overall, EIA reported a 45-Bcf nationwide withdrawal for the week.

"The record producing region storage figure is largely due to shale production and the producing region drop-off in heating degree days in the Midcontinent by the end of the inventory week," explained Societe Generale analyst Laurent Key. EIA defines the region as Alabama, Arkansas, Kansas, Louisiana, Mississippi, New Mexico, Oklahoma and Texas.

With traders and analysts noting that the prolific Barnett and Haynesville shales are now producing some 5 Bcf/d apiece, according to EIA estimates, some are convinced that the resulting supply glut will test storage capacity earlier than ever. None of the analysts ventured to forecast when that might occur, but a Gulf trader said he wouldn't be surprised if it were sometime in September.

That, the sources said, means some storage operators are likely to issue strict daily injection limits or even force withdrawals to maintain system integrity — placing even more gas in a glutted market and putting downward pressure on summer prices.

Bentek Energy analyst Maria Sanchez expects overall US storage to exit the injection season at an all-time high of 4 Tcf. "The producing region is going to be a big contributor to that," she said. Bentek is a unit of Platts.

Sanchez noted, however, that several storage expansions and new facilities are coming online this year and next, adding to overall capacity and possibly averting a storage overload.

Platts data shows there is currently some 2.65 Tcf of storage capacity in the producing region. About 103.8 Bcf in expanded capacity is expected to come on stream this year, with another 178.8 Bcf due in 2012.

Weather is going to be the ultimate determinant of how quickly the producing region's storage fills up, traders and analysts agreed. Several traders have already taken significant positions in the futures market, betting that increased cooling demand will put a significant dent in overall stockpiles this summer, sources said.

A regional risk manager said several banks and hedge funds were heeding independent meteorologists' calls for a sweltering summer that could result in a shortfall of gas come the peak of next winter. Those players, the risk manager said, have effectively translated that belief to a narrow October 2010-January 2011 spread position on the NYMEX futures strip.

A regional financial trader concurred. "There's been a bunch of call spread options on that spread this year already," he said. The average of that spread to date has been 68 cents/MMBtu, an analysis of NYMEX futures settlements shows. On Thursday, the spread came in at 59.6 cents.

Meanwhile, EIA's report of a 45-Bcf draw was below consensus expectations ranging from 49 to 53 Bcf, compared with a 29-Bcf injection a year earlier and a five-year average injection of 13 Bcf.

In the same week of 2010, EIA reported 1.665 Tcf in storage. As a result, the 12-Bcf deficit to the yearago level grew to 86 Bcf, while the 68-Bcf surplus to the five-year average of 1.569 Tcf shrank to 10 Bcf.

EIA reported a 52-Bcf withdrawal in the East, leaving inventories at 616 Bcf, compared with 750 Bcf a year ago; an injection of 5 Bcf in the West to 221 Bcf, compared with 292 Bcf a year ago; and a 2-Bcf injection in the producing region to 742 Bcf, compared with 623 Bcf a year ago.

Inventories now are 87 Bcf below the five-year average of 703 Bcf in the East, 23 Bcf below the five-year average of 244 Bcf in the West, and 119 Bcf above the five-year average of 623 Bcf in the producing region. — *Samantha Santa Maria, Stephanie Seay, Adam Bennett*

# Gas Daily

Thursday, April 14, 2011

## Bentek: Hydro to displace 1.2 Bcf/d in West

Some 295 Bcf of gas demand, or 1.2 Bcf/d, will be lost in the West Coast between January and August due to heavy snowfall and precipitation this past winter, deflating both electricity and gas prices in the region, Bentek Energy said in a report Wednesday.

In April alone, gas-fired generation levels will be 54% below normal as some 1.7 Bcf/d is displaced by hydro, according to Bentek, a unit of Platts. The report said an average of 1.2 Bcf/d was already displaced during the first quarter of this year and that hydro supply is unlikely to taper off until late summer.

On Tuesday, forecasts for The Dalles Dam on the Washington/Oregon border said river flow would likely be 121% of normal from April through September.

Earlier this month, the US Army Corps of Engineers said hydroelectric production at 23 dams in the Pacific Northwest was about 8.8 million MWh in March, 52% above the 10-year average and more than twice the output in March 2010. The 10-year average for hydroelectric production in the region in March is 5.8 million MWh; March 2010 production was 4.3 million MWh.

According to Bentek, hydro generation will average 166 GWh/d between April and August, which is 35% higher than normal, and that will prove bearish for electricity and gas prices across the Pacific Northwest, Southwest and California.

Because the Pacific Northwest also exports its electricity, the high hydro levels are expected to result in an increase in exports to California and British Columbia, the report stated. Year-to-date, exports from the region have averaged 42% above normal and 83% above year-ago levels, it said.

"Power exports from the Northwest are expected to continue to top year-ago and normal levels through August, based on current snowpack levels and hydro forecasts," Bentek added.

Gas traders this week said forward prices in the region are not reflective of the high levels of displacement.

"Cash is trading pretty high to NYMEX prompt, so that may be keeping a floor under [forward] basis for now," a Western financial trader said. "Storage is lower than forecast right now, so probably some support for a while. If there's no heat early and we get big injections, then prices should tank quickly."

The market in general seems not to have factored in this strong hydro potential, which is masked by an overall soft NYMEX futures strip.

Platts forward prices for Northwest Pipeline Sumas have actually tightened in recent months. Sumas' prompt summer package was assessed Wednesday up 5 cents since the beginning of the year to minus 42.5 cents/MMBtu.

Credit Suisse analysts recently cautioned in a report that there are mitigating factors that could limit the amount of gas displaced by hydro.

They include the timing of any continued precipitation; spring and summer temperatures, which affect the timing of snowpack melt; maintenance schedules for generating units; and seasonal wildlife regulations. — *Samantha Santa Maria*

# Gas Daily

Tuesday, April 5, 2011

## Analysts: Market flush with gas despite fewer rigs

US gas supplies will grow substantially in 2011 despite a 10% drop in the gas rig count, keeping prices just below \$4/Mcf on average, investment bank Raymond James said Monday.

Raymond James' Marshall Adkins joined analysts from Tudor Pickering Holt and Jefferies & Company in predicting flush gas supplies and little change in prices this year.

Jefferies' Subash Chandra said last week that new January data from the Energy Information Administration's Form 914 shows no sign of slowing production. While EIA's gross production data showed a 500,000 Mcf/d drop in output in January compared with December, Chandra said that after adjusting those numbers to account for lost production due to well freeze-offs, production actually rose — and is on pace to grow by 4.78 Bcf/d from 2010 levels.

"Although cold weather persisted into early February, most storage data in late February and early March suggest a market 3 Bcf/d oversupplied," TPH said in a report. "Nuclear issues and bullish long-term demand dynamics are fun to talk about but don't change the fact we currently have too much gas." As a result, TPH is not expecting prices to average higher than \$4/Mcf this spring or summer.

Adkins said several factors are keeping production up while the number of active rigs drops, including improved drilling efficiencies resulting in a backlog of wells awaiting completion. Also, while many gas drillers are promoting their new efforts in oil- or liquids-rich plays, those wells still deliver significant volumes of gas.

Adkins said many in the market think Haynesville Shale wells in Louisiana, for example, are being drilled to hold acreage by production, when data from the state shows that more than half the Haynesville permits issued in February were on acreage already held by a previous well.

"Many industry pundits have predicted that once term acreage is secured (about three years after the land grab), the rig count in the region will fall off a cliff, and gas production will fall shortly thereafter. So do we think the rig count falls in the back half of 2011?" Adkins asked. "Of course, rigs have already begun moving to the Eagle Ford. Does it drop to zero? Not even close."

In fact, the number of Louisiana permits submitted by operators to drill wells not held by production "has actually increased dramatically on a percentage basis over the past six months, from one-third to about one-half."

Adkins noted that data from the Louisiana Department of Natural Resources shows the number of uncompleted wells increasing even as the rig count in the Haynesville falls off.

"We're not simply alluding to the infrastructure-related three- to four-month lag between rig count changes and when production actually hits the market," he said. "Rather, we're focusing on the all-time high level of uncompleted wells waiting to be hooked up to a pipeline."

He noted that despite a 40-rig drop from June 2010 high, the number of uncompleted wells in the Haynesville continues to hover between 450 and 500. "That's a meaningful amount of supply waiting behind pipe."

So meaningful, Adkins said, that producers could shut down their Haynesville operations for the rest of the year and supply would not drop.

**Meanwhile, traders and analysts have underestimated the amount of gas coming from liquids-rich plays such as the Eagle Ford Shale and the Woodford Shale, Adkins said.**

"We have found that the relevance of these plays for US gas supply is often underestimated by investors, likely due to the industry's success in marketing the assets as 'oil' and/or 'liquids' plays. ... Dry gas is viewed more as a byproduct."

Finally, "drillers are just simply too good at getting gas out of the ground," Adkins asserted. "How often do you hear operators talk about the increasing number of days to drill a well? Never."

He noted that producers have cut their drilling times by 26% in the Barnett Shale and 35% in the Fayetteville Shale, and those same efficiencies are being seen in newer shales such as the Haynesville and Marcellus.

"The Haynesville Shale just recently passed the Barnett Shale as the top gas-producing shale play in the United States, now producing 5.5 Bcf/d after just two years of large-scale production," Adkins said. "It took Barnett production nearly a decade to top the 5 Bcf/d mark." Adkins said. — *Bill Holland*



**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**April 12, 2011 Release**

Jan-09	5.24	Jan-10	5.83	Jan-11	4.49	Jan-12	4.68
Feb-09	4.51	Feb-10	5.32	Feb-11	4.09	Feb-12	4.64
Mar-09	3.96	Mar-10	4.29	Mar-11	3.97	Mar-12	4.44
Apr-09	3.49	Apr-10	4.03	Apr-11	4.00	Apr-12	4.33
May-09	3.83	May-10	4.14	May-11	3.95	May-12	4.24
Jun-09	3.80	Jun-10	4.80	Jun-11	3.90	Jun-12	4.11
Jul-09	3.38	Jul-10	4.63	Jul-11	3.81	Jul-12	4.31
Aug-09	3.14	Aug-10	4.32	Aug-11	3.87	Aug-12	4.51
Sep-09	2.97	Sep-10	3.89	Sep-11	4.02	Sep-12	4.57
Oct-09	4.00	Oct-10	3.43	Oct-11	4.18	Oct-12	4.79
Nov-09	3.66	Nov-10	3.71	Nov-11	4.33	Nov-12	4.88
Dec-09	5.34	Dec-10	4.25	Dec-11	4.62	Dec-12	5.12
Average 2009	\$ [REDACTED]	Average 2010	\$ [REDACTED]	Average 2011	\$ [REDACTED]	Average 2012	\$ [REDACTED]
Summer 2009	\$ [REDACTED]	Summer 2010	\$ [REDACTED]	Summer 2011	\$ [REDACTED]	Summer 2012	\$ [REDACTED]
Winter 2009-2010	\$ [REDACTED]	Winter 2010-2011	\$ [REDACTED]	Winter 2011-2012	\$ [REDACTED]		

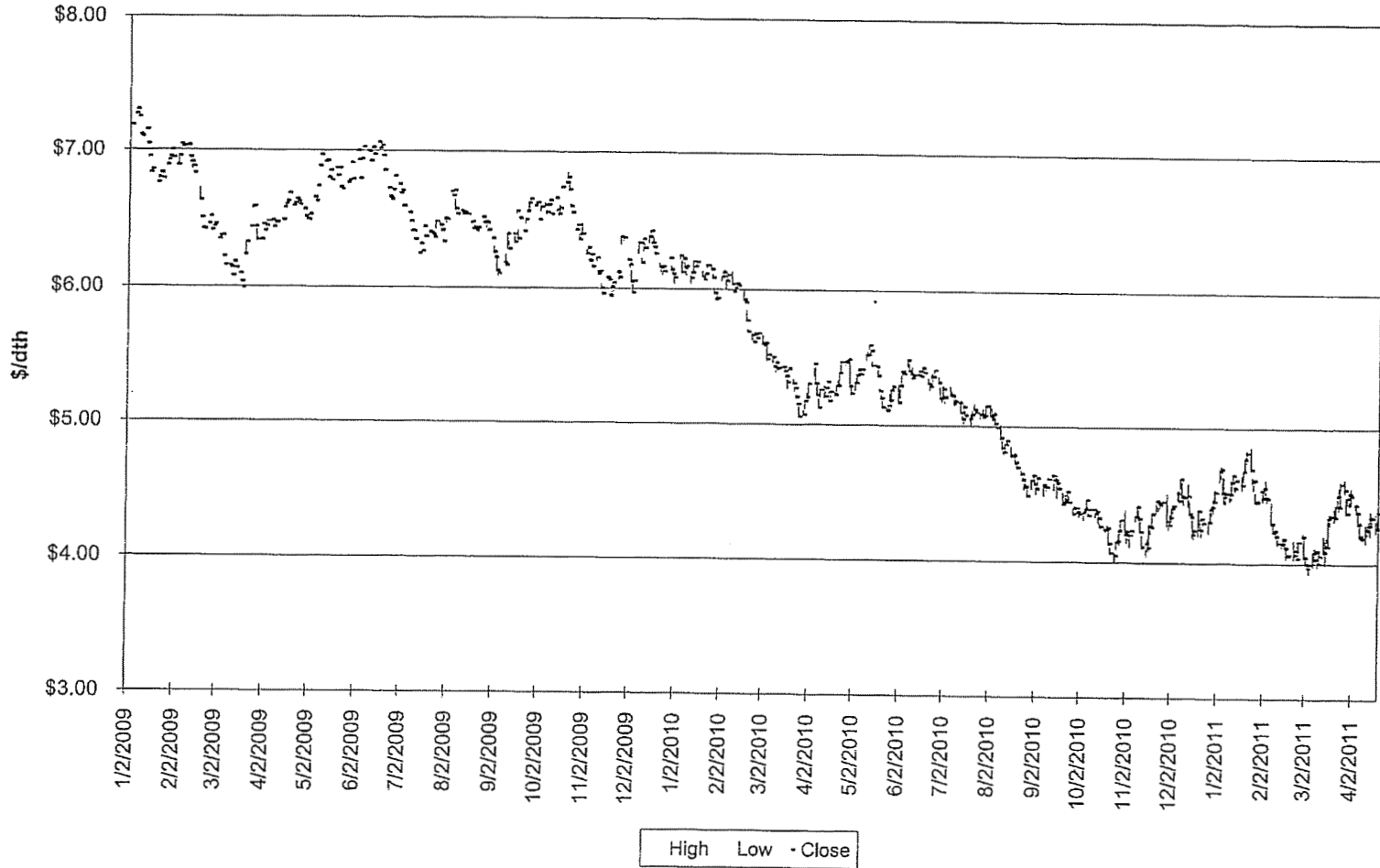
### Winter Strip Nov11 - Mar12

26



# Summer Strip 2011

27



# Short-Term Energy and Summer Fuels Outlook

April 12, 2011 Release  
(Next update May 10, 2011)

## Natural Gas

U.S. Natural Gas Consumption. EIA expects total natural gas consumption to rise slightly from 2010 levels to **66.7 billion cubic feet per day (Bcf/d) in 2011, primarily because of the increase in consumption in the industrial sector.** Forecast industrial consumption rises 3.6 percent to 18.7 Bcf/d in 2011, largely driven by the natural-gas-weighted industrial production index, which is expected to increase by 4.3 percent.

Total consumption growth increases by 0.7 percent in 2012 to 67.2 Bcf/d. Natural gas consumption in the industrial and electric power sectors grow by 1.3 percent and 2.9 percent, respectively, which offsets forecast declines in residential and commercial consumption (note, however, that consumption changes relative to 2010 are affected by changes in EIA's methodology for collecting and reporting natural gas consumption data that were implemented in the middle of 2010 to provide more accurate data on seasonal patterns of natural gas use.)

U.S. Natural Gas Production and Imports. EIA expects the growth in natural gas production to slow from the **2.6 Bcf/d (4.5 percent) increase seen in 2010.** Total marketed production grows **1.5 Bcf/d (2.4 percent) to 63.3 Bcf/d in 2011 and by 0.5 Bcf/d (0.8 percent) in 2012.** For both 2011 and 2012, declines in Federal GOM production are more than offset by increases in production in the lower-48 states.

Marketed natural gas production in December 2010 of 64.0 Bcf/d was the highest rate since February 1973. The latest EIA data for monthly natural gas production show a decline in production in the lower-48 States for January 2011. Some of this decline is because of "freeze-offs" during the very cold weather that forced some producers to temporarily shut down some production. Production is expected to recover from these freeze-offs before beginning modest declines that will continue through the year because of a falling gas-directed drilling rig count. The number of rigs drilling for natural gas, as reported by Baker Hughes Inc., has fallen from 973 in April 2010 to 889 as of April 8, 2011. The large price difference between petroleum liquids and natural gas on an energy-equivalent basis contributes to an expected shift towards drilling for liquids rather than for dry gas. Increasing consumption in 2012, led by strong growth in the electric power sector, contributes to higher prices and to an economic incentive for producers to resume drilling.

Growing domestic production continues to reduce U.S. reliance on natural gas imports. Pipeline gas from Canada remains the dominant source of U.S. natural gas imports. Because of the earthquake in Japan and subsequent nuclear outages, Japan's demand for LNG as a replacement fuel for electric power generation is expected to increase, contributing to higher global LNG prices. Japan is already the largest importer of LNG in the world, with daily imports averaging more than 9 Bcf/d in 2010. EIA now projects U.S. imports of LNG will average 1.05 Bcf/d in 2011, down from 1.18 Bcf/d in 2010.

## Global Crude Oil and Liquid Fuels

Crude Oil and Liquid Fuels Overview. The forecast for total world oil consumption grows by an annual average of **1.5 million bbl/d in 2011 and 2012.** Supply from non-OPEC countries grows an average of about 0.4 million bbl/d annually through 2012. Consequently, EIA expects that in order to meet projected demand growth the market will rely on both a drawdown of inventories and significant increases in the production of crude oil and non-crude liquids in OPEC member countries at a time when the disruption of crude oil exports from Libya and continuing unrest in other MENA countries already highlight significant supply risks.

Among the major uncertainties that could push oil prices above or below our current forecast are: the continued unrest in producing countries and its potential impact on supply; decisions by key OPEC member

countries regarding their production response to the global increase in oil demand; the rate of economic growth, both domestically and globally; fiscal issues facing national and sub-national governments; and China's efforts to address concerns regarding its growth and inflation rates.

Gas Commercial Operations  
Hedging Program  
Market Indicators Summary  
May 27, 2011

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (June 11--Aug 11)	↔	Long	NOAA predicting above average temperatures for June 2011--August 2011 for large portions of the southern and western CONUS. Below normals in north central portion of CONUS. Extreme heat this summer will be confined to the Southwest region, nation's Midsection can expect cooler weather and the East Coast should be slightly warmer than normal.	12-13
Mid Term Forecast (30-60 days)	↔	Long	June is predicted to be 6.3% warmer than normal based on 10 year normals and July weather is predicted to be 5.1% cooler than normal.	14
Short Term Forecast (6-10 days)	↑	Short	Much Above and Above dominate the 6 to 10 day forecast.	15
Tropical Storm Activity	↑	Short	NOAA calls for a 65% chance of an above normal season, with a 25% chance of a near-normal season and only a 10% chance of below-normal tropical activity.	16
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↑	Long	Storage injections for the week ending May 20th were 105 BCF. Storage levels are at 2.024 TCF which is 10.2% lower than last year and 1.3% lower than the 5 year average.	17
<b>Industry Publications</b>				
PIRA Energy Group Summer 2011: [REDACTED] Winter 2011/12: [REDACTED]	↓	Long	GAS PRICE SCORECARD: June--Sept 2011 PIRA's price outlook is Bearish. Gradual narrowing of storage deficit and production growth will send bearish signal to markets.	18-19
Gas Daily	↑	Long	Gas supply and demand should come into greater balance by year's end thanks to increased coal-to-gas and fuel oil-to-gas switching. Bentek calls for a 2.2 Bcf/d increase in gas demand matching projections for 2.3 Bcf/d in supply.	20-21
Gas Daily	↓	Long	Jefferies reduces 2011 gas price forecast by 7% to \$4.27/Mcf. This assumes weather is 5 degrees above normal and that gas continues to keep the market share that was taken from coal.	22-23
Wood Mackenzie	↑↓	Long	Oversupply and low, stable prices persist through 2011 and into 2012. By late 2012 prices shift up and realign with drilling economics. The market pulls capital back to gas in the 2013--2020 period.	24
BNP Paribas	↓	Long	Storage inventories have got in line with the 5-year averages. But this is a result of two cold winters and one hot summer. A milder than normal summer could result in record storage levels. Henry Hub yearly average price predictions: 2011--\$4.21, 2012--\$4.70 and 2013--\$5.23.	25-26
<b>Government Agencies</b>				
Energy Information Administration Summer 2011: \$4.156 Winter 2011/12: \$4.680	↓	Long	The projected Henry Hub natural gas spot price averages \$4.24/MMBtu for 2011 and \$4.65/MMBtu for 2012.	27
<b>Technical Analysis</b>				
Winter 2011-12 Strip Chart	↔	Short	Closed at \$4.92	28
Summer 2011 Strip Chart	↔	Short	Closed at \$4.46	29
Summer 2012 Strip Chart	↔	Short	Closed at \$4.90	30
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to rise slightly from 2010 levels to 66.5 Bcf/d in 2011, resulting from an increase in the industrial and electric power consumption. Projected consumption increases by 0.7% in 2012 to 67.0 Bcf/d.	31
Supply	↓	Long	EIA expects average total production to increase by 1.4 Bcf/d (2.3%) in 2011 and by 0.6 Bcf/d (0.9%) in 2012.	31
Oil Market	↑	Long	Total world oil consumption grows by an annual average of 1.4 million bbl/d in 2011 and 1.6 million bbl/d in 2012. EIA projects WT1 at \$103/bbl for 2011 and \$107/bbl in 2012.	31

Meeting Minutes: 412 Annex Conference Room - 1:00 pm  
Attendees: Jim Mehring, Jeff Kern, Joachim Fischesser, Terry Bates, Steve Niederbaumer

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. Significant discussion focused on storage levels below 2010 levels as well as the 5-year average. Current level have been impacted by the cold winter and the hot 2010 summer. 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 2010 - October 2011  
 As of 05/25/11

Nov-10    Dec-10    Jan-11    Feb-11    Mar-11    Apr-11    May-11    Jun-11    Jul-11    Aug-11    Sep-11    Oct-11

**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  
 Collar  
 Fixed Price  
 Fixed Price  
 Fixed Price  
 Collar

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

**Types of Hedging Products (1)**

Fixed Price  
 Price Caps  
 No-Cost Collars

**Embedded Hedged Cost**

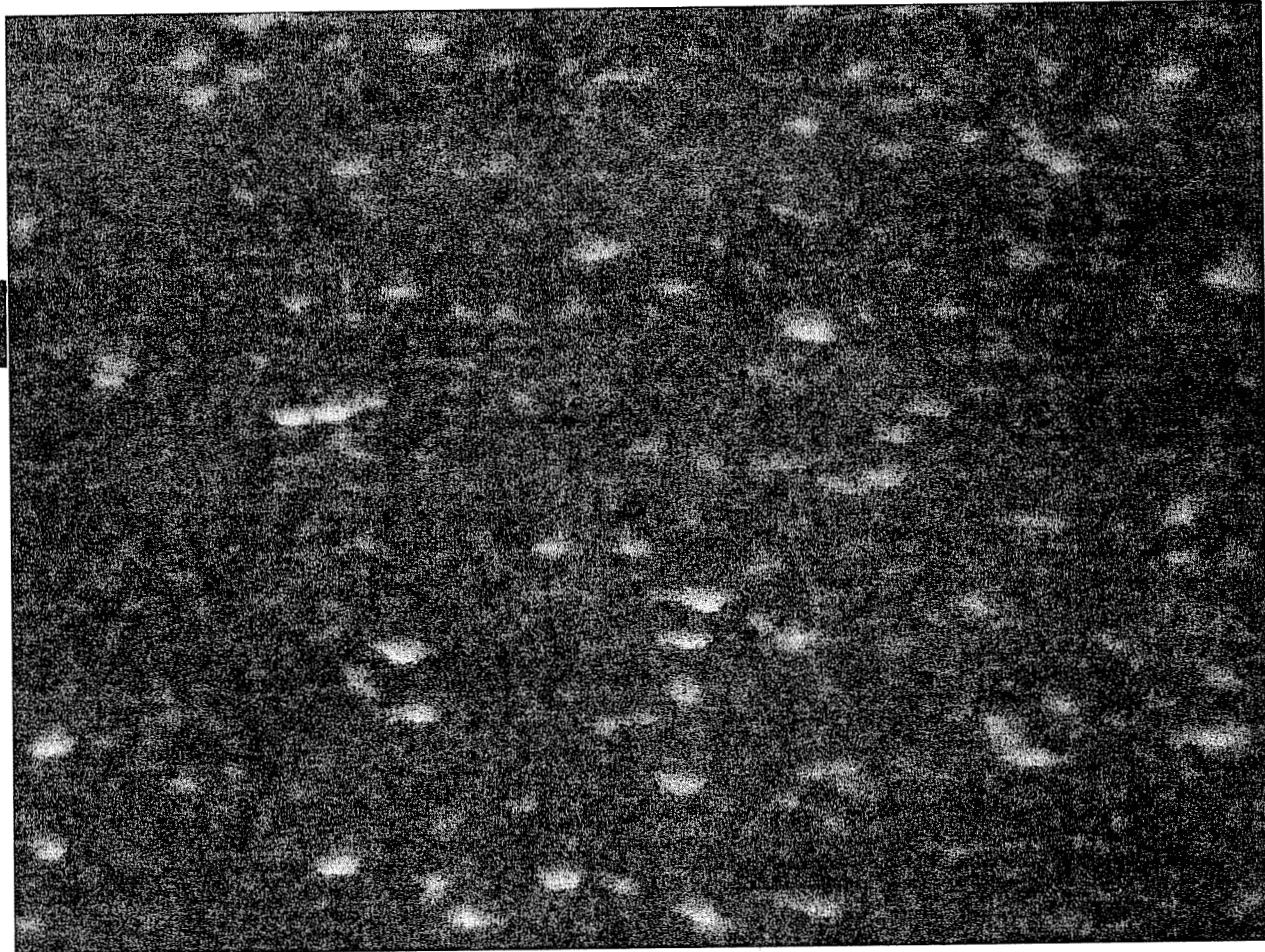
Winter  
 Summer

**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 %



9

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2011 - October 2012  
As of 05/25/11

	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)												
TCO FSS Withdrawals (Mcf)												
Other "Withdrawals" (Mcf)												
Total Withdrawals (Mcf)												
<b>Amount Hedged (dth/day)</b>												
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% Summer months.



Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 05/25/11

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 (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

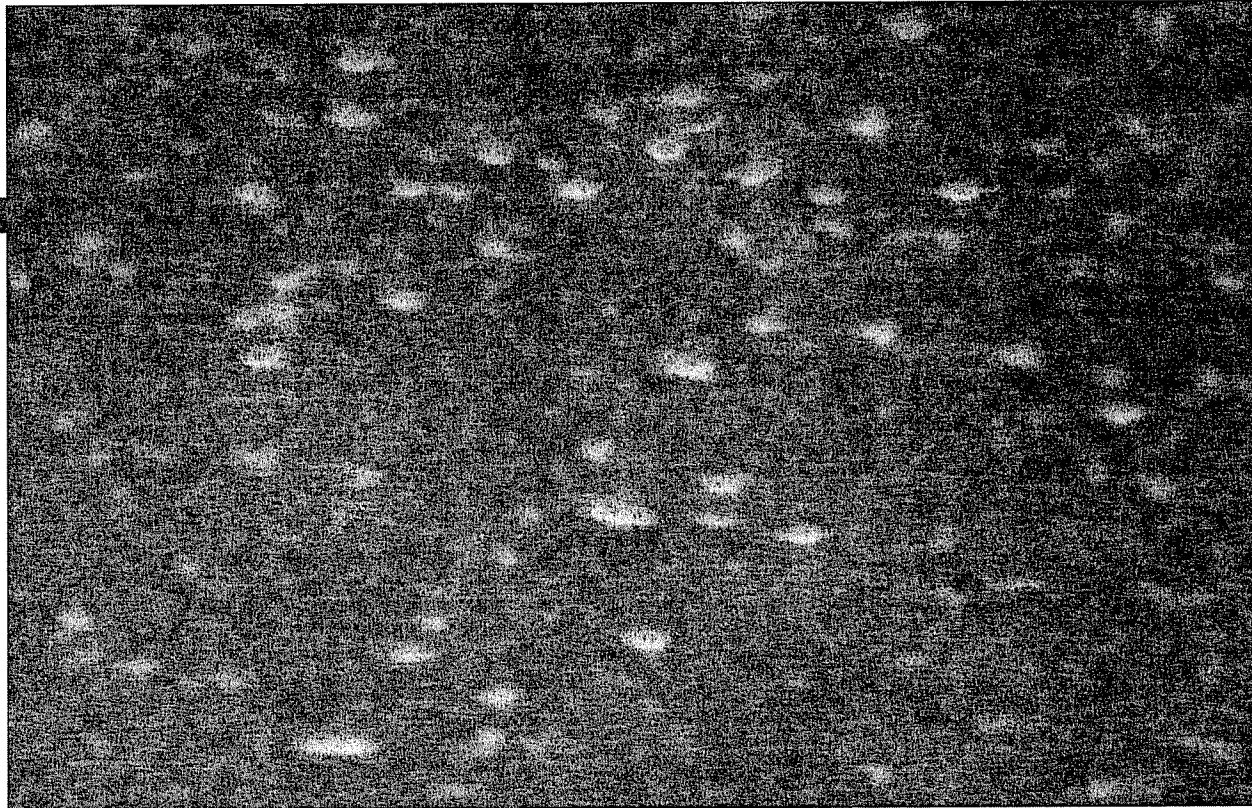
Winter  
 Summer

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.

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2013 - October 2014  
As of 05/25/11

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)**

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**

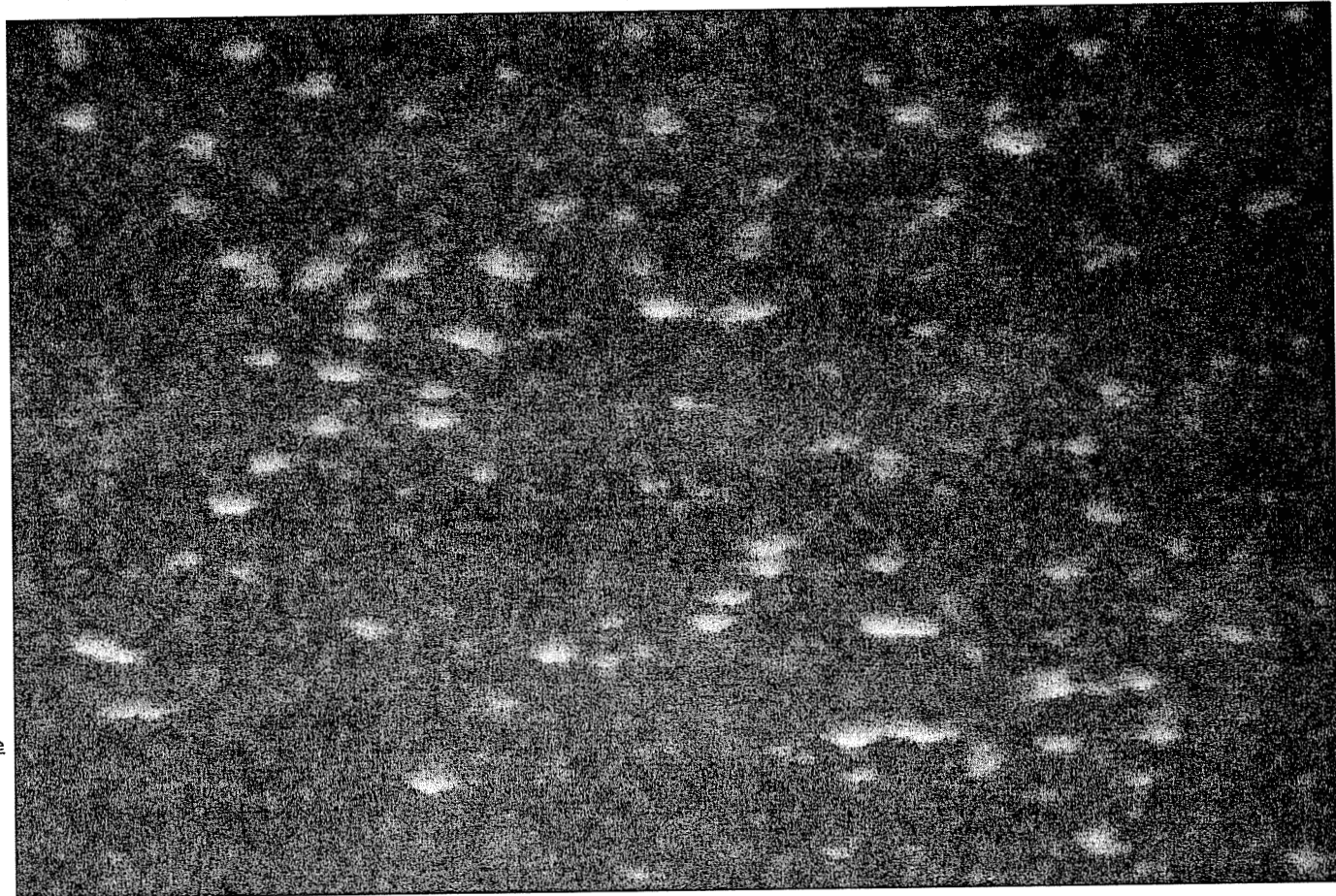
Winter  
Summer

**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.

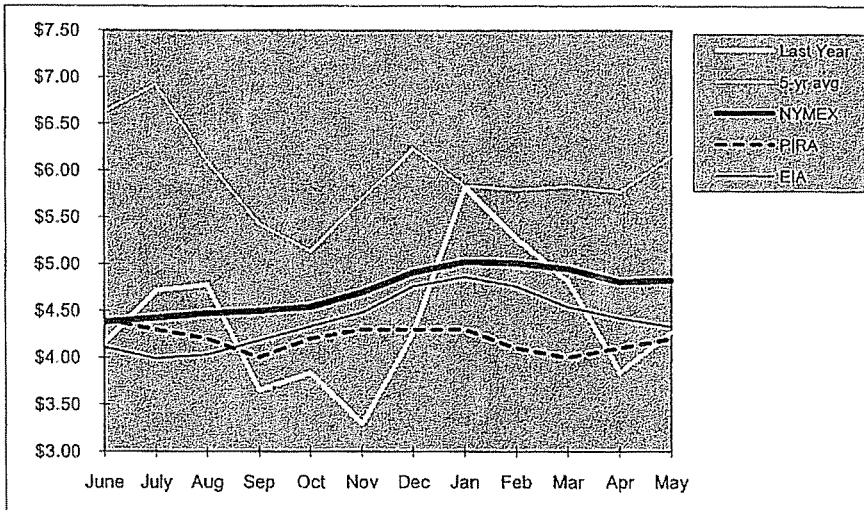
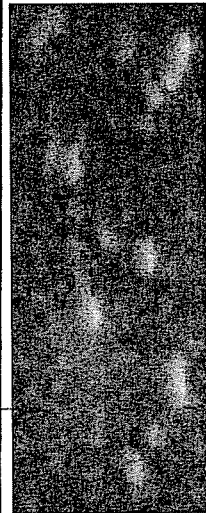
5/25/2011

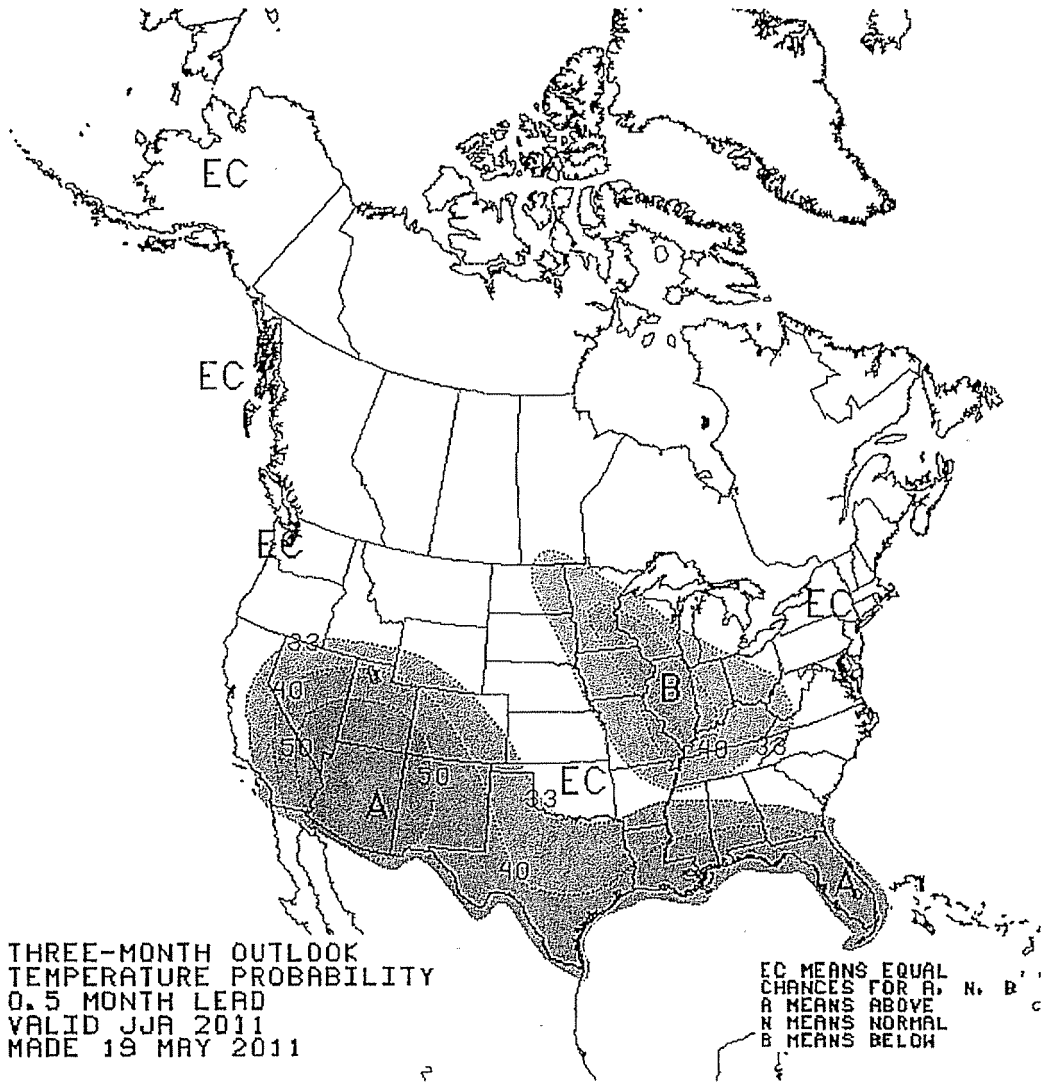
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/11)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Apr-11					
May-11					
Jun-11					
Jul-11					
Aug-11					
Sep-11					
Oct-11					
Summer 2011					
Target Levels By March 31, 2011					
Nov-11					
Dec-11					
Jan-12					
Feb-12					
Mar-12					
Winter 11/12					
Target Levels By October 31, 2011					
Apr-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2011					
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Target Levels By October 31, 2011					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2011					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2011					

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

Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (06/07-10/11)	Last Year (2010-2011)		PIRA 25-May-11	EIA 10-May-11	NYMEX 26-May-11		
June	\$6.63	\$4.16			\$4.110	\$4.379		
July	\$6.92	\$4.72			\$3.990	\$4.423		
Aug	\$6.10	\$4.77			\$4.030	\$4.469		
Sep	\$5.43	\$3.65			\$4.180	\$4.496		
Oct	\$5.13	\$3.84			\$4.330	\$4.538		
Nov	\$5.69	\$3.29			\$4.480	\$4.695		
Dec	\$6.23	\$4.27			\$4.760	\$4.907		
Jan	\$5.84	\$5.81			\$4.860	\$5.022		
Feb	\$5.80	\$5.27			\$4.760	\$5.010		
Mar	\$5.83	\$4.82			\$4.540	\$4.948		
Apr	\$5.77	\$3.84			\$4.420	\$4.807		
May	\$6.15	\$4.27			\$4.330	\$4.825		
12 Month Avg	\$5.96	\$4.39			\$4.399	\$4.710		
Summer Average					\$4.199	\$4.562		
Winter Average					\$4.680	\$4.916		





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# Gas Daily

Tuesday, May 24, 2011

## Worst of heat to be concentrated in Southwest this summer: WSI

Extreme heat this summer will largely be confined to the Southwest region, private forecaster WSI said Monday, as the nation's midsection can expect cooler weather and the East Coast should be just slightly warmer than normal.

"May has been a rather chilly month across most of the US so far, as the atmospheric pattern has changed to allow cooler weather to temporarily return to the southern US," said WSI Chief Meteorologist Todd Crawford. "This change in the pattern towards increased high-latitude blocking, or a more amplified jet stream, will likely persist and evolve into June. Because of this, we expect the coolest part of the summer (relative to normal) to be early, especially across the north-central and Great Lakes states. During the last half of summer, we think that the pattern will reverse with the potential for some significant heat to return to the northern US by August."

In June, WSI expects cooler-than-normal weather mostly in the North Central and Northwest states, with warmer-than-normal weather elsewhere.

In accompanying market commentary, Paul Flemming of Energy Security Analysis Inc., said gas demand should average near normal for June as a result of those weather patterns and the return of most power generators from maintenance.

In July, WSI predicts warmer-than-normal weather only in the North Central region, the Southwest, and inland in the Northwest, with most of the nation averaging cooler than average. That should result in a drop in gas demand to below-normal levels, said Flemming, ESAI's director of power and gas.

In August, WSI said warmer-than-normal conditions should prevail everywhere except in the Mississippi and Ohio River valleys. That forecast will result in more gas demand for cooling, Flemming said, and a greater chance for price spikes in the Northeast and California.

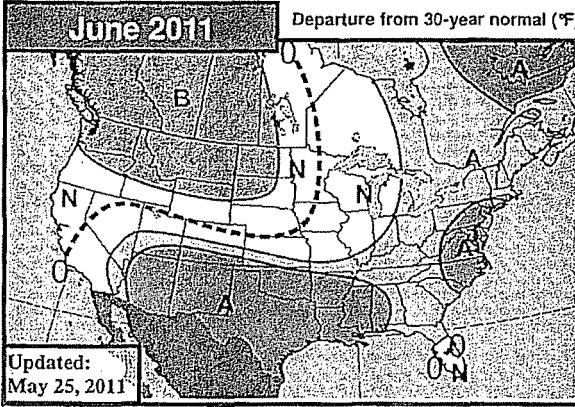
# EarthSat's 30-60 Day Outlook

Wednesday, May 25, 2011

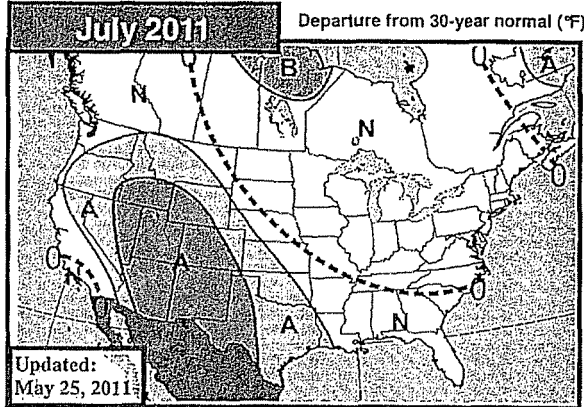
Meteorologists: SS/BH/AH/RG



EarthSat Weather



Updated:  
May 25, 2011



Updated:  
May 25, 2011

Legend for temperature departure from 30-year normal (°F):  
 ≥3.0, +2.0 to +2.9, +1.0 to +1.9, 0, -1.0 to -1.9, -2.0 to -2.9, ≤-3.0  
 -0.9 to 0.9

**Previous** Warmer across the Midwest, South, and East  
Slightly cooler Northwest

There were numerous changes to our final June forecast, including warmer adjustments across the Eastern half and cooler changes for the Northwest/Interior West. All of those changes have resulted in a final forecast map showing aboves across the East and South, and from Texas to parts of the Southwest. More seasonal warmth appears over the Midwest, where we currently expect the early part of June to be well above normal. That said, decreasing trends in the AO and NAO, along with ENSO transitioning from La Nina to a neutral state support an eventual cooling trend in the Midwest. These analogs have also shown that as parts of the Eastern half cool off, the West embarks on a warming trend. In addition, revamped MJO activity could help produce some cooler air over the Eastern half and compensating warmth across the Western states (particularly if the MJO wave settles into phase 6). Stronger -AO blocking could force a notable cool shot into the Central US, while a wholesale shift toward a +PNA pattern could cause a much cooler Eastern half and much warmer West. It's also worth mentioning that the CFS model (version 2) has trended warmer versus earlier solution and now favors our warmer outlook.

**Previous** More marginal cooling in Midwest and East  
Warmer in the Interior West

Changes to July favored added warmth to much of the West and strengthened cooling to most of the Eastern half. The composite map has been updated accordingly, reflecting more widespread seasonably cool temps, and a southward shift of the "zero line" to the Tennessee Valley and Southern Mid-Atlantic. Oppositely, the boundary of aboves has been pushed farther north over the West. We think that the warmest departures will align over the West because this is where the mean ridge should develop. The neutral ENSO analogs (i.e. 1995, 2001, 2008) strongly argue for the Western ridge and a relatively cool outcome for much of the Eastern half. Furthermore, the higher-numbered MJO phases 7 and 8 also support anomalous Western warmth and a cooler trough farther east. If the cooler air should focus over the Midwest and South, the East could be warmer under southerly flow and a coastal ridge (especially if the PNA averages negative). If the MJO is less active than expected, the seasonal signals such as the warm AMO and cold PDO could contribute to a warmer Eastern half and cooler West. Finally, the threat of tropical rains could cool Texas and other parts of the South.

Jun PWCCD\*\* Forecasts \*10Y Normal updated to '01-10

10Y Normal*	235.1
30Y Normal	217.4
Jun-2010	280.9
Jun 2011 Fcst:	250.0

Change: +17 \*\*National Pop-Weighted CDDs

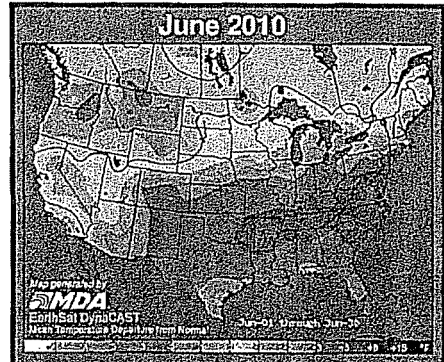
Jul PWCCD\*\* Forecasts \*10Y Normal updated to '01-10

10Y Normal*	337.2
30Y Normal	327.7
Jul-2010	380.5
Jul 2011 Fcst:	320.0

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

**May so far**

Taking the verification from May 1-24 and the forecast for the last week of May, we have a composite that is probably warmer than our 30 and 60 Day Outlooks for May across the Eastern Midwest and Mid-Atlantic/Northeast, and substantially colder across California and the Interior West. Areas where we look to perform reasonably well include Texas and the South, and the northwestern Midwest and northern Plains. There is an area of marginal belows in the mid/low MS/Delta region, likely due to above normal precipitation. From a weighted degree day standpoint, the month as a whole now looks to total 166.5 GWHDDs, a slightly cooler than normal month (normal being 156.5 GWHDDs).



# 6-10 Day Forecast—Detailed

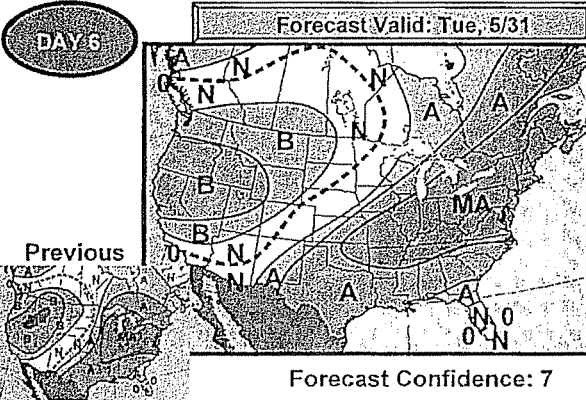
Thursday, May 26, 2011

Meteorologist: AC/KT



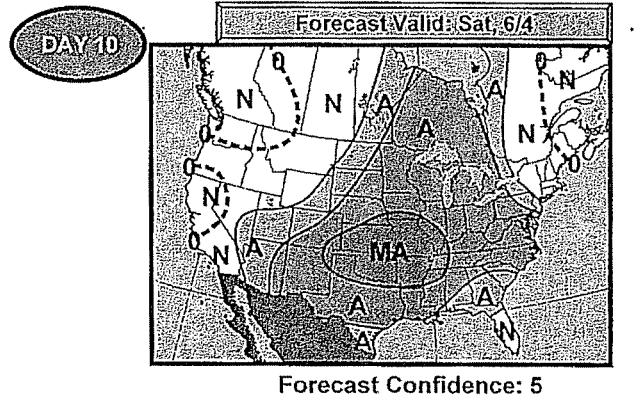
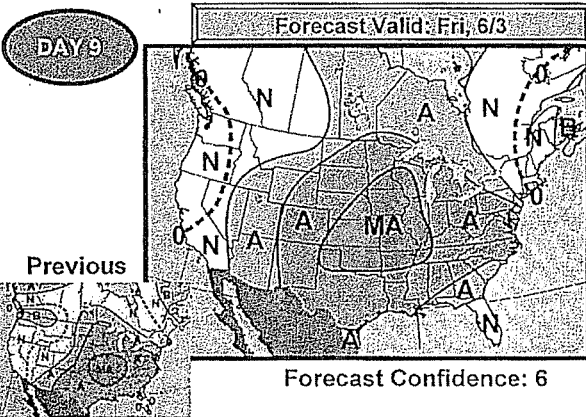
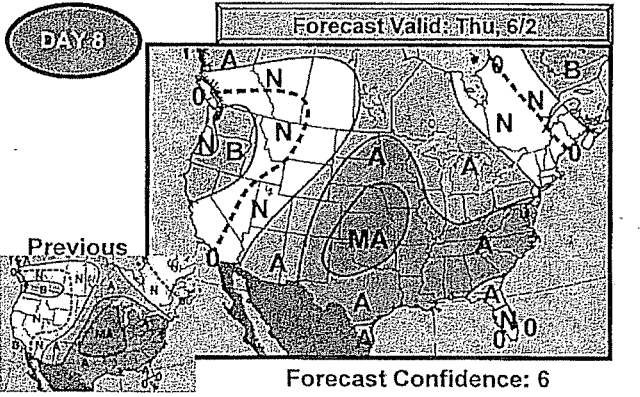
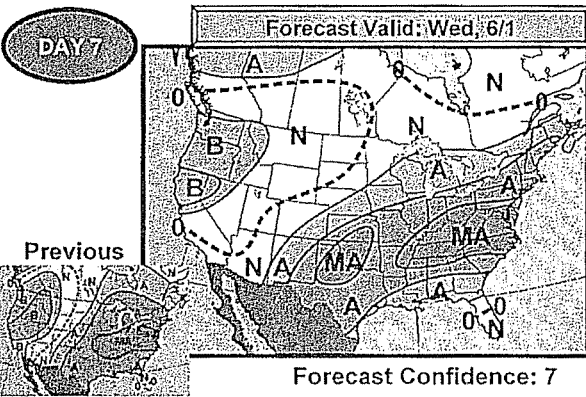
EarthSat Weather

## Forecast Temperature Deviations



**\*Warmth Peaks Early in the Northeast\***  
**\*Slightly Cooler Early in the Midwest\***

Not too many changes were placed into this forecast today, and confidence has increased as a result. The Northeast was warmed a bit during the early period, and temperatures could still spike a bit more along the Mid-Atlantic region during this time frame. The Midwest was cooled slightly early in the period as a brief cool down is expected. The American models are stronger with this cool shot, so there is a bit of a cool risk to the forecast. Overall, the warm pattern across the eastern half of the country continues to be supported by a +AO, +NAO, and -PNA. The West is not as cool today, with belows expected only during the first half of the period, mainly in the Pac NW.



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



# Gas Daily

Friday, May 20, 2011

## NOAA calls for busier-than-average Atlantic Basin hurricane season

The National Oceanic and Atmospheric Administration on Thursday predicted busier-than average Atlantic Basin hurricane season, with 12 to 18 named storms and six to 10 hurricanes, of which three to six will strengthen to Category 3 or above.

The agency calls for a 65% chance of an above normal season, with a 25% chance of a near-normal season and only a 10% chance of below-normal tropical activity. Hurricane season runs from June 1 through November 30.

NOAA said it based its outlook on the "tropical multi-decadal signal," which has contributed to above normal tropical storm activity since 1995, as well as continued above-average sea surface temperatures in the tropical Atlantic Ocean and Caribbean Sea and predictions that the current La Niña weather pattern will give way to more neutral conditions by summer. — *Jeff Barber*

**Weekly Natural Gas Storage Report**

Released: May 26, 2011 at 10:30 a.m. (eastern time) for the Week Ending May 20, 2011.  
Next Release: June 2, 2011

**Working Gas in Underground Storage, Lower 48**

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

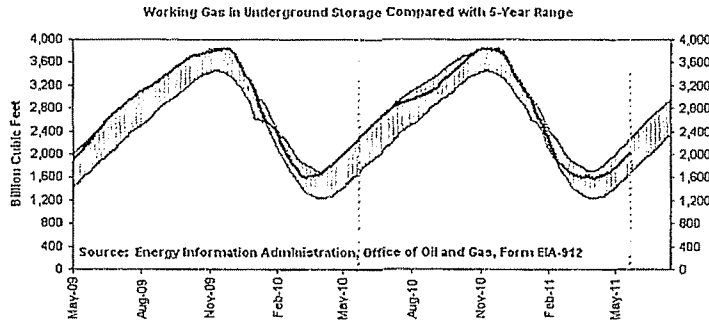
Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	05/20/11	05/13/11	Change	Year Ago (05/20/10)		5-Year (2006-2010) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	860	804	56	1,039	-17.2	970	-11.3
West	262	251	11	374	-29.9	311	-15.8
Producing	902	864	38	841	7.3	769	17.3
<b>Total</b>	<b>2,024</b>	<b>1,919</b>	<b>105</b>	<b>2,254</b>	<b>-10.2</b>	<b>2,050</b>	<b>-1.3</b>

**Notes and Definitions**

**Summary**

Working gas in storage was 2,024 Bcf as of Friday, May 20, 2011, according to EIA estimates. This represents a net increase of 105 Bcf from the previous week. Stocks were 230 Bcf less than last year at this time and 26 Bcf below the 5-year average of 2,050 Bcf. In the East Region, stocks were 110 Bcf below the 5-year average following net injections of 56 Bcf. Stocks in the Producing Region were 133 Bcf above the 5-year average of 769 Bcf after a net injection of 38 Bcf. Stocks in the West Region were 49 Bcf below the 5-year average after a net addition of 11 Bcf. At 2,024 Bcf, total working gas is within the 5-year historical range.

- Data
- [History \(XLS\)](#)
- [5-Year Averages, Maximum, Minimum, and Year-Ago Stocks \(XLS\)](#)
- References
- Methodology
- [Differences Between Monthly and Weekly Data](#)
- [Revision Policy](#)
- 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 2006 through 2010.  
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**  
**May 25, 2011 Release**

Jan-09		Jan-10		Jan-11		Jan-12	
Feb-09		Feb-10		Feb-11		Feb-12	
Mar-09		Mar-10		Mar-11		Mar-12	
Apr-09		Apr-10		Apr-11		Apr-12	
May-09		May-10		May-11		May-12	
Jun-09		Jun-10		Jun-11		Jun-12	
Jul-09		Jul-10		Jul-11		Jul-12	
Aug-09		Aug-10		Aug-11		Aug-12	
Sep-09		Sep-10		Sep-11		Sep-12	
Oct-09		Oct-10		Oct-11		Oct-12	
Nov-09		Nov-10		Nov-11		Nov-12	
Dec-09		Dec-10		Dec-11		Dec-12	
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		

**North American Gas Forecast Monthly**



May 25, 2011

**NATURAL GAS**

**GAS PRICE SCORECARD: JUNE 2011 – SEPTEMBER 2011**

Bearish Neutral Bullish



U.S. Supply Issues	Outlook	Commentary
<i>U.S. Production</i>		Led by Haynesville and Marcellus shale gas, the net growth of U.S. production should exceed 3 BCF/D without an allowance for hurricane-driven supply curtailments. In Haynesville, 2.2 BCF/D of incremental pipeline capacity will be a stimulus.
<i>LNG Imports</i>		We continue to anticipate LNG imports remaining at minimum levels that would be similar to last summer.
<i>Canadian Trade</i>		Large end-April storage deficits are continuing and will require accelerated Y/Y refills before midyear and after. The faster refills, in turn, will become the largest factor behind much lower exports to the U.S.
<i>Mexican Trade</i>		Production should continue to decline, coupled with higher domestic demand, causing imports from the U.S. to increase.
<i>Storage Levels</i>		A Y/Y storage deficit expected to remain above the 200 BCF level by the end of this month will begin to vanish over the summer as incremental Y/Y demand and reduced net imports are more than offset by higher domestic production.
U.S. Demand Issues	Outlook	Commentary
<i>Economy</i>		Expectations for U.S. economic growth in 2Q11 have been revised downward and the manufacturing sector's prospects look positive, although recent output levels are weaker in part related to the Japan-led supply chain disruptions.
<i>Electric Generation</i>		Gas-fired CCGT gains against steam coal in the Eastern Grid will accelerate, but gas demand losses from milder summer weather and incremental hydro, should push gas demand lower Y/Y.
<i>Industrial Sector</i>		Despite recent preliminary IP readings that point to a slowdown of manufacturing activity, post-1Q11 industrial gas demand continues to look stronger than before, consequently, not diminishing future growth prospects.
<i>Res/Com Heating</i>		Prior to October, the impact of heating degree days on gas demand is minimal.
Other Issues	Outlook	Commentary
<i>NYMEX Prices and Speculation</i>		Non-commercial short-covering helped fuel the March and April price rallies as underscored by the ~296,000 lot reduction in their NYMEX/ICE net short futures position. Net shorts have swelled since, but remain far below the ~449,000 3/15 peak.
<i>Medium-Term NYMEX Prices</i>		The 2015 and 2020 calendar strip price declines ended this month. Buying interest appears to have been further stoked following the DOE's approval to allow Sabine Pass LNG to export gas to any country with which trade is allowed.
Overall Assessment	Outlook	Commentary
<i>Price Outlook</i>		A gradual narrowing of the Y/Y storage deficit will send a bearish fundamental price signal especially if U.S. production growth remains strong, but storage congestion pricing that would force gas to compete with non-Appalachian coal in the EG sector is not expected.

# Gas Daily

Thursday, May 12, 2011

## Bentek: Demand, supply could come into balance by end of 2011

Gas supply and demand should come into greater balance by year's end thanks to increased coal-to-gas and fuel oil-to-gas switching, Bentek Energy Vice President Jim Simpson said Wednesday.

Speaking at Intelligence Press' GasMart conference in Chicago, Simpson said Bentek calls for a 2.2 Bcf/d increase in gas demand by the end of the year due to fuel-switching, matching projections for 2.3 Bcf/d in supply over the same period — largely from shale production and associated gas from increased oil and liquids drilling.

Bentek is also beginning to see signs of increased fuel oil-to-gas switching in the Northeast despite additional infrastructure costs involved as oil prices remain high.

"Utilities can pass the infrastructure costs onto the consumer, add it to the natural gas costs, and the consumer's bill is still cheaper than if they went with fuel oil," Simpson said.

He attributed the heavy fuel-switching a structural shift in demand, leading to Bentek's projections for switching to account for an 8.5 Bcf/d growth in gas demand through 2020.

On the supply side, while current production levels are sustainable in the \$4/Mcf to \$5/Mcf range because so many producers are slashing costs by focusing on liquids and oil, long-term demand growth isn't as likely if gas prices move into the \$5.50/Mcf to \$6/Mcf range, Simpson said.

He explained that demand growth is very price-sensitive because much of it is predicated on fuel-switching as industrial and residential use continues to lag power generation demand.

And grow it must because supply is not slowing down, particularly as associated gas from increased oil production enters the market.

Simpson predicted that US will add 1.8 million barrels/d of oil through 2015 as gas companies and oil producers take the technology that ushered in the shale revolution and begin applying it to onshore oil.

The impact of associated gas, even as producers turn more and more to liquids and oil, led Bentek to forecast a gas production increase of as much as 21 Bcf/d by 2020, keeping prices low and incentivizing more demand growth, possibly from heavy natural gas vehicles and LNG exports.

In a report released Wednesday, Bentek, a unit of Platts, elaborated on Simpson's forecasts, stating that ramped-up US gas production will be held in check over the next five years by increased coal-to-gas switching, declining Canadian imports, rising Mexican exports and falling LNG receipts.

In the near term, average daily power burn this year is expected to be 19.9 Bcf/d, inclusive of 1.7 Bcf/d of coal-to-gas switching, the report stated, as the increased gas supplies and declining production rates of coal close the price spread between coal- and gas-fired generation.

Through 2016, Bentek forecasts US gas demand to grow some 4 Bcf/d, with power generation making up 3 Bcf/d. In Canada, meanwhile, the report calls for a 800,000 Mcf/d decline in production by 2015,

ultimately resulting in a 1.7 Bcf/d decline in net exports to the US through 2016 as the US finds cheaper supplies closer to home.

South of the border, Bentek expects a tighter demand supply balance as declining Mexican production and fewer LNG imports into Mexican terminals gets replaced by US shale gas, particularly from the nearby Eagle Ford Shale in South Texas. "This divergence between Mexican supply and demand is expected to remain in place and potentially amplify over the next five years," the report said.

— *Joshua Starnes, Samantha Santa Maria*

# Gas Daily

Tuesday, May 3, 2011

## Jefferies slices 2011 gas price forecast by 7%

Even with slightly bullish weather assumptions, Jefferies & Company's top gas analyst sliced his 2011 price forecast 7% Monday to \$4.27/Mcf.

Subash Chandra said that assuming weather is 5 degrees above normal and that gas continues to keep the market share it has taken from coal, bulging US supplies will keep gas trading in a range bound by high-cost Central Appalachian coal and low-cost Powder River Basin coal.

Chandra predicted that Henry Hub prices would average \$4.20/Mcf over the next two quarters but dropped his fourth-quarter price estimate 10%, from \$5/Mcf to \$4.50/Mcf.

"During shoulder season, Powder River Basin sets the 'floor.' During peaks, Central Appalachian sets the 'cap,'" Chandra explained. "We don't believe there is any event under way that will alter this pricing dynamic, which has now been in place for two and one-half years."

Over that period "coal has struggled to regain market share," Chandra said, noting that coal's share of the power market has dropped from 47.2% in 2008 to 43.7% in 2010, while gas' share has climbed two percentage points to 25.7%.

"Natural gas should continue to orbit around the price of coal," he added. "Henry Hub is currently trading 7% below Powder River coal and 26% below Central Appalachian coal, with \$4.09/Mcf being the point at which gas displaces lower-cost coals."

But gas can't climb much higher than \$5/Mcf, Chandra said, because there are substantial idle coal plants that will turn on when gas prices go above that level. "In other words, strong demand requires weak gas prices," he said. "The market can't endure both."

As a result, a true bull market for gas is a "mirage," he continued. "The market that investors prefer is one where baseload sources of power are stretched to the limit, and gas must compete once again with oil at the margin to meet peaking loads.

"It is a market that lives only in fairy tales. To witness such a market in reality will require the combination of strong weather-adjusted power demand in excess of anything experienced in the last several years, coal capacity retirements well beyond what is assumed in most realistic models, and a supply collapse in all key gas shales, not just the Haynesville," Chandra said.

He discounted any help in the next five years from other demand drivers such as coal plant shutdowns, liquefied natural gas exports, and increased gas use by the transportation and petrochemical sectors.

Despite Dow Chemical's announcement that it would be building more polyethylene plants along the Gulf Coast, Chandra doesn't see petrochemical demand growing by more than 100,000 Mcf/d in the next two years. "While capacity additions have grabbed headlines, the bulk of additions is three to four years out," he said.

Meanwhile "new legislation, currently in committee, provides compelling tax breaks for the construction of infrastructure, sale of vehicles and consumption of natural gas, but will still take many years before gas for transportation salvages the commodity," he predicted.

And coal plant retirements in the face of new environmental regulations won't bolster gas prices, he said, because about one-third of coal generation is already idle and ready to pick up any slack at gas prices above \$5/Mcf. — *Bill Holland*





## North American Gas Service: Key Messages from May 2011 Gas Forum—Short-Term Prices

### **Oversupply and low, stable prices persist through 2011 and into 2012**

- Backlog of uncompleted wells cleared
- Hold-by-production lease clauses extend Haynesville drilling through Q2
- Weather correction limits year-over-year demand growth, despite strengthening GDP
- New coal capacity holds down power sector growth, with some support from firming coal prices

### **By late 2012 prices shift up—and realign with drilling economics**

- Supply plateaus by Q3 2011—liquids and associated oil volumes aren't enough to offset reduced dry gas investment
- Demand strengthens as coal retirements accelerate with implementation of the Clean Air Transport Rule
- Coal prices hold high
- Tight oil remains a target, so rig recovery is muted even as prices climb

### **The market pulls capital back to gas in the 2013-'20 period**

- What price levels incentivize the drilling needed to meet the market pull?
- Coal retirements continue: mid-merit units come offline and add to gas demand



Over the last two years, on the occasion of our US gas price scenario revision, we have been sketching bearish outlooks triggered by the conjunction of growing shale gas production and declining demand. A persistent storage surplus has been weighing on gas quotations. The market, extremely sensitive to storage news, had been expecting that the evacuation of this surplus would eventually coincide with a price recovery. Now the idea of abundant and steady gas supplies has taken root, together with expectations of continued low prices, while the concept of North American LNG exports in the future does not seem so crazy anymore.

Storage inventories have finally got in line with their five year average as of end of April 2011. But this has been the result of two unusually cold winters and one unusually hot summer in a row, an exceptional climatic situation. Moreover a "La Nina" phenomenon is now chilling the northern part of the American continent and heating up the South. The market has easily coped with weather driven demand increases thanks to steadily growing production. As a consequence, inventories could once again track - or even beat, in case of a milder than normal summer -- the record storage levels of the previous years after the injection season.

Starting from 2H10 the market has become aware of the fact that the "shale phenomenon" was here to stay. In its preliminary Annual Energy Outlook (AEO) 2011, the EIA has more than doubled its central estimate of US technically recoverable shale resources, from 10 Trillion Cubic Meters (Tcm) to 23.4 Tcm (827 Tcf), enough to cover the entire US gas consumption for 36 years, versus dry gas proved reserves of 7.7 Tcm (273 Tcf). While three years ago the marginal cost of production for these shale resources was still assessed in a 6-8 US\$/MMBtu range, some consultants announced that most of the latter could now be economically exploited at a cost of 4 US\$/MMBtu or below, with the "best plays" around 2.5 US\$/Btu.

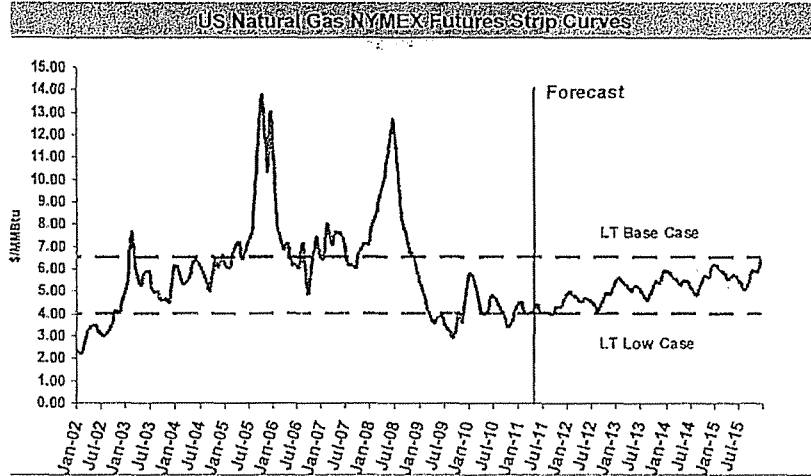
A series of improvements have contributed to lower shale gas production costs. Over the last couple of years the industry has been able to extend the life and production profile of the wells by better controlling initial production (IP) rates (IP rates for a shale play can lie in a range of 3 to 15 MMcf/day vs. an average US IP rate of 1 MMcf/d). The consequent rise of Estimated Ultimate Recoveries (EUR) has decreased break-even levels, together with a decrease in royalties. If during the boom period producers paid up to 30,000 US\$ per acre, in some recent lease activity they have paid 8,000-10,000 US\$/acre. Royalties represent a sunk cost. This factor has been underpinning production despite falling Henry Hub prices. Companies have continued to drill in order not to lose their permits, creating by the way a backlog of some 3,000 uncompleted wells (i.e. initiated but not yet exploited) for the benefit of future supplies.

Since 2005 US domestic production has risen by some 100 bcm/y, the increase coming essentially from shale gas. It has continued to rise despite the active rigs fall recorded in 2009 (-750 units, i.e. -50% approximately); in 2010, after a partial recovery of 170 active rigs, the output has grown by 4.4% and a further increase of more than 2% is expected by EIA for 2011, despite the fact that active gas rigs are bending down again, thanks to productivity gains. Due to the strong recovery of industrial demand and the continuous gas-fired power generation growth, 2010 US gas demand has jumped to 682 bcm/y (or 66.2 Bcf/d, i.e. +5.7%), well above 2008 levels. Nevertheless the industry balance is still pointing to overcapacity, with domestic production progressively eroding market share from imports (both pipeline and LNG).

The world gas bubble is rapidly disappearing and the Fukushima catastrophe is likely to further underpin long term gas demand (see also our Gas Trends on the Japanese crisis dated March 2011). The oil to gas premium continues to increase, as it is the case for price spreads with Europe and Asia oil linked markets. Such a decoupling – in our view – makes no economic sense in an energy scarce world. The

market will have to adjust, but in the short mid term it is especially taking into account the fact that the US gas surplus can not be evacuated. Our new price scenario represents a conservative basis: upside potential could reside in significant hurricane related disruptions or a faster than expected drilling slow-down.

Despite the fact that the world gas bubble is rapidly disappearing, the US gas surplus can not be rapidly evacuated. Our price scenario becomes more conservative, with prices below the 5 US\$/MMBtu threshold until end 2012, barring any short term serious hurricane related production outage



Source: BNP Paribas CIB

Henry Hub Monthly Average Price Scenario: US\$/MMBtu

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
January	6.12	8.69	6.48	7.98	5.24	5.81	4.49	4.96	5.59	5.87	6.16
February	6.12	7.53	8.01	8.55	4.52	5.34	4.07	4.79	5.38	5.66	5.94
March	6.93	6.88	7.10	9.38	3.95	4.29	3.97	4.68	5.26	5.52	5.80
April	7.20	7.12	7.59	10.13	3.56	4.01	4.15	4.53	5.04	5.27	5.54
May	6.48	6.22	7.62	11.23	3.81	4.16	4.38	4.70	5.22	5.47	5.74
June	7.16	6.20	7.37	12.68	3.80	4.79	4.04	4.63	5.13	5.37	5.64
July	7.59	6.12	6.22	11.15	3.39	4.63	4.04	4.38	4.85	5.08	5.33
August	9.46	7.14	6.23	8.25	3.15	4.31	4.05	4.15	4.61	4.83	5.06
September	12.73	4.92	6.05	7.69	2.96	3.90	3.96	4.50	4.99	5.23	5.49
October	13.72	5.83	6.77	6.73	4.02	3.43	4.31	4.89	5.42	5.68	5.95
November	10.35	7.40	7.13	6.67	3.69	3.74	4.32	4.89	5.40	5.65	5.92
December	12.97	6.71	7.14	5.79	5.37	4.23	4.71	5.32	5.67	6.16	6.44
Yearly Average	8.90	6.73	6.97	8.85	3.96	4.39	4.21	4.70	5.23	5.48	5.75

Source: BNP Paribas CIB

NB = 1 Bcf/day = 10.3 bcm/year ; 1 mtpa = 1.38 bcm/year; 1 bcf = 0.028 bcm

**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**May 10, 2011 Release**

Jan-09	5.24	Jan-10	5.83	Jan-11	4.49	Jan-12	4.86
Feb-09	4.51	Feb-10	5.32	Feb-11	4.09	Feb-12	4.76
Mar-09	3.96	Mar-10	4.29	Mar-11	3.97	Mar-12	4.54
Apr-09	3.49	Apr-10	4.03	Apr-11	4.25	Apr-12	4.42
May-09	3.83	May-10	4.14	May-11	4.20	May-12	4.33
Jun-09	3.80	Jun-10	4.80	Jun-11	4.11	Jun-12	4.20
Jul-09	3.38	Jul-10	4.63	Jul-11	3.99	Jul-12	4.40
Aug-09	3.14	Aug-10	4.32	Aug-11	4.03	Aug-12	4.59
Sep-09	2.97	Sep-10	3.89	Sep-11	4.18	Sep-12	4.65
Oct-09	4.00	Oct-10	3.43	Oct-11	4.33	Oct-12	4.88
Nov-09	3.66	Nov-10	3.71	Nov-11	4.48	Nov-12	4.97
Dec-09	5.34	Dec-10	4.25	Dec-11	4.76	Dec-12	5.22
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		

Winter Strip Nov11 - Mar12



### Summer Strip 2011



29

### Summer Strip 2012



# Short-Term Energy Outlook

May 10, 2011 Release  
(Next update June 7, 2011)

## Natural Gas

**U.S. Natural Gas Consumption.** EIA expects total natural gas consumption to grow by 0.5 percent to 66.5 billion cubic feet per day (Bcf/d) in 2011. Forecast industrial consumption rises 1.9 percent to 18.4 Bcf/d in 2011, and electric power consumption rises 0.4 percent to 20.3 Bcf/d.

Projected total consumption increases by 0.7 percent in 2012 to 67.0 Bcf/d. Growth continues in the industrial and electric power sectors at 1.4 percent and 2.6 percent, respectively. Residential and commercial consumption each decline by 1.6 percent in 2012 stemming from forecast 2.2 percent reduction in natural gas-weighted heating degree-days.

**U.S. Natural Gas Production and Imports.** Marketed natural gas production has been growing steadily since 2005, primarily because of the boom in horizontal drilling in unconventional shale formations. EIA expects total marketed production to average 1.4 Bcf/d (2.3 percent) higher in 2011 compared with last year. Marketed natural gas production fell by 1.1 Bcf/d in February 2011 from the month before, but this drop can largely be attributed to temporary factors including seasonal maintenance in the GOM and colder-than-normal weather in Texas, New Mexico, Oklahoma, and Wyoming which caused freeze-offs (gas flow blockages resulting from water vapor freezing in the gas stream), forcing temporary shut downs to lower-48 onshore production. EIA expects production will recover from February levels but begin modest month-to-month declines that could continue through the year because of reductions in the number of active natural gas drilling rigs.

The number of rigs drilling for natural gas, as reported by Baker Hughes Inc., has fallen from 973 in April 2010 to 882 as of April 29, 2011. More rigs are being directed toward oil instead of gas largely because of the large price disparity between the two fuels on an energy-equivalent basis. On April 21, 2011, the number of active oil-directed rigs exceeded the number of gas-directed rigs for the first time since April 28, 1995.

The decline in drilling activity this year and forecast increase in consumption next year contribute to higher natural gas prices next year and a turnabout in drilling activity during 2012. EIA expects total marketed production to increase by 0.6 Bcf/d (0.9 percent) to 63.8 Bcf/d in 2012.

Growing domestic natural gas production continues to reduce reliance on natural gas imports. Because of the earthquake in Japan and subsequent nuclear generation outages, Japan's demand for liquefied natural gas (LNG) as a replacement fuel for electric power generation is expected to increase, contributing to higher global LNG prices. Japan is already the largest importer of LNG in the world, with daily imports averaging more than 9 Bcf/d in 2010. EIA projects U.S. imports of LNG will average 0.9 Bcf/d in 2011, down 21 percent from 1.2 Bcf/d in 2010.

## Global Crude Oil and Liquid Fuels

**Crude Oil and Liquid Fuels Overview.** EIA projects that total world oil consumption will grow by 1.4 million barrels per day (bbl/d) in 2011, which is about 0.1 million bbl/d lower than last month's Outlook, and 1.6 million bbl/d in 2012, slightly higher than forecast last month. Supply from non-OPEC countries increases by an average of about 0.6 million bbl/d annually through 2012, which is about 0.2 million bbl/d higher than in last month's Outlook. OECD inventory reports for the first quarter 2011 have come in higher than EIA projected in last month's Outlook. Consequently, while EIA still expects the market will rely on both a drawdown of inventories and increases in the production of crude oil and non-crude liquids in OPEC member countries to meet projected demand growth, the forecast for OPEC crude oil and liquid fuels production has been lowered from last month's Outlook by about 0.14 million bbl/d in 2011 and 0.5 million bbl/d in 2012.

Among the major uncertainties that could push oil prices above or below our current forecast are: continued unrest in producing countries and its potential impact on supply; decisions by key OPEC-member countries regarding their production in response to the global increase in oil demand; the rate of economic growth, both domestically and globally; fiscal issues facing national and sub-national governments; and China's efforts to address concerns regarding its growth and inflation rates.



Gas Commercial Operations  
Hedging Program  
Market Indicators Summary  
June 23, 2011

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (July 11--Sept 11)	↔	Long	NOAA predicting above average temperatures for July 2011--September 2011 for portions of the southern and western CONUS. Below normals in north central portion of CONUS.	12
Mid Term Forecast (30-60 days)	↔	Long	July is predicted to be 2.3% warmer than normal based on 10 year normals and August weather is predicted to be 1.7% cooler than normal.	13
Short Term Forecast (6-10 days)	↑	Short	Above and some Much Above dominate the 6 to 10 day forecast.	14
Tropical Storm Activity	↑	Short	EIA estimates shut-in production during the 2011 hurricane season of 53 Bcf on natural gas. During the 2010 hurricane season 8.5 Bcf of natural gas was shut-in.	15-16
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↑	Long	Storage injections for the week ending June 17th were 98 BCF. Storage levels are at 2.354 TCF which is 9.9% lower than last year and 2.6% lower than the 5 year average.	17
<b>Industry Publications</b>				
PIRA Energy Group Summer 2011: [REDACTED] Winter 2011/12: [REDACTED]	↓	Long	GAS PRICE SCORECARD: June--Sept 2011 PIRA's price outlook is Bearish. Gradual narrowing of storage deficit and production growth will send bearish signal to markets.	18-19
Gas Daily	↔	Long	Gas prices to remain stable this summer as higher levels of demand, storage and economic growth counteract downward price pressure from a cooler forecast.	20
Gas Daily	↓	Long	Hydro levels in the Pacific Northwest are extraordinary high. Regions price outlook is "incrementally bearish", but "won't push price down to the \$3 level".	21
Gas Daily	↑	Long	The market share of gas used in US generation will rise to 40% of overall capacity by 2035, compared with 21% in 2011.	22
Gas Daily	↓	Long	Traders and analysts believe the continued growth of onshore production will dampen any storm-related price volatility. Historical NYMEX prices show the decreasing effects of storms on gas prices.	23-24
<b>Government Agencies</b>				
Energy Information Administration Summer 2011: \$4.201 Winter 2011/12: \$4.608	↓	Long	The projected Henry Hub natural gas spot price averages \$4.25/MMBtu for 2011 and \$4.58/MMBtu for 2012.	25
<b>Technical Analysis</b>				
Winter 2011-12 Strip Chart	↔	Short	Closed at \$4.76	26
Summer 2011 Strip Chart	↔	Short	Closed at \$4.37	27
Summer 2012 Strip Chart	↔	Short	Closed at \$4.74	28
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to grow by 1.4% to 67.1 Bcf/d in 2011, resulting from an increase in the industrial and electric power consumption. Projected consumption increases slightly in 2012 to 67.2 Bcf/d.	29
Supply	↓	Long	EIA expects average total production to increase by 7% to 67.1 Bcf/d in 2011 despite a "significant decline" in gas drilling activity.	29
Oil Market	↑	Long	World benchmark crude oil prices reached their highest level of this year at the end of April, fell by about 10% by May 9 and have changed very little since then. EIA projects WTI at \$104/bbl for 2011 and \$108/bbl in 2012.	30

Meeting Minutes: 412 Annex Conference Room - 1:00 pm

Attendees: Jim Mehring, Jeff Kern, Mike Brumback, Joachim Fischesser, Terry Bates, Steve Niederbaumer

Discussed the current market fundamentals including weather (including hurricanes' impact on price volatility), storage levels, supply and demand and analyst thoughts on the current gas market conditions. In addition, discussed DEO and DEK's hedging programs and the amount of gas currently hedged within those programs. The KPSC is currently reviewing DEK's Hedging Program. Determined that based on levels currently hedged in Ohio and that the KPSC was in the process of reviewing DEK's Hedging Program additional hedging activity for Ohio was appropriate at this time. Discussed several hedging opportunities and determined to hedge in Ohio 5,000 Dth/day for December 2011--February 2012 converting a FOMI price to fixed. In addition, for the period November 2012--October 31, 2013 to hedge [REDACTED] Dth/day at a fixed rate.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2010 - October 2011  
 As of 06/21/11

Nov-10    Dec-10    Jan-11    Feb-11    Mar-11    Apr-11    May-11    Jun-11    Jul-11    Aug-11    Sep-11    Oct-11

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  
 Collar  
 Fixed Price  
 Fixed Price  
 Fixed Price  
 Collar

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

Types of Hedging Products (1)

Fixed Price  
 Price Caps  
 No-Cost Collars

Embedded Hedged Cost

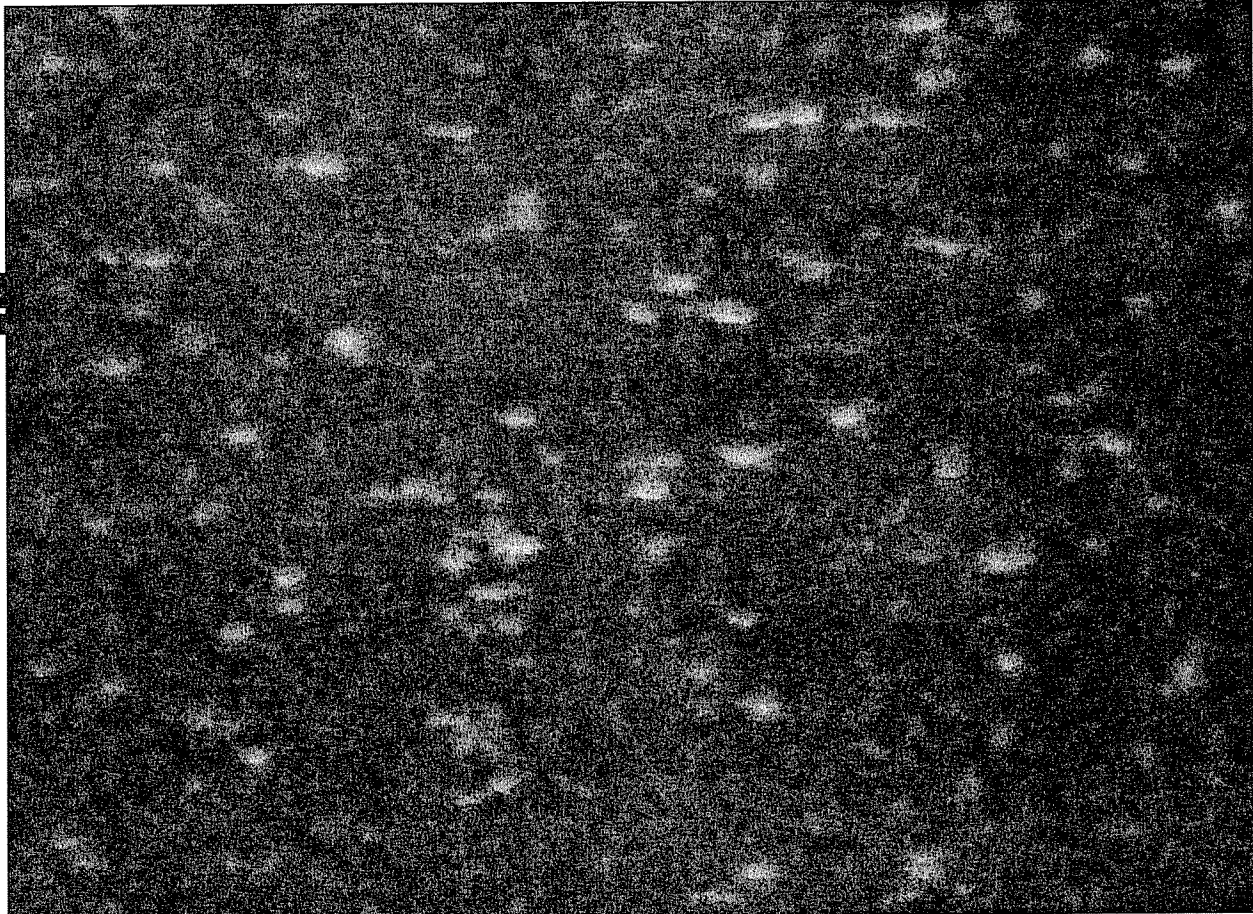
Winter  
 Summer

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.

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Duke Energy Kentucky  
Hedging Program - Current Position  
November 2011 - October 2012  
As of 06/21/11

Nov-11    Dec-11    Jan-12    Feb-12    Mar-12    Apr-12    May-12    Jun-12    Jul-12    Aug-12    Sep-12    Oct-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  
Collar  
Total Hedged (dth/day)  
Total Hedged (dth)

Types of Hedging Products (1)

Fixed Price  
Price Caps  
No-Cost Collars

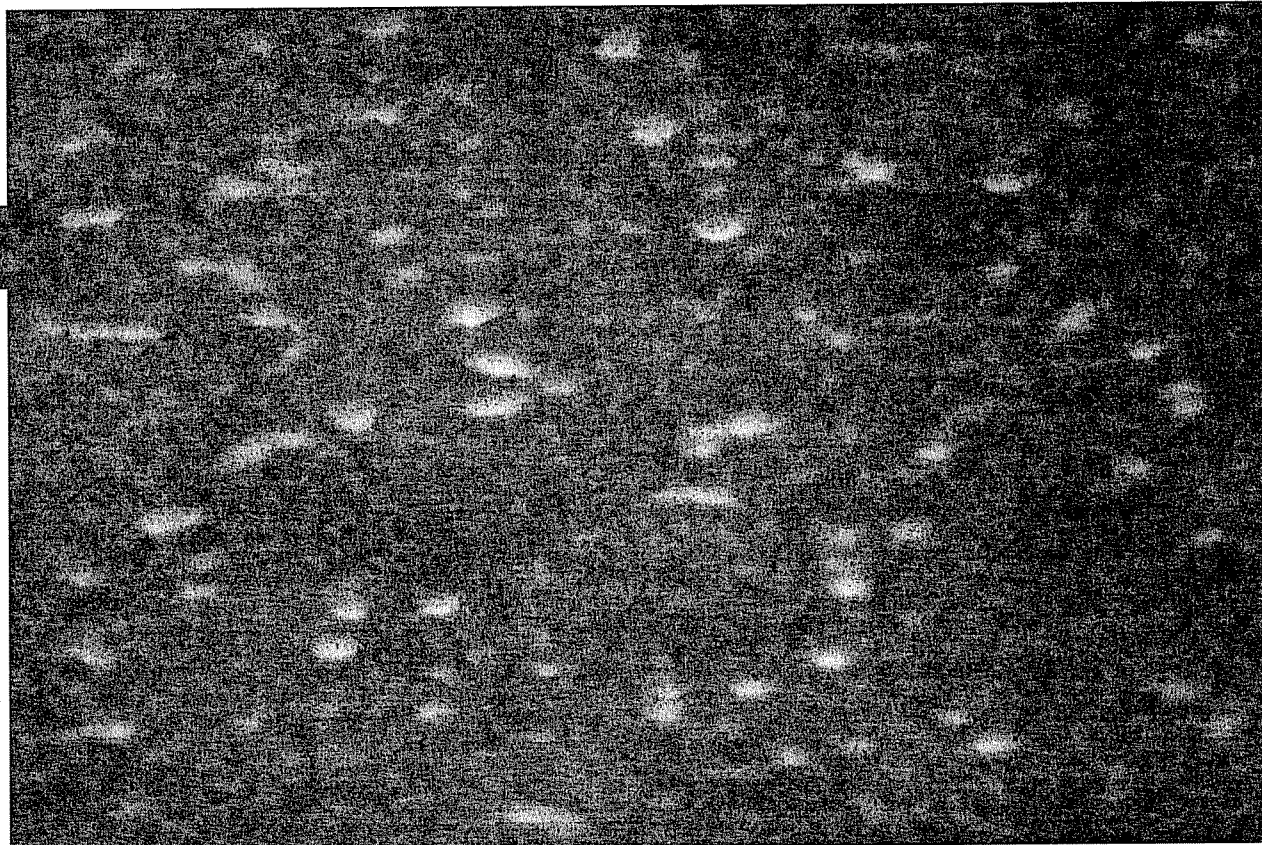
Embedded Hedged Cost  
Winter  
Summer

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

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2012 - October 2013  
As of 06/21/11

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  
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.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2013 - October 2014  
 As of 06/21/11

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)**

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**

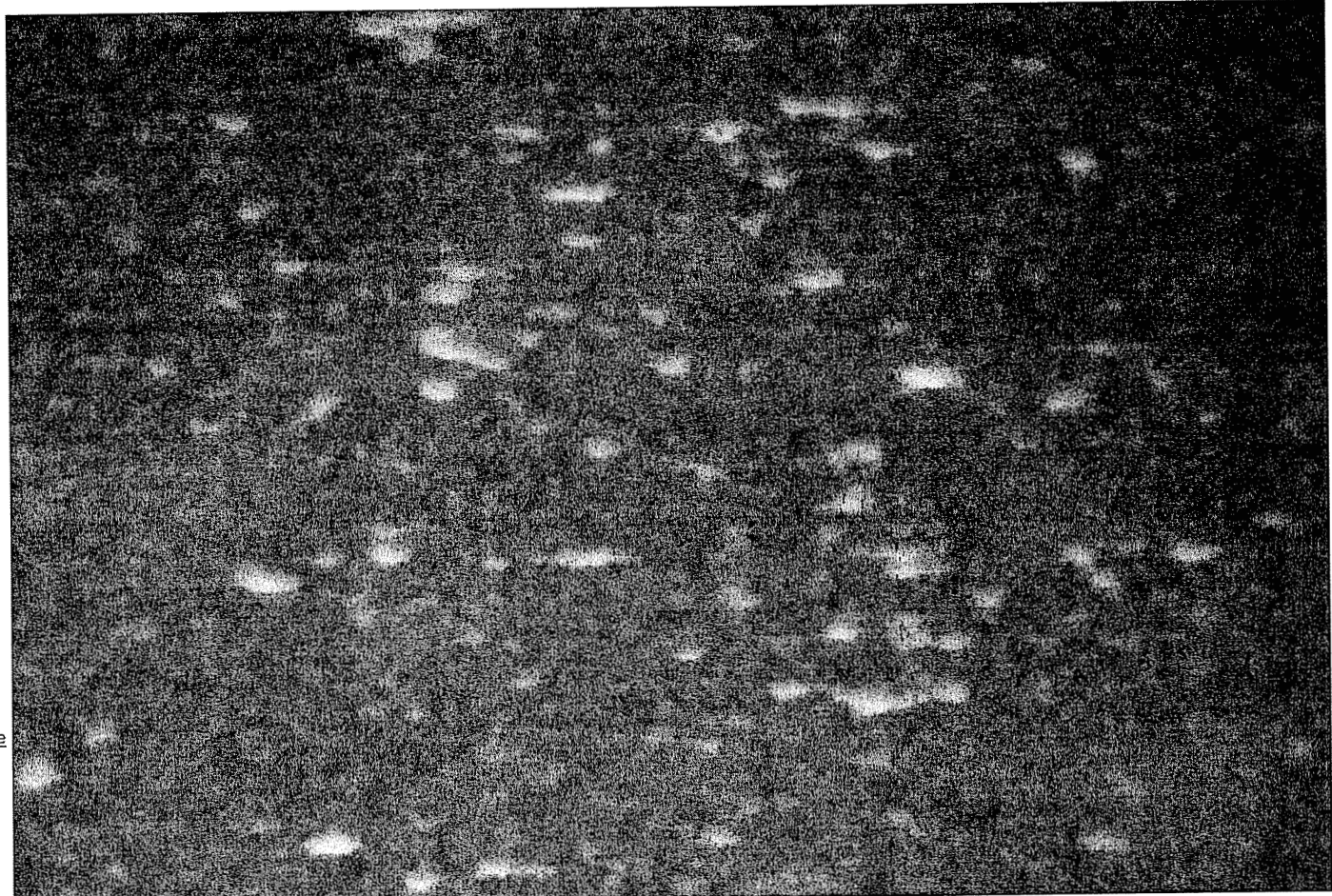
Winter  
 Summer

**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.

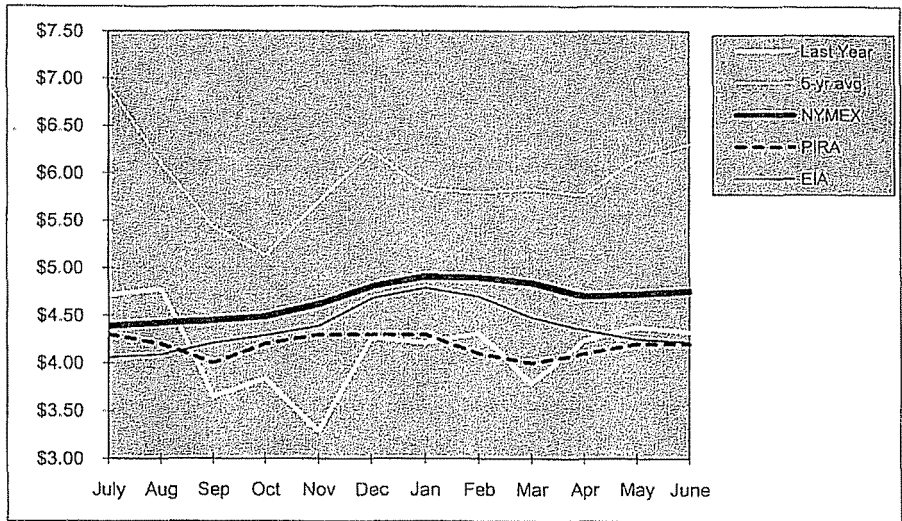
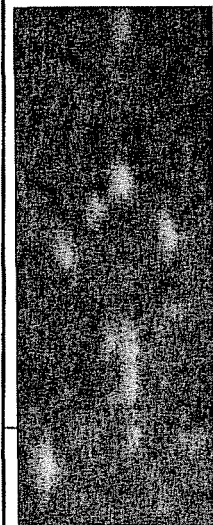
6/21/2011

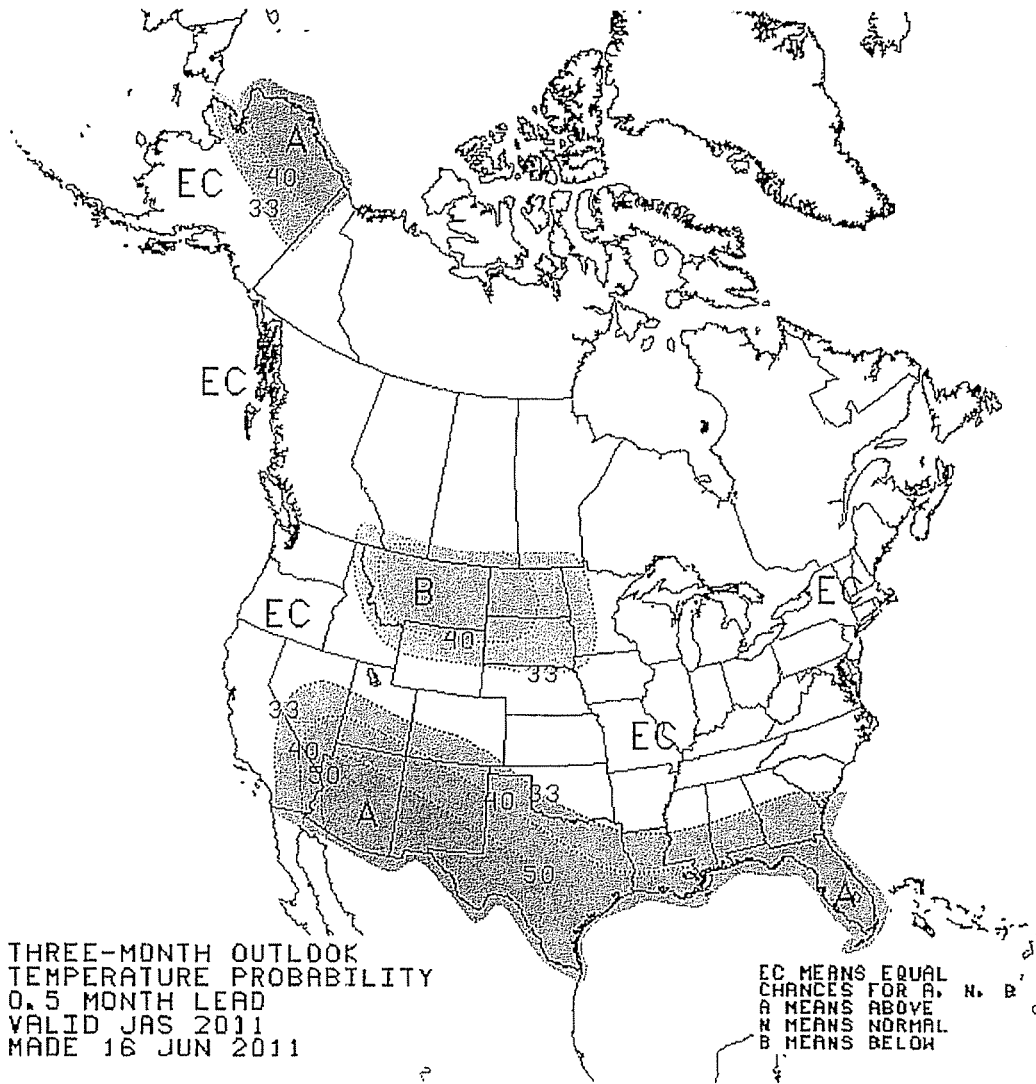
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/11)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Apr-11					
May-11					
Jun-11					
Jul-11					
Aug-11					
Sep-11					
Oct-11					
Summer 2011					
Target Levels By March 31, 2011					
Nov-11					
Dec-11					
Jan-12					
Feb-12					
Mar-12					
Winter 11/12					
Target Levels By October 31, 2011					
Apr-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2011					
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Target Levels By October 31, 2011					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2011					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2011					

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

Historic Prices:							Hedged Prices	
	NYMEX Closing Price			PIRA	EIA	NYMEX	Ohio	Kentucky
	5-yr. avg. (06/07-10/11)	Last Year (2010-2011)		25-May-11	7-Jun-11	22-Jun-11		
July	\$6.92	\$4.72			\$4.060	\$4.388		
Aug	\$6.10	\$4.77			\$4.090	\$4.423		
Sep	\$5.43	\$3.65			\$4.210	\$4.448		
Oct	\$5.13	\$3.84			\$4.290	\$4.489		
Nov	\$5.69	\$3.29			\$4.390	\$4.621		
Dec	\$6.23	\$4.27			\$4.680	\$4.806		
Jan	\$5.84	\$4.22			\$4.790	\$4.909		
Feb	\$5.80	\$4.32			\$4.700	\$4.899		
Mar	\$5.83	\$3.79			\$4.480	\$4.842		
Apr	\$5.77	\$4.24			\$4.350	\$4.704		
May	\$6.15	\$4.38			\$4.250	\$4.724		
June	\$6.31	\$4.33			\$4.220	\$4.755		
12 Month Avg	\$5.93	\$4.15			\$4.376	\$4.667		
Summer Average					\$4.210	\$4.562		
Winter Average					\$4.608	\$4.815		



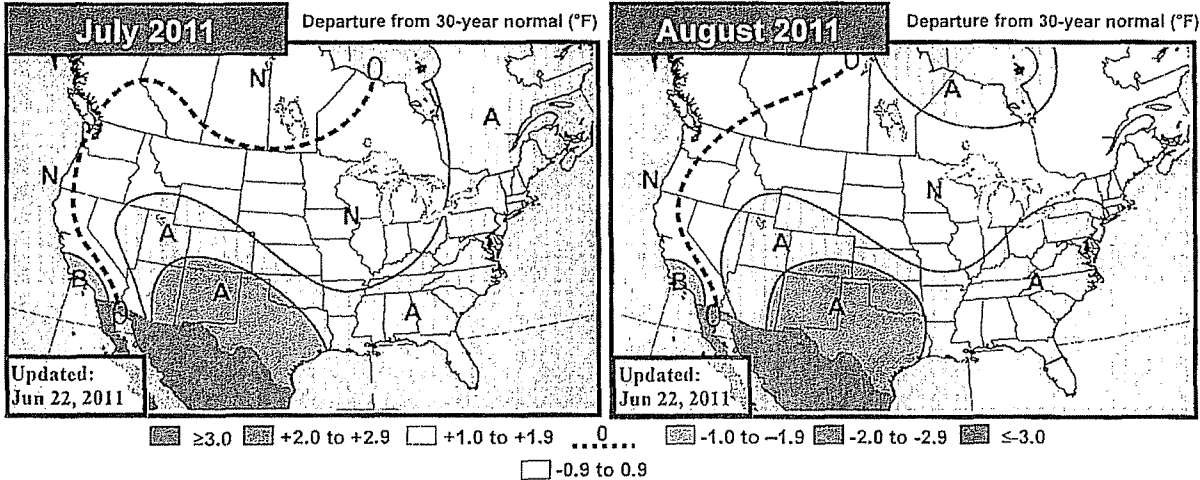




# EarthSat's 30-60 Day Outlook

Wednesday, June 22, 2011

Meteorologists: SS/BH/TH/RC



**Previous** Warmer in the East  
Not as warm in the West

The forecast features warmer changes across the Midwest, Northeast and Mid-Atlantic, and cooler changes across the West. Our map continues to show aboves from the Desert SW and Interior West eastward through the Southern Plains, South, and now along the East Coast. This outlined zone of anomalous heat perhaps best reflects a warm AMO pattern, which also correlates with seasonal-cool temps along the West Coast. Additional forecast drivers include the -PNA and, to a lesser extent, the +EPO. This latter signal could possibly help instigate enhanced storminess across the Southeast and along the Gulf Coast (and therefore presents a cool risk). The warm-dominated MJO phases 1-3 lend further support to our forecast, though it's worth noting that phase 1 centers the warmest anomalies across the North and phase 3 aligns them from the Midwest through the Mid-Atlantic. Even though the MJO remains an uncertain signal, the just-mentioned supportive phases present warm risks to our forecast for the East and Midwest.

**Jul PWCCD\*\* Forecasts** \*10Y Normal updated to '01-10

<b>Jul 2011 Fcst:</b>	<b>345.0</b>	<b>10Y Normal*</b>	<b>337.2</b>
		<b>30Y Normal</b>	<b>327.7</b>
		<b>Jul-2010</b>	<b>380.5</b>

Change: +3 \*\*National Pop-Weighted CDDs

**Previous** Some warming in the Ohio Valley/Mid-Atlantic  
Marginal warming Interior West

Warmer changes were made nearly across the board, particularly in Texas and the Southwest. The forecast remains above normal from the Mid-Atlantic through Texas and the Eastern Rockies, then down into the Desert SW. More seasonal temps are expected from parts of the Northeast and the western Midwest through the Northwest, while near-below are forecast for SoCal. Primary forecast drivers include the warm AMO and +EPO, with some additional support provided by the very warm MJO phases 1-4. However, if Atlantic tropical activity ramps up to a significant degree, potentially heavy rains could cool the Southeast and Gulf Coasts. There's also a chance that the MJO wave propagates through phases 5-7, any of which correlate with a decidedly cool pattern for the Eastern half. The years 1954, 1955, 1999 and 2008 represent a few best-fit analogs (based on warm AMO, cold PDO and pre-summer La Nina conditions), and produce a monthly composite that matches our map fairly well.

**Aug PWCCD\*\* Forecasts** \*10Y Normal updated to '01-10

<b>Aug 2011 Fcst:</b>	<b>316.0</b>	<b>10Y Normal*</b>	<b>321.6</b>
		<b>30Y Normal</b>	<b>296.5</b>
		<b>Aug-2010</b>	<b>356.6</b>

Change: +6 \*\*National Pop-Weighted CDDs

**June so far**

Final 60 Day Outlook Final 30 Day Outlook Current verif+ forecast (H+6/30)

It looks like we'll have the overall shape of the pattern for June pinned down well, but the magnitudes will be stronger than what our forecast showed. The combined verification so far and forecast for the final days of June shows temperature anomalies of 6-9F above normal in Texas, the southern Plains, and Mississippi Delta, and 3-5 into the Southeast and Mid-Atlantic, certainly warmer than our forecast. Meanwhile, the cold anomalies are stronger in the West with anomalies of 2-5F below normal in the Interior West and northern Rockies, and also in Southern California. The month as a whole is expected to register 269 PWCCDs, which is good for fourth warmest since 1950, but still a bit below last year (which at 284 was the warmest since 1950).



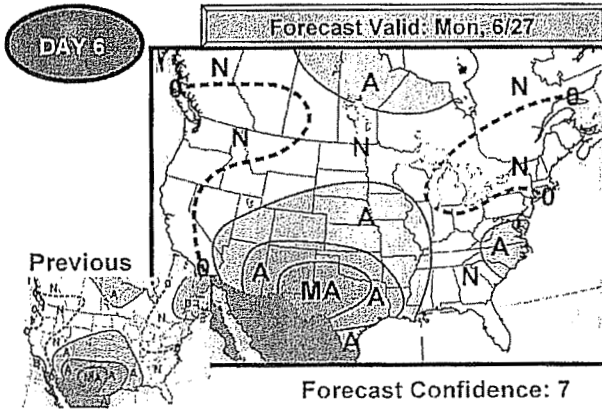
# 6-10 Day Forecast—Detailed



Wednesday, June 22, 2011

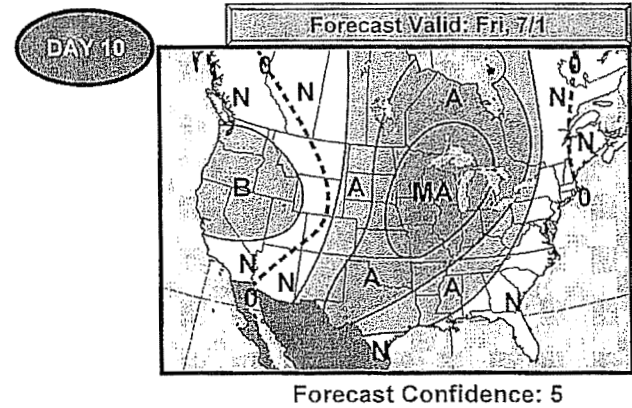
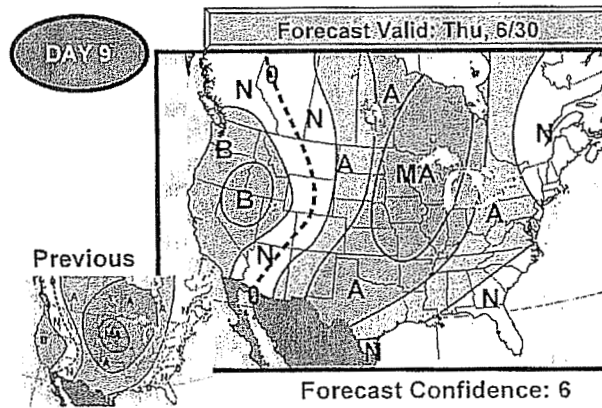
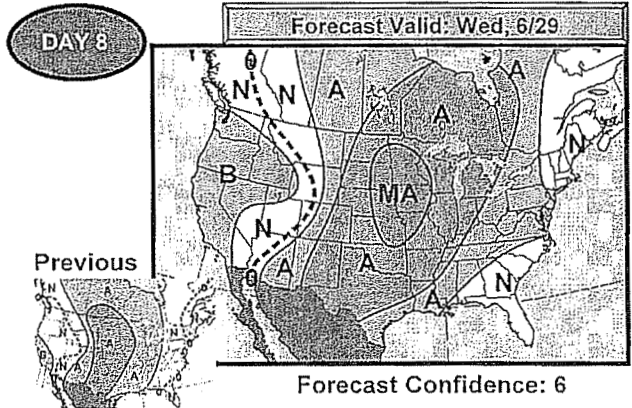
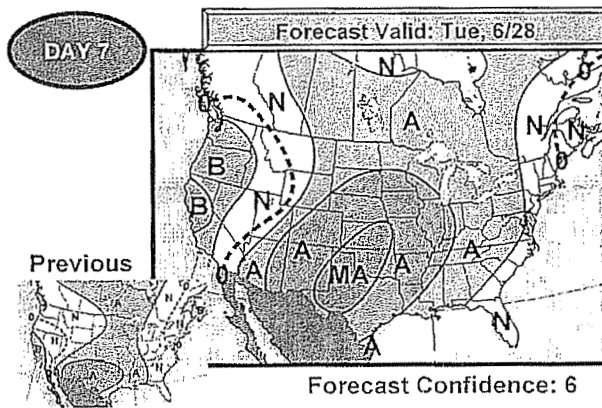
Meteorologist: AC/BH

## Forecast Temperature Deviations

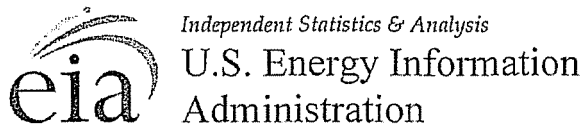


\*More Much Aboves Press Into The Plains, Midwest\*  
\*East May Stay More Seasonal\*


Progression of the forecast and day-on-day changes has led to a warmer forecast across the Plains and Midwest. The core of the heat in these regions should be found in the second half of the period. There could still be even hotter than expected readings for the Plains and Midwest per the some of the guidance, as more much above normal temperatures may appear. Also within that model and the European ensemble, a much warmer outlook is seen in the West. As a result of the warmth in the middle of the country, high pressure at the surface could situate across the East Coast. This might allow for any warmer air to push into the region to be delayed.



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



June 2011

 Short-Term Energy Outlook Supplement:  
2011 Outlook for Hurricane-Related Production  
Outages in the Gulf of Mexico

*Highlights*

- The National Oceanic and Atmospheric Administration's (NOAA) *Atlantic Hurricane Season Outlook*, released on May 19, 2011, predicts that the Atlantic basin likely will experience above-normal tropical weather activity during this year's hurricane season (June 1 – November 30).<sup>1</sup> NOAA projects that 12 to 18 named storms will form within the Atlantic Basin over the next 6 months, including 6 to 10 hurricanes of which 3 to 6 will be intense.<sup>2</sup>
- Based on the results of a simulation using the NOAA predictions for the level of hurricane activity, EIA estimates that median outcomes for shut-in production in the Federally-administered Gulf of Mexico as a result of disruptions during the 2011 hurricane season are 19 million barrels (bbls) of crude oil and 53 billion cubic feet (Bcf) of natural gas.
- Projections of shut-in production are highly uncertain. For example, there is a 70-percent probability that shut-in offshore production for the entire season will fall between 3.2 and 53.5 million bbls of crude oil and between 6.5 and 162 Bcf of natural gas. Intervals with a higher likelihood of encompassing the actual level of shut-in production would be even wider.
- EIA's simulation results indicate an 80-percent probability of offshore crude oil or natural gas production experiencing outages during the upcoming hurricane season that are equal to or larger than the production shut in during the 2010 hurricane season (about 4.3 million bbls of crude oil and 8.5 Bcf of natural gas).

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Contact: Tyler Hodge (Tyler.Hodge@eia.gov)

<sup>1</sup> <http://www.cpc.noaa.gov/products/outlooks/hurricane.shtml>

<sup>2</sup> A named storm generally refers to either a tropical storm or hurricane. An intense hurricane is one rated as Category 3, 4 or 5. A moderate hurricane is classified as either Category 1 or 2.

Impacts of the 2010 Hurricane Season on Crude Oil and Natural Gas Production

The Atlantic Basin experienced above-average hurricane activity during the 2010 hurricane season, consistent with NOAA's updated August 2010 *Outlook*. Nineteen named storms passed through the region, including 7 tropical storms and 12 hurricanes, of which 5 were classified as intense.<sup>3</sup>


Although hurricane activity in the entire Atlantic was above normal, the Gulf of Mexico was spared from the worst of the storms. Only one hurricane and two tropical storms threatened offshore energy production, and none of the storms passed within 400 miles of the center of the Gulf producing region. Thus, the impacts to crude oil and natural gas production were quite limited.

Hurricane Alex initially threatened offshore production in late June 2010, but as the storm reached hurricane strength it turned westward and made landfall near Tampico, Mexico. According to the Department of the Interior's Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE), a total of 1.04 million bbls of crude oil and 1.6 Bcf of natural gas were shut in by Hurricane Alex, representing about 2 percent and 1 percent of normal monthly Gulf crude oil and natural gas production, respectively. In late July, Tropical Storm Bonnie passed over Florida and entered the Gulf of Mexico. By the time it passed over the Gulf producing region, it had been downgraded to a tropical depression. BOEMRE reports that 3.26 million bbls of crude oil production (7 percent of the monthly normal level) and 6.3 Bcf of natural gas production (3 percent of the monthly normal level) were shut in by Bonnie. Figure 1 highlights the effect of some past tropical storms and hurricanes on crude oil and natural gas production in the Gulf of Mexico.

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<sup>3</sup> NOAA had originally projected a relatively normal level of hurricane activity in its May 2010 *Outlook*, but the projection was revised in August to a likely range of 14 to 20 named storms, including 8 to 12 hurricanes.

Weekly Natural Gas Storage Report

 U.S. Energy Information Administration  
Independent Statistics and Analysis  
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[Glossary](#)

Weekly Natural Gas Storage Report

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Released: June 23, 2011 at 10:30 a.m. (eastern time) for the Week Ending June 17, 2011.  
Next Release: June 30, 2011

Working Gas in Underground Storage, Lower 48

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

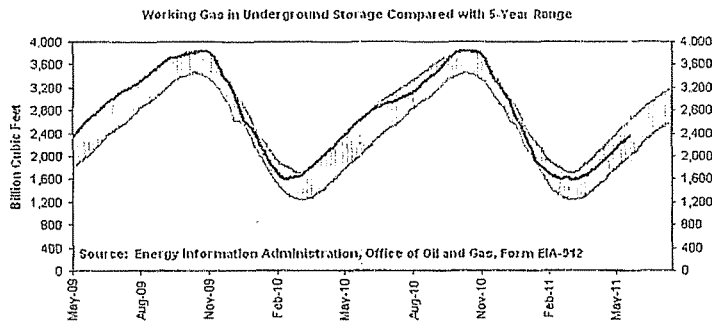
Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	06/17/11	06/10/11	Change	Year Ago (06/17/10)		5-Year (2006-2010) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,072	1,008	64	1,244	-13.8	1,198	-10.5
West	322	304	18	436	-26.1	369	-12.7
Producing	960	944	16	933	2.9	851	12.8
Total	2,354	2,256	98	2,612	-9.9	2,418	-2.6

[Notes and Definitions](#)

**Summary**

Working gas in storage was 2,354 Bcf as of Friday, June 17, 2011, according to EIA estimates. This represents a net increase of 98 Bcf from the previous week. Stocks were 258 Bcf less than last year at this time and 64 Bcf below the 5-year average of 2,418 Bcf. In the East Region, stocks were 126 Bcf below the 5-year average following net injections of 64 Bcf. Stocks in the Producing Region were 109 Bcf above the 5-year average of 851 Bcf after a net injection of 16 Bcf. Stocks in the West Region were 47 Bcf below the 5-year average after a net addition of 18 Bcf. At 2,354 Bcf, total working gas is within the 5-year historical range.

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- 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 2006 through 2010.  
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**  
**May 25, 2011 Release**

Jan-09		Jan-10		Jan-11		Jan-12	
Feb-09		Feb-10		Feb-11		Feb-12	
Mar-09		Mar-10		Mar-11		Mar-12	
Apr-09		Apr-10		Apr-11		Apr-12	
May-09		May-10		May-11		May-12	
Jun-09		Jun-10		Jun-11		Jun-12	
Jul-09		Jul-10		Jul-11		Jul-12	
Aug-09		Aug-10		Aug-11		Aug-12	
Sep-09		Sep-10		Sep-11		Sep-12	
Oct-09		Oct-10		Oct-11		Oct-12	
Nov-09		Nov-10		Nov-11		Nov-12	
Dec-09		Dec-10		Dec-11		Dec-12	
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		

**North American Gas Forecast Monthly**



May 25, 2011

**NATURAL GAS**

**GAS PRICE SCORECARD: JUNE 2011 – SEPTEMBER 2011**

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
U.S. Production	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Led by Haynesville and Marcellus shale gas, the net growth of U.S. production should exceed 3 BCF/D without an allowance for hurricane-driven supply curtailments. In Haynesville, 2.2 BCF/D of incremental pipeline capacity will be a stimulus.
LNG Imports	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	We continue to anticipate LNG imports remaining at minimum levels that would be similar to last summer.
Canadian Trade	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Large end-April storage deficits are continuing and will require accelerated Y/Y refills before midyear and after. The faster refills, in turn, will become the largest factor behind much lower exports to the U.S.
Mexican Trade	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Production should continue to decline, coupled with higher domestic demand, causing imports from the U.S. to increase.
Storage Levels	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	A Y/Y storage deficit expected to remain above the 200 BCF level by the end of this month will begin to vanish over the summer as incremental Y/Y demand and reduced net imports are more than offset by higher domestic production.
U.S. Demand Issues	Outlook	Commentary
Economy	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Expectations for U.S. economic growth in 2Q11 have been revised downward and the manufacturing sector's prospects look positive, although recent output levels are weaker in part related to the Japan-led supply chain disruptions.
Electric Generation	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Gas-fired CCGT gains against steam coal in the Eastern Grid will accelerate, but gas demand losses from milder summer weather and incremental hydro, should push gas demand lower Y/Y.
Industrial Sector	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Despite recent preliminary IP readings that point to a slowdown of manufacturing activity, post-1Q11 industrial gas demand continues to look stronger than before, consequently, not diminishing future growth prospects.
Res/Com Heating	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Prior to October, the impact of heating degree days on gas demand is minimal.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Non-commercial short-covering helped fuel the March and April price rallies as underscored by the ~296,000 lot reduction in their NYMEX/JICE net-short futures position. Net shorts have swelled since, but remain far below the ~449,000 3/15 peak.
Medium-Term NYMEX Prices	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	The 2015 and 2020 calendar strip price declines ended this month. Buying interest appears to have been further stoked following the DOE's approval to allow Sabine Pass LNG to export gas to any country with which trade is allowed.
Overall Assessment	Outlook	Commentary
Price Outlook	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	A gradual narrowing of the Y/Y storage deficit will send a bearish fundamental price signal especially if U.S. production growth remains strong, but storage congestion pricing that would force gas to compete with non-Appalachian coal in the EG sector is not expected.

# Gas Daily

Wednesday, June 15, 2011

## Summer prices neutral on cooler forecast: NGSA

Gas prices are likely to remain stable this summer as higher levels of demand, storage and economic growth counteract downward price pressure from a cooler forecast, the Natural Gas Supply Association said Tuesday in its summer outlook.

"This is the third year in a row that we've seen a stable market for natural gas. We anticipate that the trend has legs not only because of the shale plays now being developed, but because of all our supply sources," Skip Horvath, the president and CEO of NGSA, said in a statement.

The trade group on Tuesday released its summer outlook, which analyzes factors that impact supply and demand and projects the combined impact of these factors on summer gas prices. The analysis found this summer would be 18% cooler than last year and 3.4% cooler than the 30-year average. Lower temperatures will reduce demand for air conditioning, which will in turn put downward pressure on gas prices.

When the weather is combined with the four other factors in the analysis, however, there will be a neutral impact on summer prices this year compared with the summer of 2010, NGSA said. "Customer demand, the economy, production and storage inventories all are projected to grow, but at moderate rates that are similar to last summer, placing overall flat pressure on natural gas prices," the group said in a statement.

But there are still a couple of sectors to watch, the group said. Power plants switching from coal to natural gas will use an average 2.6 Bcf/d of gas this summer compared with 1.8 Bcf/d during the summer of 2010, an increase of 44%. "This would make 2011 the third consecutive summer of the coal-to-gas switching phenomenon, and the largest amount of switching yet," the statement said.

Industrial demand is projected to be up 2%, NGSA said. "We expect industrial demand to be our most significant growth sector this summer. Although not yet at pre-recession strength, primary metals demand for natural gas is climbing and seems poised for continued growth. At the same time, overall industrial demand for natural gas is positioned to match or surpass pre-recession levels," Horvath said.

But the overall economy will hit a "soft patch" this summer, with GDP growth at 2.5% this summer compared with 3.1% in the summer of 2010, NGSA predicted.

Gas storage levels are expected to start the summer at 1,579 Bcf and hit 3,900 Bcf by the end of injection season. Last summer started with 1,669 Bcf in storage and ended with 3,840 Bcf when injection season came to an end. Average production is forecast to be 62.1 Bcf/d this summer, an increase over the 2010 summer average production of 59.1 Bcf/d. Canadian imports are predicted to be 6.2 Bcf/d, down from 6.9 Bcf/d last summer, and LNG imports are expected to be 800,000 Mcf/d, down from 900,000 Mcf/d last summer.

However, there are several "wild cards" that could impact the outlook, including a stronger than expected industrial rally, an unexpected statewide ban on shale production and significant weather surprises, NGSA said. — *Kate Winston*



# Gas Daily

Friday, June 10, 2011

## Analysts differ over hydro glut's impact on Western gas market

While hydro levels in the Pacific Northwest are extraordinarily high, analysts differ on what impact that glut will have on the region's gas demand and prices this summer.

Thanks to a snowy winter and rainy spring, river flow forecasts are averaging well above normal in the Northwest, leading to concerns that the subsequent drop-off in gas-fired generation demand could spur "atrocious" storage injections, according to a recent report by Jefferies & Company.

"Worst-case scenario, we enter storage more than full," Jefferies analyst Subash Chandra wrote. "Gas stays in the low \$4.00s/MMBtu] and dips into \$3/ MMBtu-plus territory by October."

But Biliana Pehlivanova, an analyst with Barclays Capital, said any fluctuations in Northwest gas demand won't amount to "a big swing in states' generation portfolios" and likely will be tied to short-term shifts in weather.

While Pehlivanova said the outlook for the region's gas market this summer is "incrementally bearish," the situation "won't push us down to, say, the \$3 level. ... While the surplus hydro availability is expected to be greatest in June, it poses limited downside risks to gas consumption."

The Barclays report showed that this summer's hydro output in Pacific Northwest is likely to surpass last year's, averaging between 5,700 MW and 7,700 MW of incremental power supply. "If the full brunt of such an increase in hydropower were to be borne by gas, the resulting drop of gas consumption would be as large as 1.2-1.5 Bcf/d," the report said.

But Barclays said wind power, not gas, will take the biggest hit from the hydro glut.

"All coal and gas generation has already been rendered unnecessary during the off-peak hours, so much so as to necessitate the forced shutdown of wind generation as well," Barclays said.

Meanwhile, the lofty hydropower generation levels are expected to linger. "We can say with confidence that high March levels will persist through the summer," the Jefferies report said. "Historically, a strong March yields a strong summer."

That is supported by high stream flow and snowpack, Jefferies said. "Stream flows are well above average, and should remain so as snowfall and cool temperatures in the West have allowed for above normal snowpack levels."

Barclays agreed. "Snowpack levels in the Pacific Northwest are significantly higher than those of last year, measuring more than 200% of historical norms in numerous locations. The Northwest River Forecast Center expects water supply at the Dalles Dam this year to be the seventh highest out of the past 50. In stark contrast, last year ranked 47 out of 50." — *Anastasia Gnezditskaia*

# Gas Daily

Wednesday, June 22, 2011

## Gas seen taking 40% share of generating capacity by 2035

New market drivers for US power generation are likely to boost the role of natural gas far beyond its current share, including low gas prices, pending CO2 regulation, future coal plant retirements and the ability of gas-fired units to help integrate renewable energy, according to industry analysts.

The overall market share of gas used in US power generation will rise to 40% of overall capacity by 2035, compared with 21% in 2011, while renewables' share should increase to 11% from 4%. Mark Griffith, a managing director at Black & Veatch Management Consulting, told an industry event Tuesday in Washington.

The share of coal used in the US generation sector should decrease to 25% from 49% over the same time period, Griffith said. He added that power generation will be the main sector for expanded gas use because it is growing about two times faster than the residential and industrial sectors.

Meanwhile, Bruce Henning, vice president at ICF International, expects US power consumption to grow by 1.7% per year through 2030.

That will result in a dramatic increase of gas-fired forms of power generation, with combined-cycle generation ramping up to 400,000 MW in 2035, compared with 200,000 MW in 2011, and combustion turbine power supply reaching 250,000 MW in 2035 vs. the current 130,000 MW, he said.

Since the growth of renewable generation will get a strong boost from renewable portfolio standards, now adopted by more than 20 states, gas will be the lowest-cost option to back up such intermittent sources of power, Henning said.

In addition, the retirement of coal and nuclear plants will make gas a more dominant source of base-load generation, analysts said. Pending carbon controls will further decrease the reliance on coal, possibly pushing it "out of the picture," according to Henning.

# Gas Daily

Tuesday, May 31, 2011

## Hurricanes' impact on gas prices diminishing

Although many meteorologists predict an above-average Atlantic hurricane season this year, traders and analysts believe the continued churn of onshore production will dampen any storm-related price volatility.

However, one factor could throw a wrench in the works: significant storage deficits in the consuming East and West markets compared with year-ago levels. Industry analysts believe those deficits could send some buyers scurrying for gas if a major hurricane takes out production in the Gulf of Mexico.

This year's hurricane season, which runs from June 1 through November 30, could bring 12 to 18 named storms and six to 10 hurricanes, according to predictions released in mid-May from the National Oceanic and Atmospheric Administration. Three to six hurricanes could strengthen to Category 3 or higher, NOAA predicted.

"The impact of the hurricane season, particularly in the natural gas market ... depends on where our daily demand [and] supply are and what our temperatures are when we start to see the development of the storms," said Alan Lammey, energy analyst with WeatherBell Analytics.

Since the devastation wrought by hurricanes Katrina and Rita in 2005, gas production has shifted steadily from offshore to onshore, boosted in no small part by the viability of shale gas and by the BP Macondo blowout last year.

In 2009, US shale gas production was roughly equal to offshore output, with each yielding about 3.1 Tcf, according to data from the Energy Information Administration. While 2009's shale production was a marked increase from 2007 output of about 1.1 Tcf, offshore production was down from roughly 3.5 Tcf in 2007.

The production shift means the industry is less susceptible to major price fluctuations in the event that a hurricane knocks out offshore production, said Ben Schlesinger, founding president of consulting firm Benjamin Schlesinger and Associates.

Historical NYMEX prices show the decreasing effects of storms on gas prices. In 2005, when Katrina and Rita hit, NYMEX prompt-month prices soared past the \$10/MMBtu mark, hitting a high in the \$14.00s/MMBtu in late September after starting the year with a \$5 handle.

In contrast, the NYMEX prompt-month contract barely budged from \$6-\$7/MMBtu territory when Hurricanes Gustav and Ike hit the Gulf region in the fall of 2008.

"We would see even more replacement gas flood in from the onshore with the kind of surplus we have right now," Schlesinger said.

However, the market would not be entirely immune to price increases if a devastating storm hits the Gulf. "A lot of gas coming into some areas is from the offshore, so you will see a big effect depending on [the] location of the storm," one trader said.

And if a large percentage of offshore production is shut in for an extended period, the storage deficits in the East and West could worsen, a Texas financial trader said. According to EIA data, for the week ending May 20, the East had 860 Bcf of gas in storage, about 17% less than year-ago levels, while the West had 262 Bcf, down 30%.

Yet even areas prone to hurricanes, such as Florida, are better positioned for storms than in the past. For example, Lukasz Cyran, manager of market operations for Infinite Energy, said there are now more ways to get gas into Florida Gas Transmission zone 3, thanks to recent pipeline expansions.

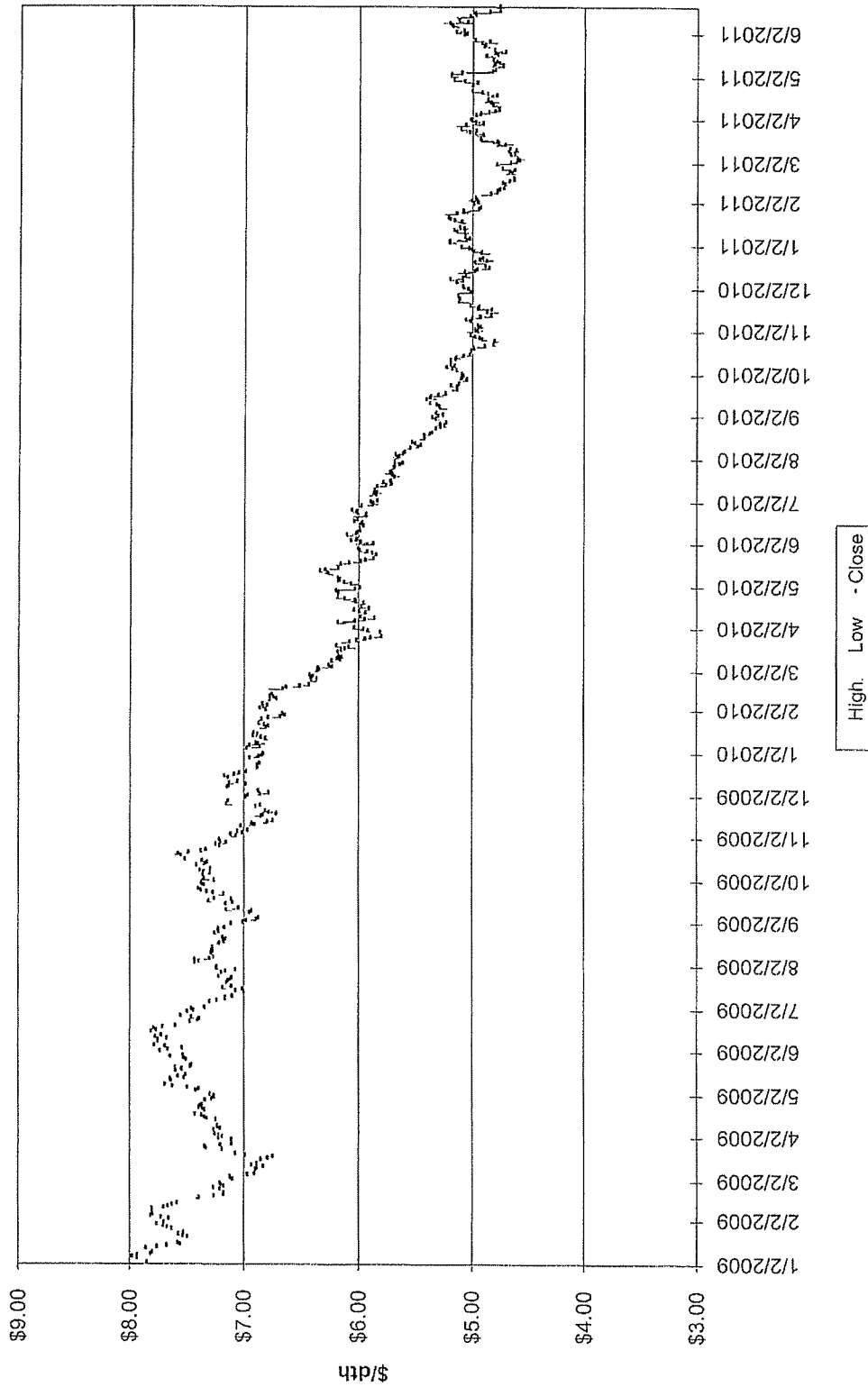
The Florida Gas Phase VIII expansion, which began service earlier this year, added 483 miles of pipeline and 820,000 Mcf/d of capacity to Florida Gas' system to ease price spikes and supply shortages in the region.

But as with every year, those in the industry will be keeping a close eye on the sky during the hurricane season. "There's always a fear," Cyran said. "Hurricanes are always going to have an impact."

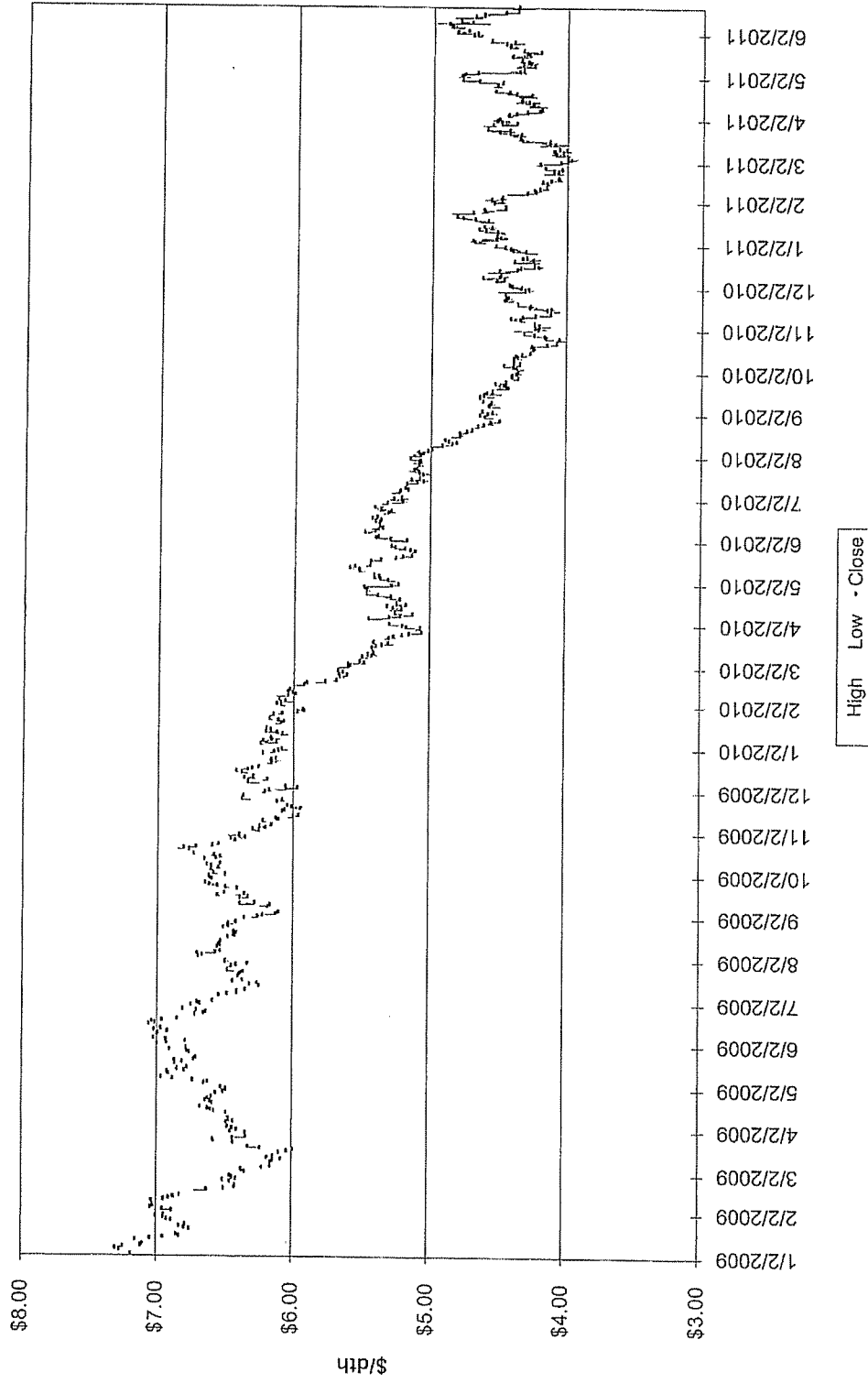
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**June 7, 2011 Release**

Jan-09	5.24	Jan-10	5.83	Jan-11	4.49	Jan-12	4.79
Feb-09	4.51	Feb-10	5.32	Feb-11	4.09	Feb-12	4.70
Mar-09	3.96	Mar-10	4.29	Mar-11	3.97	Mar-12	4.48
Apr-09	3.49	Apr-10	4.03	Apr-11	4.25	Apr-12	4.35
May-09	3.83	May-10	4.14	May-11	4.31	May-12	4.25
Jun-09	3.80	Jun-10	4.80	Jun-11	4.20	Jun-12	4.22
Jul-09	3.38	Jul-10	4.63	Jul-11	4.06	Jul-12	4.32
Aug-09	3.14	Aug-10	4.32	Aug-11	4.09	Aug-12	4.51
Sep-09	2.97	Sep-10	3.89	Sep-11	4.21	Sep-12	4.57
Oct-09	4.00	Oct-10	3.43	Oct-11	4.29	Oct-12	4.79
Nov-09	3.66	Nov-10	3.71	Nov-11	4.39	Nov-12	4.88
Dec-09	5.34	Dec-10	4.25	Dec-11	4.68	Dec-12	5.12
Average 2009	\$ [REDACTED]	Average 2010	[REDACTED]	Average 2011	\$ [REDACTED]	Average 2012	[REDACTED]
Summer 2009	\$ [REDACTED]	Summer 2010	[REDACTED]	Summer 2011	\$ [REDACTED]	Summer 2012	[REDACTED]
Winter 2009-2010	\$ [REDACTED]	Winter 2010-2011	[REDACTED]	Winter 2011-2012	\$ [REDACTED]		[REDACTED]

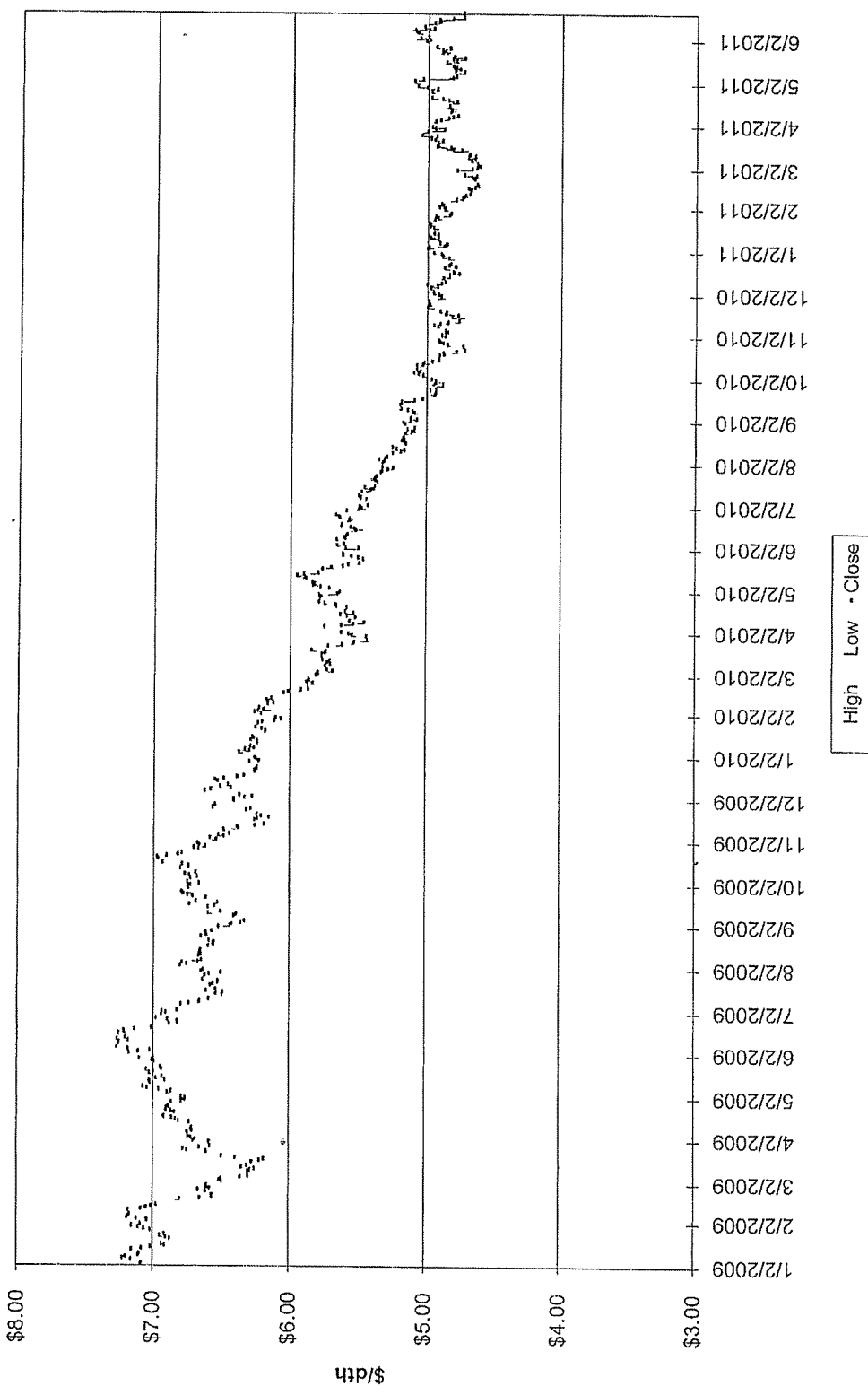
Winter Strip Nov11 - Mar12



Summer Strip 2011



Summer Strip 2012





# Gas Daily

Wednesday, June 8, 2011

## EIA ups supply outlook despite falling rig count

The Energy Information Administration on Tuesday raised its 2011 gas supply forecast by 580,000 Mcf/d, or about 7%, to 67.06 Bcf/d despite a "significant decline" in gas drilling activity.

In its June short-term energy outlook, EIA said total US marketed production is expected to rise 4.5% this year to 64.61 Bcf/d, compared with last-month's forecast of a 2.3% increase to 63.23 Bcf/d.

"Production continues to grow at a strong pace despite a significant decline in gas-directed drilling activity," EIA said. "According to Baker Hughes, total working natural gas rigs now number 881, down 11% from the August 2010 level. However, growth in oil-directed drilling activity could lead to significant increases in associated natural gas production."

Looking farther ahead, EIA said it expects "rising natural gas prices in 2012 to contribute to an increase in drilling activity."

The agency raised its second-quarter Henry Hub forecast to \$4.25/MMBtu, up 6 cents from its May outlook. It also raised its 2011 forecast to \$4.25/MMBtu, up a penny, but dropped its 2012 price outlook to \$4.58/MMBtu from its May prediction of \$4.65/MMBtu.

On the demand side, the agency expects industrial gas consumption to rise 3.1% this year to 18.65 Bcf/d and gas use by the electric-power sector to rise 0.4% to 20.3 Bcf/d.

Demand from both sectors will continue to rise in 2012, EIA said, while residential and commercial use will decline by 2.8% and 2.2% respectively, in 2011 and 2012 due to an expected slide in heating demand.

According to EIA, the growing domestic production trend will have an impact on both imports and exports. Gross pipeline imports will drop 4.2% to 8.68 Bcf/d in 2011 and 3.7% to 8.36 Bcf/d in 2012, EIA predicted — lower than the agency's May outlook of 8.87 Bcf/d in 2011 and 8.23 Bcf/d in 2012.

EIA said imports of liquefied natural gas will drop from 1.2 Bcf/d in 2010 to 1 Bcf/d in 2011 and 950,000 Mcf/d in 2012. The 2011 forecast is slightly higher than EIA's month-ago estimate of 940,000 Mcf/d.

At the same time, gas exports are on the rise, EIA noted. "Increased pipeline gross exports to Mexico and Canada during the first part of 2011 have led to an upward revision for both 2011 and 2012. Pipeline gross exports are expected to average 4.1 Bcf/d in 2011 and 3.9 Bcf/d in 2012, compared to just 3.1 Bcf in 2010." Increased production will also help boost gas storage levels as the summer progresses. Working gas storage stood at 2.107 Tcf on May 27, which is 237 Bcf lower than at this time last year, but "projected inventories surpass 3.8 Tcf at the end of October 2011 as a result of high production levels and a mild summer relative to last year," EIA said.

# Short-Term Energy Outlook

June 7, 2011 Release  
(Next update July 12, 2011)

World benchmark crude oil prices reached their highest level of this year at the end of April, fell by about 10 percent by May 9 and have changed very little since then. EIA still expects oil markets to tighten through 2012 given projected world oil demand growth and slowing growth in supply from countries that are not members of the Organization of the Petroleum Exporting Countries (OPEC). The projected U.S. refiner crude oil average acquisition cost rises from \$104 per barrel in 2011 to \$108 per barrel in 2012, about the same as last month's *Outlook*.

Gas Commercial Operations  
Hedging Program  
Market Indicators Summary  
July 28, 2011

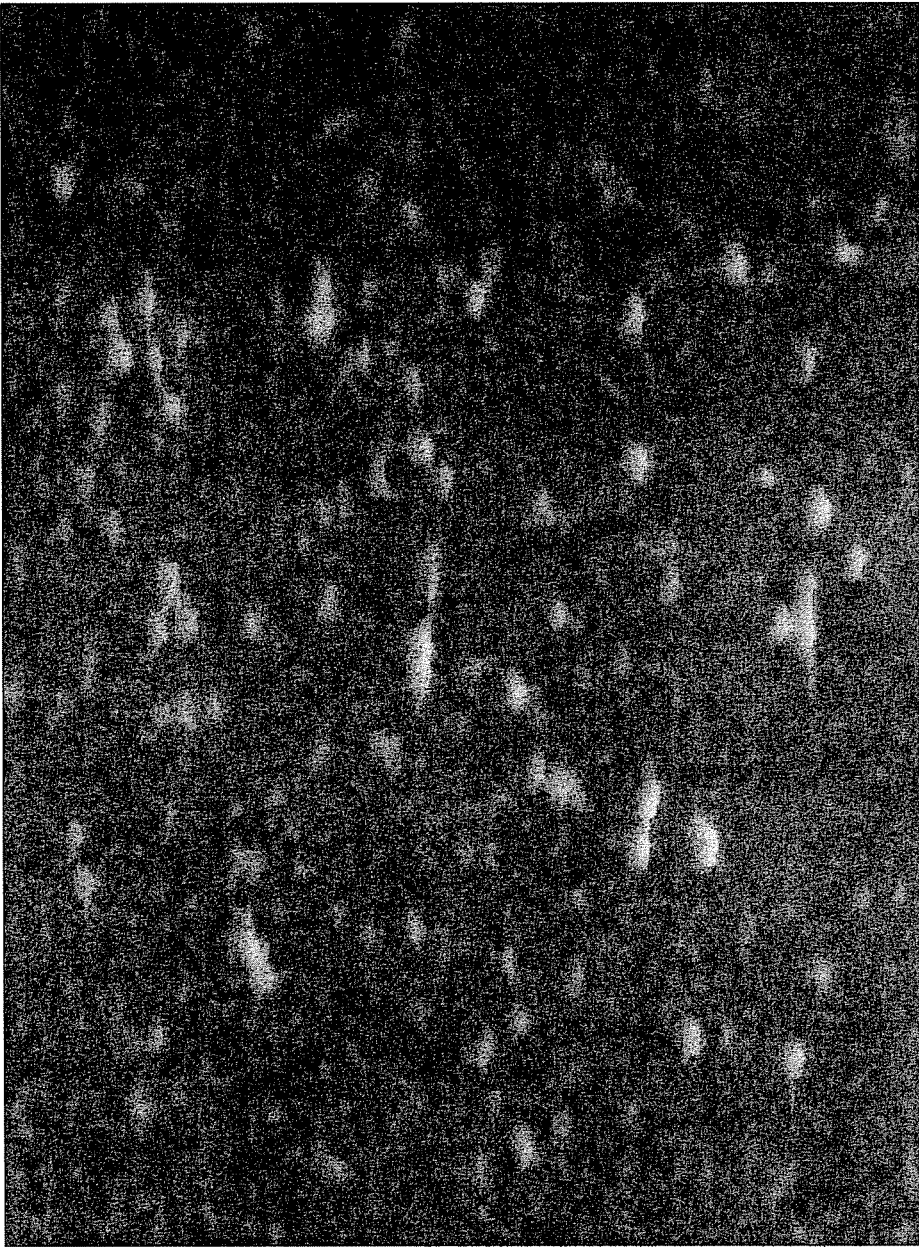
	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (August 11--Oct 11)	↑	Long	NOAA predicting above average temperatures for August 2011--October 2011 for portions of the Southern, Midwest, and Northeast CONUS. Below normals on the west coast of CONUS.	12
Mid Term Forecast (30-60 days)	↑	Long	August is predicted to be 9.8% warmer than normal based on 10 year normals and September weather is predicted to be 7.8% cooler than	13
Short Term Forecast (6-10 days)	↑	Short	Above and some Much Above dominate the 6 to 10 day forecast.	14
Tropical Storm Activity	↔	Short	80% chance that the current system forming near the Yucatan Channel becoming a tropical cyclone during the next 48 hours. The biggest market impact of tropical storms hitting the US would be the amount of demand they knock out, not the amount of supply they cut off.	15
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↑	Long	Storage injections for the week ending July 15th were 60 BCF. Storage levels are at 2.671 TCF which is 7.4% lower than last year and 2.2% lower than the 5 year average.	16
<b>Industry Publications</b>				
PIRA Energy Group Summer 2011: [REDACTED] Winter 2011/12: [REDACTED]	↑	Long	GAS PRICE SCORECARD: 2012 PIRA's price outlook has changed from Bearish to Neutral. New lows are possible if temperatures turn bearish in the early stages of the heating season. Slower US production growth would set the stage for a rebound.	17-18
Gas Daily	↑	Long	Rising gas production has tightened the spread between summer and winter NYMEX gas futures values, giving operators limited financial incentive to inject gas into storage. Spread between NYMEX July contract and Dec--Feb this year was about 45 cent/MMBtu, 80 cent spread in 2010 and \$2.00 spread in 2009.	19-20
Gas Daily	↑↓	Long	Investment bank Raymond James raised their price forecast 13% to \$4.25/Mcf. In addition, predicting \$4.25/Mcf which is 12% below where the NYMEX strip is trading.	21
Gas Daily	↔	Long	EIA and MIT defend their projections of ample gas supplies for the next decade. In the decades to come, shale gas could provide 25% of the US gas needs, compared to 8% in 2008.	22
Gas Daily	↓	Long	Drillers doubled their spending in Pennsylvania's Marcellus Shale last year to \$11.5 billion and plan to spend \$12.7 billion this year. Pennsylvania's portion of the Marcellus could be producing 17.5 Bcf/d, or 25% of US gas demand by 2020.	23-24
<b>Government Agencies</b>				
Energy Information Administration Summer 2011: \$4.253 Winter 2011/12: \$4.526	↓	Long	The projected Henry Hub natural gas spot price averages \$4.27/MMBtu for 2011 and \$4.535/MMBtu for 2012.	25
<b>Technical Analysis</b>				
Winter 2011-12 Strip Chart	↔	Short	Closed at \$4.66	26
Summer 2011 Strip Chart	↔	Short	Closed at \$4.37	27
Summer 2012 Strip Chart	↔	Short	Closed at \$4.70	28
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to grow by 2.0% to 67.4 Bcf/d in 2011, resulting from an increase in the industrial and electric power consumption. Projected consumption drops slightly in 2012 to 67.3 Bcf/d.	29
Supply	↑	Long	EIA expects average total production to increase by 5.8% to 65.4 Bcf/d in 2011. Production growth is forecast to continue at a much slower pace in 2012, increasing 0.6 Bcf/d to average 66.0 Bcf/d.	29
Oil Market	↑	Long	Crude oil price outlook remains uncertain. Among the major uncertainties that could push oil prices above or below the forecast are: additional supply disruptions, willing of OPEC member countries to increase and sustain higher production levels, and the rate of global economic growth. EIA projects WTI at \$102/bbl for 2011 and \$108/bbl in 2012.	29

Meeting Minutes: 414 Annex Conference Room - 8:00 am  
Attendees: Jim Mehring, Jeff Kern, Mike Brumback, Joachim Fischesser, Terry Bales, Mitch Martin, Steve Niederbauer

Discussed market fundamentals including weather (Tropical Storm Don), storage inventory levels, PIRA (early bird 2012 forecast) 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 around the impact of the Federal government debt ceiling on gas prices. Discussed the two deals that Duke Ohio entered into since the last hedging meeting: Called three suppliers to provide [REDACTED] dth/d for the period 11/1/2012--10/31/2013 at Columbia Gulf Mainline. The supplier and their bids were: [REDACTED], [REDACTED] and [REDACTED]. [REDACTED] was awarded the deal. Contacted [REDACTED] to convert a portion of a FOMI deal at Columbia Gulf Mainline to a Fixed Rate deal. The deal was for [REDACTED] dth/d for 12/1/2011--2/29/2012. The price of [REDACTED] was offered and accepted. Based on previously discussed factors, a decision was made not to hedge additional volumes at this time.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2010 - October 2011  
 As of 07/27/11

Nov-10    Dec-10    Jan-11    Feb-11    Mar-11    Apr-11    May-11    Jun-11    Jul-11    Aug-11    Sep-11    Oct-11



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  
 Collar  
 Fixed Price  
 Fixed Price  
 Fixed Price  
 Collar  
 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 %

5

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2011 - October 2012  
 As of 07/27/11

	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												
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% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 07/27/11

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  
 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

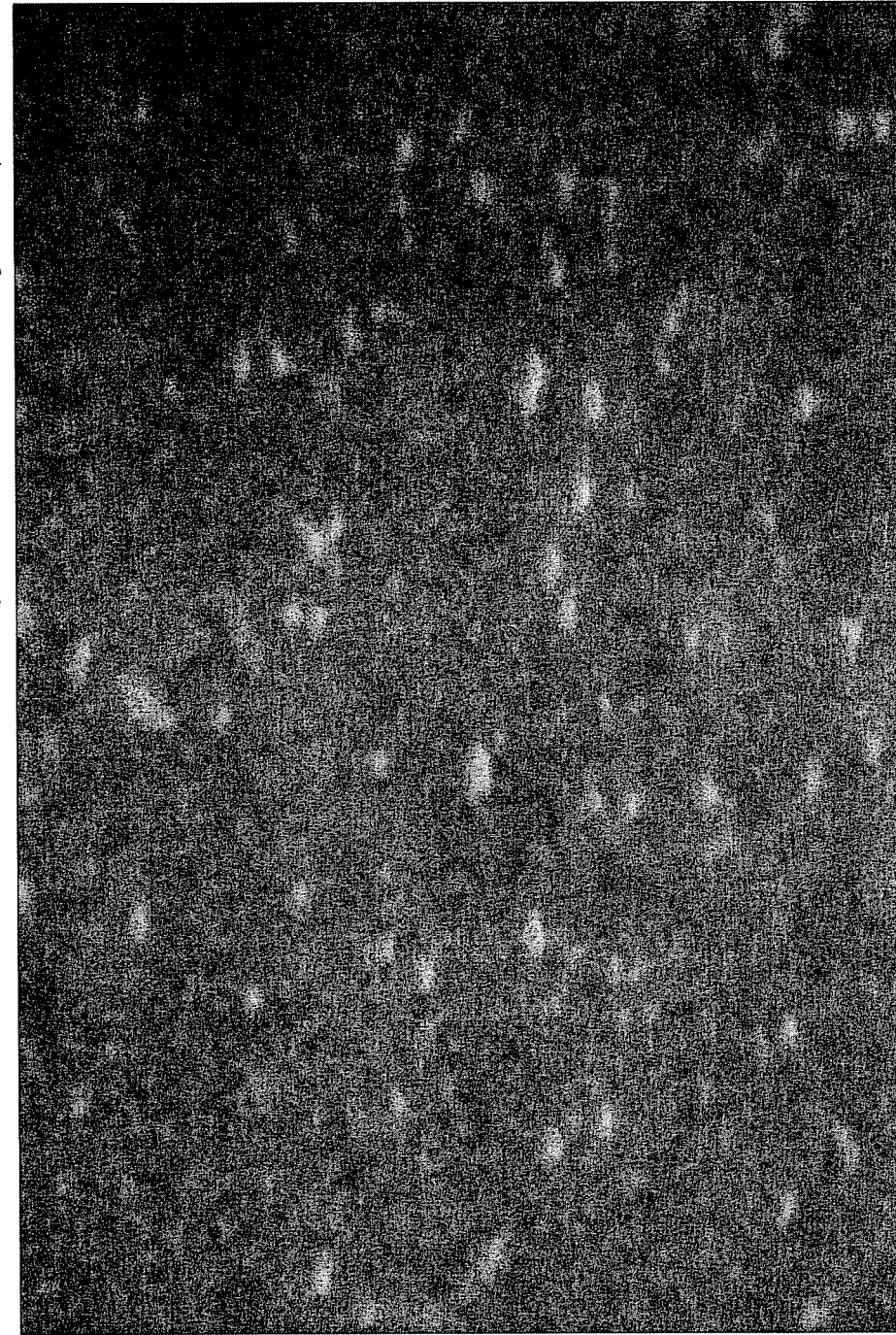
Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

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.

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2013 - October 2014  
As of 07/27/11

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)

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.

7/27/2011

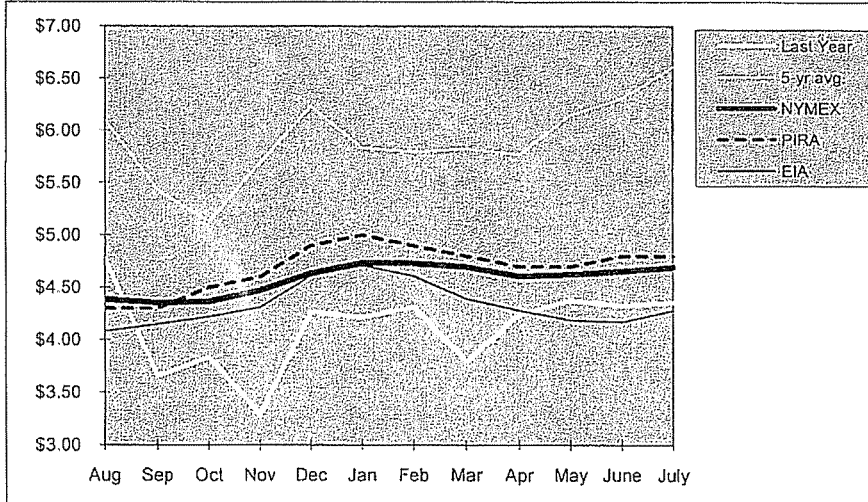
Duke Energy Kentucky  
 Hedging Program  
 Current Position

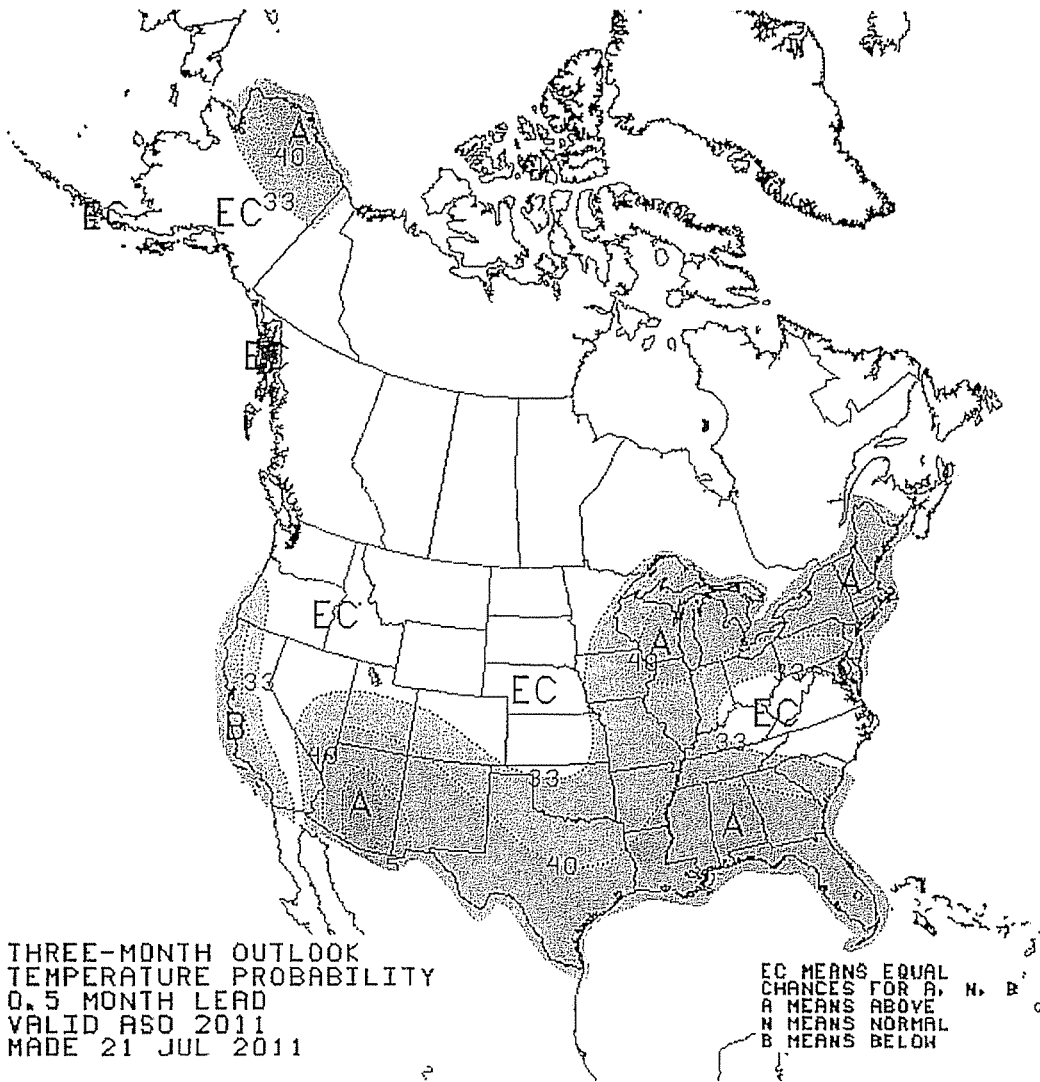
Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/11)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Apr-11					
May-11					
Jun-11					
Jul-11					
Aug-11					
Sep-11					
Oct-11					
Summer 2011					
Target Levels By March 31, 2011					
Nov-11					
Dec-11					
Jan-12					
Feb-12					
Mar-12					
Winter 11/12					
Target Levels By October 31, 2011					
Apr-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2011					
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Target Levels By October 31, 2011					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2011					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2011					



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

Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (06/07-10/11)	Last Year (2010-2011)		PIRA 26-Jul-11	EIA 12-Jul-11	NYMEX 27-Jul-11		
Aug	\$6.10	\$4.77			\$4.080	\$4.387		
Sep	\$5.43	\$3.65			\$4.150	\$4.352		
Oct	\$5.13	\$3.84			\$4.220	\$4.366		
Nov	\$5.69	\$3.29			\$4.310	\$4.469		
Dec	\$6.23	\$4.27			\$4.610	\$4.637		
Jan	\$5.84	\$4.22			\$4.710	\$4.733		
Feb	\$5.80	\$4.32			\$4.610	\$4.730		
Mar	\$5.83	\$3.79			\$4.390	\$4.695		
Apr	\$5.77	\$4.24			\$4.280	\$4.608		
May	\$6.15	\$4.38			\$4.190	\$4.625		
June	\$6.31	\$4.33			\$4.170	\$4.655		
July	\$6.61	\$4.36			\$4.280	\$4.694		
12 Month Avg	\$5.91	\$4.12			\$4.333	\$4.579		
Summer Average					\$4.196	\$4.527		
Winter Average					\$4.526	\$4.653		



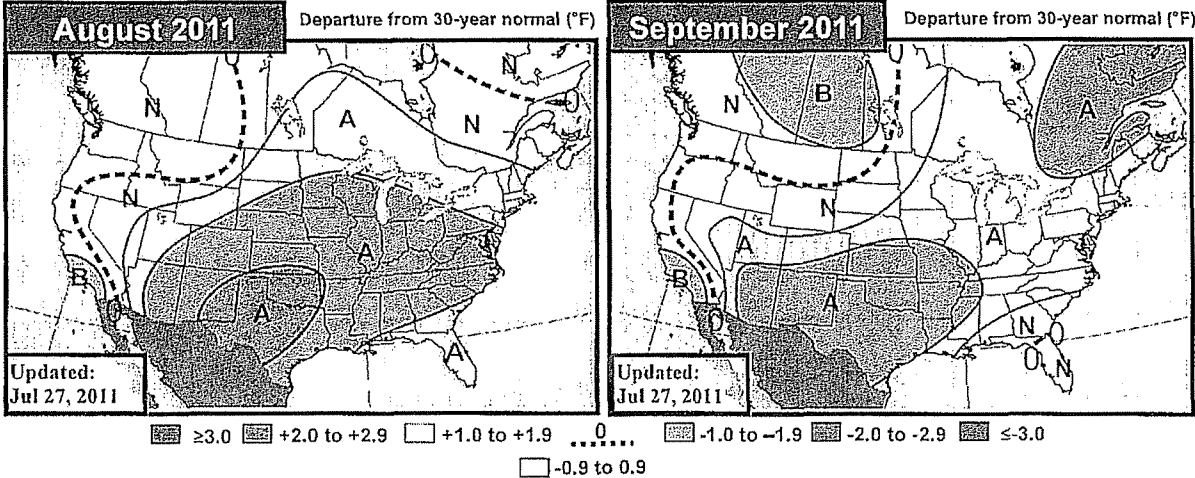


# EarthSat's 30-60 Day Outlook



Wednesday, July 27, 2011

Meteorologists: SS/BH/TH/RC



**Previous** Hotter across mid-continent  
Extreme heat continues at times in Texas

Mostly warmer changes were made to our final August forecast, especially in the Midwest and Plains. Aside from a cooler change in the Pac NW, other cool changes were rather marginal west of the Rockies. We call for a very hot end of the summer from the Plains east, which meets our expectations that persistence, the warm AMO, cold PDO and Southern drought will continue to modulate temperatures. The first three drivers mentioned also support a relatively cooler outcome for the West (particularly the West Coast states). Shorter-term teleconnection signals such as the +EPO and -WPO also lend support to the forecast pattern. Finally, a piece in Tuesday's Editor's Notes documented how the June-July estimate of historically high PWCCDs correlates well with a hot August (as was the case in 1988, 2002, 2005 and 2006 and 2010). Enhanced tropical activity could disturb the pattern a bit, as could very strong blocking (very -AO and/or -NAO).

Aug PWCCD** Forecasts	*10Y Normal updated to '01-10		
Aug 2011 Fcst:	353.0	10Y Normal*	321.6
		30Y Normal	296.5
		Aug-2010	356.6

Change: +15      \*\*National Pop-Weighted CDDs

**Previous** Slightly warmer in southwestern Midwest  
Still cool in Southern California

Some minor warm changes were seen for September across the southwestern Midwest and the lower Mississippi Valley. The forecast remains warm-dominated overall, with the only cool anomalies reserved for California and the Northwest. It's important to note that September is a shoulder month, so demands should be tempered by the lower normals. Seasonal signals (warm AMO and cold PDO) offer support for the widespread warmth, as well as for the cool West Coast. In addition, the five analog years referenced in the August discussion also correlate with expansive aboves across the eastern two-thirds of the US. Impacts from tropical storms could cool the South and/or Texas, while an unlikely pattern shift as simulated by the MEI analogs could cause a cooler Eastern half and warmer West.

Sep PWCCD** Forecasts	*10Y Normal updated to '01-10		
Sep 2011 Fcst:	187.0	10Y Normal*	173.5
		30Y Normal	165.7
		Sep-2010	196.8

Change: +1      \*\*National Pop-Weighted CDDs

**July so far**

The month of July will be the hottest month on a PWCCD scale dating back to 1950, with the month expected to total around 415 CDD (the previous highest since 1950 was 2006, which totaled 386 CDDs). Our forecasts missed out on this extreme heat, particularly our 60 Day forecast which predicted the heat to be mainly based in the Interior West and Southwest while the Midwest and East was expected to be near normal. The 30 Day outlook corrected things a bit in the East, but still missed the overall scale of the heat by a wide margin, especially in the Midwest. The month will feature anomalies of 5-8F above normal from Texas into the southern Plains and much of the Midwest, and also in parts of the Mid-Atlantic as well.



# 6-10 Day Forecast—Detailed

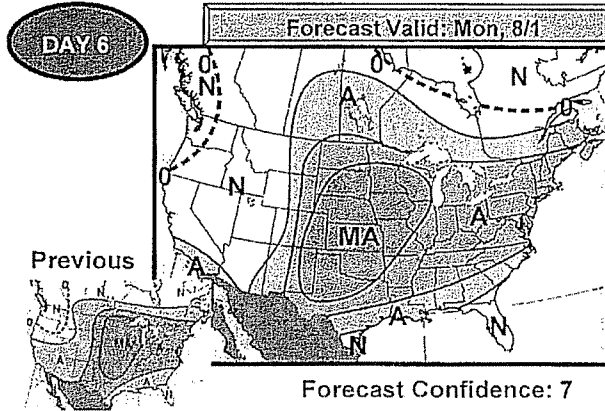
Wednesday, July 27, 2011

Metcorologist: JS/BH



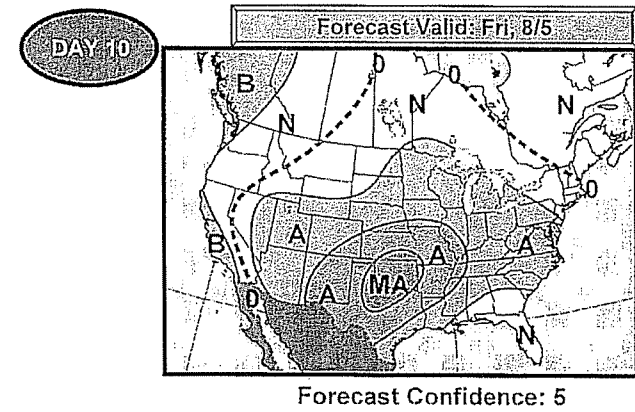
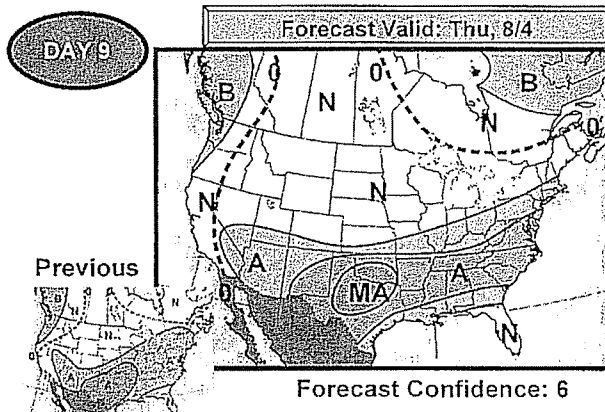
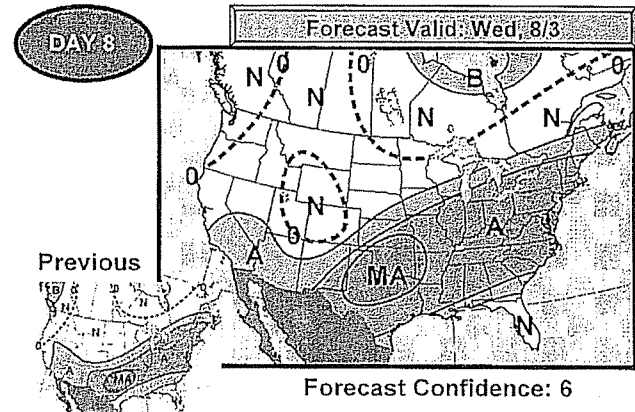
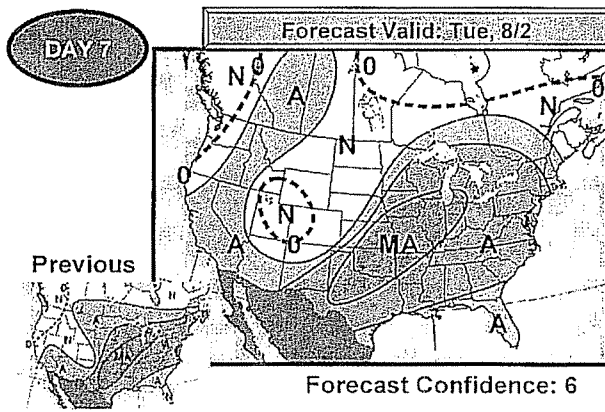
EarthSat Weather

## Forecast Temperature Deviations



**\*Most Intense Heat Early In Period\***  
**\*Persistence Favored Towards Period's End\***

Little has changed with the forecast this morning, featuring impressive much above normal heat at the onset of the period across the Central US which shrinks to only over Texas and the southern Plains by period's end. While there is potential for spikes of stronger than expected heat, this forecast does side with the hottest guidance, lessening the risk. There is potential for cooler conditions towards period's end as well, but persistence suggests that any cooler air should stay mired in Canada and struggle to invade the US. The least amount of confidence lies in the west, especially the Pac NW, where a warmer solution is possible according to many models but recent verifications suggest otherwise.



- 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

# Gas Daily

Thursday, July 21, 2011

## Annual hurricane threat to gas market disappearing: Barclays

The annual hurricane threat to US natural gas supplies has diminished, Barclays Capital said in a report this week.

Short of a reprise of 2005's tandem of hurricanes Katrina and Rita, the biggest market impact of tropical storms hitting the US would be the amount of demand they knock out, not the amount of supply they cut off, Barclays analyst Biliiana Pehlivanova said.

"An active hurricane season does not necessarily mean disrupted production," she said. "In fact, in the event of a landfall near major consuming areas, a tropical storm could bring more significant and longer-lasting disruptions to demand."

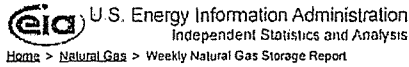
The Gulf of Mexico "has lost its dominant position in US supply," the analyst noted, adding that Gulf production has dropped to 9% of US output from 24% in 2001.

"The 60% drop in Gulf production contrasts sharply with the 14% gain in overall US marketed supply for the same time frame," the report said. "Consequently, a storm's disruptive force carries far smaller implications for natural gas markets."

Threats to the Gulf Coast region "could still bring support to prices, but unless a storm's destructive force proves to have a long-lasting effect on a significant amount of production, any support is likely to be muted and short-lived," Pehlivanova said. "Last summer, prompt-month prices hovered in the \$4.50-4.90/MMBtu range as Hurricane Alex developed and made landfall in northeastern Mexico, shutting in 1.6 Bcf of production. Tropical Storm Bonnie shut in 6.3 Bcf of production, but also failed to push prices outside of that range."

--- Bill Holland

Weekly Natural Gas Storage Report



[Glossary](#)

Weekly Natural Gas Storage Report

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

Released: July 21, 2011 at 10:30 a.m. (eastern time) for the Week Ending July 15, 2011  
Next Release: July 28, 2011

Working Gas in Underground Storage, Lower 48

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

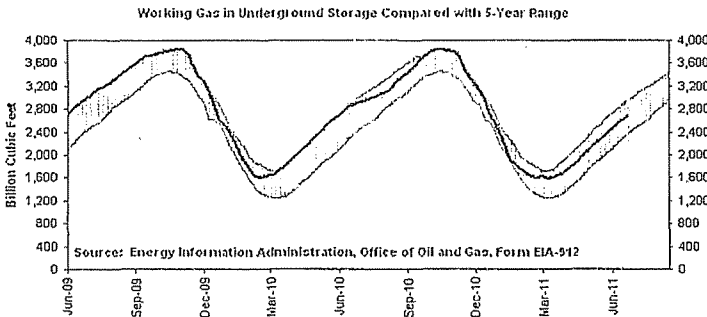
Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	07/15/11	07/08/11	Change	Year Ago (07/15/10)		5-Year (2006-2010) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,298	1,248	50	1,419	-8.5	1,415	-8.3
West	378	362	16	473	-20.1	405	-6.7
Producing	995	1,001	-6	991	0.4	910	9.3
Total	2,671	2,611	60	2,884	-7.4	2,730	-2.2

Notes and Definitions

Summary

Working gas in storage was 2,671 Bcf as of Friday, July 15, 2011, according to EIA estimates. This represents a net increase of 60 Bcf from the previous week. Stocks were 213 Bcf less than last year at this time and 59 Bcf below the 5-year average of 2,730 Bcf. In the East Region, stocks were 117 Bcf below the 5-year average following net injections of 50 Bcf. Stocks in the Producing Region were 85 Bcf above the 5-year average of 910 Bcf after a net withdrawal of 6 Bcf. Stocks in the West Region were 27 Bcf below the 5-year average after a net addition of 16 Bcf. At 2,671 Bcf, total working gas is within the 5-year historical range.

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- 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 2006 through 2010. 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 26, 2011 Release**

Jan-09		Jan-10		Jan-11		Jan-12	
Feb-09		Feb-10		Feb-11		Feb-12	
Mar-09		Mar-10		Mar-11		Mar-12	
Apr-09		Apr-10		Apr-11		Apr-12	
May-09		May-10		May-11		May-12	
Jun-09		Jun-10		Jun-11		Jun-12	
Jul-09		Jul-10		Jul-11		Jul-12	
Aug-09		Aug-10		Aug-11		Aug-12	
Sep-09		Sep-10		Sep-11		Sep-12	
Oct-09		Oct-10		Oct-11		Oct-12	
Nov-09		Nov-10		Nov-11		Nov-12	
Dec-09		Dec-10		Dec-11		Dec-12	
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		

**North American Gas Forecast Monthly**



July 26, 2011

**NATURAL GAS**

**GAS PRICE SCORECARD: 2012**

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
U.S. Production		Slower production looks in store unless Haynesville growth exceeds our expectations. But slower depletion of non-shale wells, more associated gas and narrower offshore GOM declines should mitigate the overall slowdown.
LNG Imports		LNG has moved almost completely out of the U.S. supply picture and no change is in sight.
Canadian Trade		Reduced imports from Canada are expected to continue, but the Y/Y losses should become much smaller unless Canada had another unusually cold winter.
Mexican Trade		U.S. exports to Mexico will be higher given the inadequacy of gas-oriented drilling and a rising gas burn for EG.
Storage Levels		Barring an unusually cold 2011-12 heating season, storage looks poised to reach an all-time high for end-March next year, but slower production growth should help minimize the risk of injection season storage congestion.
U.S. Demand Issues	Outlook	Commentary
Economy		Economic growth and manufacturing IP are projected to expand at a similar pace to the current year.
Electric Generation (EG)		Stronger gas-fired EG looks likely given new, more stringent environmental standards that will limit coal-fired EG.
Industrial Sector		Rising gas intensity appears to be launching a faster pace of gas demand growth, but downside risks are also apparent.
Res/Com Heating		Barring another unusually cold winter, gas heating demand will suffer large Y/Y losses through most of the next heating season with negative spillover effects into other sectors.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation		The combined NYMEX/ICE futures and option position held by speculators is still net short. Their long position, though, is still near a multi-year high despite a sizable pullback since early June. Moreover, those bullish bets have bypassed the NYMEX 2012 contracts, which continue to languish.
Medium-Term NYMEX Prices		The revised upside potential for 2012 gas prices rests more on near-term developments. Thus, the impact on the longer-dated contracts should be relatively muted, especially considering this year's price rally in the back-end of the NYMEX curve.
Overall Assessment	Outlook	Commentary
Price Outlook		At ~\$4.75/MMBtu, the NYMEX 2012 strip is near the low end of the \$4.68-\$5.23 range in place since October 2010. New lows are certainly possible, especially if temperatures turn bearish in the early stages of the heating season. Further affirmation of slower U.S. production growth, however, would set the stage for a rebound.



# Gas Daily

Monday, July 11, 2011

## Storage filling despite lack of financial incentive

Rising gas production has tightened the spread between summer and winter NYMEX gas futures values, giving operators limited financial incentive to inject gas into storage. But some analysts maintain that storage will continue to have value for market participants and that the spreads will widen out again by 2012.

At the end of June, the spread between the NYMEX July contract and the December-through-February average was approximately 45 cents/MMBtu, a far cry from the 80-cent spread in 2010 and the \$2 spread in the same period of 2009.

"The summer-winter spread is tighter this year because the market is more bearish about the supply balance than it was last year," said Greg Ballheim, director of consulting at Pace Global Energy Services. "In 2010, the market was concerned that a halving of the rig count in late 2009 would result in lower production in 2010. It didn't. In fact, the rig count remains low, but we are exceeding production level highs last seen about 40 years ago."

Pax Saunders, vice president of energy markets at Gelber & Associates, echoed that sentiment. "This is not just the amount of gas, but an oversupply condition," he said. "Storing gas right now is not much of a favorable arbitrage."

A recent research note from Bank of America/Merrill Lynch added that "the market is barely covering for the costs of storage, embedding expectations of a below-normal injection season next summer." The report said the market "is placing very little marginal value to storage at the moment," either due to incremental working storage capacity brought online in recent years, expectations for a gas price rebound, or both.

Furthermore, "operators are taking their time fracking and connecting wells to the system," Raymond James analyst Christopher Butschek explained. "This 'uncompleted backlog' of wells is in effect *de facto* storage, as the gas could hit the market within a month or two."

Analysts generally concurred that despite tightening NYMEX spreads, storage will continue to fill as large end-users and utilities will continue to inject.

"The goal of the utilities and end-users is to lock in the price, so they would store anyway," according to Saunders, adding that they are not typically concerned with price spreads. Utilities typically do not speculate but buy and sell gas based on their hedging programs as required by public utility commissions, he said.

"Gas storage remains a necessary component of the US market — on a daily basis, gas production is basically flat throughout the year while demand remains highly seasonal," Ballheim added. "Gas must be injected in the summer so long as producers want to monetize their production capacity."

But merchant traders are reticent to store gas because there is "no reward with the lack of market contango," Saunders added.

International Gas Consulting President Ken Beckman agreed. "It crushes the heart of the value for storage capacity in this year for anyone that does not have a specific need they are storing for; i.e. a real

winter demand," he said. "With traders unable to find attractive spreads, storage capacity finds little value in the short term. It is really hard to sign up for new storage capacity this year in that scenario. Consequently, it takes a company with a long view to sign up for capacity."

But Bank of America analysts predict an eventual widening of spreads, as they believe the market will come more into balance in 2012.

"In our view, storage will ramp up very quickly under normal weather for the remainder of this summer," the report said. "[By] our estimates, inventories will likely build above the five-year average and will end the injection season at 3.75 Tcf. This will likely depress near-dated prices relative to forward winter prices." --- *Anastasia Gnezditskaia*

# Gas Daily

Wednesday, July 6, 2011

## Raymond James boosts 2011 price forecast 13%

Analysts at investment bank Raymond James raised their natural gas price forecast 13% to \$4.25/Mcf this year on Tuesday, with predictions of \$4.30/Mcf prices at the Henry Hub through December.

But Marshall Adkins, their top gas analyst, isn't getting bullish on next year, predicting 2012 prices will average \$4.25/Mcf at Henry Hub, 12% below where the NYMEX strip is trading.

This year's gas price got a huge boost from an abnormally cold winter, Adkins said, which burned up 500 Bcf, or 2.5 Bcf/d more gas than Raymond James had predicted would be consumed when it made its bearish \$3.75/Mcf estimate at the beginning of this year, citing gas supply gains of 4 Bcf/d.

"Thanks to the weather, summer-ending gas storage may now end slightly below last year rather than over-supplied as expected," Adkins said in a note to clients.

"Looking ahead to 2012, the natural gas outlook remains ugly," Adkins added, for many of the same reasons he's been bearish all along: surging production growth, normal weather, and a sluggish US economic rebound.

"Currently, US natural gas producers are growing year-over-year supply by about 4.5 Bcf/d," he said. And while dry gas rigs have dropped 8% as producers hunt for wetter, oilier prospects, those liquids plays will still produce enough gas to offset the decline in production from dry gas rigs.

Without more industrial and power demand than is being seen in the current economic environment, the US still ends up with 2 Bcf/d more than it consumes and there's not enough room in storage for all the extra gas, Adkins said.

"The point here is that our \$4.25/Mcf forecast for 2012 will in all likelihood prove to be too high," Adkins said, but hedged his bets after this past winter's chilly surprise. "After the past couple of years, we don't want to call for a natural gas meltdown only to have the market bailed out by six sigma weather events."

Raymond James' first gas price forecast for 2012 calls for \$4.25/Mcf average prices in the first quarter of 2012, \$4/Mcf in the second and third quarters, and \$4.75/Mcf in the last quarter. — *Bill Holland*

# Gas Daily

Wednesday, July 20, 2011

## MIT, EIA defend bullish shale gas projections

Officials from the Energy Information Administration and the Massachusetts Institute of Technology on Tuesday defended their projections of ample gas supplies for the next decade — views that have come under fire after The New York Times published articles critical of the economics of shale gas production.

At a hearing of the Senate Energy and Natural Resources Committee, Ranking Republican Lisa Murkowski of Alaska said she was troubled that the late-June articles appeared to contradict EIA's predictions of \$5/Mcf gas until 2020 amid robust shale production. She said she was particularly concerned that the articles were based in part on leaked e-mails from within EIA.

"We depend on EIA to deliver independent, impartial information," Murkowski said. The *Times* article "deserves some kind of explanation."

"We found nothing that causes us concern," Acting EIA Administrator Howard Gruenspecht replied. "EIA is doing a solid job tracking shale gas in the US energy system."

Gruenspecht said most of the EIA e-mails the newspaper used to support its story — which suggested that shale drillers can't make back their investments in the current market environment — were to and from one contract employee and so heavily redacted as to be wildly out of context. He promised to supply the committee with unredacted copies of the e-mails.

"I can't tell you EIA is 100% right," Gruenspecht said. "But we are transparent. We stand behind our shale gas work. The results of the shift in North American natural gas markets have had the positive effect of lowering prices and expanding supply. Shale gas is thus a 'game changer.' In the decades to come, shale gas could provide 25% of US natural gas needs, compared to 8% in 2008."

"We depend on you to give us information. This *New York Times* article challenges you," Louisiana Democratic Senator Mary Landrieu told Gruenspecht and MIT professor Ernest Moniz, author of a recently updated report on the future of domestic gas supply.

"Do you think there has been a paradigm shift in natural gas?" Landrieu asked. "The data and the EIA's projections indicate that there is a good chance" that such a shift has occurred, Moniz responded.

"The *New York Times* story was very disappointing," he added, noting that MIT's study was completed using different shale data than EIA but came to nearly the same conclusions.

"Even with uncertainty, there are abundant supplies of natural gas in the world, and many of these supplies can be developed and produced at relatively low cost," Moniz testified.

"In the US, despite their relative maturity, natural gas resources continue to grow, and the development of low-cost and abundant unconventional gas resources, particularly shale gas, has a material impact on future availability and price," he added.

MIT's study predicts that gas will be priced between \$6/MMBtu and \$8/MMBtu for the next 20 years.

— Bill Holland

# Gas Daily

Thursday, July 21, 2011

## Study: Pa. Marcellus could produce 17.5 Bcf/d

Gas drillers doubled their spending in Pennsylvania's Marcellus Shale last year to \$11.5 billion and plan to increase that another 10% this year to \$12.7 billion, according to a Penn State University study released Wednesday.

As a result of that greater-than-expected investment, Pennsylvania's portion of the Marcellus could be producing 17.5 Bcf/d, or 25% of US gas demand, by 2020, said the study funded by the Marcellus Shale Coalition. Gas production in Pennsylvania recently passed the 2 Bcf/d mark, with three-quarters of that volume coming from horizontal shale wells, it said.

The report's authors, three current and former Penn State energy economists, said Pennsylvania's lack of a severance tax on gas production keeps the Marcellus competitive with newer, more liquids-rich shale plays in Texas and North Dakota and compensates for the higher costs of drilling in Pennsylvania's mountains.

"The absence of a severance tax in Pennsylvania, along with city-gate prices higher than the national average, offsets higher costs associated with complex regulations, climate conditions, topography, higher labor costs and other structural factors," said lead author Timothy Considine, now with the University of Wyoming.

The study did not attempt to calculate the price of any environmental accidents or impacts. But Considine has modeled such costs in reports for other customers, concluding that the price of cleanup would be more than offset by the volumes of new Marcellus gas being supplied to the market.

The report, which assumes gas prices will remain relatively low and stable for the next 20 years, predicts that industry will be drilling new wells in Pennsylvania at the rate of seven per day or 2,500/year in 2020, up 1,405, or four per day, in 2010.

The study used data supplied by 12 producers in the Marcellus that account for 55% of all wells drilled.

For the last three years, gas drillers have spent more than planned in Pennsylvania. For instance, the \$11.5 billion spent in 2010 far exceeded the \$8.8 billion the firms originally forecast.

The study said that money generated billions more in secondary economic activity, resulting in an estimated payment of \$1.6 billion in state and federal taxes and supporting more than 140,000 jobs.

Pennsylvania counties with significant amounts of drilling have seen their unemployment rates fall below the state average, the study said, while seeing an increase in sales tax revenue.

"For example, from 2009 to 2010 Bradford County saw an increase in tax revenue of \$13.22%, while the state as a whole saw tax revenues decline (on average) by 2.26%," it said.

MSC President Kathryn Klaber told reporters on a conference call that the Penn State study did not look at other economic impacts resulting from Marcellus drilling, such as the continuing build-out of midstream pipelines and processing plants, or low-cost gas keeping manufacturers from moving out of state.

She said the group supports some form of impact fee on drillers, with the revenue directed to local communities, as long as it's "reasonable" and "competitive."

"You have to look at it for what it is," Pennsylvania Budget and Policy Center research Director Michael Wood said of the study. "It's an industry produced document designed to be an advertisement for industry. It's not something to make public policy with."

The Harrisburg-based BPC has criticized all three versions of the MSC's economic impact studies as playing fast and loose with data and categories. Wood offered the \$1.6 billion in tax revenue as an example.

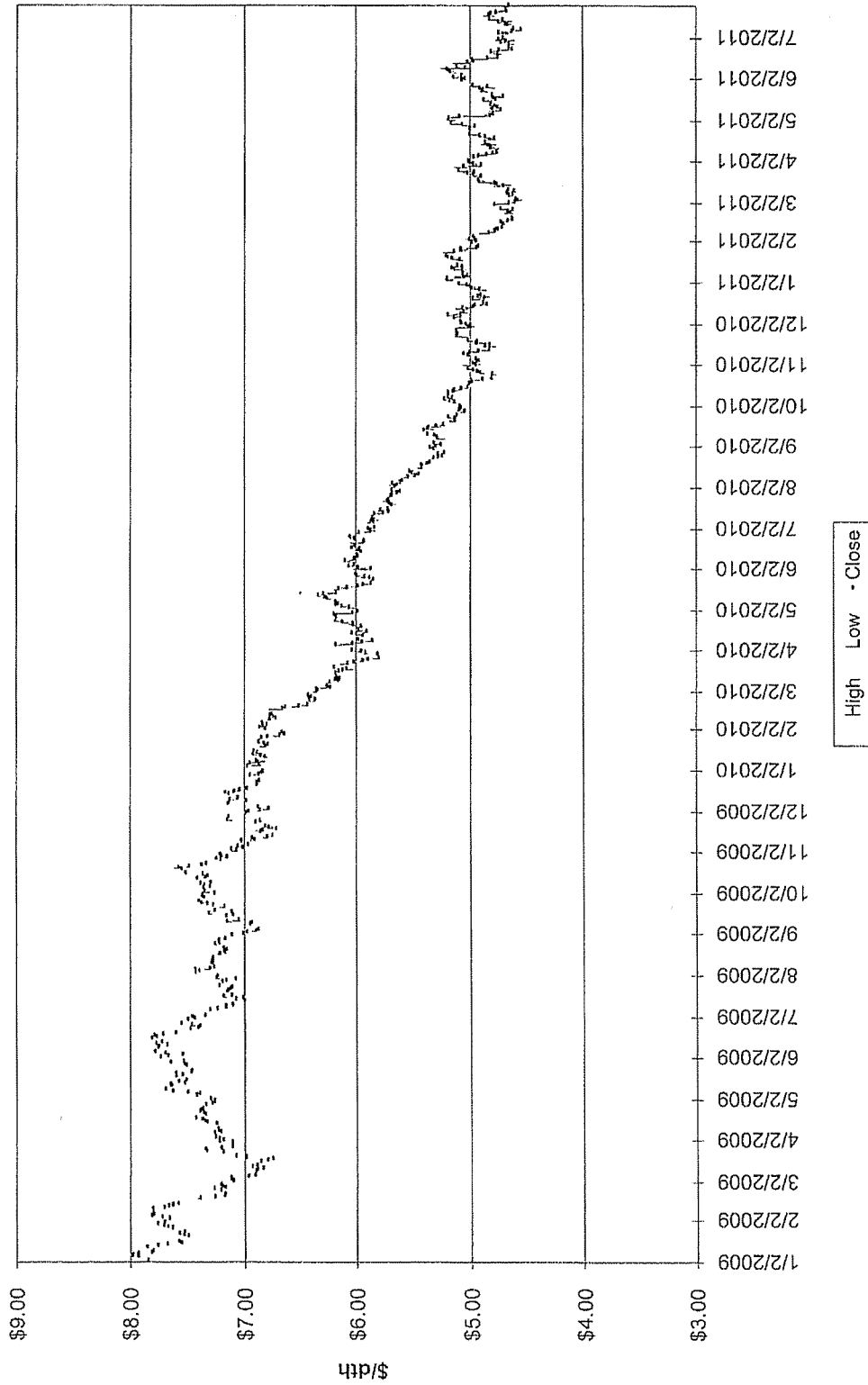
"The Department of Revenue cast a pretty wide net," he said. "and their number was \$200 million. Not that there's anything wrong with \$200 million, but it's not \$1.6 billion."

Wood said the study's assumptions caused it to overestimate how much economic activity gas drilling is creating and supporting in Pennsylvania. "Their assumption is that 95% of [drillers'] supplies were purchased in state. I don't think so. These companies are headquartered in Texas and Oklahoma and they have their own existing supply chains. That 95% is difficult to understand."

**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**July 12, 2011 Release**

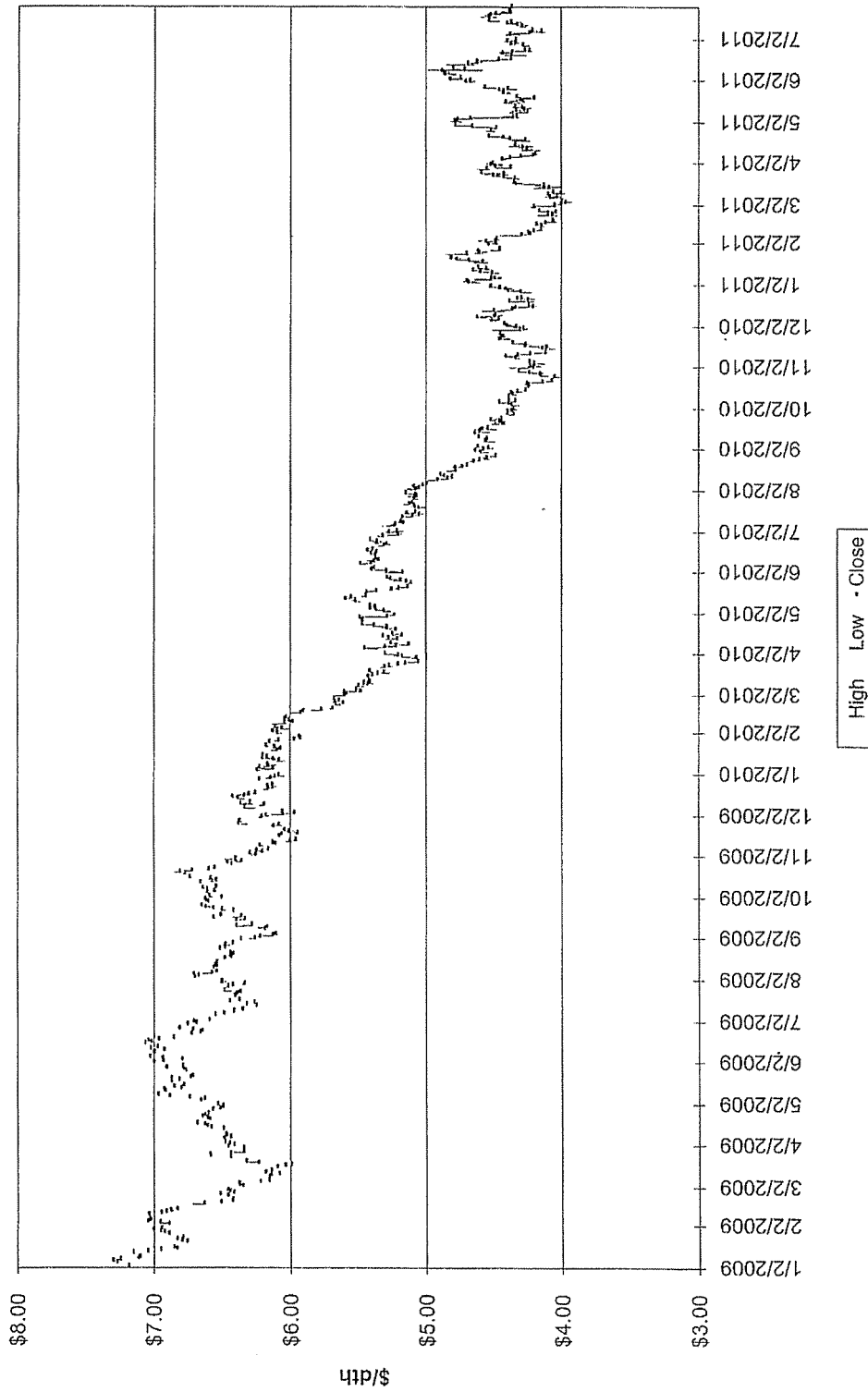
Jan-09	5.24	Jan-10	5.83	Jan-11	4.49	Jan-12	4.71
Feb-09	4.51	Feb-10	5.32	Feb-11	4.09	Feb-12	4.61
Mar-09	3.96	Mar-10	4.29	Mar-11	3.97	Mar-12	4.39
Apr-09	3.49	Apr-10	4.03	Apr-11	4.25	Apr-12	4.28
May-09	3.83	May-10	4.14	May-11	4.31	May-12	4.19
Jun-09	3.80	Jun-10	4.80	Jun-11	4.54	Jun-12	4.17
Jul-09	3.38	Jul-10	4.63	Jul-11	4.22	Jul-12	4.28
Aug-09	3.14	Aug-10	4.32	Aug-11	4.08	Aug-12	4.48
Sep-09	2.97	Sep-10	3.89	Sep-11	4.15	Sep-12	4.55
Oct-09	4.00	Oct-10	3.43	Oct-11	4.22	Oct-12	4.77
Nov-09	3.66	Nov-10	3.71	Nov-11	4.31	Nov-12	4.87
Dec-09	5.34	Dec-10	4.25	Dec-11	4.61	Dec-12	5.12
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		

Winter Strip Nov11 - Mar12

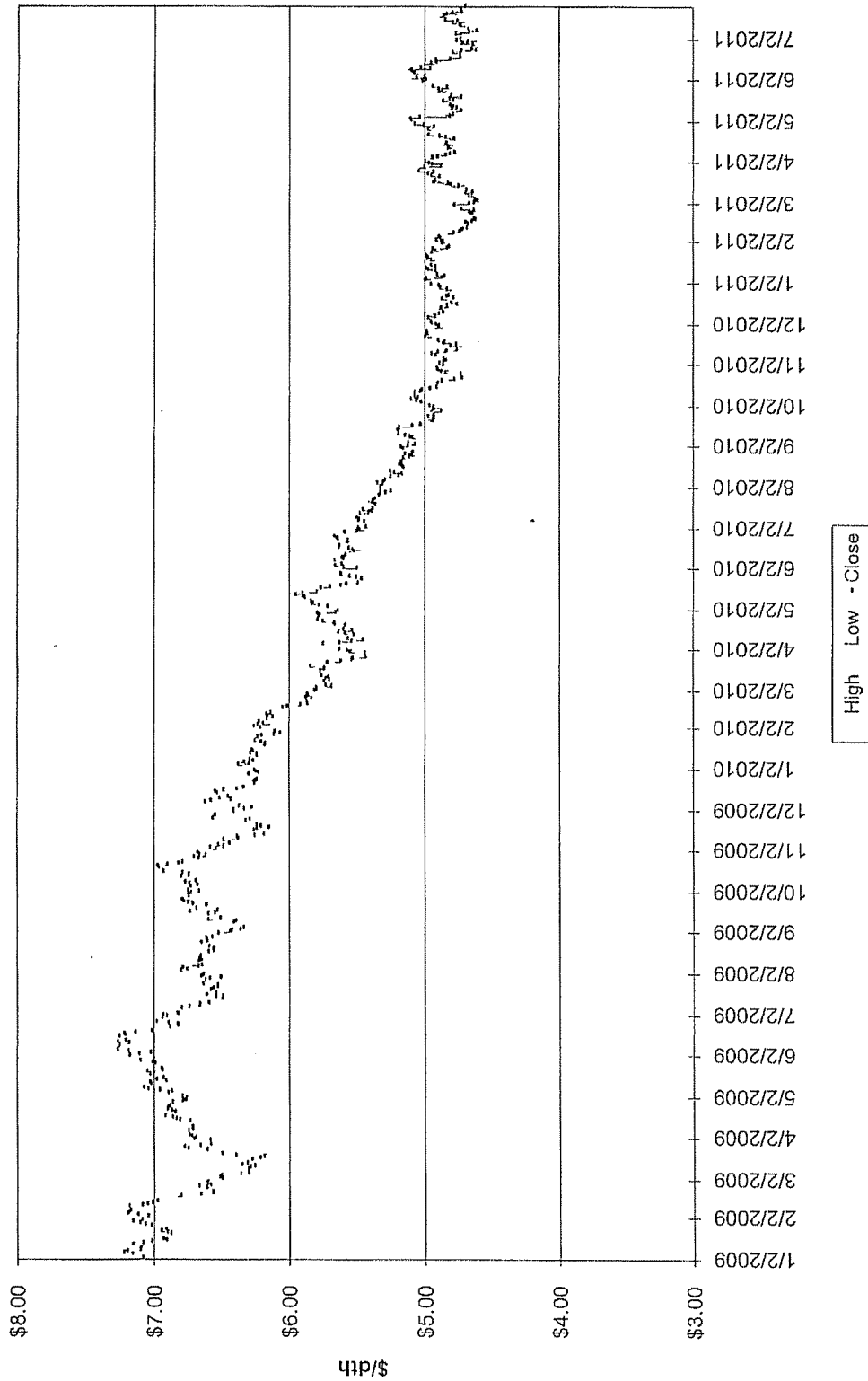




Summer Strip 2011



Summer Strip 2012



82

# Short-Term Energy Outlook

July 12, 2011 Release

## Natural Gas

U.S. Natural Gas Consumption. EIA expects that total natural gas consumption will grow by 2.0 percent to 67.4 billion cubic feet per day (Bcf/d) in 2011. Forecast industrial and electric power consumption are expected to rise in 2011 by 3.3 percent to 18.7 Bcf/d and 2.1 percent to 20.6 Bcf/d, respectively.

Projected total consumption drops slightly in 2012 to 67.3 Bcf/d, reflecting expected continued growth in the industrial and electric power sectors with a decline in residential and commercial consumption due to a forecast decline in heating degree-days in the Midwest and West.

U.S. Natural Gas Production and Imports. Marketed natural gas production is expected to average 65.4 Bcf/d in 2011, a 3.6 Bcf/d (5.8 percent) increase over 2010. Much of this growth is expected to occur during the first three quarters of the year, with a more moderate increase in the fourth quarter. Production growth is forecast to continue at a much slower pace in 2012, increasing 0.6 Bcf/d (0.9 percent) to average 66.0 Bcf/d.

Growing domestic natural gas production has reduced reliance on natural gas imports and contributed to increased exports. EIA expects that pipeline gross imports of natural gas will fall by 3.9 percent to 8.7 Bcf/d during 2011 and by 4.0 percent to 8.4 Bcf/d in 2012. Pipeline gross exports to Mexico and Canada are expected to average 4.2 Bcf/d in 2011 and 4.3 Bcf/d in 2012, compared to just 3.1 Bcf in 2010.

EIA projects that U.S. imports of liquefied natural gas (LNG) will fall from an average 1.2 Bcf/d in 2010 to 1.0 Bcf/d in both 2011 and 2012. Because of the earthquake in Japan and subsequent nuclear generation outages, Japan's demand for LNG as a replacement fuel for electric power generation is expected to increase, contributing to higher global LNG prices.

U.S. Natural Gas Inventories. On July 1, 2011, working natural gas in storage stood at 2,527 Bcf, 214 Bcf below last year's level in late June. EIA expects that inventories, though currently lower than last year, will come close to last year's levels towards the end of the 2011 injection season. Projected inventories surpass 3.8 Tcf at the end of October 2011 because of current high production rates and a milder summer relative to last year.

U.S. Natural Gas Prices. The Henry Hub spot price averaged \$4.54 per MMBtu in June, 23 cents higher than the May average and 34 cents higher than forecast in last month's *Outlook*. EIA expects that the Henry Hub price will average \$4.26 per MMBtu over the second half of 2011, as the inventory deficit relative to last year narrows. EIA projects that the Henry Hub price will average \$4.54 per MMBtu in 2012, as slowing growth in production contributes to lighter domestic natural gas markets.

## Global Crude Oil and Liquid Fuels

Crude Oil and Liquid Fuels Overview. EIA projects that total world oil consumption will grow by 1.4 million barrels per day (bbl/d) in 2011 and 1.6 million bbl/d in 2012. EIA still expects that the market will rely on both a drawdown of inventories and production increases in both non-OPEC and OPEC countries to meet projected demand growth. Projected supply from non-OPEC countries increases by an average of about 0.6 million bbl/d annually in 2011 and 2012. OPEC production, including both crude and non-crude liquids, increases by 0.3 and 0.9 million bbl/d in 2011 and 2012, respectively.

EIA expects the release of strategic reserves pursuant to the IEA's June 23 announcement to reduce the expected draw on commercial stocks during the rest of 2011. In last month's *Outlook*, commercial stocks held in Organisation for Economic Cooperation and Development (OECD) member countries, which fell by about 7 million barrels over the first 6 months of 2011, were forecast to fall by 127 million barrels over the last 6 months of this year because of the projected second-half increase in world consumption. In this *Outlook*, the second-half OECD commercial stock draw has been lowered to 71 million barrels.

The crude oil price outlook remains uncertain. Among the major uncertainties that could push oil prices above or below our current forecast are: risk of additional supply disruptions in producing regions, such as possible unrest in Sudan; the willingness and ability of key OPEC-member countries to increase and sustain higher production in response to the global increase in oil demand; the rate of global economic growth; and fiscal issues facing national and sub-national governments.

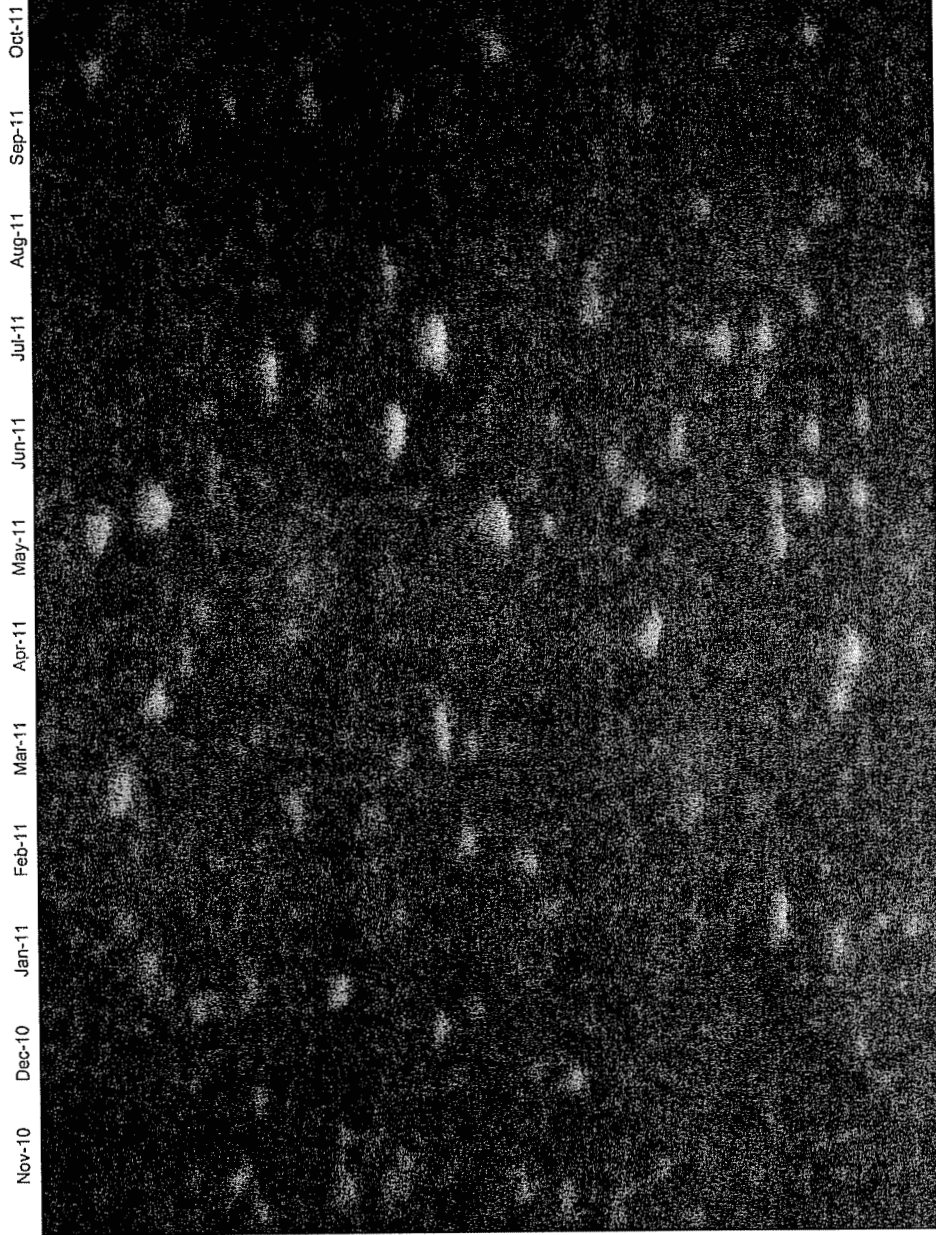
Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2011-12

		Dth/Day					Total	% System Supply
		November	December	January	February	March		
<u>Duke Energy Ohio</u>								
Previously Hedged								
	Col Gulf Mainline							
	Col Gulf Mainline							
	Gulf South-DE Field Services							
	Col Gulf Mainline							
	Col Gulf Mainline							
	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								

## Duke Energy Hedging Meeting—August 8, 2011

- At the July 28, 2011 Hedging Meeting, a decision was reached not to hedge additional volumes, however, at the time it was stated to monitor the market for significant price movements.
- NYMEX prices for November 2011—March 2012 strip have decreased significantly from the July 28, 2011 meeting of \$ [REDACTED] to \$ [REDACTED] based on August 8<sup>th</sup> pricing levels.
- On August 8, 2011, Jim Mehring, Jeff Kern and Steve Niederbaumer met to discuss additional hedging in light of current market conditions.
- Information reviewed included pricing information and the current position of the Ohio Hedging Program (proposed Kentucky Hedging Program has not yet been approved). Discussion focused on the volatility in the financial markets, the current heat wave and its impact on storage levels and the return to more normal weather.
- After discussion, a determination was made to hedge additional volumes in Ohio.
- [REDACTED] and [REDACTED] were contacted to convert FOMI base gas to a fixed price. [REDACTED] bid--\$ [REDACTED] [REDACTED] bid --\$ [REDACTED]
- [REDACTED] bid was accepted for [REDACTED] Dth/day, Dec 11-Mar 12 on Columbia Gulf Mainline
- [REDACTED], [REDACTED] and [REDACTED] were contacted for [REDACTED] Dth/day, Apr 12—Mar 14 on Columbia Gulf Mainline. [REDACTED] bid--\$ [REDACTED], [REDACTED] bid--\$ [REDACTED] [REDACTED] bid--\$ [REDACTED]
- [REDACTED] was selected as the winning bidder based on volumes already arranged with [REDACTED]

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2010 - October 2011  
As of 08/08/11



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  
Collar  
Fixed Price  
Fixed Price  
Fixed Price  
Collar  
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 %

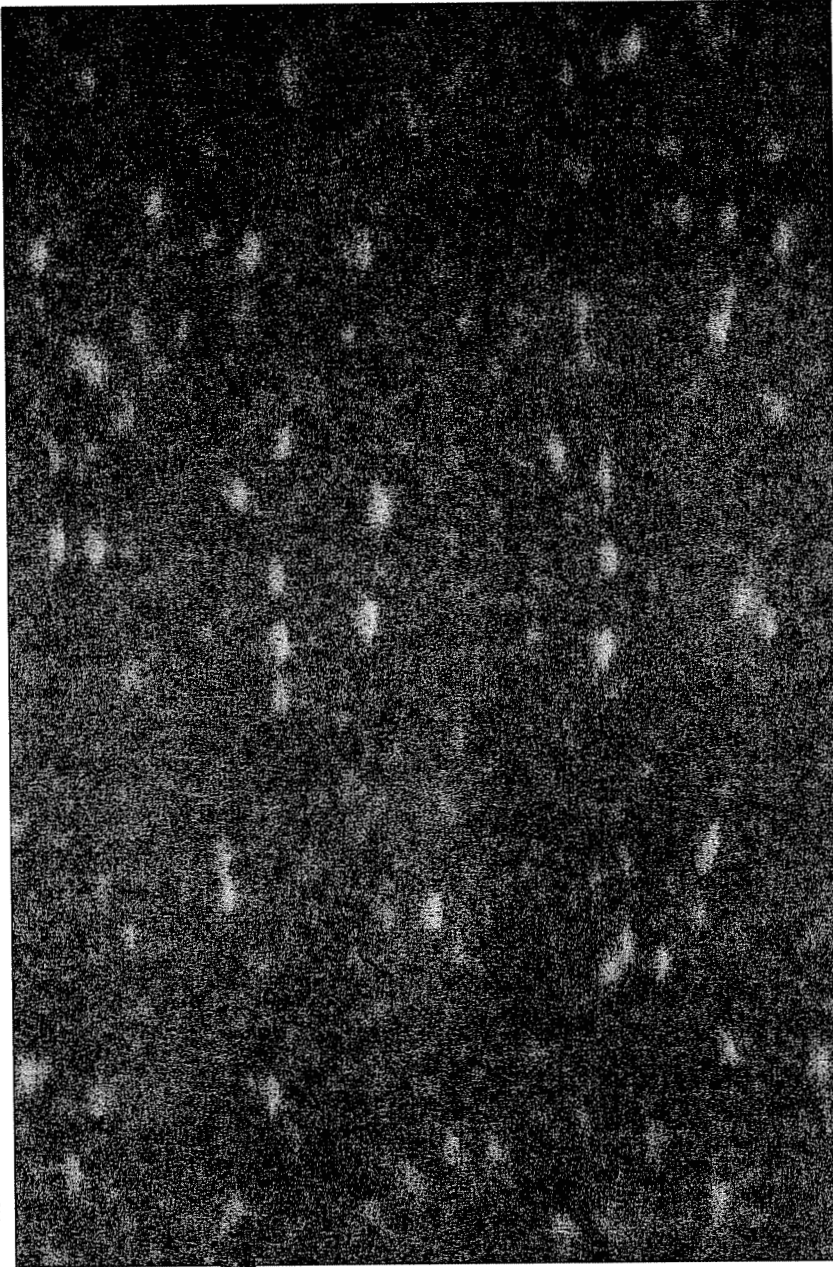
Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2011 - October 2012  
 As of 08/08/11

	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												
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% Summer months.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 08/08/11

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  
 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

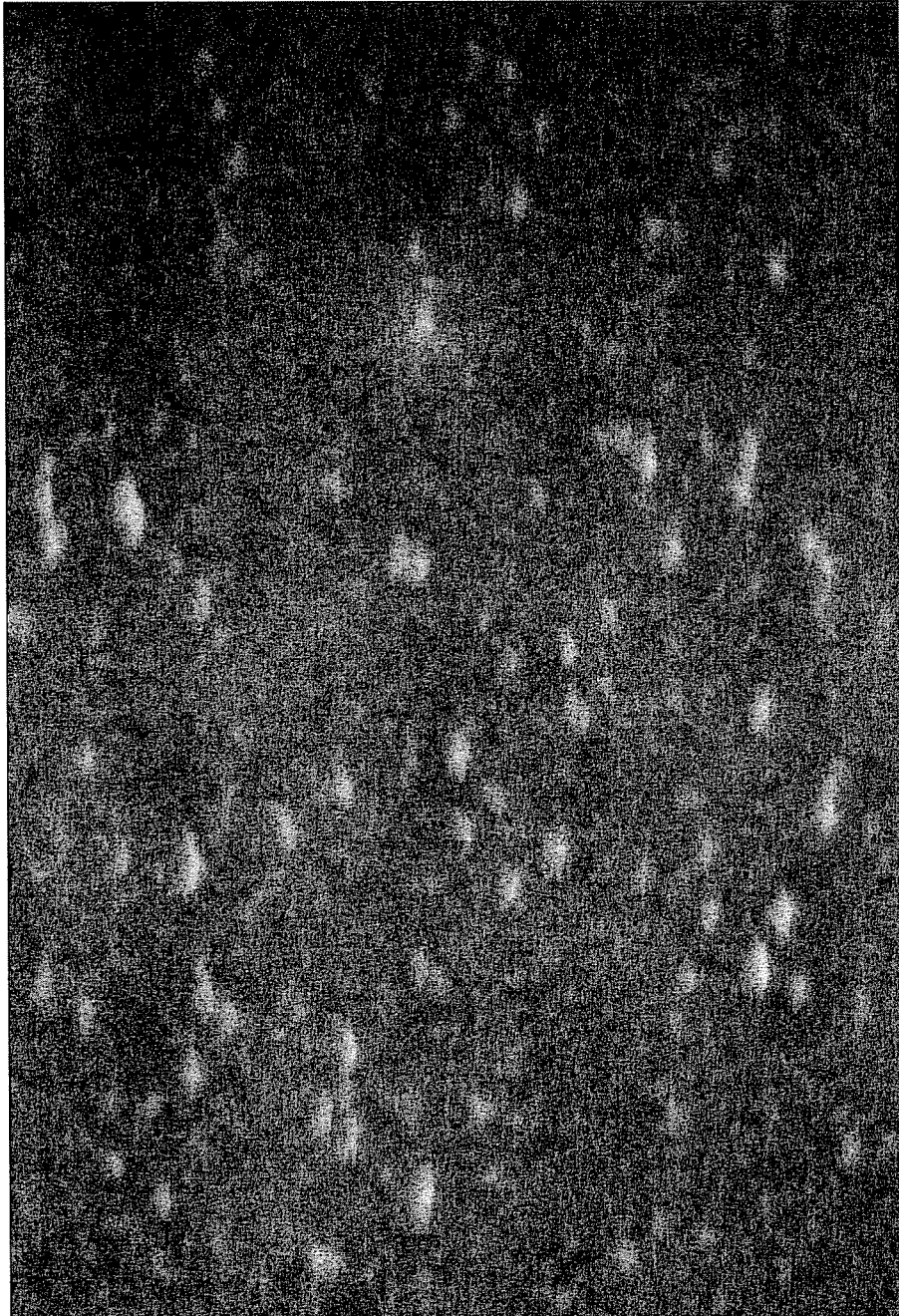
Amt Hedged with Storage @ City Gate  
 Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (incl. injections) (Dth)  
 % Hedged & Storage  
 Seasonal %

(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 2013 - October 2014  
As of 08/08/11

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)  
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.

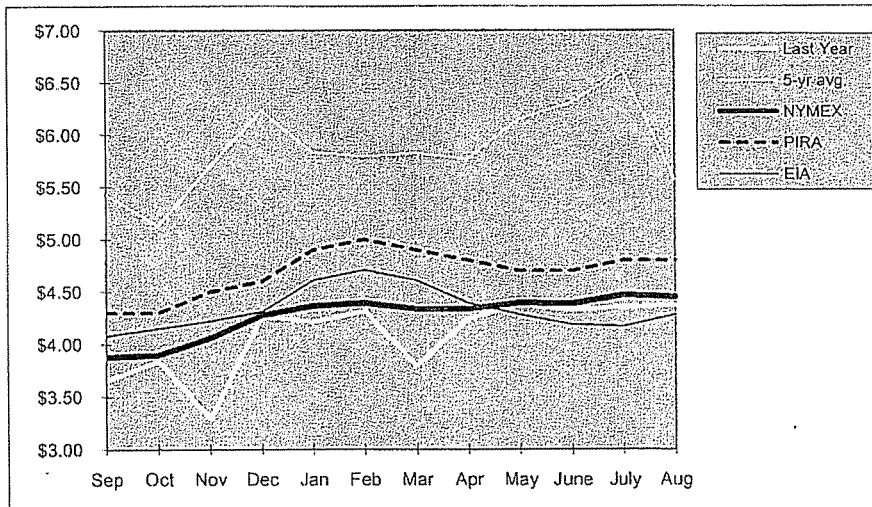
8/8/2011

Duke Energy Kentucky  
 Hedging Program  
 Current Position

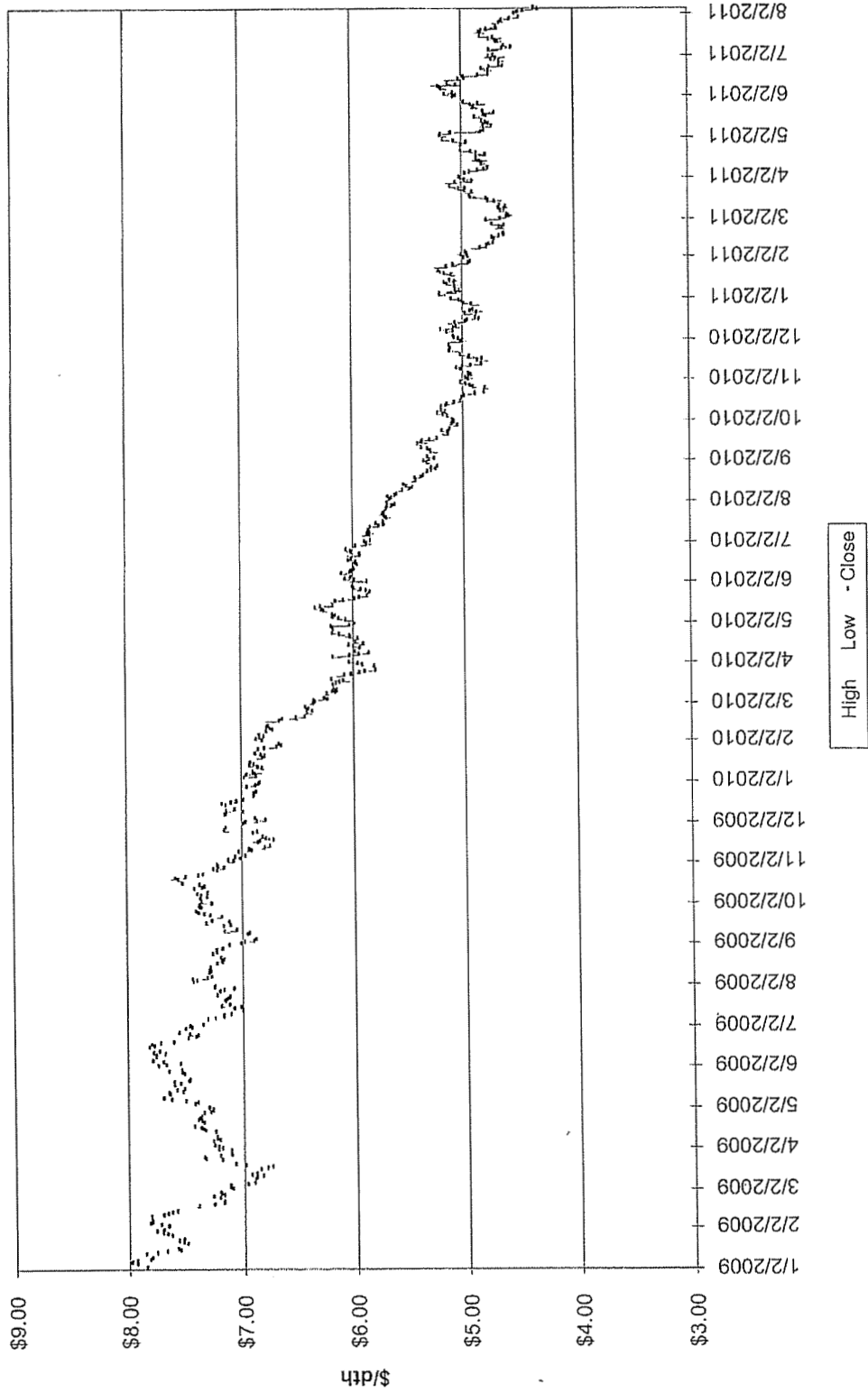
Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/11)	
		Total		Required	Allowed
		Dth/day	Dth/mo	dth/day	dth/day
Apr-11					
May-11					
Jun-11					
Jul-11					
Aug-11					
Sep-11					
Oct-11					
Summer 2011					
Target Levels By March 31, 2011					
Nov-11					
Dec-11					
Jan-12					
Feb-12					
Mar-12					
Winter 11/12					
Target Levels By October 31, 2011					
Apr-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2011					
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Target Levels By October 31, 2011					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2011					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2011					

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

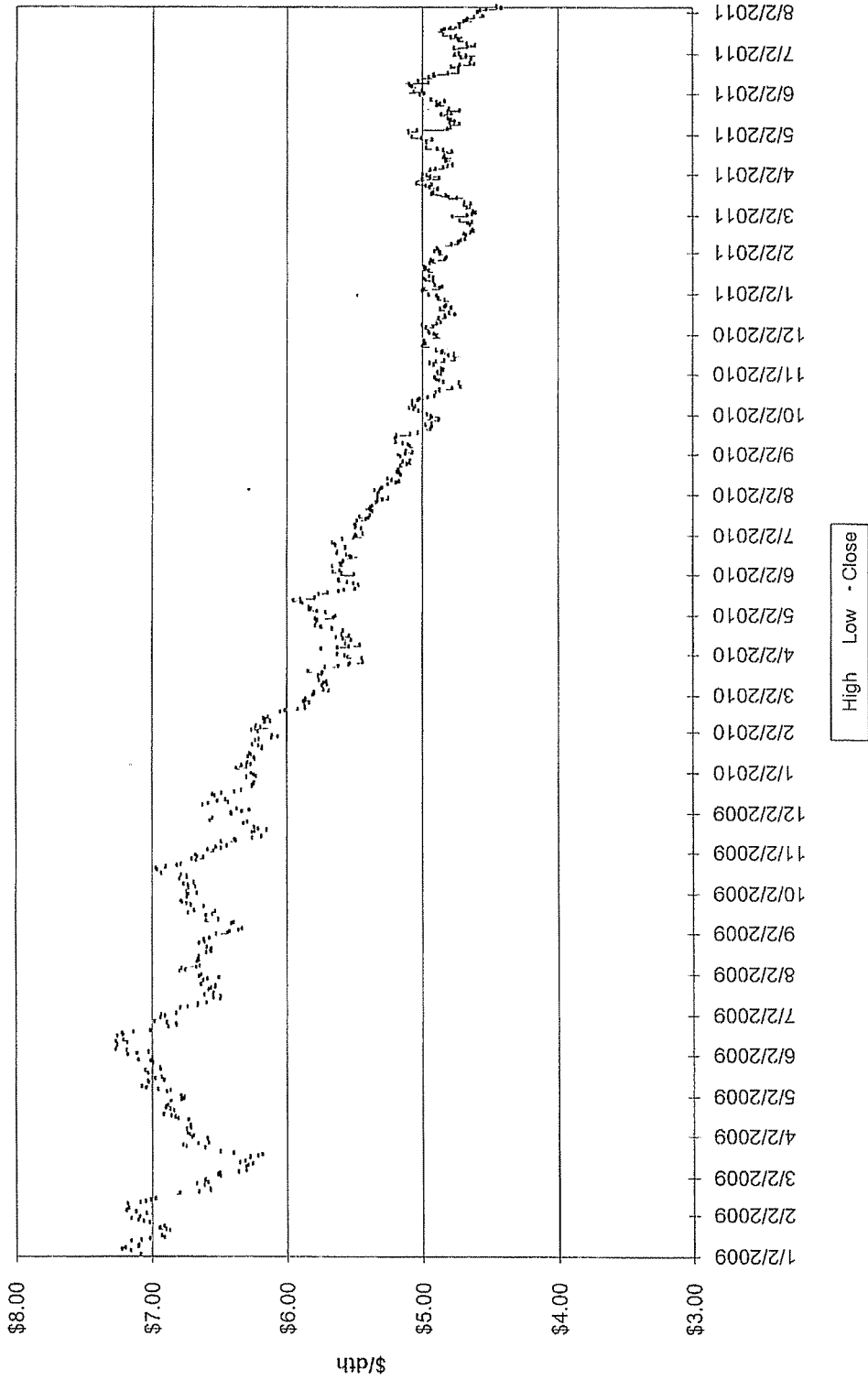
Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (06/07-10/11)	Last Year (2010-2011)		PIRA 26-Jul-11	EIA 12-Jul-11	NYMEX 8-Aug-11		
Sep	\$5.43	\$3.65			\$4.080	\$3.878		
Oct	\$5.13	\$3.84			\$4.150	\$3.897		
Nov	\$5.69	\$3.29			\$4.220	\$4.058		
Dec	\$6.23	\$4.27			\$4.310	\$4.276		
Jan	\$5.84	\$4.22			\$4.610	\$4.365		
Feb	\$5.80	\$4.32			\$4.710	\$4.393		
Mar	\$5.83	\$3.79			\$4.610	\$4.336		
Apr	\$5.77	\$4.24			\$4.390	\$4.334		
May	\$6.15	\$4.38			\$4.280	\$4.394		
June	\$6.31	\$4.33			\$4.190	\$4.385		
July	\$6.61	\$4.36			\$4.170	\$4.471		
Aug	\$5.57	\$4.37			\$4.280	\$4.448		
12 Month Avg	\$5.86	\$4.09			\$4.333	\$4.270		
Summer Average					\$4.220	\$4.258		
Winter Average					\$4.492	\$4.286		



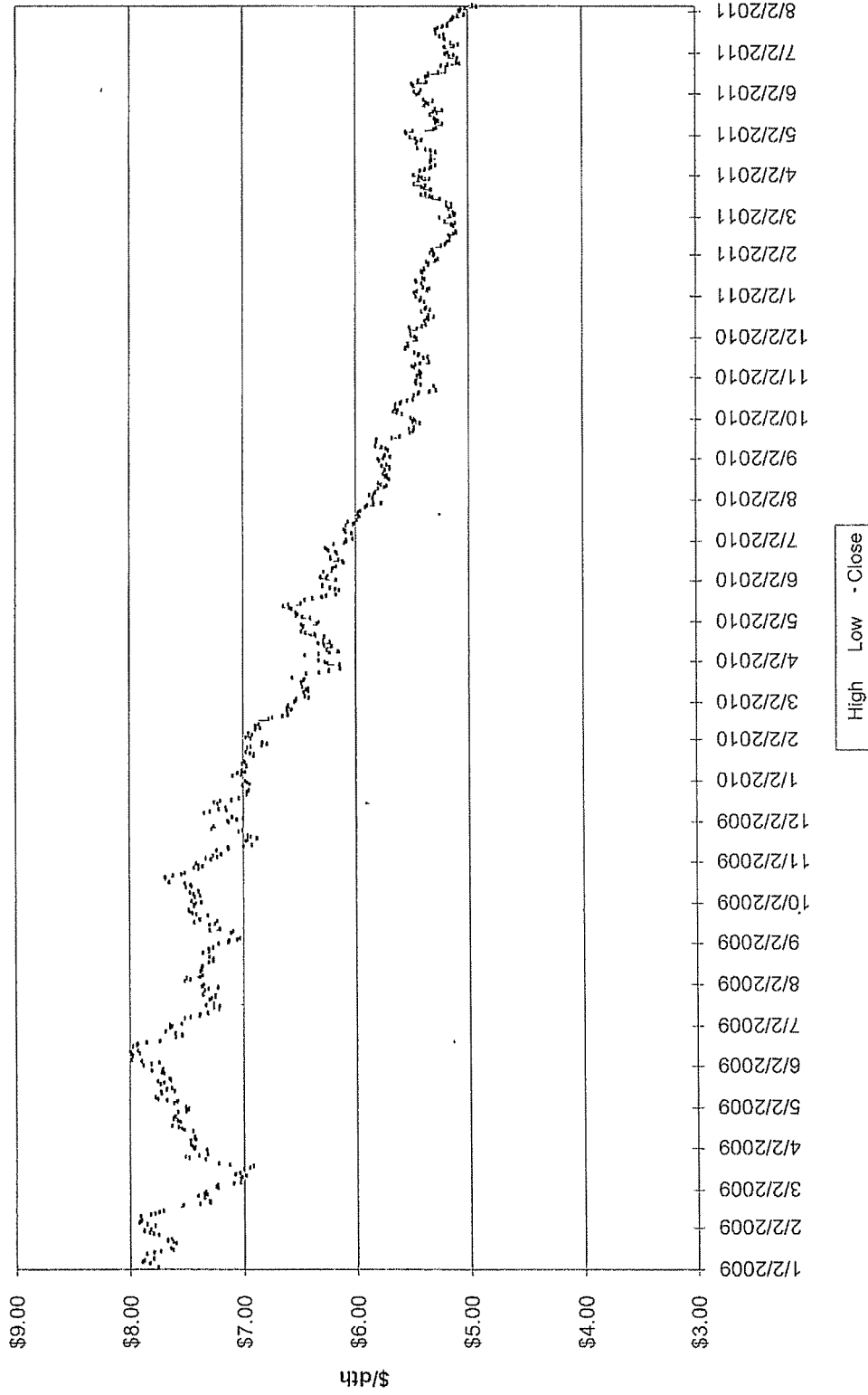
Winter Strip Nov11 - Mar12



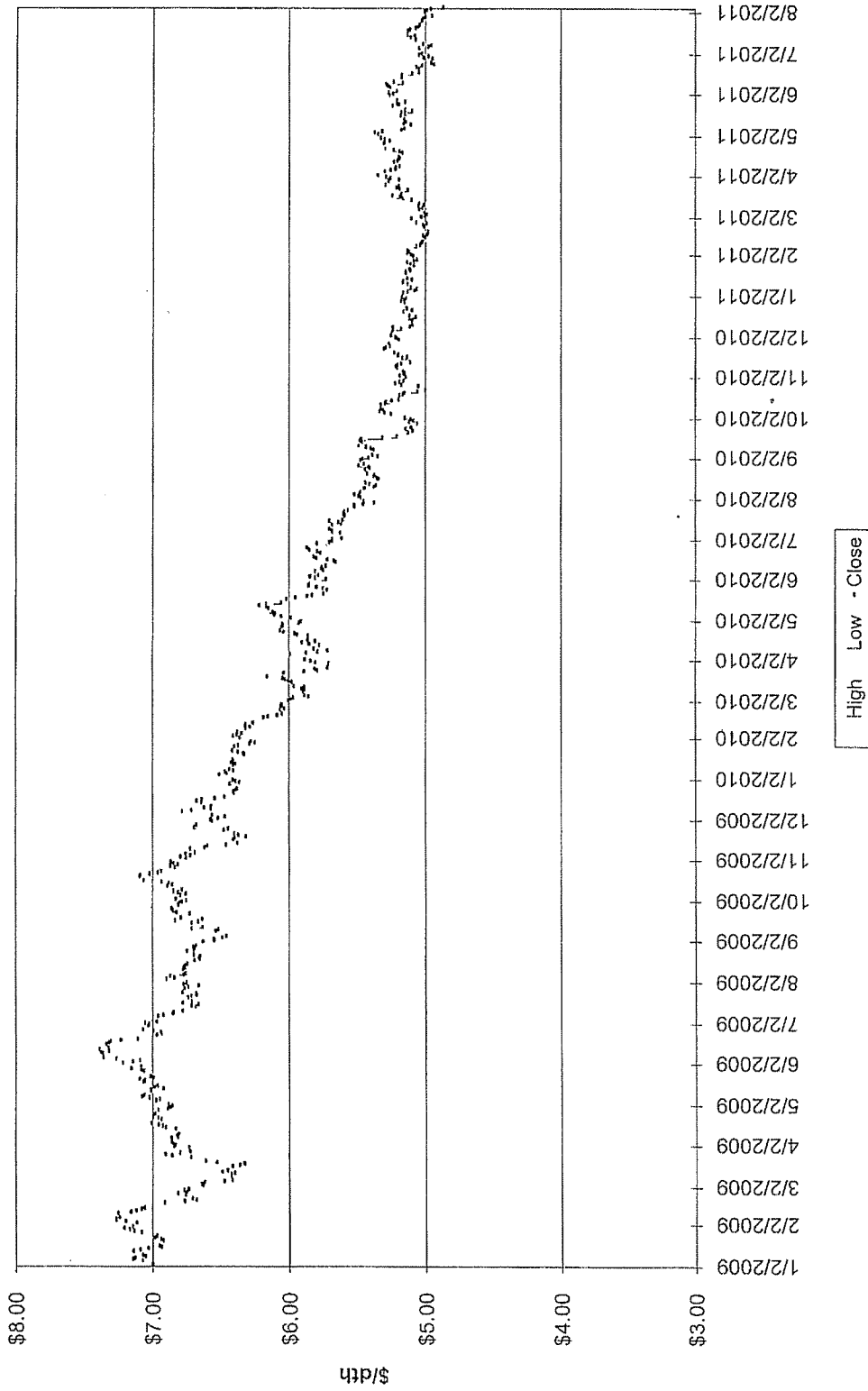
Summer Strip 2012



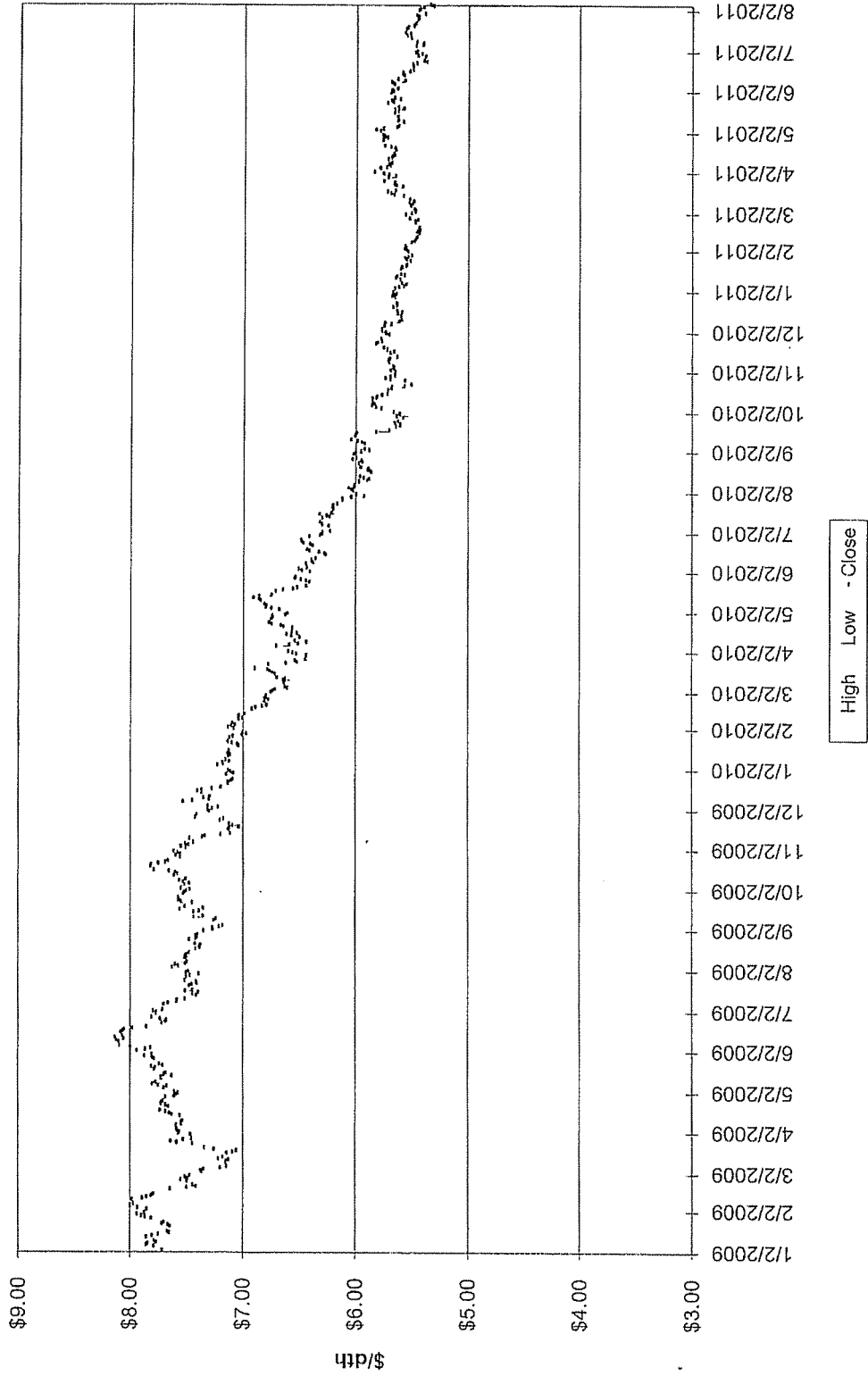
Winter Strip Nov12 - Mar13



Summer Strip 2013



Winter Strip Nov13 - Mar14





Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2011-12

Duke Energy Ohio

Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Gulf South-DE Field Services  
 Col Gulf Mainline  
 Col Gulf Mainline  
 Tex Gas Zone 1

Total  
 System Supply

Duke Energy Kentucky

Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Col Gulf Mainline

Total  
 System Supply

Duke Energy--Total

Previously Hedged

Total



	Dth/Day						%
	November	December	January	February	March	Total	System Supply
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]

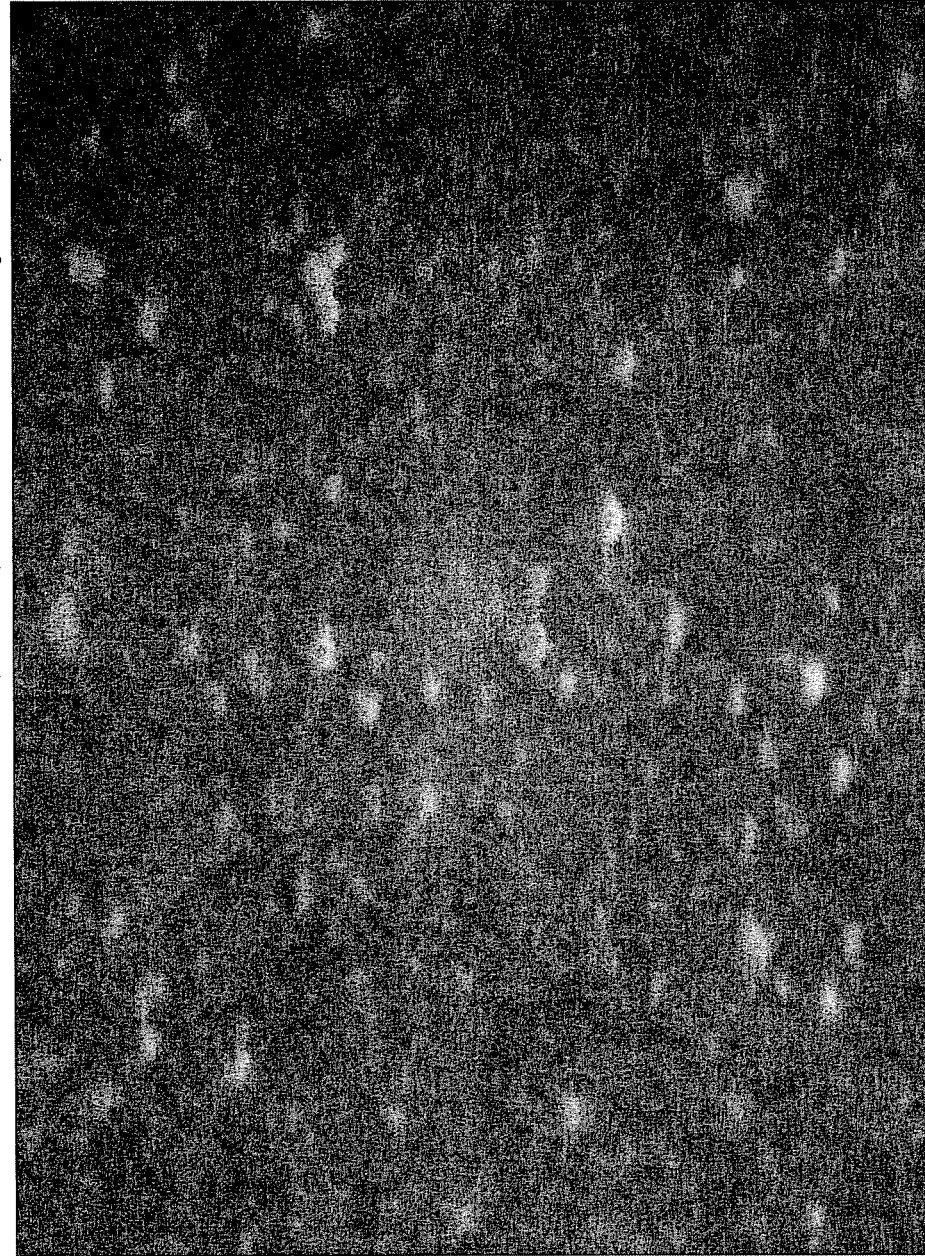
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
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Gas Commercial Operations  
Hedging Program  
Market Indicators Summary  
August 18, 2011

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (August 11--Oct 11)	↔	Long	NOAA predicting above average temperatures for August 2011--October 2011 for portions of the Southern, Midwest, and Northeast CONUS. Below normals on the west coast of CONUS.	12
Mid Term Forecast (30-60 days)	↑↓	Long	September is predicted to be 6.6% warmer than normal based on 10 year normals and October weather is predicted to be 6.5% warmer than normal.	13
Short Term Forecast (6-10 days)	↓	Short	Record high temperatures have moderated over the CONUS. Some Normal and Below Normal temperatures during the early portion of the forecast.	14
Tropical Storm Activity	↔	Short	30% chance that the current system forming over the central Caribbean becoming a tropical cyclone during the next 48 hours. NOAA increases number of expected Atlantic tropical storms from 12 to 18 to 14 to 19 named storms. The long-term seasonal average is 11 named storms.	15-16
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↑	Long	Storage injections for the week ending August 12th were 50 BCF. Storage levels are at 2.833 TCF which is 5.8% lower than last year and 2.5% lower than the 5 year average.	17
<b>Industry Publications</b>				
PIRA Energy Group Winter 2011/12: ██████████ Summer 2012: ██████████	↑	Long	GAS PRICE SCORECARD: 2012 PIRA's price outlook has changed from Bearish to Neutral. New lows are possible if temperatures turn bearish in the early stages of the heating season. Slower US production growth would set the stage for a rebound.	18-19
Gas Daily	↓	Long	Chesapeake Energy values its 1.25 million acres in Utica Shale of eastern Ohio between \$15 to \$20 billion. The Utica Shale will be economically superior to Eagle Ford Shale because of access to rail, road and river transportation, proximity to industry and underused workforce.	20-21
Gas Daily	↔	Long	The electric utility sector remains cautious about committing to gas-fired generation because of the fuel's volatile price history and the ongoing controversy over hydraulic fracturing. For utilities to buy more gas requires producers to get more creative with their contracts, making them longer-term with built-in price protections.	22
Gas Daily	↑	Long	Pure-play gas drilling will continue to decline as producers switch to oil and liquids-rich basins. After years where natural gas accounted for 80% of drilling activity, the number of rigs targeting oil is now larger than the number of gas rigs.	23
<b>Government Agencies</b>				
Energy Information Administration Winter 2011/12: \$4.306 Summer 2012: \$4.309	↓	Long	The projected Henry Hub natural gas spot price averages \$4.235/MMBtu for 2011 and \$4.413/MMBtu for 2012.	24
<b>Technical Analysis</b>				
Winter 2011-12 Strip Chart	↔	Short	Closed at \$4.33	25
Summer 2012 Strip Chart	↔	Short	Closed at \$4.46	26
Winter 2012-13 Strip Chart	↔	Short	Closed at \$4.97	27
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to grow by 1.8% to 67.4 Bcf/d in 2011, resulting from an increase in the industrial and electric power consumption. Projected consumption increases slightly in 2012 to 67.8 Bcf/d.	28
Supply	↔	Long	EIA expects average total production to increase by 5.9% to 65.5 Bcf/d in 2011. Production growth is forecast to continue at a much slower pace in 2012, increasing 0.6 Bcf/d to average 66.1 Bcf/d.	28
Oil Market	↑	Long	Global oil demand growth, led by China, is expected to outpace the growth in supplies. Among the major uncertainties that could push oil prices above the forecast are: additional supply disruptions and higher-than-expected demand growth. Eia expects the U.S. cost of crude oil will rise from \$100 per barrel in 2011 to \$107 per barrel in 2012 as global spare production capacity and inventories continue to decline.	29
<p>Meeting Minutes: 412 Annex Conference Room - 1:00 pm  Attendees: Jeff Kern, Joachim Fischesser, Terry Bates, Mitch Martin, Rick Colvin, Steve Niederbaumer</p> <p>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. Reviewed the KPSC Order that authorized DEK to continue the hedging plan through September 30, 2012. In addition, discussed the results of hedging completed since the last Hedging meeting. DEO--Accepted ██████████ bid of \$█████████ for ██████████ Dth/day for the period April 1, 2012--March 31, 2014 and ██████████ bid of \$█████████ for ██████████ Dth/day for the period December 1, 2011--March 31, 2012. DEK--Accepted ██████████ bid of \$█████████ for ██████████ Dth/day for the period April 1, 2012--March 31, 2014 and ██████████ bid of \$█████████ for ██████████ Dth/day for the period December 1, 2011--March 31, 2012. 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.</p>				

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2010 - October 2011  
As of 08/12/11

Nov-10 Dec-10 Jan-11 Feb-11 Mar-11 Apr-11 May-11 Jun-11 Jul-11 Aug-11 Sep-11 Oct-11



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
Collar
Fixed Price
Fixed Price
Fixed Price
Collar
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

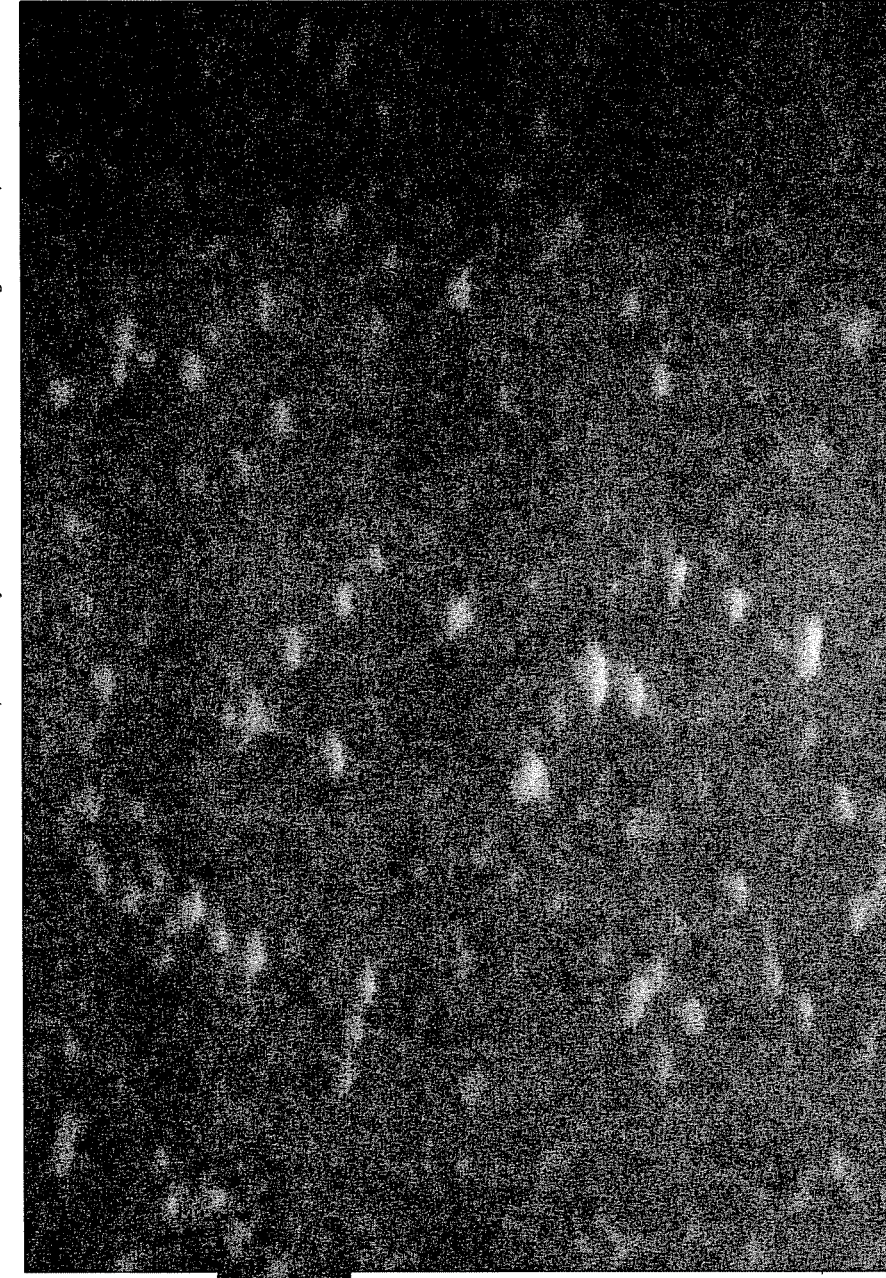
Amt Hedged with Storage @ City Gate

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 2011 - October 2012  
As of 08/19/11

Nov-11 Dec-11 Jan-12 Feb-12 Mar-12 Apr-12 May-12 Jun-12 Jul-12 Aug-12 Sep-12 Oct-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  
Collar  
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

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 08/12/11

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  
 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 %

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Duke Energy Kentucky  
Hedging Program - Current Position  
November 2013 - October 2014  
As of 08/12/11

	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												
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.

8/12/2011

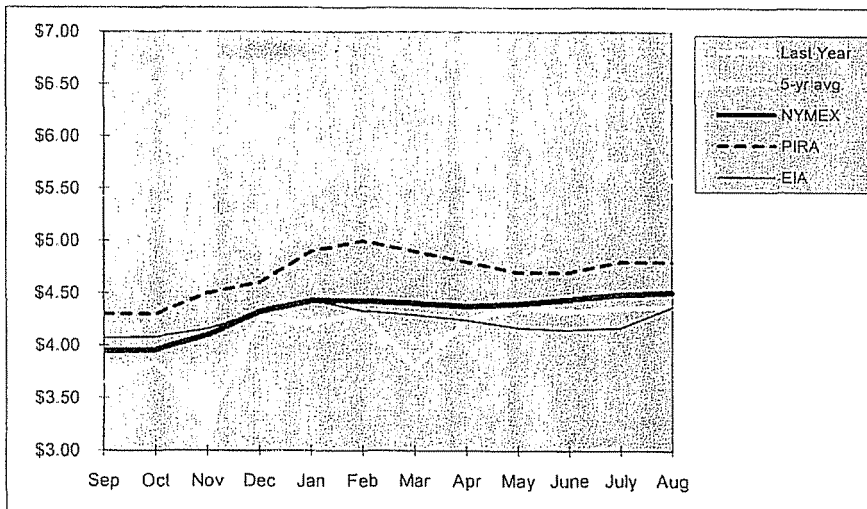
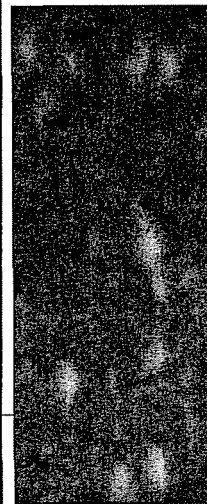
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/11)	
		Total		Required dth/day	Allowed dth/day
		Dth/day	Dth/mo		
Apr-11					
May-11					
Jun-11					
Jul-11					
Aug-11					
Sep-11					
Oct-11					
Summer 2011					
Target Levels By March 31, 2011					
Nov-11					
Dec-11					
Jan-12					
Feb-12					
Mar-12					
Winter 11/12					
Target Levels By October 31, 2011					
Apr-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2011					
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Target Levels By October 31, 2011					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2011					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2011					

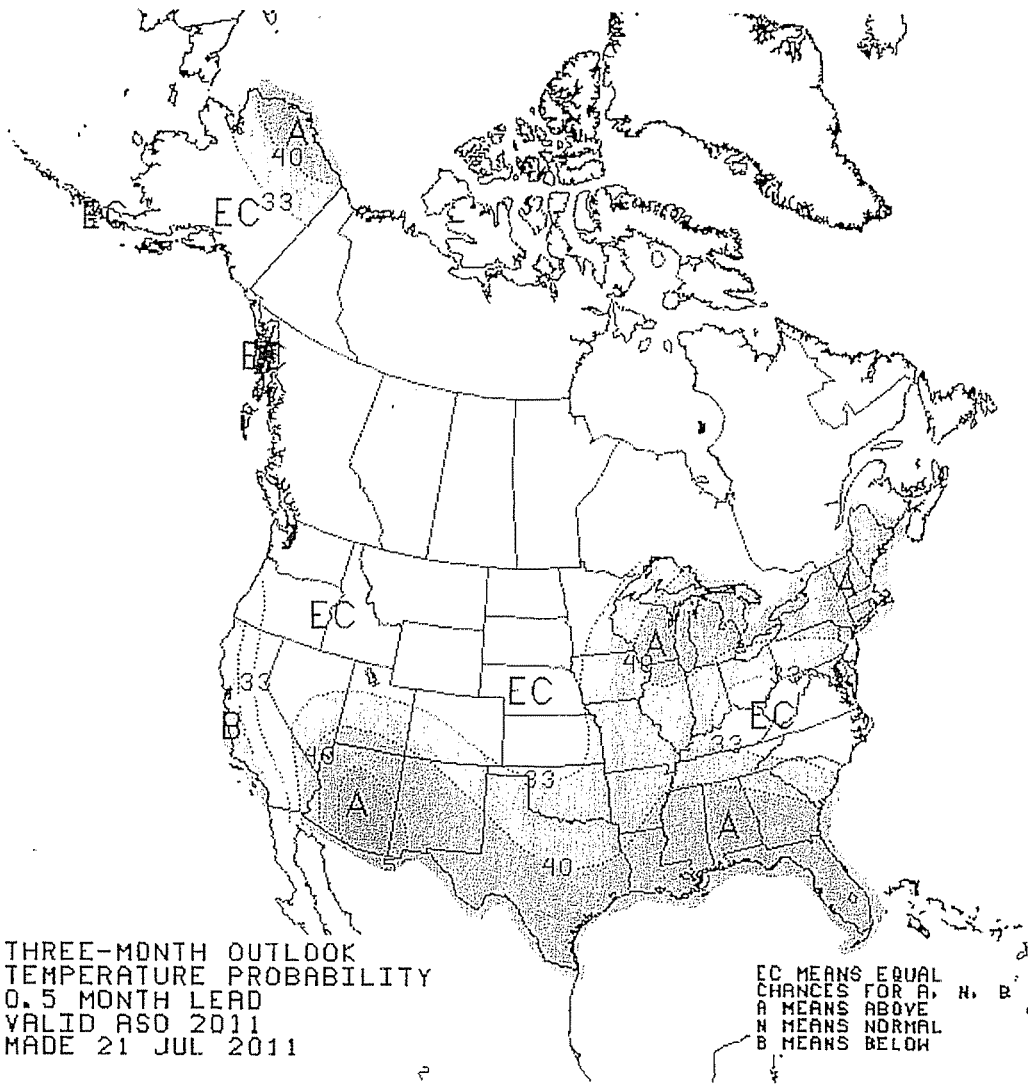
### COMPARISON OF HISTORIC SPOT & PROJECTED PRICES TO CURRENT FUTURES PRICES

Historic Prices: NYMEX Closing Price						
	5-yr. avg. (06/07-10/11)	Last Year (2010-2011)		PIRA 26-Jul-11	EIA 9-Aug-11	NYMEX 17-Aug-11
Sep	\$5.43	\$3.65			\$4.070	\$3.949
Oct	\$5.13	\$3.84			\$4.080	\$3.956
Nov	\$5.69	\$3.29			\$4.160	\$4.099
Dec	\$6.23	\$4.27			\$4.320	\$4.323
Jan	\$5.84	\$4.22			\$4.430	\$4.429
Feb	\$5.80	\$4.32			\$4.330	\$4.427
Mar	\$5.83	\$3.79			\$4.290	\$4.402
Apr	\$5.77	\$4.24			\$4.240	\$4.376
May	\$6.15	\$4.38			\$4.170	\$4.400
June	\$6.31	\$4.33			\$4.150	\$4.441
July	\$6.61	\$4.36			\$4.170	\$4.485
Aug	\$5.57	\$4.37			\$4.370	\$4.509
12 Month Avg	\$5.86	\$4.09			\$4.232	\$4.316
Summer Average					\$4.179	\$4.302
Winter Average					\$4.306	\$4.336

Hedged Prices  
Ohio Kentucky





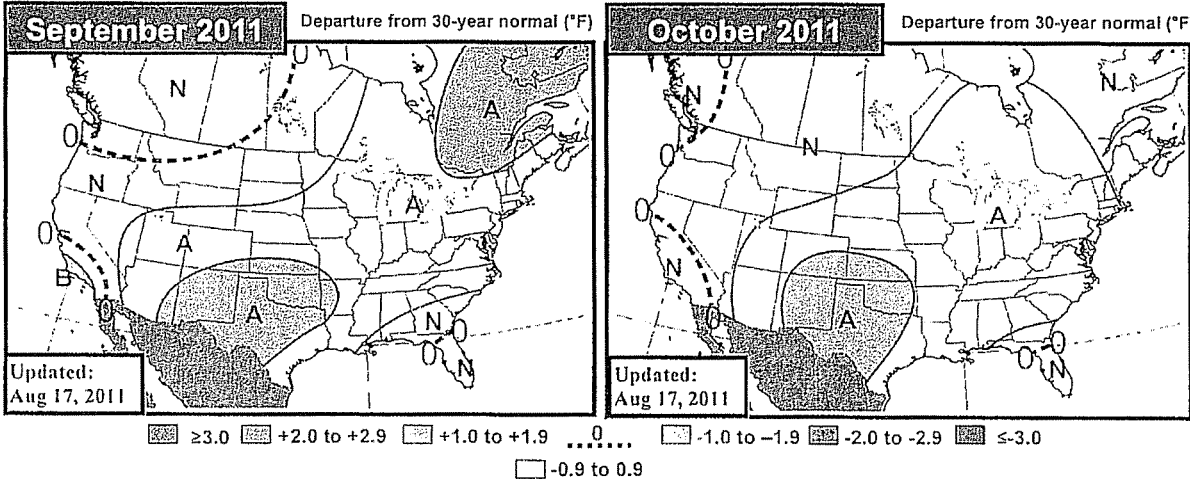


# EarthSat's 30-60 Day Outlook



Wednesday, August 17, 2011

Meteorologists: SS/BH/TH/RG



**Previous** Some cool changes in Rockies and Plains, but still warm-dominated overall

Some minor cool adjustments were made to the forecast from the Southwest and Interior West into the Rockies and Plains, but it's still a warm-dominated outlook overall. The heat was dialed back somewhat across the Delta, and the South in general will be an area of lower confidence as the peak of the tropical season poses plenty of risks. The forecast falls almost directly in line with the latest ECMWF model monthly forecast, issued on Monday, which shows a nearly identical forecast to ours but with stronger warm anomalies from the southern Rockies into the central and southern Plains and the southwestern Midwest. The CFSv2 model shows the heat across Texas and the warm anomalies in the Midwest, South, and East, but shows cooler anomalies across the northern Plains and warmer anomalies in the Northwest. Meanwhile, current models show a Phase 1 MJO persisting, and if that lasts into September there may be cool risks in the Midwest and Plains and warm risks in the West.

Sep PWCCD** Forecasts	*10Y Normal updated to '01-10
Sep 2011 Fcst: <b>185.0</b>	10Y Normal* 173.5
	30Y Normal 165.7
	Sep-2010 196.8
Change: -5	

\*\*National Pop-Weighted CDDs

**Previous** Slight warm changes in the Rockies and Plains. Still warmest in Texas

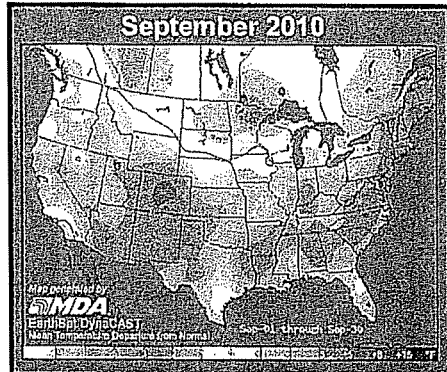
Some minor warm adjustments were made to the forecast across the northern Plains and upper Midwest, with the forecast still showing no below on the map. Again, with October being a shoulder month, demands should be low. The continued cold PDO signal favors the widespread warmth across the mid-continent and East, though the positive AMO actually favors more West-based warmth. The current suite of ENSO analogs, the closest of which include 2000, 1996, 1971, and 1974 support the outlook for the most part, though they're warmer than our forecast with anomalies of +2F to +4F across much of the Midwest. Meanwhile, the ECMWF monthly forecast shows the heat more based across the Southwest, southern Rockies, and southern Plains, with near normal temperatures in the East. A late-season tropical system could be a fly in the ointment here, potentially disrupting the pattern. Risks to the cooler side exist in the Midwest and East if any persistent blocking is established.

Oct GWHDD** Forecasts	*10Y Normal updated to '01-10
Oct 2011 Fcst: <b>265.0</b>	10Y Normal* 283.4
	30Y Normal 289.1
	Oct-2010 232.6
Change: -2	

Oct PWCCD Forecast: 69.0      \*\*National Gas-Weighted HDDs

**Aug so far**

The 1-15 Day forecast now extends to the end of the month, so we have a pretty good idea as to how August will fare. Overall, both the final 60 Day and final 30 Day outlook pinned down the heat across the southern tier into the Mid-Atlantic, with the final 30 Day outlook doing a better job in showing the stronger magnitude heat continuing in Texas. However, the final 30 Day Outlook appears to have overestimated the heat across the Plains and Midwest, with those areas coming in closer to normal for the period. Neither forecast was great in showing the expected resurgence of heat across the West in the latter part of the month, though both appear to have been correct in showing cool conditions continuing in coastal Southern California. If the current 1-15 Day outlook holds true, August looks to total 337 population weighted CDDs, good for 9th hottest since 1950.



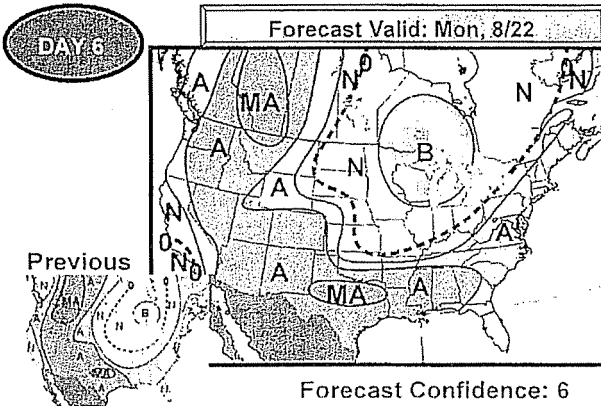
# 6-10 Day Forecast—Detailed

Wednesday, August 17, 2011

Meteorologist: AC/BH

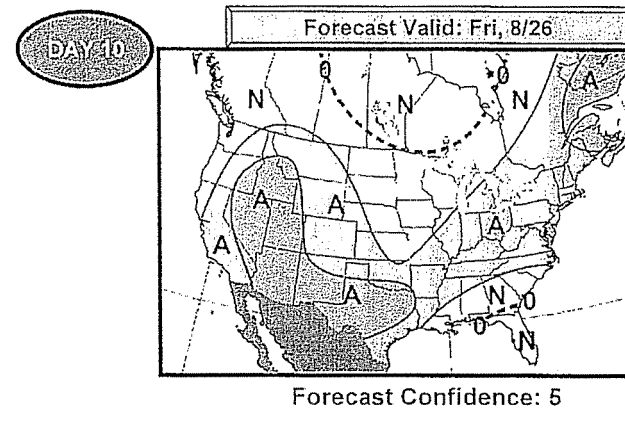
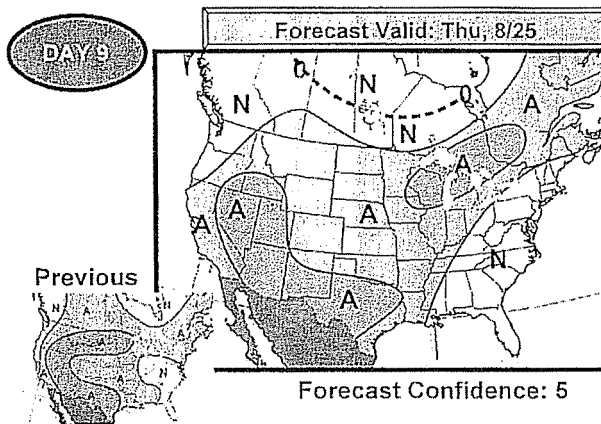
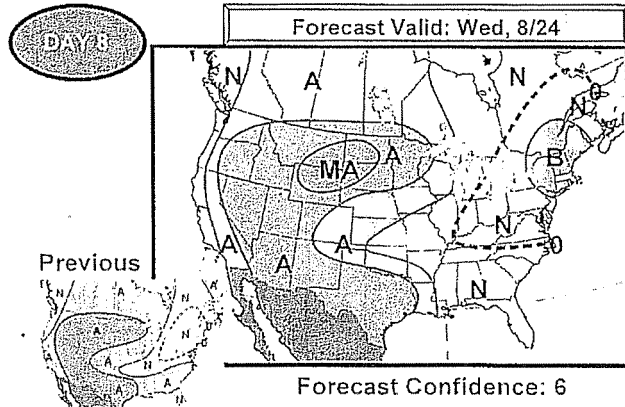
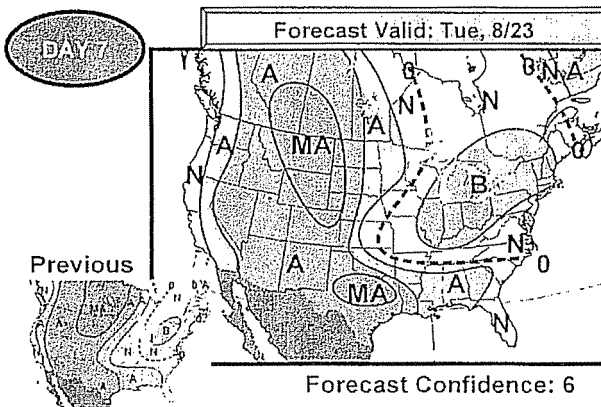


## Forecast Temperature Deviations

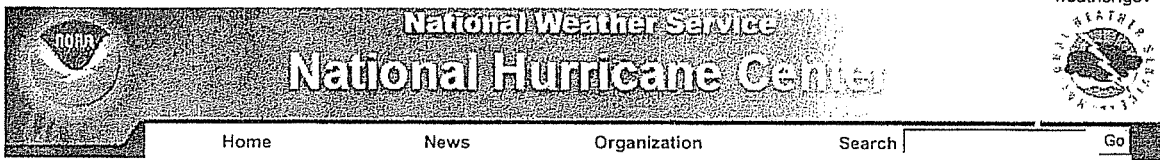


\*Remaining Quite Warm Across Much Of West\*  
 \*More Expansive Belows For Midwest, Northeast\*

The cool air mass diving into the Midwest and Northeast during the first half of the period could contain more widespread below normal coverage. Some of these below normal temperatures might be a little stronger as well, but should stay away from much below normal readings. The models still struggle to agree on the pattern during the latter part of the period though. The northern tier according to the European models should have abundant warmth spanning across the region. However, the American models are cooler across this area, which would lead to a cooler outlook for the Midwest late. The West may have a little more much above normal coverage at times, especially over the Southwest mid to late period.



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



Local forecast by  
"City, St" or "ZIP"

- Alternate versions  
Text-only | Mobile
- Get Storm Info  
Satellite | Radar  
Aircraft Recon  
Advisory Archive  
Experimental  
Mobile Products  
E-mail Updates  
Audio/Podcasts  
GIS Data | RSS
- Help with Advisories
- Marine Forecasts  
Atlantic and E Pacific  
Analysis Tools  
Gridded Marine  
Help with Marine
- Hurricane Awareness  
Be Prepared | Learn  
Storm Surge  
Frequent Questions  
Research  
Hurricane Hunters  
Saffir-Simpson Scale  
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## Atlantic Tropical Weather Outlook

000  
ABNT20 KNHC 171136  
TWOAT

TROPICAL WEATHER OUTLOOK  
NWS NATIONAL HURRICANE CENTER MIAMI FL  
800 AM EDT WED AUG 17 2011

FOR THE NORTH ATLANTIC...CARIBBEAN SEA AND THE GULF OF MEXICO...

CLOUDINESS AND SHOWERS ASSOCIATED WITH A TROPICAL WAVE OVER THE CENTRAL CARIBBEAN HAVE CHANGED LITTLE IN ORGANIZATION DURING PAST SEVERAL HOURS. THERE ARE STILL NO SIGNS OF A SURFACE CIRCULATION AND PRESSURES HAVE NOT FALLEN OVER THIS REGION. ENVIRONMENTAL CONDITIONS REMAIN CONDUCIVE FOR SOME GRADUAL DEVELOPMENT OF THIS WAVE DURING THE NEXT COUPLE OF DAYS. THIS SYSTEM HAS A MEDIUM CHANCE...30 PERCENT...OF BECOMING A TROPICAL CYCLONE DURING THE NEXT 48 HOURS AS IT MOVES WESTWARD AT 15 TO 20 MPH.

ELSEWHERE...TROPICAL CYCLONE FORMATION IS NOT EXPECTED DURING THE NEXT 48 HOURS.

\$\$  
FORECASTER KIMBERLAIN

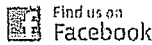
### Quick Navigation Links:

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National Centers for Environmental Prediction  
National Hurricane Center  
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Miami, Florida 33165-2149 USA  
nhcwebmaster@noaa.gov  
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# Gas Daily

Friday, August 5, 2011

## NOAA increases number of expected Atlantic tropical storms this season

Government forecasters said Thursday they expect 14 to 19 named storms to develop during the 2011 Atlantic hurricane season, an increase from the 12 to 18 predicted in May.

The National Oceanic and Atmospheric Administration also said it now expects seven to 10 hurricanes to form this year, up from the six to 10 predicted in May.

"The atmosphere and Atlantic Ocean are primed for high hurricane activity during August through October," Gerry Bell, lead seasonal hurricane forecaster at NOAA's Climate Prediction Center, said in a statement. "Storms through October will form more frequently and become more intense than we've seen so far this season."

The agency cited several climate factors, including the tropical multi-decadal signal that since 1995 has brought favorable ocean and atmospheric conditions, the third-warmest Atlantic Ocean temperatures on record and the possible redevelopment of La Niña.

In addition, NOAA said reduced vertical wind shear and lower air pressure across the tropical Atlantic also favor a busier-than-average hurricane season.

NOAA said that of the seven to 10 hurricanes it expects to form this season, three to five are likely to become major storms of Category 3 strength or above.

The long-term seasonal average is 11 named storms, six hurricanes and two major hurricanes. The Atlantic Basin already has produced five tropical storms this season: Arlene, Bret, Cindy, Don and Emily.

The Atlantic hurricane season runs from June 1 through November 30.

Weekly Natural Gas Storage Report

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

[Glossary](#)

Weekly Natural Gas Storage Report

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Released: August 18, 2011 at 10:30 a.m. (eastern time) for the Week Ending August 12, 2011.  
Next Release: August 25, 2011

Working Gas in Underground Storage, Lower 48

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

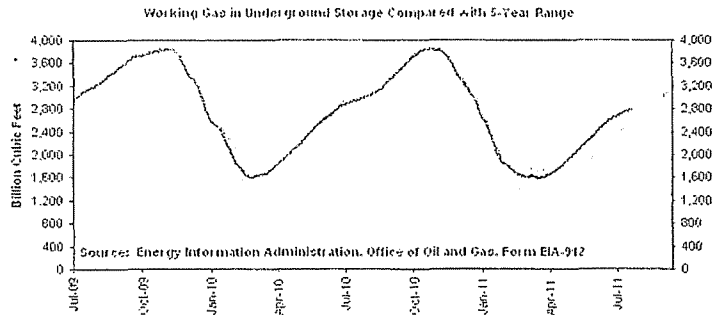
Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	08/12/11	08/05/11	Change	Year Ago (08/12/10)		5-Year (2006-2010) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,466	1,418	48	1,570	-6.6	1,586	-7.6
West	414	404	10	482	-14.1	417	-0.7
Producing	953	961	8	956	-0.3	903	5.5
Total	2,833	2,783	50	3,008	-5.8	2,906	-2.5

Notes and Definitions

Summary

Working gas in storage was 2,833 Bcf as of Friday, August 12, 2011, according to EIA estimates. This represents a net increase of 50 Bcf from the previous week. Stocks were 175 Bcf less than last year at this time and 73 Bcf below the 5-year average of 2,906 Bcf. In the East Region, stocks were 120 Bcf below the 5-year average following net injections of 48 Bcf. Stocks in the Producing Region were 50 Bcf above the 5-year average of 903 Bcf after a net withdrawal of 8 Bcf. Stocks in the West Region were 3 Bcf below the 5-year average after a net addition of 10 Bcf. At 2,833 Bcf, total working gas is within the 5-year historical range.

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



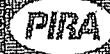
Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2006 through 2010.  
Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

PIRA  
 North American Gas Price Overview  
 Per MMBTU  
 July 26, 2011 Release

Jan-09		Jan-10		Jan-11		Jan-12	
Feb-09		Feb-10		Feb-11		Feb-12	
Mar-09		Mar-10		Mar-11		Mar-12	
Apr-09		Apr-10		Apr-11		Apr-12	
May-09		May-10		May-11		May-12	
Jun-09		Jun-10		Jun-11		Jun-12	
Jul-09		Jul-10		Jul-11		Jul-12	
Aug-09		Aug-10		Aug-11		Aug-12	
Sep-09		Sep-10		Sep-11		Sep-12	
Oct-09		Oct-10		Oct-11		Oct-12	
Nov-09		Nov-10		Nov-11		Nov-12	
Dec-09		Dec-10		Dec-11		Dec-12	
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009- 2010	\$	Winter 2010- 2011	\$	Winter 2011- 2012	\$		

18

**North American Gas Forecast Monthly**



July 26, 2011

NATURAL GAS

**GAS PRICE SCORECARD: 2012**

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
U.S. Production		Slower production looks in store unless Haynesville growth exceeds our expectations. But slower depletion of non-shale wells, more associated gas and narrower offshore GOM declines should mitigate the overall slowdown.
LNG Imports		LNG has moved almost completely out of the U.S. supply picture and no change is in sight.
Canadian Trade		Reduced imports from Canada are expected to continue, but the YY losses should become much smaller unless Canada had another unusually cold winter.
Mexican Trade		U.S. exports to Mexico will be higher given the inadequacy of gas-oriented drilling and a rising gas burn for EG.
Storage Levels		Barring an unusually cold 2011-12 heating season, storage looks poised to reach an all-time high for end-March next year, but slower production growth should help minimize the risk of injection season storage congestion.
U.S. Demand Issues	Outlook	Commentary
Economy		Economic growth and manufacturing IP are projected to expand at a similar pace to the current year.
Electric Generation (EG)		Stronger gas-fired EG looks likely given new, more stringent environmental standards that will limit coal-fired EG.
Industrial Sector		Rising gas intensity appears to be launching a faster pace of gas demand growth, but downside risks are also apparent.
Res/Com Heating		Barring another unusually cold winter, gas heating demand will suffer large YY losses through most of the next heating season with negative spillover effects into other sectors.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation		The combined NYMEX/ICE futures and option position held by speculators is still net short. Their long position, though, is still near a multi-year high despite a sizable pullback since early June. Moreover, those bullish bets have bypassed the NYMEX 2012 contracts, which continue to languish.
Medium-Term NYMEX Prices		The revised upside potential for 2012 gas prices rests more on near-term developments. Thus, the impact on the longer-dated contracts should be relatively muted, especially considering this year's price rally in the back-end of the NYMEX curve.
Overall Assessment	Outlook	Commentary
Price Outlook		At ~\$4.75/MMBtu, the NYMEX 2012 strip is near the low end of the \$4.68-\$5.23 range in place since October 2010. New lows are certainly possible, especially if temperatures turn bearish in the early stages of the heating season. Further affirmation of slower U.S. production growth, however, would set the stage for a rebound.



# Gas Daily

Monday, August 1, 2011

## Chesapeake values Utica prospects at \$15-\$20B

Investors piled into Chesapeake Energy shares Friday on word from the company that it valued its 1.25 million acres in the Utica Shale of eastern Ohio between \$15 billion and \$20 billion, with comparisons to the Eagle Ford play.

While Chesapeake briefly tipped off the markets in May on the size and location of its Utica holdings — details that were the worst kept secret in the industry, according to one analyst — on an earnings conference call Friday, CEO Aubrey McClendon opened the door a little wider. He said results from nine completed wells indicate a major oil and liquids play running from just south of Youngstown west to roughly Interstate 71, connecting Cleveland and Columbus.

Chesapeake stock climbed 3% on Friday to close at \$34.35/share with double the normal number of shares trading.

"The Utica will be economically superior to the Eagle Ford," McClendon told analysts on the Friday morning call, because of Ohio's ready access to rail, road, and river transportation, proximity to industry, and underused workforce.

"There's plenty of water" for hydraulic fracturing, McClendon said, "and the topography is less challenging [flatter] than Pennsylvania or West Virginia. "This is pretty much the most ideal place" for a new shale oil play, he said.

"Potentially the Big Kahuna," Tudor, Pickering, Holt & Co. analysts David Heikkinen and Brad Pattarozzi said, estimating Chesapeake will be spending up to \$3 billion a year in the play when it ramps up to 40 rigs by 2014, from its current fleet of five. "For perspective, Chesapeake is spending \$6 billion in total capex in 2011 and 2012 and \$15 - \$20 billion is bigger than the BHP acquisition of Petrohawk."

But on Friday's call and in Thursday's earnings press release, no production numbers from Chesapeake's Utica wells was provided. McClendon said the company wants to keep those details confidential while it still signs leases in the play, but \$20 billion estimates with little supporting data made analysts on the conference call uneasy.

"Bold statement on Utica, but stops short of disclosing well data," Jefferies & Company analyst Biju Perincheril said before the call. "The company put some big numbers around its Utica position, but we will have to wait another quarter for concrete well results."

"'Trust me' on Utica valuation and financing needs breeds investor skepticism and keeps the stock at a discount," TPH said. "Petrohawk was the same story. We worry less than most as Chesapeake has been really effective at getting OPM (other people's money)."

"To be fair," TPH said, "Chesapeake has delivered on each of its shale transactions." Chesapeake won't change the basic strategy it used in the Marcellus, Haynesville, Eagle Ford and Anadarko Basins: buy leases early and often, drill to outline the play, bring in the deep-pocketed partner in a joint venture to recoup the cost of leases and pay for more drilling.

While McClendon wouldn't be pinned down Friday to the joint venture route, Chesapeake has collected billions in fees and drilling carries from JV partners as diverse as BP to Norway's Statoil to the China National Offshore Oil Corporation by selling stakes in giant shale plays.

Chesapeake said Thursday it is actively marketing a partnership in the Utica and TPH said a data room has opened.

In its earnings announcement after Thursday's market close, Chesapeake said its profits doubled to \$467 million when compared to the previous quarter because of increased liquids production, alongside a 3% growth in natural gas production to 2.6 Bcf/d.

Including hedges, Chesapeake said its natural gas sold for an average of \$5.19/Mcf, an 8% drop from a year ago, while its average liquids price of \$65.23/barrel was a 6% gain. — *Bill Holland*

# Gas Daily

Thursday, August 4, 2011

## Many utilities still leery of gas, Xcel VP says

The electric utility sector remains cautious about committing to gas-fired generation because of the fuel's volatile price history and the ongoing controversy over hydraulic fracturing, Xcel Energy's top fuel buyer told a gas industry meeting in Denver.

"We have long memories in the utility business," Xcel Vice President for Fuels Susan Arigoni told the Colorado Oil & Gas Association's annual meeting Tuesday. "We are not paid for taking risks with fuel."

While Minneapolis-based Xcel's future plans call for gas to account for a greater share of the company's overall fuel purchases, the utility will focus on displacing coal-fired capacity with renewable energy sources, Arigoni said.

"Gas must compete with renewables," she said. "The focus has been on coal." For utilities to buy more gas requires producers to get more creative with their contracts, making them longer-term with built-in price protections, Arigoni said. "What do we need? Reliability. We need the gas to show up."

In addition, utilities need new thinking on long-term contracts for gas. "We realize that \$4/Mcf gas cannot be sustained," she said, but utilities want protection against gas' historical price spikes to \$10/Mcf and higher.

A change in Colorado law allows for utilities to enter into long-term contracts for gas, Arigoni said, adding that such laws eliminate the ability of state regulators to second-guess utility fuel-purchasing decisions when conditions change.

She added that concerns about the environmental impact of fracking are adding an element of regulatory risk for utility buyers. "Questions are getting asked and they are coming from the headlines" in *The New York Times* and because of the movie "Gasland," Arigoni said, telling producers: "We're relying on you to solve the problem."

Arigoni also cited concerns about the credit quality of gas producers and sellers. For a utility to enter into a long-term contract with a gas supplier, it has to be convinced the seller will be around to deliver gas through the life of the deal. As a result, Arigoni said she is open to a variety of ways to determine prices — including the use of indexes or inflation escalators.

Arigoni said gas sellers should provide electric utilities with "opportunities to change our portfolio from the short-term [spot gas buys] to the long term" to help provide stability.

Still, she cautioned gas producers that it will be "very difficult to convince the electric industry" that shale gas has really changed the rules of the game. "We grew up on coal."— *Bill Holland*

# Gas Daily

Thursday, August 4, 2011

## Analyst: Gas-to-oil drilling shift to last years

After years of dominating the US drilling scene, pure-play gas drilling will continue to decline as producers switch to oil and liquids-rich basins, a top energy investment analyst said Wednesday.

"It's a whole new ball game," Tudor Pickering Holt cofounder Dan Pickering told an audience of energy executives at the Colorado Oil & Gas Association's annual meeting in Denver. "After years where natural gas accounted for 80% of drilling activity, the number of rigs targeting oil is now larger than the number of gas rigs."

He said he expects that trend to continue for the next "two, three, four or more years."

Despite the shift, gas supplies will continue to meet demand because of all the associated gas entering the market from liquids-rich wells, Pickering explained. As a result, prices are likely to trade in a band between \$4/Mcf and \$5/Mcf until 2013, when they rise to around \$6/Mcf.

"We're going to wallow around in the trough for a while," Pickering said. The US is in the seventh year of what Pickering thinks is a 30-year trend of extraction from unconventional resource plays and, at around \$100/b, "the shift to oil is natural."

He cited estimates that Barnett Shale gas producers are seeing only 14% rates of return at current gas prices, while Bakken Shale oil producers are seeing internal rates of return of 48%. "Its simple, oil wells make more money."

He estimated that 30% of US gas drilling is profitable at prices below \$5/Mcf, with 60% profitable at prices between \$5/Mcf and \$6.60/Mcf. "Supply always reacts to price. We're going to see less gas in coming years," Pickering said.

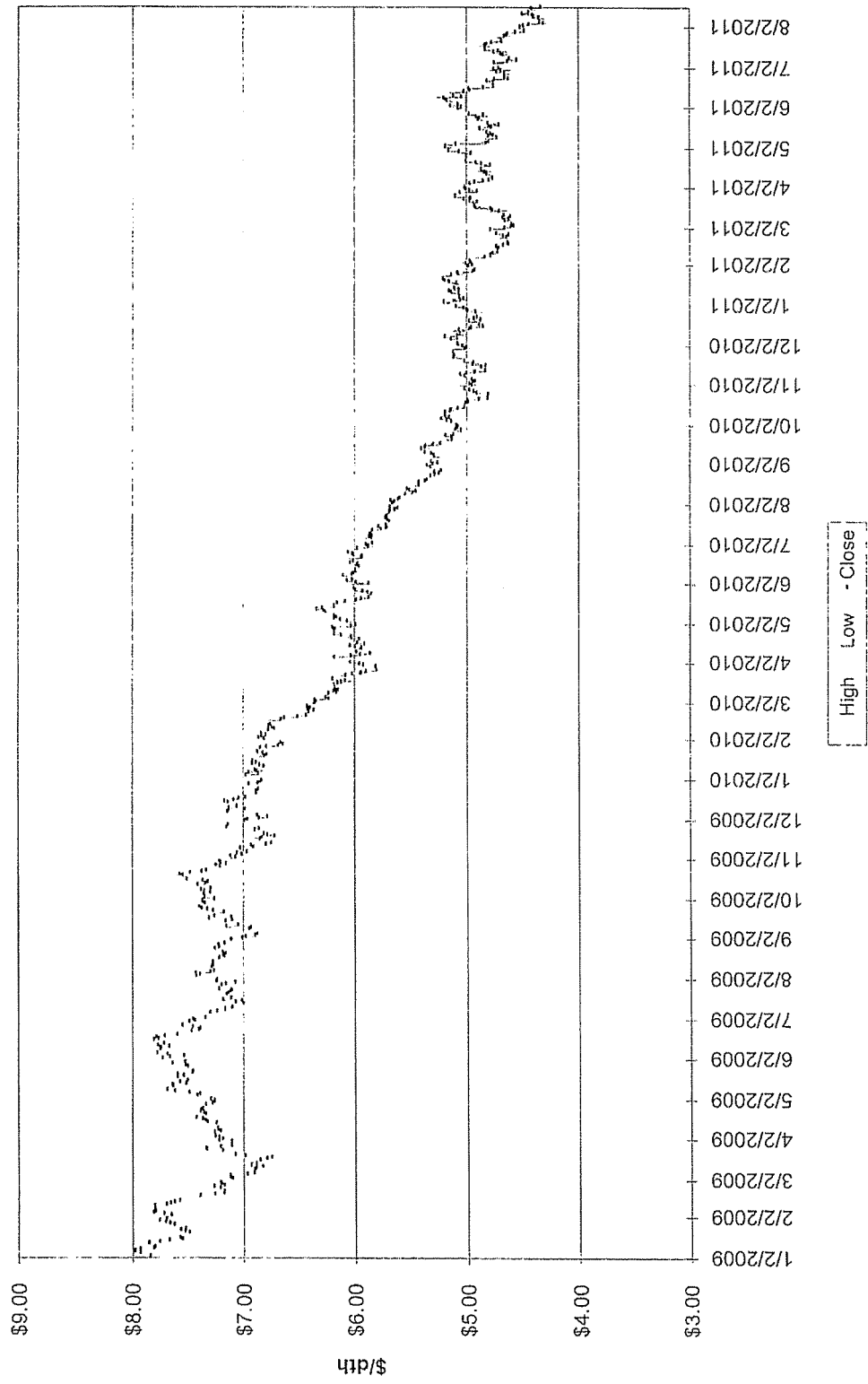
The analyst said he was comfortable with a forecast that US producers would boost oil production by 2 million barrels/d by 2020, a 25% increase. Chesapeake Energy CEO Aubrey McClendon's prediction that drillers could boost oil output by 4 million barrels/d is too optimistic, Pickering said, though he wouldn't discount it entirely.

Several years ago "I would have said the same thing about unconventional gas, and I would have been wrong," he told the audience. With shale gas, producers "did what they said they were going to do. They did twice as much, twice as fast." — Bill Holland

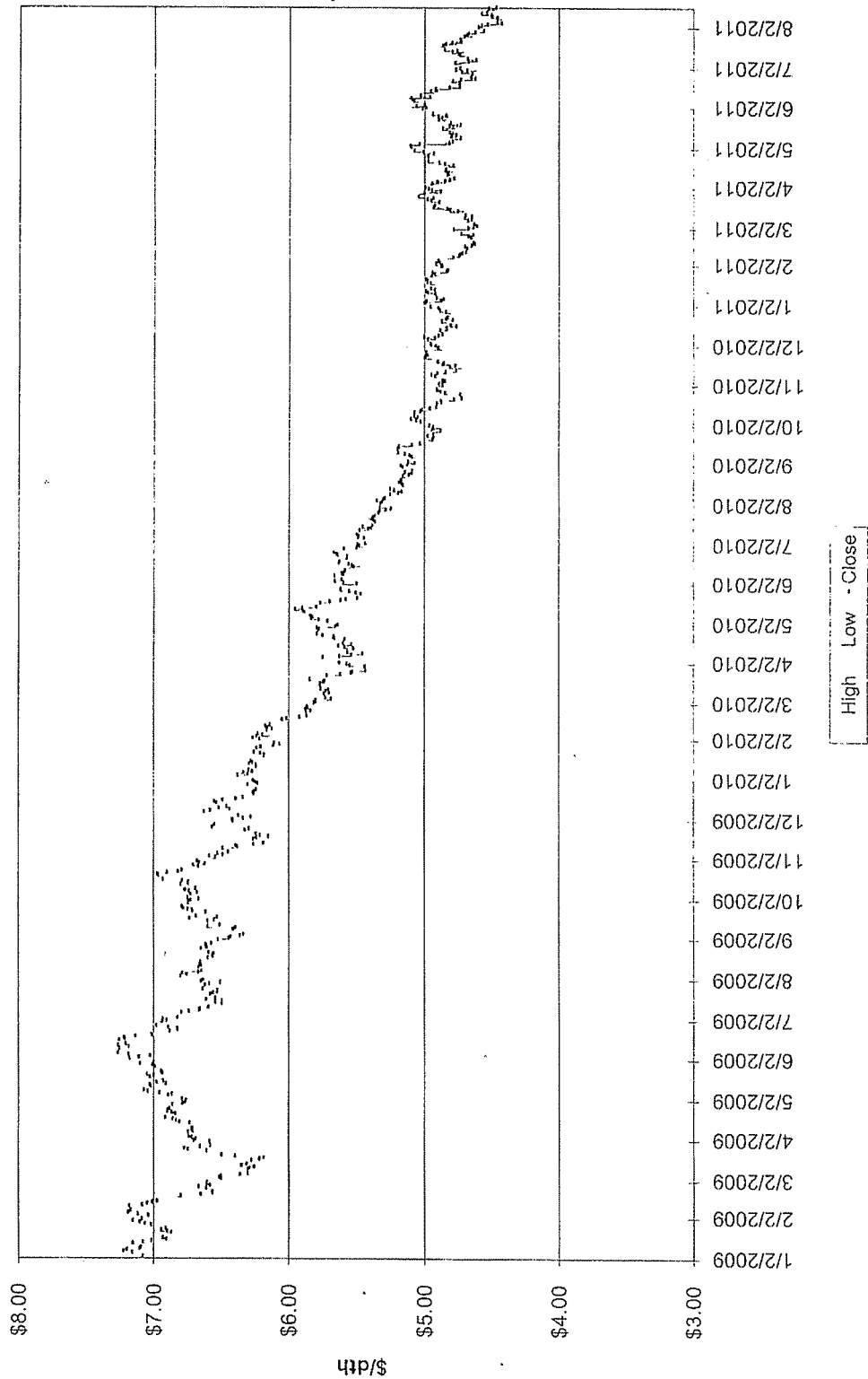
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**August 9, 2011 Release**

Jan-09	5.24	Jan-10	5.83	Jan-11	4.49	Jan-12	4.43
Feb-09	4.51	Feb-10	5.32	Feb-11	4.09	Feb-12	4.33
Mar-09	3.96	Mar-10	4.29	Mar-11	3.97	Mar-12	4.29
Apr-09	3.49	Apr-10	4.03	Apr-11	4.25	Apr-12	4.24
May-09	3.83	May-10	4.14	May-11	4.31	May-12	4.17
Jun-09	3.80	Jun-10	4.80	Jun-11	4.55	Jun-12	4.15
Jul-09	3.38	Jul-10	4.63	Jul-11	4.42	Jul-12	4.17
Aug-09	3.14	Aug-10	4.32	Aug-11	4.11	Aug-12	4.37
Sep-09	2.97	Sep-10	3.89	Sep-11	4.07	Sep-12	4.44
Oct-09	4.00	Oct-10	3.43	Oct-11	4.08	Oct-12	4.62
Nov-09	3.66	Nov-10	3.71	Nov-11	4.16	Nov-12	4.73
Dec-09	5.34	Dec-10	4.25	Dec-11	4.32	Dec-12	5.02
Average 2009	\$ [REDACTED]	Average 2010	\$ [REDACTED]	Average 2011	\$ [REDACTED]	Average 2012	\$ [REDACTED]
Summer 2009	\$ [REDACTED]	Summer 2010	\$ [REDACTED]	Summer 2011	\$ [REDACTED]	Summer 2012	\$ [REDACTED]
Winter 2009-2010	\$ [REDACTED]	Winter 2010-2011	\$ [REDACTED]	Winter 2011-2012	\$ [REDACTED]		

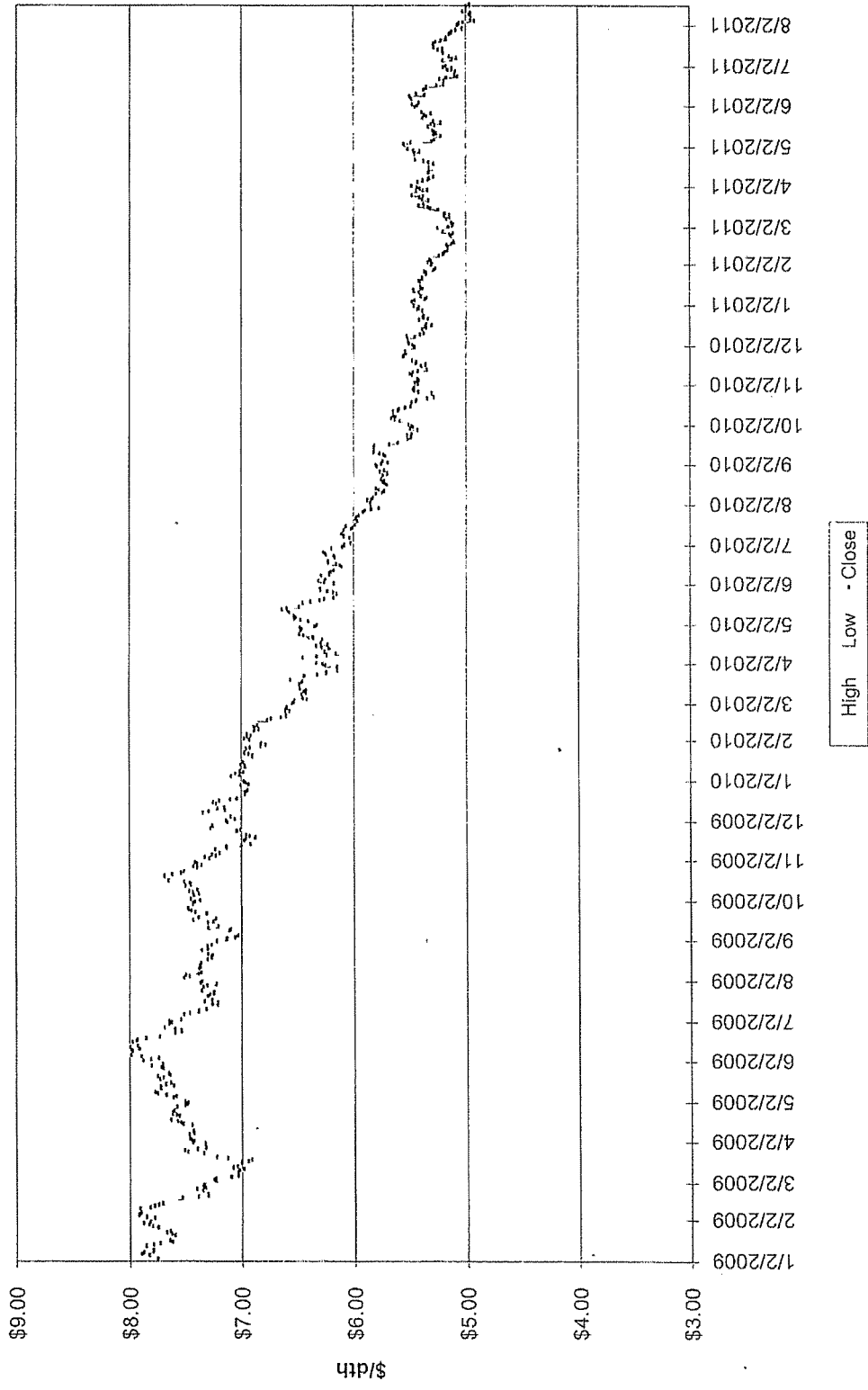
Winter Strip Nov11 - Mar12



Summer Strip 2012



Winter Strip Nov12 - Mar13





# Short-Term Energy Outlook

August 9, 2011 Release  
(Next update September 7, 2011)

## Natural Gas

U.S. Natural Gas Consumption. EIA expects that total natural gas consumption will grow by 1.8 percent to 67.4 billion cubic feet per day (Bcf/d) in 2011. Forecast industrial and electric power consumption growth make up most of the increase, with expected increases in 2011 to 18.4 Bcf/d (1.7 percent) and 21.0 Bcf/d (3.7 percent), respectively.

Extremely hot weather seen in July throughout most of the country contributed to an increase in consumption of natural gas for electric power generation to meet increased cooling demand. This month's *Outlook* raises the forecast of consumption of natural gas for power generation for the third quarter of 2011 to 28.3 Bcf/d (a 4.2-percent increase from the previous month's forecast of 27.2 Bcf/d) corresponding to an 11-percent increase in projected third quarter cooling degree-days from last month's forecast.

Projected total consumption increases slightly in 2012 to 67.8 Bcf/d. Expected growth in the industrial and electric power sectors offsets projected declines in residential and commercial consumption due to anticipated warmer winter weather.

U.S. Natural Gas Production and Imports. Marketed natural gas production is expected to average 65.5 Bcf/d in 2011, a 3.7 Bcf/d (5.9 percent) increase over 2010. This growth is centered in the onshore production in the Lower 48 States, which more than offsets projected declines in the Federal Gulf of Mexico. EIA expects production will continue to grow in 2012, but at a slower pace, increasing 0.6 Bcf/d (0.9 percent) to an average of 66.1 Bcf/d.

Extremely hot weather settled on much of the Nation last month, with U.S. population-weighted cooling degree-days 27 percent higher than the 30-year normal and 8 percent higher than last year, which contributed to an increase in natural gas consumption for electricity generation compared with July 2010. Nevertheless, the estimated 246 billion cubic feet (Bcf) increase in natural gas working inventories during July 2011 was 21 Bcf higher than during the same month last year. Natural gas working inventories ended July 2011 at 2.8 trillion cubic feet (Tcf), about 7 percent, or 194 Bcf, below the 2010 end-of-July level. EIA expects that working natural gas inventories will build strongly, approaching last year's high levels by the end of this year's inventory build season. The projected Henry Hub natural gas spot price averages \$4.24 per million British thermal units (MMBtu) in 2011, \$0.15 per MMBtu lower than the 2010 average. EIA expects the natural gas market to begin tightening in 2012, with the Henry Hub spot price increasing to an average of \$4.41 per MMBtu.

## *Global Crude Oil and Liquid Fuels*

Crude Oil and Liquid Fuels Overview. Global oil demand growth, led by China, is expected to outpace the growth in supplies from countries outside of the Organization of the Petroleum Exporting Countries (OPEC), leading markets to rely on both a drawdown of inventories and production increases in OPEC countries to close the gap. However, OPEC countries are not expected to markedly increase production over the next few months.

Among the major upside risks in the crude oil price outlook are additional supply disruptions in producing regions and higher-than-expected demand growth, particularly in the countries that are not members of the Organization for Economic Co-operation and development (OECD). Downside risks for oil prices include the rate of global economic recovery and fiscal issues facing national and sub-national governments.

EIA expects the U.S. average refiner acquisition cost of crude oil will rise from \$100 per barrel in 2011 to \$107 per barrel in 2012 as global spare production capacity and inventories continue to decline.

Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2011-12

		Dth/Day					Total	% System Supply
		November	December	January	February	March		
<u>Duke Energy Ohio</u>								
Previously Hedged								
	Col Gulf Mainline							
	Col Gulf Mainline							
	Gulf South-DE Field Services							
	Col Gulf Mainline							
	Col Gulf Mainline							
	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 Commercial Operations  
Hedging Program  
Market Indicators Summary  
September 27, 2011

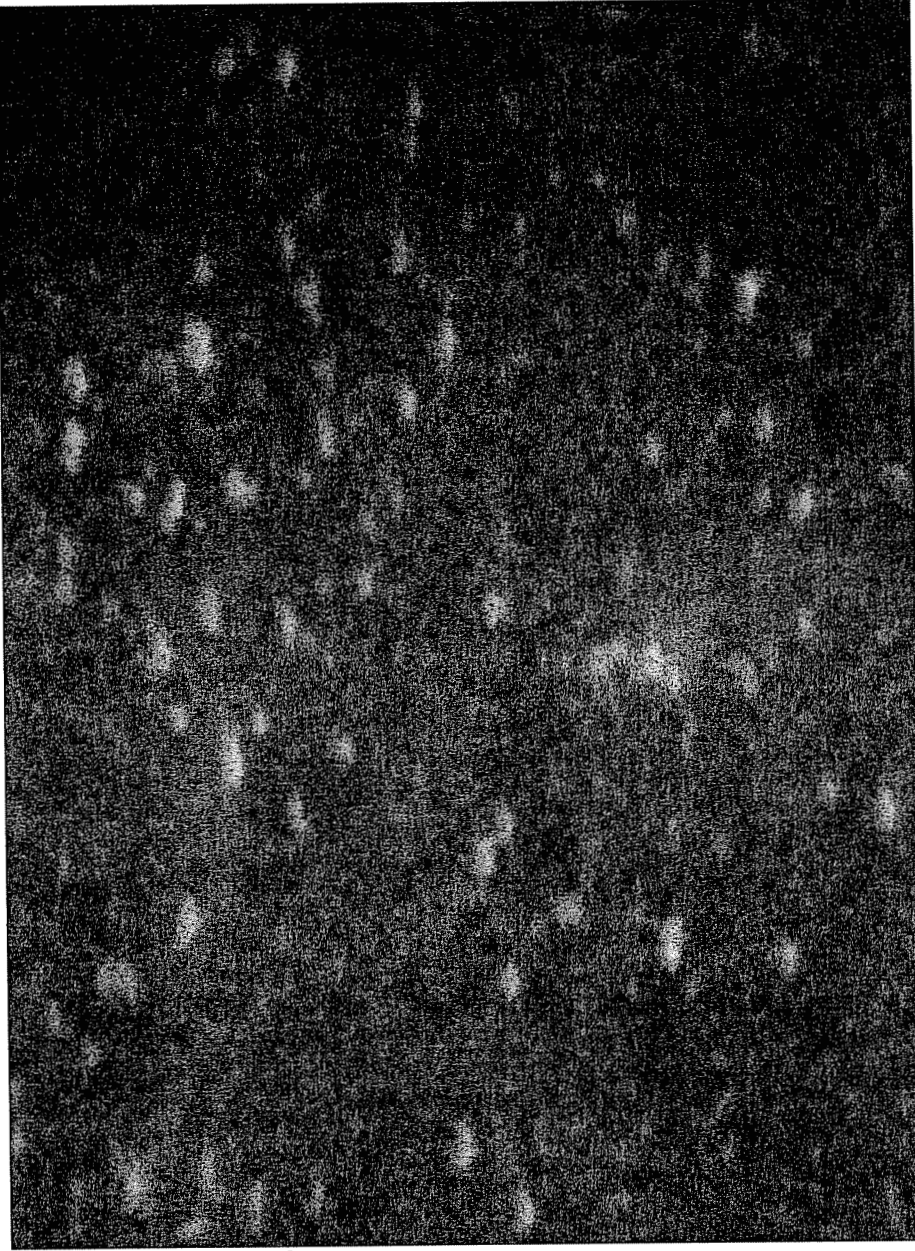
	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Nov 11--Jan 12)	↔	Long	NOAA predicting above average temperatures for November 2011--January 2012 for portions of the South-Central portion of CONUS. Equal chances of Above, Normal, or Below for the rest of CONUS.	13
Mid Term Forecast (30-60 days)	↑	Long	October is predicted to be 9.7% warmer than normal based on 10 year normals and November weather is predicted to be 13.9% colder than normal	14
Short Term Forecast (6-10 days)	↔	Short	Mid-East and Eastern portions of CONUS Below normal temperatures, western portion of CONUS Much Above/Above for the period moving east during the period.	15
Tropical Storm Activity	↔	Short	20% chance that the current system located 600 miles west of Cape Verde Islands becoming a tropical cyclone during the next 48 hours.	
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↔	Long	Storage injections for the week ending September 16th were 89 BCF. Storage levels are at 3.201 TCF which is 3.9% lower than last year and 1.1% lower than the 5 year average. Estimated injections for the week ending September 23rd are expected to be in the 100 Bcf range--last years injections 78 Bcf.	16
<b>Industry Publications</b>				
PIRA Energy Group Winter 2011/12: ██████████ Summer 2012: ██████████	↑ ↓	Long	GAS PRICE SCORECARD: November 2011--March 2012 US Production and Storage Levels remain bearish while Electric Generation and Industrial Sector demand are bullish	17-18
Gas Daily	↓	Long	"Production has been ramping up since early 2010" and will keep rising even with gas prices in the \$4 to \$4.50/MMBtu range next year. 2012 price is forecast to average \$4.30/MMBtu	19-20
Gas Daily	↑	Long	Analysts expect prices to rise to \$6.50/MMBtu or above as early as 2013 resulting from more power generators rely on gas. Increase in gas prices due to new emission regulations which are expected to result in retirement of coal-fired generation which could add 4 to 6 Bcf/d of gas consumption.	21
Gas Daily	↑	Long	Coal-fired power plants will continue to be retired in favor of natural gas-fired generation despite efforts by policymakers to blunt EPA rules targeting coal plants. "The reality is that on an economic basis, gas is much more competitive."	22
Information Presented at LDC Forum	↑ ↓	Long	90% of gas demand growth resulting from power production, Unconventional gas resources for about 100 years at current demand levels, 9 new environmental rules have been or will be introduced by the EPA over the next 18 months, Loss of 30 GW of coal generation would increase demand by 7.2 Bcf/d.	23
<b>Government Agencies</b>				
Energy Information Administration Winter 2011/12: \$4.212 Summer 2012: \$4.224	↑	Long	The projected Henry Hub natural gas spot price averages \$4.203/MMBtu for 2011 and \$4.298.	24
<b>Technical Analysis</b>				
Winter 2011-12 Strip Chart	↔	Short	Closed at \$4.05	25
Summer 2012 Strip Chart	↔	Short	Closed at \$4.24	26
Winter 2012-13 Strip Chart	↔	Short	Closed at \$4.76	27
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to grow by 1.8% to 67.3 Bcf/d in 2011, resulting from an increase in the industrial and electric power consumption. Projected consumption increases slightly in 2012 to 67.7 Bcf/d.	28
Supply	↔	Long	EIA expects average total production to increase by 6.4% to 65.8 Bcf/d in 2011. Production growth is forecast to continue at a much slower pace in 2012, increasing 1.7% to average 66.9 Bcf/d.	28
Oil Market	↑	Long	Global oil demand growth, is lower than last month's projection due to less optimistic assumptions about global economic growth. EIA expects the U.S. cost of crude oil will rise from \$100 per barrel in 2011 to \$103 per barrel in 2012.	29

Meeting Minutes: 412 Annex Conference Room - 10:00 am  
Attendees: Jeff Kern, Mike Brumback, Joachim Fischesser, Terry Bates, Mitch Martin, Steve Niederbaumer

Discussed market fundamentals including weather, storage inventory levels, PIRA and EIA forecasts for the Winter 2011/12 and Summer 2012, 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, discussed the current position of the Hedging Programs for DEO and DEK. Discussed the ██████████ Storage levels and the amount of gas that will be needed to be injected beginning April 12 through October 12 to cover withdraws beginning November 2011 through March 2012. Significant discussion took place around the current storage levels, estimates of storage injections for the remainder of the injection season and the level of storage as of November 1st. Based on these factors, a decision was made to hedge additional volumes, based on the ██████████ Storage Activity at this time.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2010 - October 2011  
 As of 09/21/11

Nov-10    Dec-10    Jan-11    Feb-11    Mar-11    Apr-11    May-11    Jun-11    Jul-11    Aug-11    Sep-11    Oct-11



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

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

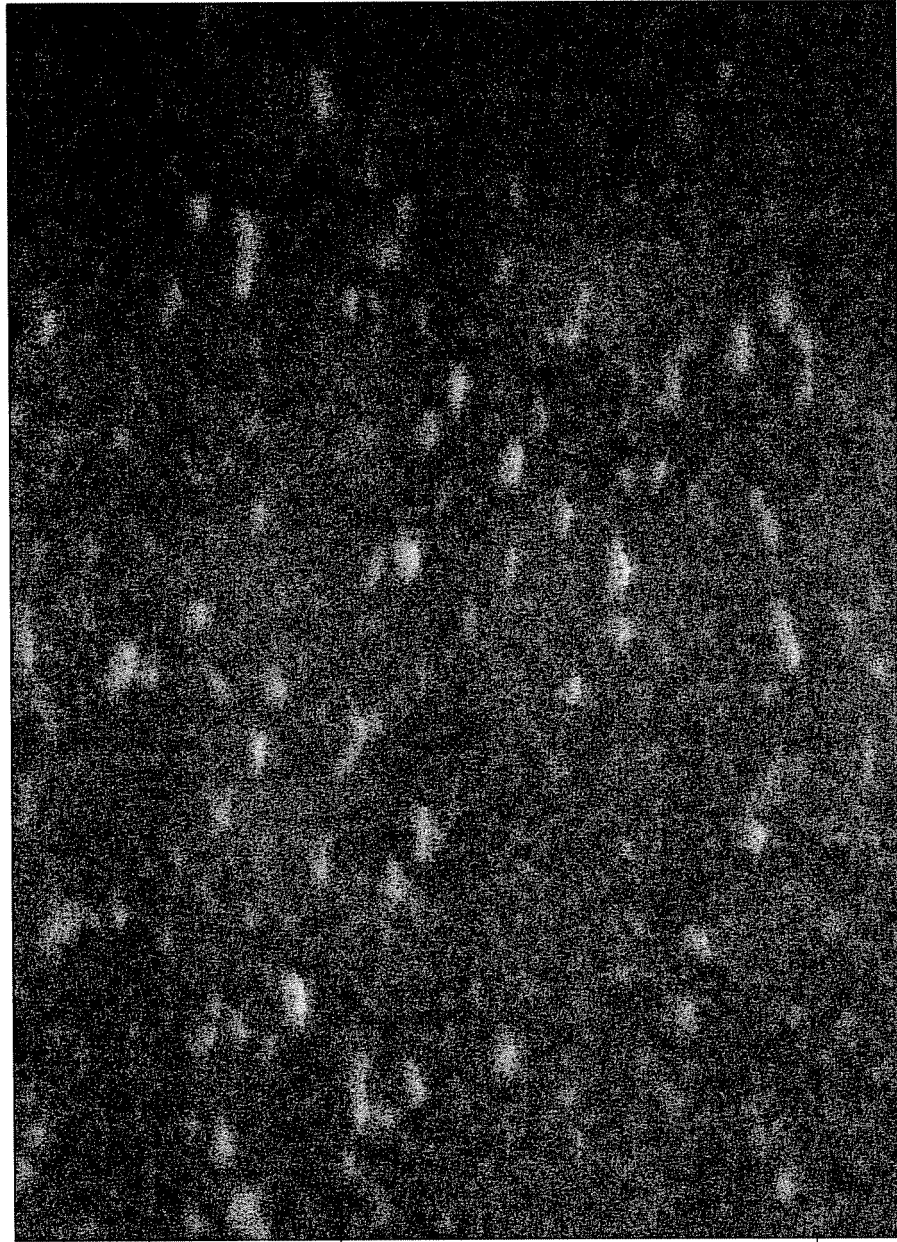
Embedded Hedged Cost  
 Winter  
 Summer

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 %

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2011 - October 2012  
As of 09/21/11

Nov-11 Dec-11 Jan-12 Feb-12 Mar-12 Apr-12 May-12 Jun-12 Jul-12 Aug-12 Sep-12 Oct-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  
Collar ( )  
Total Hedged (dth/day)  
Total Hedged (dth)

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

Embedded Hedged Cost  
Winter  
Summer

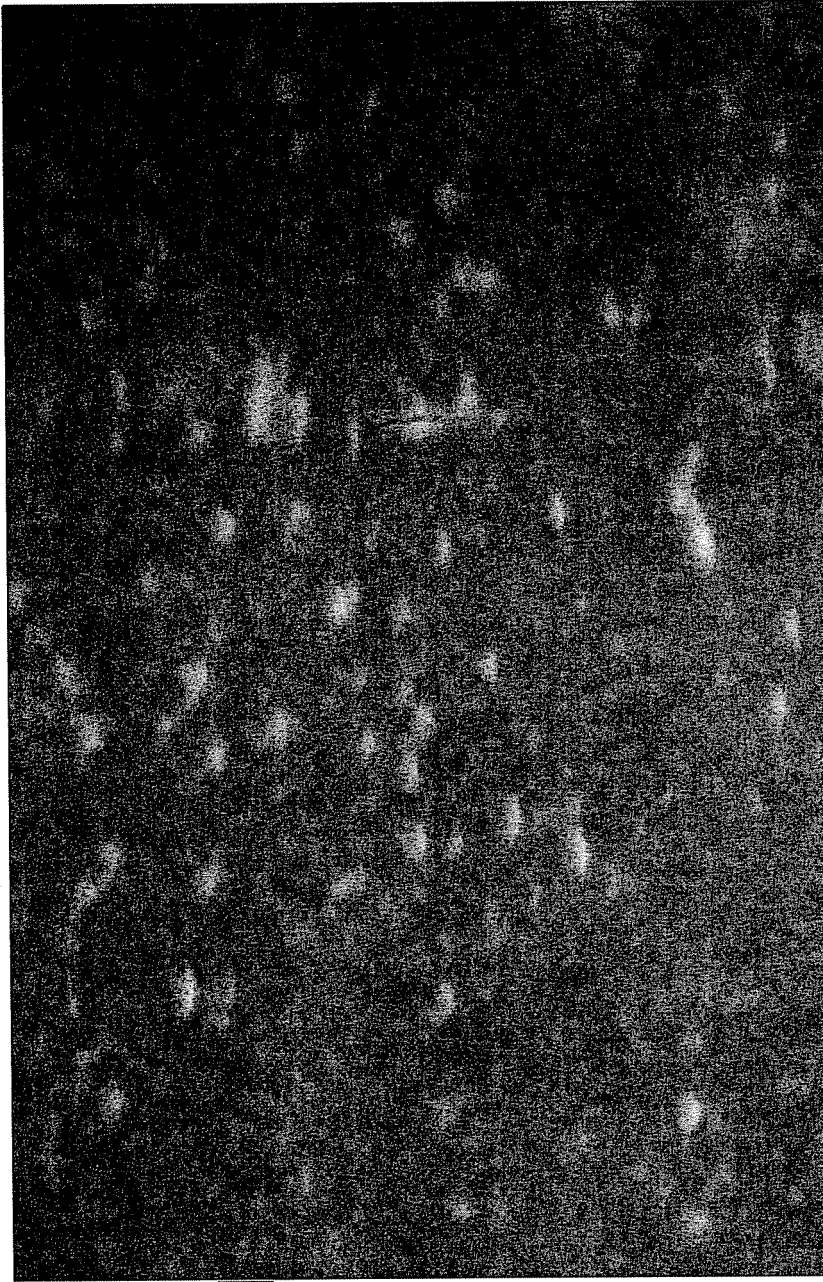
Estimated EGC per Dth at City Gate  
  
Estimated System Supply (Gross)  
Hedged % of System Supply  
Seasonal % of System Supply

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 2012 - October 2013  
 As of 09/21/11

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

Types of Hedging Products (1)  
 Fixed Price  
 Price Caps  
 No-Cost Collars  
 4

Embedded Hedged Cost  
 Winter  
 Summer

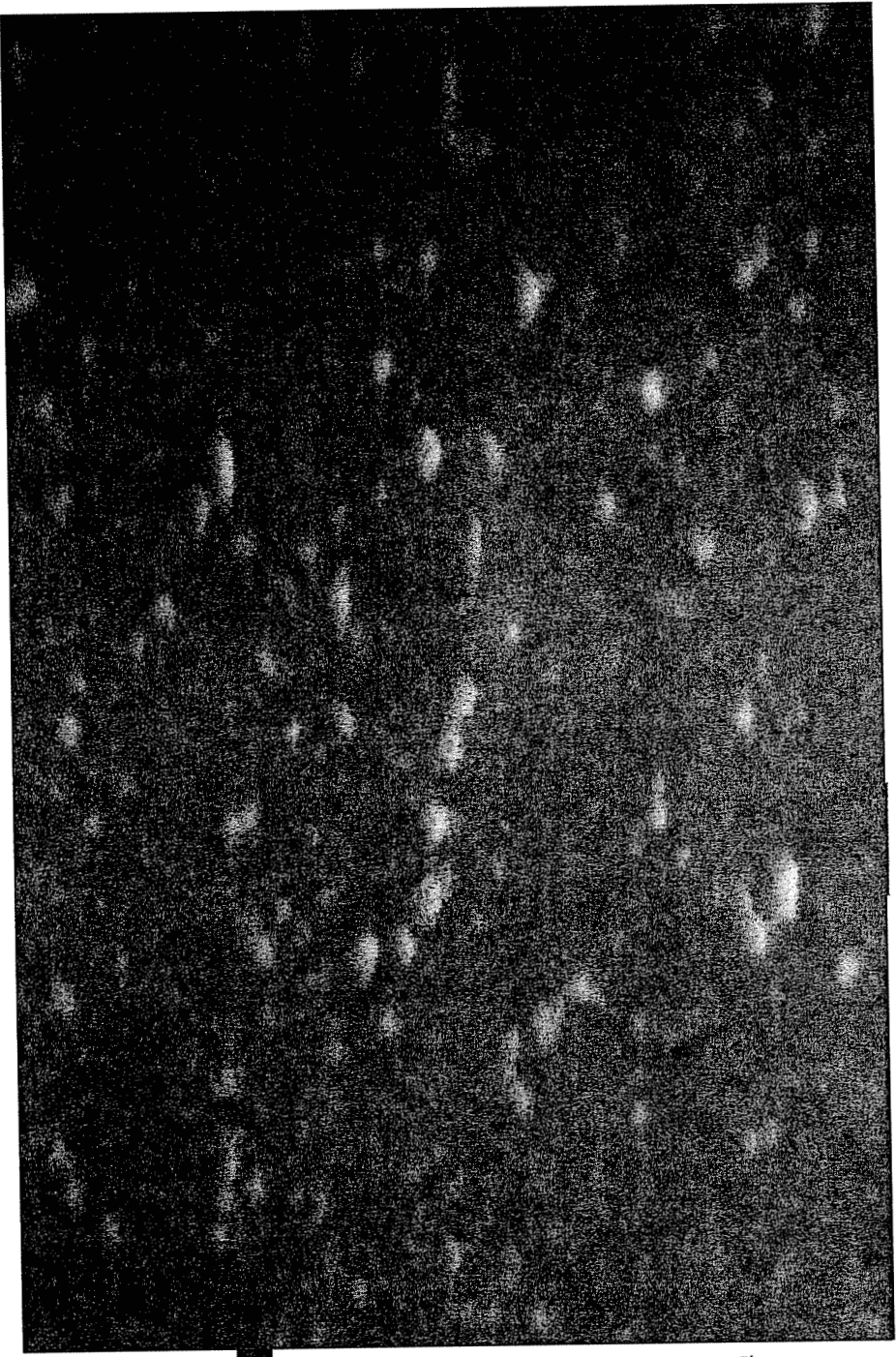
Estimated EGC per Dth at City Gate  
 Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

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 09/21/11

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  
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.



9/21/2011

Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/11)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Apr-11					
May-11					
Jun-11					
Jul-11					
Aug-11					
Sep-11					
Oct-11					
Summer 2011					
Target Levels By March 31, 2011					
Nov-11					
Dec-11					
Jan-12					
Feb-12					
Mar-12					
Winter 11/12					
Target Levels By October 31, 2011					
Apr-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2011					
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Target Levels By October 31, 2011					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2011					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2011					

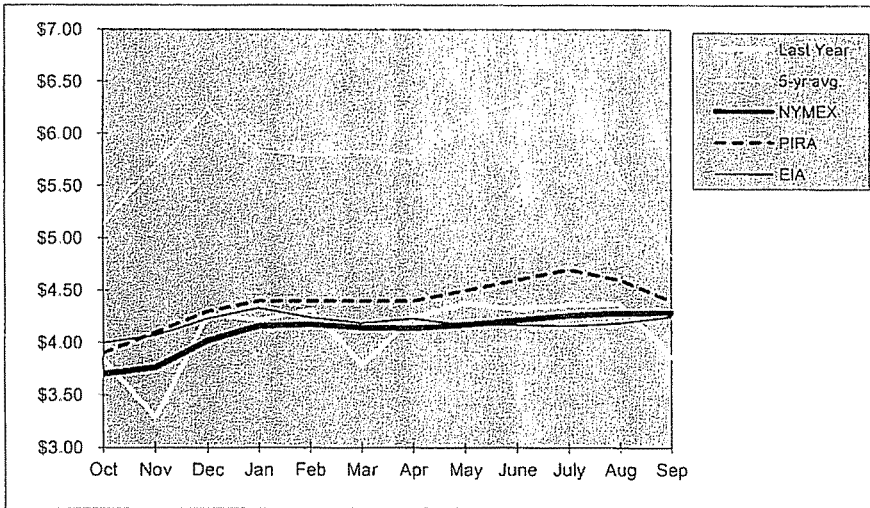
Duke Energy Ohio  
 [REDACTED] Estimated Storage Activity  
 November 2011 - October 2012

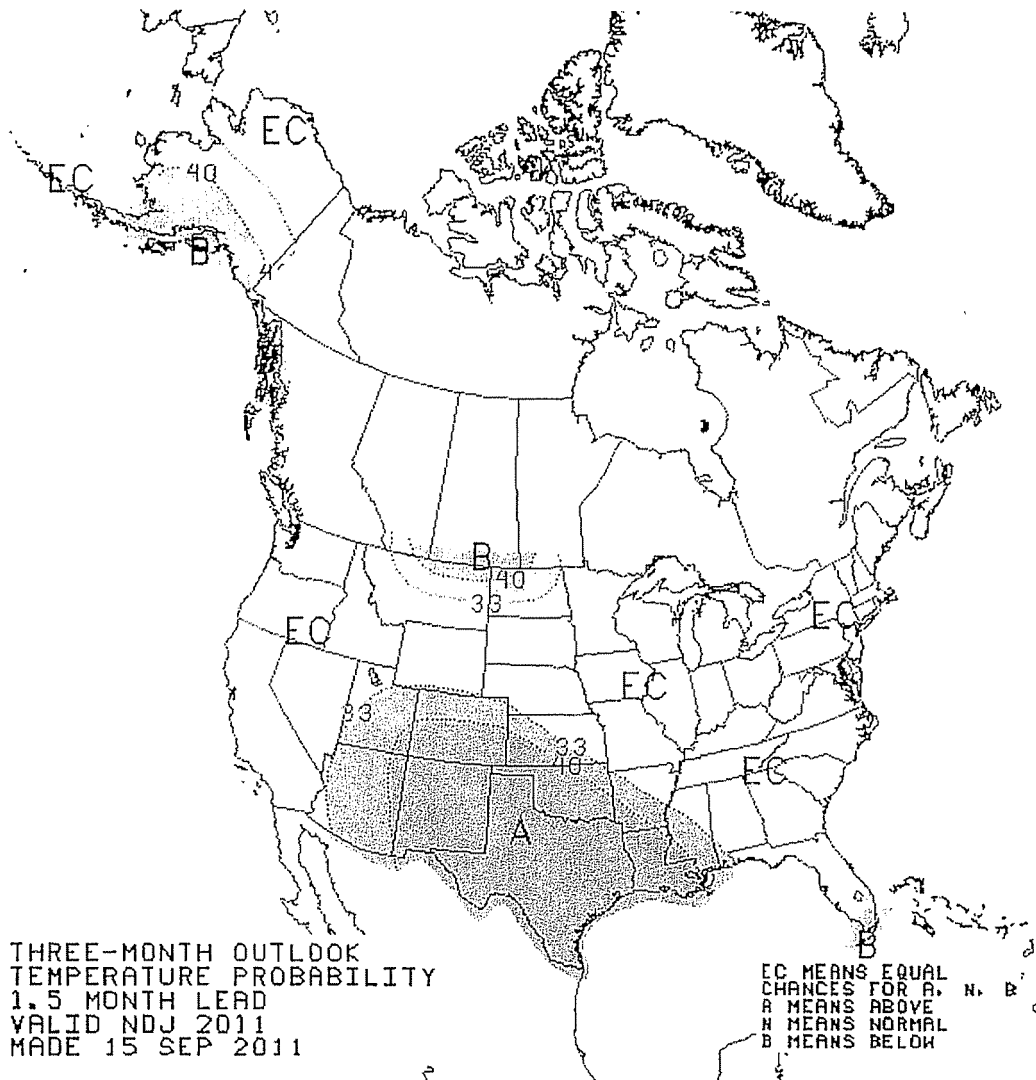
	Estimated Activity			Withdraws		Amount to be hedged at time of filing (dth)					
	Injections		% %	Mcf	Dth	Nov	Dec	Jan	Feb	Mar	Total
	Mcf	Dth		Mcf	Dth						
Nov-11		[REDACTED]		[REDACTED]	[REDACTED]						
Dec-11				[REDACTED]	[REDACTED]						
Jan-12				[REDACTED]	[REDACTED]						
Feb-12				[REDACTED]	[REDACTED]						
Mar-12				[REDACTED]	[REDACTED]						
Apr-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
May-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Jun-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Jul-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Aug-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Sep-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Oct-12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Amount to be hedged per day	
Apr-12	[REDACTED]
May-12	[REDACTED]
Jun-12	[REDACTED]
Jul-12	[REDACTED]
Aug-12	[REDACTED]
Sep-12	[REDACTED]
Oct-12	[REDACTED]

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

Historic Prices:							Hedged Prices	
NYMEX Closing Price							Ohio	Kentucky
	5-yr. avg. (06/07-10/11)	Last Year (2010-2011)		PIRA 26-Aug-11	EIA 7-Sep-11	NYMEX 23-Sep-11		
Oct	\$5.13	\$3.84			\$4.000	\$3.701		
Nov	\$5.69	\$3.29			\$4.070	\$3.766		
Dec	\$6.23	\$4.27			\$4.230	\$4.021		
Jan	\$5.84	\$4.22			\$4.330	\$4.159		
Feb	\$5.80	\$4.32			\$4.240	\$4.176		
Mar	\$5.83	\$3.79			\$4.190	\$4.147		
Apr	\$5.77	\$4.24			\$4.230	\$4.139		
May	\$6.15	\$4.38			\$4.170	\$4.173		
June	\$6.31	\$4.33			\$4.170	\$4.215		
July	\$6.61	\$4.36			\$4.160	\$4.259		
Aug	\$5.57	\$4.37			\$4.190	\$4.284		
Sep	\$4.84	\$3.86			\$4.250	\$4.288		
12 Month Avg	\$5.81	\$4.10			\$4.186	\$4.111		
Summer Average					\$4.167	\$4.151		
Winter Average					\$4.212	\$4.054		



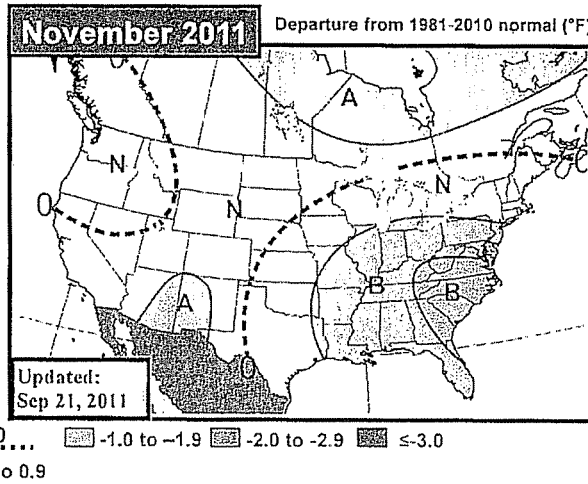
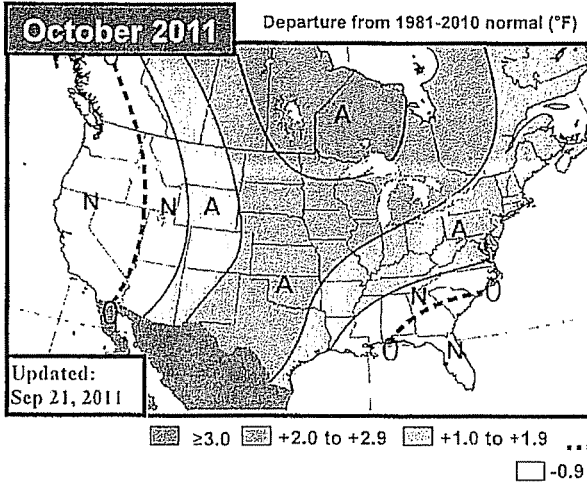


# EarthSat's 30-60 Day Outlook



Wednesday, September 21, 2011

Meteorologists: SS/BH/TH/RG



**Previous**  
Warmer across the mid-continent  
Slight cool change in southern CA

Warmer changes dominate this penultimate forecast update, especially over the mid-continent. Aboves now extend into more of the East as a result of the changes. Pacific signaling, including second-year La Nina analogs and the more general -PDO analogs, continue to offer strong support for our forecast. We further detailed the ENSO connection in Tuesday's Editor's Notes, having shown that the current monthly average of subsurface temp. anomalies within the ENSO 3.4 Region matches up quite well with Sept. monthly averages from La Nina episodes since the mid-1990s (1995, 1999, 2007 and 2008). These analog years produced similarly warm-dominated Octobers with aboves extending into the East. One substantial risk to the forecast includes the possibility of a lingering +PNA signal, which could enforce a cooler pattern over the East and South and support a warmer ridge out West.

**Previous**  
Not as cool in the Northeast  
Still cool in the South

Some warmer tweaks were made in the East in this forecast. Still, widespread belows remain from the Central Midwest through the Mid-Atlantic and points south, and little warmth appears on the composite map. Much of the same Pacific signaling cited in the October discussion is expected to play a role in November, but guidance from second-year La Nina and -PDO analogs turns much colder over the Eastern half. The same analog years (again, 95, 99, 07 and 08) featuring similar Sept. subsurface temp. anomalies in the eastern equatorial Pacific also signal a colder outcome for the East, South and Midwest. The NAO decreased from October to November during many of the years included in the second-year Nina and -PDO analog subsets, which helped to transport chilly air into the Eastern half. Forecast risks worth considering include the chance that the East and South average warmer per a more dominant -PNA signal, and the threat that the Midwest and East stay mild per the +AMO seasonal signal.

Oct GWHDD\*\* Forecasts      \*10Y Normal updated to '01-10

Oct 2011 Fcst:	256.0	10Y Normal*	283.4
		30Y Normal	285.0
		Oct-2010	232.6

Change: -10      \*\*National Pop-Weighted CDDs

Oct PWCCD Forecast: 71.0

Nov GWHDD\*\* Forecasts      \*10Y Normal updated to '01-10

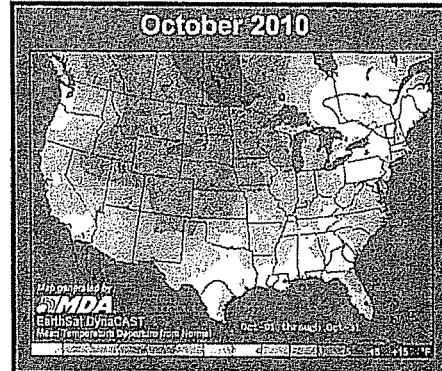
Nov 2011 Fcst:	596.0	10Y Normal*	523.4
		30Y Normal	555.7
		Nov-2010	548.8

Change: -3      \*\*National Gas-Weighted HDDs

**Sep so far**

**Final 60 Day Outlook      Final 30 Day Outlook      Current verify + forecast (9/1-9/30)**

The September result is becoming a bit more clearer, we're now through mainly days of the month and our 15-10 Day forecast extends out to the end of the month. The result is quite a bit different than our outlook, especially our initial 60 Day outlook. With cut-off lows early and late in the month keeping conditions much cooler than expected from the central/southern Plains into the southern Midwest and the South, while persistent ridging has driven temperatures much higher than expected across most of the West with the exception of coastal Southern California. The 60 Day got the heat in Texas and in the Northeast, but missed the heat in the West and the cool weather in the South and Midwest by a wide margin. The final 30 day trended in the right direction in the West and part of the Midwest, but with cut-off lows very difficult to forecast in the long term, the scope of the cooler weather in the South was missed.



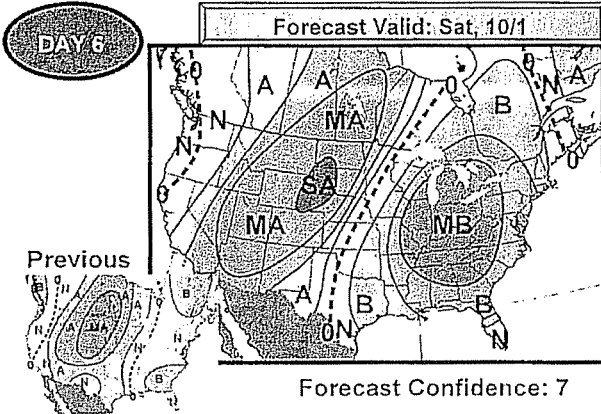
# 6-10 Day Forecast—Detailed

Monday, September 26, 2011

Meteorologist: AC/BH

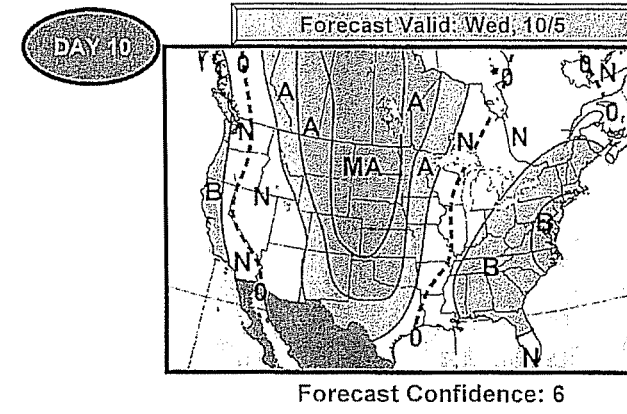
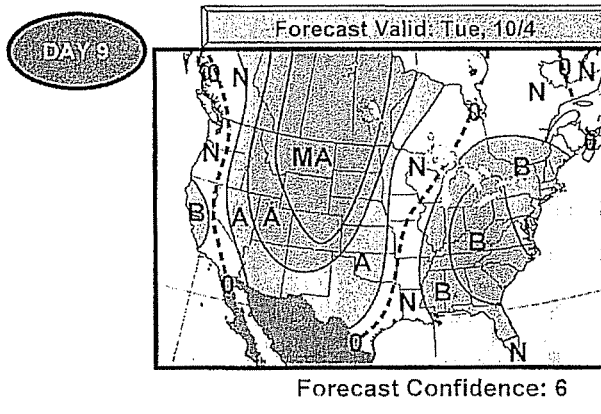
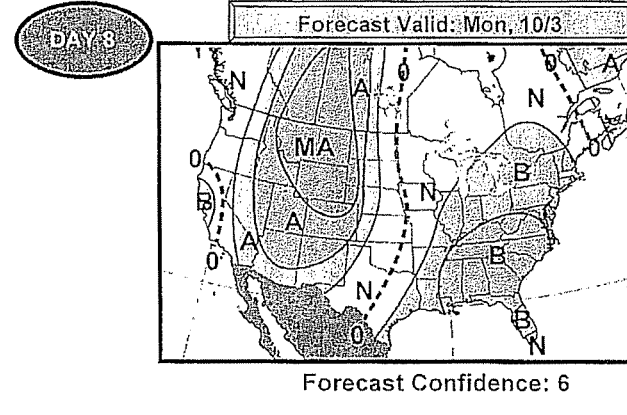
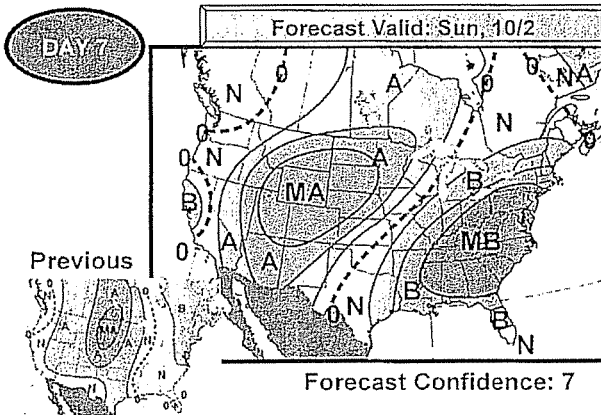


## Forecast Temperature Deviations



**\*Much Aboves Press For Central U.S. Late\***  
**\*Midwest, East Under Cool Conditions Early\***

The progression of the pattern is in better agreement amongst the models coming out of the weekend, bringing a higher confidence to the forecast compared to last Friday. There does remain detailed differences though. There could be cooler than expected temperatures across the Midwest and East for the early part of the period, particularly in the lows, as a high pressure system looms overhead. There is some concern a secondary area of high pressure in western Canada early may carry cooler air to the Northeast late in the period. A warming trend takes shape across the Central U.S. during the second half of the period, which might allow more widespread much above normal readings late. For period's end, the West may see more below normal temperatures dive 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

Released: September 22, 2011 at 10:30 a.m. (eastern time) for the Week Ending September 16, 2011.  
Next Release: September 29, 2011

### Working Gas in Underground Storage, Lower 48

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

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	09/16/11	09/09/11	Change	Year Ago (09/16/10)		5-Year (2006-2010) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,753	1,695	58	1,811	-3.2	1,829	-4.2
West	445	436	9	492	-9.6	444	0.2
Producing	1,003	981	22	1,026	-2.2	962	4.3
Total	3,201	3,112	89	3,330	-3.9	3,236	-1.1

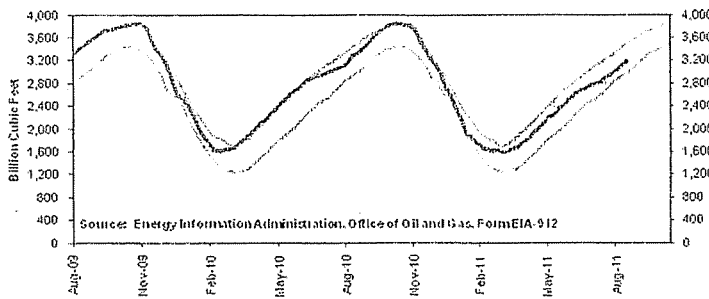
#### Notes and Definitions

##### Summary

Working gas in storage was 3,201 Bcf as of Friday, September 16, 2011, according to EIA estimates. This represents a net increase of 89 Bcf from the previous week. Stocks were 129 Bcf less than last year at this time and 35 Bcf below the 5-year average of 3,236 Bcf. In the East Region, stocks were 76 Bcf below the 5-year average following net injections of 58 Bcf. Stocks in the Producing Region were 41 Bcf above the 5-year average of 962 Bcf after a net injection of 22 Bcf. Stocks in the West Region were 1 Bcf above the 5-year average after a net addition of 9 Bcf. At 3,201 Bcf, total working gas is within the 5-year historical range.

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- 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 2006 through 2010.  
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**  
**August 26, 2011 Release**

Jan-09		Jan-10		Jan-11		Jan-12	
Feb-09		Feb-10		Feb-11		Feb-12	
Mar-09		Mar-10		Mar-11		Mar-12	
Apr-09		Apr-10		Apr-11		Apr-12	
May-09		May-10		May-11		May-12	
Jun-09		Jun-10		Jun-11		Jun-12	
Jul-09		Jul-10		Jul-11		Jul-12	
Aug-09		Aug-10		Aug-11		Aug-12	
Sep-09		Sep-10		Sep-11		Sep-12	
Oct-09		Oct-10		Oct-11		Oct-12	
Nov-09		Nov-10		Nov-11		Nov-12	
Dec-09		Dec-10		Dec-11		Dec-12	
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		











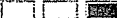
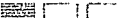


**North American Gas Forecast Monthly** 

August 26, 2011

NATURAL GAS

**GAS PRICE SCORECARD: NOVEMBER 2011 – MARCH 2012**

Bearish Neutral Bullish  


U.S. Supply Issues	Outlook	Commentary
U.S. Production		The slump in sequential U.S. gas production growth continues, largely reflecting only modest expansion of Haynesville shale gas since April 2011. But large-scale additions to the region's pipeline take-away capacity in the near future could signal an accelerated pace of growth.
LNG Imports		LNG imports are expected to plunge lower Y/Y by 450 MMCF/D (1.12 to 0.67 BCF/D), reflecting global tightness and the lack of re-export activity by GOM operators.
Canadian Trade		A projected decline of exports next winter reflects a substantially more modest storage draw than last year's unusually intensive draw that was inflated by colder-than-normal temperatures. Yet, production is forecast to post a modest Y/Y increase.
Mexican Trade		Higher Y/Y gas demand and lower Y/Y gas production will not be fully reflected in pipeline imports from the U.S. owing to incremental LNG associated with the Manzanillo terminal.
Storage Levels		Unless last winter's frigid weather repeats, a much milder heating season, coupled with ongoing Y/Y production gains, point to a Y/Y end-March 2012 storage surplus in excess of 0.3 TCF as well as the largest storage carry on record into the injection season.
U.S. Demand Issues	Outlook	Commentary
Economy		The summer's economic turbulence underscores ongoing waves of uncertainty. More recently, the modest sequential uptick in manufacturing IP is traceable to the automotive sector. Expectations for future manufacturing growth are weaker, but still in positive territory.
Electric Generation (EG)		Gas-fired EG is expected to get a sizable boost from the EPA's pending Cross-State Air Pollution Rule set to begin on January 1 <sup>st</sup> . But major questions loom over the implementation of the rule.
Industrial Sector		More evidence is accumulating to suggest a slowdown of industrial gas demand growth from an apparent brief acceleration in April, but Y/Y gains are still expected during the heating season, albeit at a slower Y/Y pace.
Res/Com Heating		Coming even close to the past heating seasons R/C heating demand is a tall order. Our mid-point GWHDD assumption that straddles the 10-year and 30-year normals suggests that demand will average ~2 BCF/D below the 2010-11 winter.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation		Net non-commercial NYMEX/ICE futures, after turning positive earlier this summer, have reversed course and moved progressively negative to the tune of ~162 contracts — a level still considerably short of negative net positions in 1H11.
Overall Assessment	Outlook	Commentary
Price Outlook		Non-core demand growth will fall short of offsetting Nov.-Mar. R/C heating losses, while higher Y/Y production further inflates the end-March Y/Y storage surplus. The most critical counterbalance would be an expectation of relatively flat sequential gas production beyond the heating season.

# Gas Daily

Friday, September 2, 2011

## Analyst: Production to keep rising through 2012 despite weak prices

US gas production likely will remain on its upward trajectory next year despite persistently weak wellhead prices, independent energy analyst Stephen Smith said Thursday.

"I do think that's going to continue," Smith said. "Production has been ramping up since early 2010" and will keep rising "even with gas prices in the \$4 to \$4.50/MMBtu range next year." Smith forecast that Henry Hub bidweek prices will average \$4.30/MMBtu in 2012.

"Driven largely by the shale-play drilling boom, gas production increased steadily from post-Rita/Katrina (fall of 2005) until Gustav/Ike in the fall of 2008," Smith said in his Monthly Energy Outlook. "The gas rig collapse, which began in September 2008, led to the February 2009 gas production peak and subsequent production decline — a decline which bottomed out in the second half of 2009."

Production in February 2011 "was depressed by the effects of wellhead freeze-offs. Since then, the upward production trend has resumed," the analyst wrote.

Smith said the rise in domestic production has been all the more impressive because it coincided with a drop in the number of rigs drilling for gas. "The total rig count has declined from a peak of 992 rigs in August 2010 to a level of 900 on August 19, 2011, a decline of 9.3%. The lowest monthly average for the last year occurred in June 2011 (877 gas rigs)," according to the report.

Smith said he is making "some assumptions that the rig count will decline slightly, but the momentum will just keep going on up."

Smith observed that the offshore Gulf of Mexico "is becoming increasingly a smaller player" in the overall US gas supply picture as a result of natural decline trends and the difficulty in obtaining drilling permits in the wake of last year's Macondo accident.

"The Gulf of Mexico is just moving into oblivion really," Smith said. Over the past decade in the Gulf, "production is down from 14 [Bcf/d] to 5 and change."

Onshore, however, shale plays have more than offset the Gulf declines. "Louisiana has been remarkably strong," Smith said, as the state has seen production shoot up from around 4 Bcf/d in mid-2009 to above 8 Bcf/d in the first several months of this year, largely due to the Haynesville Shale.

But Smith said he expects the trend to moderate as producers continue to shift capital to more liquids-rich plays. "As you lighten on up on the Haynesville, which is pure gas, you move to Texas, where the production is a combination of oil and gas," he said.

"The overwhelming trend is that the shale plays have changed the game entirely. In the space of a few years it has turned LNG import terminals into white elephants and has resurrected the trade with Mexico," the analyst said. The report found that "net gas exports to Mexico increased from virtually zero in 1999 to a peak for the 12-month moving average of 1.1 Bcf/d in early 2005. After a decline during 2005-2007, net exports have been trending up, slowly at first and sharply over the last seven months."

This year, US gas exports to Mexico increased from 1.16 Bcf/d in January to 1.41 Bcf/d in May, and "there is more gas headed that way. They haven't had the success that we have had with shale and they're finding our gas prices hard to beat."

— *Jim Magill*

# Gas Daily

Thursday, September 15, 2011

## Analysts debate power demand's impact on gas

While abundant natural gas has led prices to drop and stabilize over the past few years, some analysts believe prices will rebound substantially in the next two to three years thanks to increased demand from the electricity sector.

Analysts from BNP Paribas Energy Trading and Goldman Sachs this week said they expect gas prices to rise to \$6.50/MMBtu or above as early as 2013 as more power generators rely on gas.

Teri Viswanath, director of natural gas strategy with BNP Paribas Energy Trading, and Samantha Dart, senior energy economist with Goldman Sachs, each spoke as part of a panel on supply and demand at the LDC Gas Forum Midcontinent in Chicago.

Viswanath called 2013 a "turning point" when new emissions regulations from the Environmental Protection Agency will amplify the power sector's demand for gas.

Dart agreed, saying her price forecast is largely driven by the expected retirement of coal-fired power plants, which could add 4 to 6 Bcf/d of gas consumption.

"And we haven't even discussed what could happen on the nuclear side, or with the LNG exports," Dart added.

Taking a somewhat different view was Jack Weixel, who predicted that gas prices will remain between \$4 and \$6/MMBtu for the foreseeable future. Weixel is director of client services with Bentek Energy, a unit of Platts.

While gas demand is growing, production is matching the pace, he said, adding that the extreme cold and extreme heat of 2010 and 2011 are main reasons why gas prices didn't fall further.

"That extreme weather goes away, and we're down in three-dollar land," Weixel said.

Meanwhile, Viswanath said gas production from shale plays will start to decline over the next year or two, including output from the "shadow supply" of wells that are drilled but not yet completed.

Haynesville Shale production is likely to peak in 2012 as the inventory of deferred completions is exhausted, leaving the Marcellus Shale as a primary driver of gas production growth, according to Viswanath.

"Simply, the Marcellus alone is not enough to lift us to a supply growth year-over-year in 2013," she said. That situation is compounded by producers once focused on gas now chasing higher-priced oil or liquids. If there is a spike in gas demand from the power sector, "will these producers be there?"— *Elizabeth Bassett*

# Gas Daily

Friday, September 23, 2011

## Panel: Gas-fired power to edge out coal despite attack on EPA rules

Coal-fired power plants will continue to be retired in favor of natural gas-fired generation despite efforts by policymakers to blunt Environmental Protection Agency rules targeting coal plants, panelists told a Washington conference Thursday.

In the end, the surviving air regulations — in addition to lower gas prices and rising coal prices — will make gas-fired power plants more appealing, according to panelists at the third annual Renewable Energy Technology Conference & Exhibition.

“The reality is that on an economic basis, gas is much more competitive,” said Nils Mellquist, a senior research analyst at Deutsche Bank Climate Change Advisors.

President Obama decided earlier this month to block EPA from tightening its air quality standard for ozone, a rule that could have led to tighter emission controls on combustion sources like coal power plants.

And Republican lawmakers are working furiously to slow other EPA rules they say will hurt the economy, including the Cross-State Air Pollution Rule and a maximum achievable control technology rule to cut air toxics from utilities.

Skip Horvath, the president of the Natural Gas Supply Association, asked panelists whether those efforts would delay the retirement of coal plants. But the panelists said the low cost of gas and remaining EPA rules would propel the shift from coal to gas power anyway.

“Obviously it slows down the environmentally driven changes that could benefit both gas and renewables,” said Rick Smead, a director at Navigant Consulting. “But what we are seeing now with low gas prices in the eastern US is that gas is just cheaper than coal and is beating it straight up in economic dispatch.”

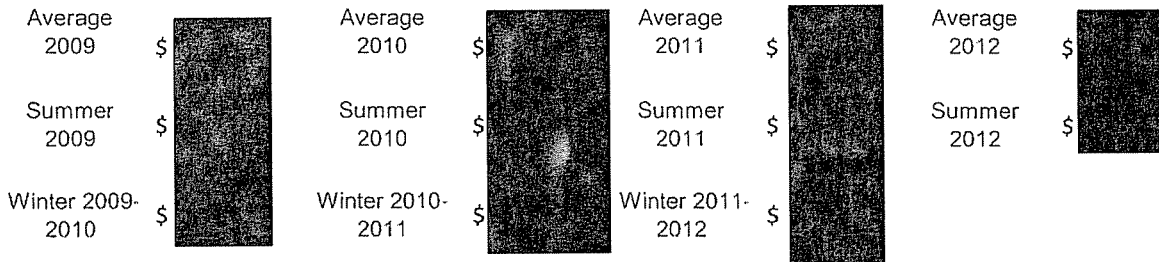
While gas prices will still exceed Power River Basin coal prices in the western US, Smead said “an awful lot of coal [plant] operators really want to get rid of those old dirty dogs anyway” because they are expensive to operate.— Kate Winston

## Information Presented at the LDC Gas Forum

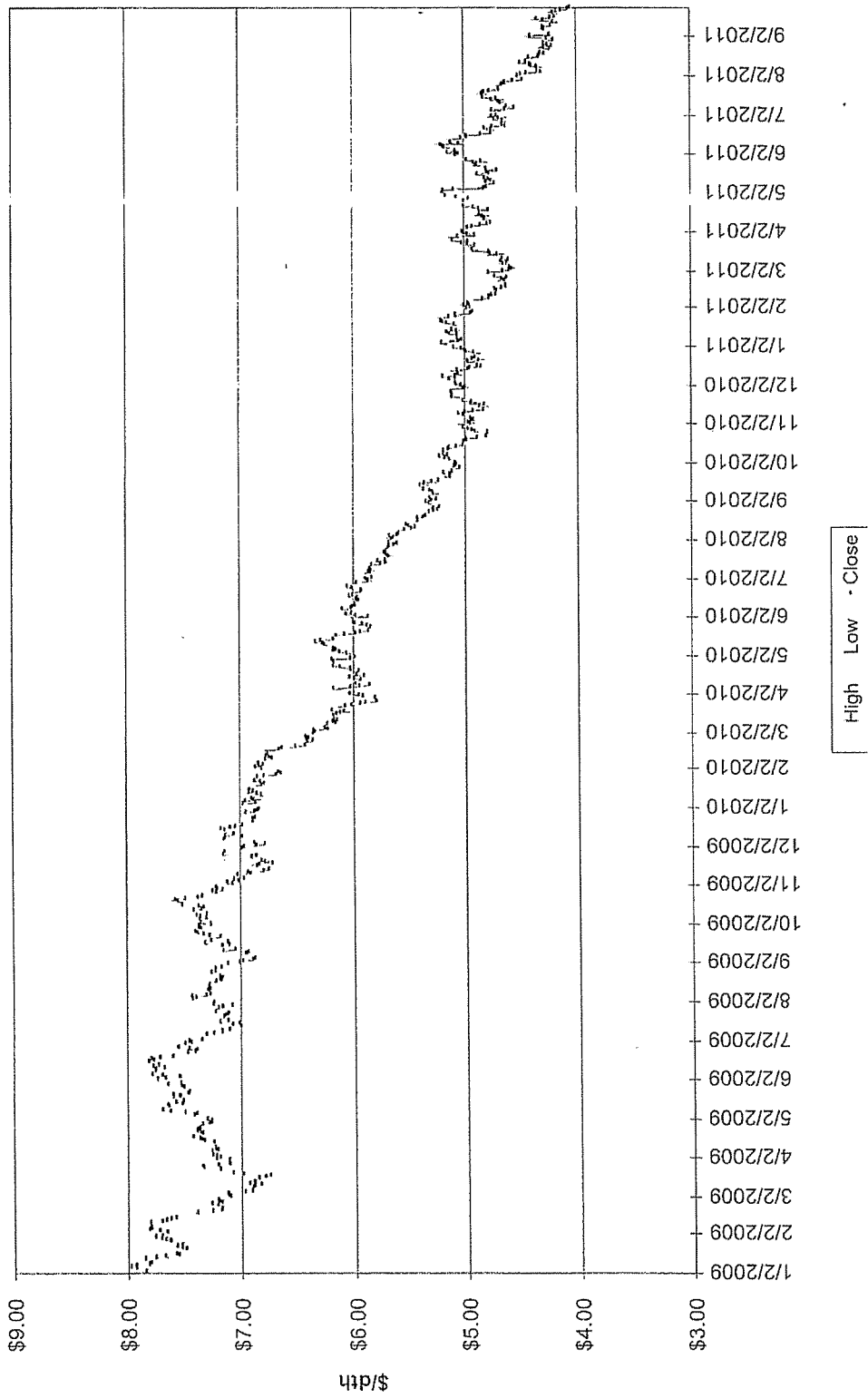
- **Natural Gas Demand Growth 2005 to 2030**
  - 90% of growth in power production
  - Gas—60% less emissions than coal
  - Gas growing at expense of coal
- **Unconventional Gas Resources**
  - Resources for about 100 years at current demand levels
  - Unconventional gas has extended coverage 60+ years
  - Further unconventional gains expected
- **Weather**
  - Dec-Feb 09-10 13<sup>th</sup> coldest out of 60 years
    - 10-11 16<sup>th</sup> coldest out of 60 years
  - Summer 2010 2<sup>nd</sup> hottest out of 60 years
  - 2011 Hottest out of 60 years
- **EPA Regulations**
  - Between 30 to 70 GW (10-20% of coal fleet) could be shuttered due to more stringent EPA regulations. Loss of 30GW of coal generation would increase demand by 7.2 Bcf/d.
  - 9 new environmental rules have either been or will be introduced by the EPA over the next 18 months.
- **Other**
  - Past 20 months has been a period of extreme abnormal weather
  - Increased demand has keep pace with production
  - Oil price is relevant again, drives producer preferences and potential gas production gains
  - Long-term growth in natural gas demand should be robust due to abundance, affordability and environmental benefits
  - The health of the demand scenarios will depend upon a concerted effort to inform and educate about the benefits of natural gas.

**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**September 7, 2011 Release**

Jan-09	5.24	Jan-10	5.83	Jan-11	4.49	Jan-12	4.33
Feb-09	4.51	Feb-10	5.32	Feb-11	4.09	Feb-12	4.24
Mar-09	3.96	Mar-10	4.29	Mar-11	3.97	Mar-12	4.19
Apr-09	3.49	Apr-10	4.03	Apr-11	4.25	Apr-12	4.23
May-09	3.83	May-10	4.14	May-11	4.31	May-12	4.17
Jun-09	3.80	Jun-10	4.80	Jun-11	4.55	Jun-12	4.17
Jul-09	3.38	Jul-10	4.63	Jul-11	4.42	Jul-12	4.16
Aug-09	3.14	Aug-10	4.32	Aug-11	4.05	Aug-12	4.19
Sep-09	2.97	Sep-10	3.89	Sep-11	4.00	Sep-12	4.25
Oct-09	4.00	Oct-10	3.43	Oct-11	4.00	Oct-12	4.40
Nov-09	3.66	Nov-10	3.71	Nov-11	4.07	Nov-12	4.48
Dec-09	5.34	Dec-10	4.25	Dec-11	4.23	Dec-12	4.77

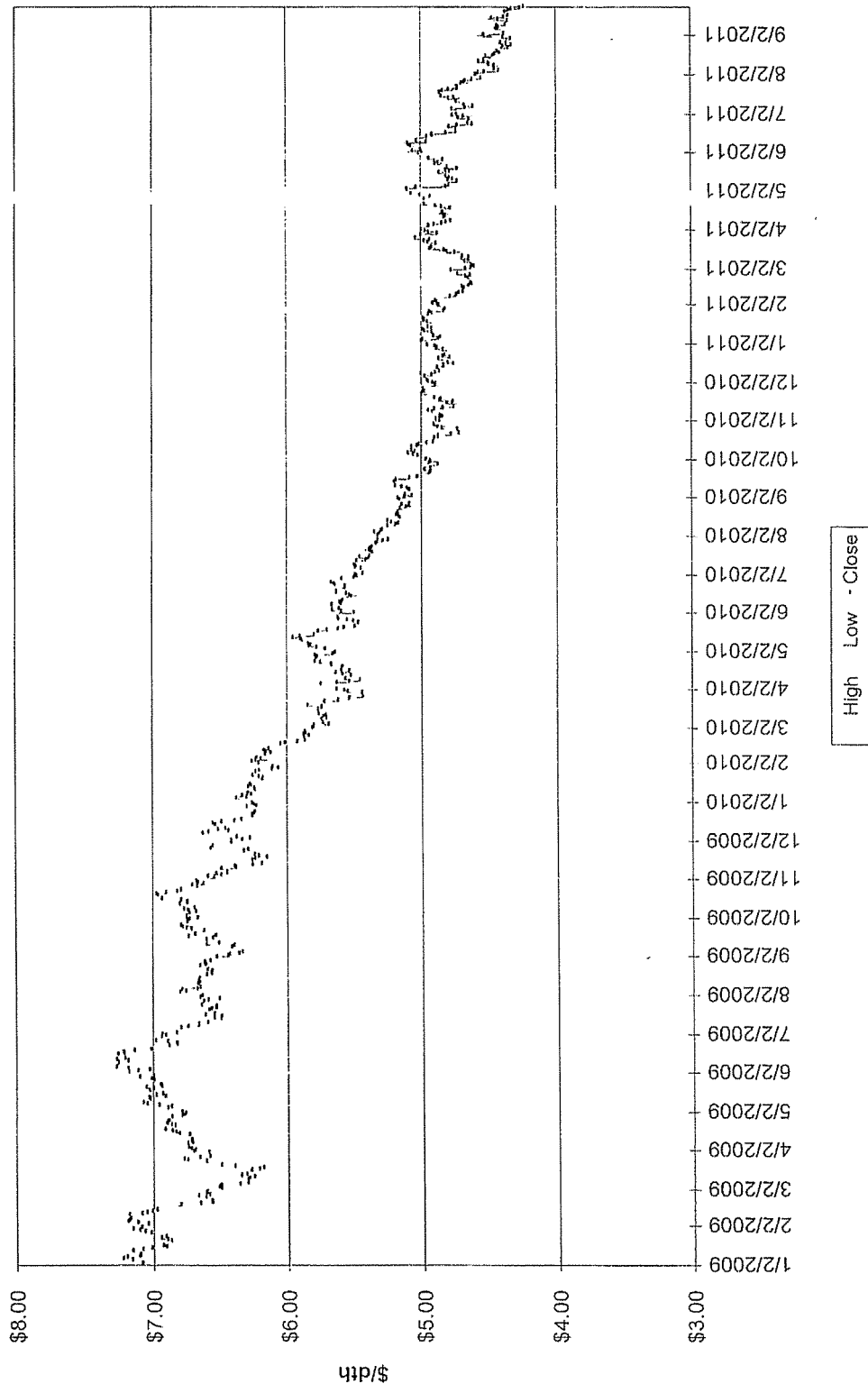


Winter Strip Nov11 - Mar12

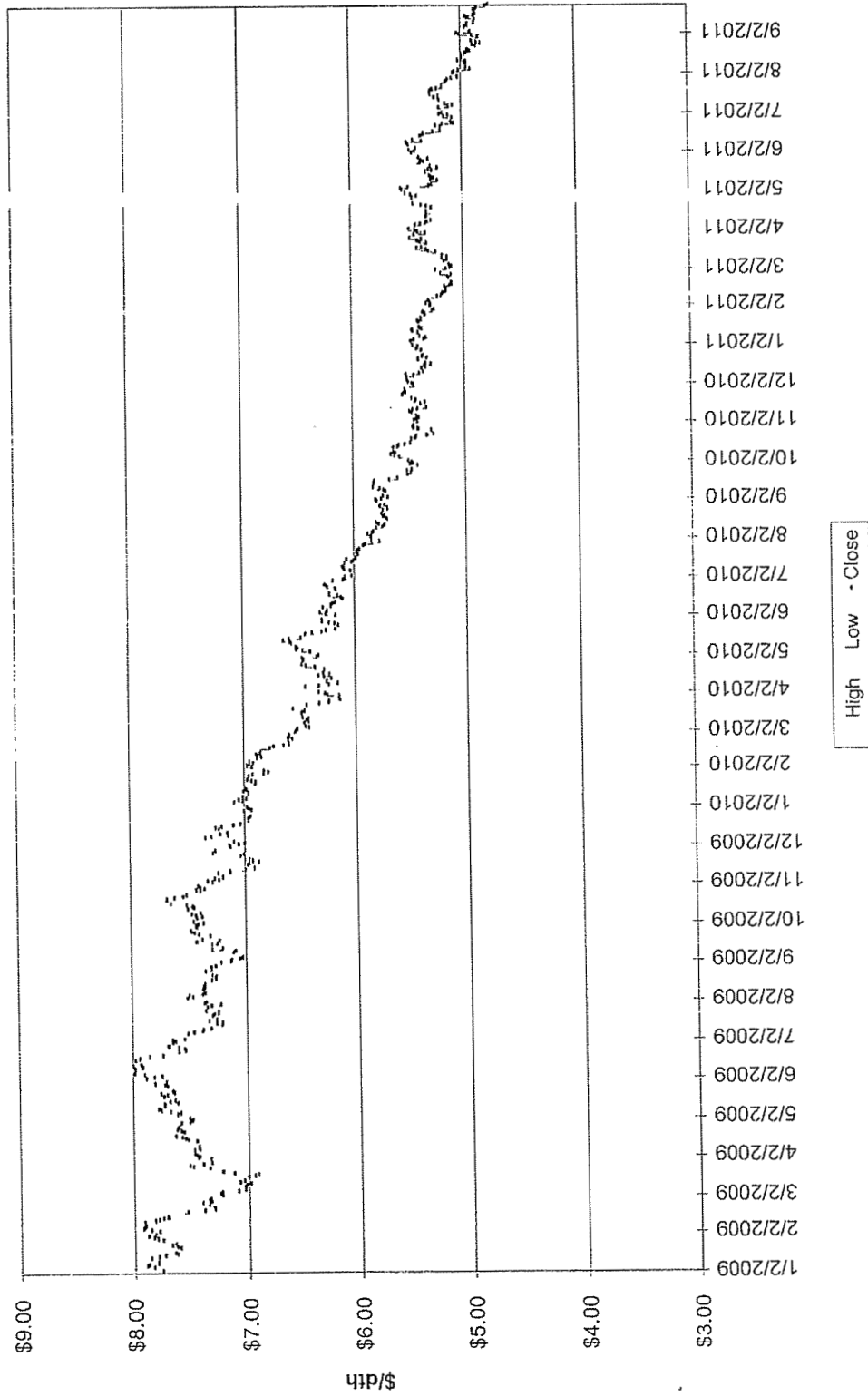




Summer Strip 2012



Winter Strip Nov12 - Mar13



# Gas Daily

Thursday, September 8, 2011

## EIA reduces gas price forecast, cites sluggish demand growth

The Energy Information Administration on Wednesday lowered its natural gas price forecast for the next two quarters and all of next year, with a fourth-quarter drop of 9 cents/MMBtu and a 2012 decline of 11 cents/MMBtu.

At the same time, EIA reduced its economic growth assumptions and predicted that total gas demand would rise just 1.8% to 67.3 Bcf/d this year and 0.6% to 67.7 Bcf/d in 2012.

In its September short-term energy outlook, EIA forecast Q3 Henry Hub spot prices at \$4.16/MMBtu, down from the August forecast of \$4.20/MMBtu. The agency projected Q4 prices at \$4.10/MMBtu, down from last month's forecast of \$4.19/MMBtu. It expects prices to be \$4.25/MMBtu in the first quarter of 2012, a 10-cent drop.

EIA also pegged full-year 2011 prices at \$4.20/MMBtu, down from the August outlook of \$4.24/MMBtu, and forecasted 2012 prices at \$4.30/MMBtu vs. last month's \$4.41/MMBtu.

Still, the agency expects prices to rise modestly next year compared with 2011, which "reflects some tightening in supply as production growth slows in 2012."

Regarding demand, EIA said "growth in the industrial and electric power sectors accounts for most of the growth in total consumption, with expected increases in 2011 to 18.5 Bcf/d (2.1%) and 20.7 Bcf/d (2.4%), respectively."

The agency said gas consumption for power generation fell from 29.7 Bcf/d in July to 29.2 Bcf/d in August, "as the extreme temperatures (411 cooling degree days in July) receded somewhat (to 350 cooling degree days in August)." Hurricane Irene, which ravaged the East Coast at the end of the month, also contributed to the downward pressure on demand, EIA added.

On the supply side, marketed gas production is expected to average 65.8 Bcf/d in 2011, a 6.4% increase over 2010. "The majority of this growth is centered in the onshore production in the Lower-48 States, which will more than offset steep projected declines in the federal Gulf of Mexico," said EIA, adding that Gulf production should fall 13.9% this year.

EIA expects that overall production will continue to grow in 2012, but at a slower pace — 1.7% to an average of 66.9 Bcf/d.

"Drilling activity has been resilient despite lower natural gas spot and futures prices," said the report, noting that the August 26 rig count "had rebounded to 898 active drilling rigs targeting natural gas, up from 866 on May 20." If this pattern holds, "production could grow more than expected in 2012."

Growing domestic gas production "has reduced reliance on natural gas imports and contributed to increased exports," EIA said. It now expects that pipeline imports of gas will fall by 4.1% to 8.7 Bcf/d during 2011 and by another 3.8% to 8.4 Bcf/d next year.

Projected US imports of liquefied natural gas are down from 1.2 Bcf/d in 2010 to 1 Bcf/d in both 2011 and 2012, while "pipeline exports to Mexico and Canada are expected to average 4.1 Bcf/d in 2011 and 4.2 Bcf/d in 2012, compared with 3.1 Bcf/d in 2010." — *Chris Newkumet, Kate Winston*

# Short-Term Energy Outlook

September 7, 2011 Release  
(Next update October 12, 2011)



## *Global Crude Oil and Liquid Fuels*

*Crude Oil and Liquid Fuels Overview.* The projected pace of global oil demand growth is lower in this month's Outlook due to less optimistic assumptions about global economic growth. The downward revision to oil demand growth relieves some of the potential oil market tightness that had been implied by previous forecast balances. Nonetheless, without a significant change in the outlook for supply, EIA expects markets to draw upon inventories to meet at least some of the growth in consumption over the fourth quarter of 2011 and beyond. In 2012, oil demand growth from countries outside of the Organization for Economic Cooperation and Development (OECD) is projected to outpace the growth in supply from producers that are not members of the Organization of the Petroleum Exporting Countries (OPEC), implying a need for OPEC producers to increase their output to balance the market.

The inherent uncertainty of the revised price forecast is evidenced by the various shocks to oil supply, demand, and prices that have occurred this year. Upside risks to the crude oil price outlook remain, particularly due to ongoing unrest in oil-producing regions and the possibility that non-OECD demand will be more resilient than expected. Yet downside risks arguably predominate, as fears persist about the rate of global economic recovery, contagion effects of the debt crisis in the European Union, and other fiscal issues facing national and sub-national governments. On the supply side, the possibility remains that Libya may be able to ramp up oil production and exports sooner than anticipated.

*Crude Oil Prices.* West Texas Intermediate (WTI) crude oil spot prices fell from an average of \$97 per barrel in July to \$86 per barrel in August. EIA has revised the projected oil price paths downward from last month's Outlook. EIA expects that the U.S. refiner average crude oil acquisition cost will average \$100 per barrel in 2011 and \$103 per barrel in 2012 compared with \$100 per barrel and \$107 per barrel for 2011 and 2012, respectively, in the previous Outlook.

Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2011-12

		Dth/Day					Total	% System Supply
		November	December	January	February	March		
<u>Duke Energy Ohio</u> Previously Hedged								
	Col Gulf Mainline							
	Col Gulf Mainline							
	Gulf South-DE Field Services							
	Col Gulf Mainline							
	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 Commercial Operations  
Hedging Program  
Market Indicators Summary  
October 20, 2011

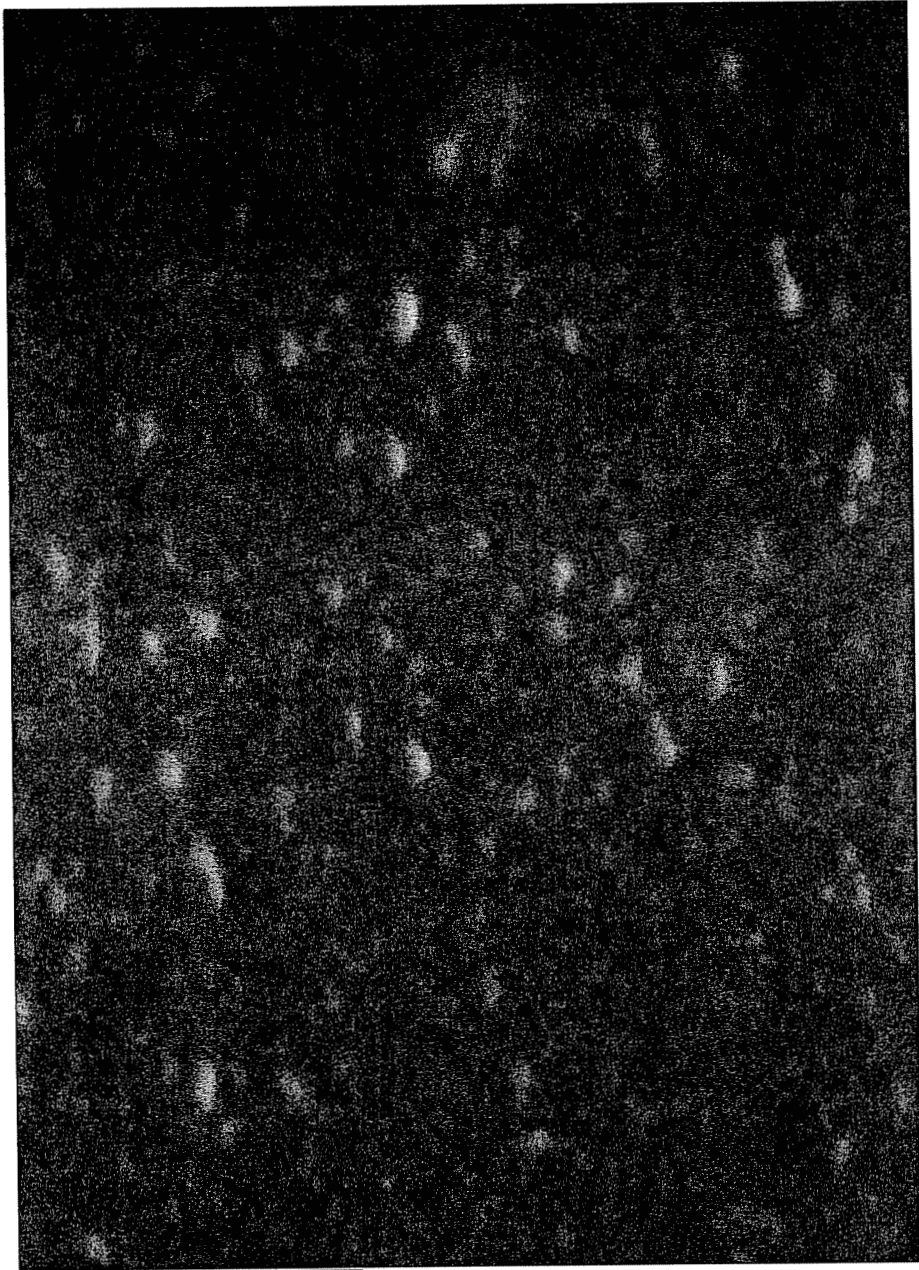
	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Dec 11--Feb 12)	↔	Long	NOAA predicting above average temperatures for December 2011--February 2012 for portions of the South-Central portion of CONUS. Below normal temperatures on West coast and Northern portions of CONUS. Equal chances of Above, Normal, or Below for the rest of CONUS.	12
Mid Term Forecast (30-60 days)	↑	Long	November is predicted to be 13.7% colder than normal based on 10 year normals and December weather is predicted to be 8.7% colder than normal. NOAA winter temperature projection--lower-48 States are forecasted to be 2% warmer during October through March compared to last year.	13
Short Term Forecast (6-10 days)	↑	Short	Much Below and Strong Below move from the West to the Eastern portions of CONUS during the period.	14
Tropical Storm Activity	↔	Short	No tropical cyclone activity expected during the next 48 hours	
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage injections for the week ending October 14th were 103 BCF. Storage levels are at 3.624 TCF which is 1.3% lower than last year and 3.2% higher than the 5 year average	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2011/12: ██████████ Summer 2012: \$██████████	↑	Long	GAS PRICE SCORECARD: November 2011--March 2012 US Production and Storage Levels remain bearish while Electric Generation and Industrial Sector demand are bullish.	16-17
Gas Daily	↑	Long	US gas production may be showing signs of moderating from its rapid pace. "The worst of the North American gas oversupply is behind us--US supply growth is expected to plateau and fall slightly in the second half of 2012 when the rig count falls sufficiently next year."	18-19
Gas Daily	↑	Long	"The talk of shale makes everyone think we're way oversupplied--the reality is that we're not. The signposts are already here." Signposts include: shift in drilling rigs away from gas fields, natural gas used in power generation, concerns about fracking, and LNG exports.	20
Gas Daily	↑	Long	"We think the supply-driven natural gas market will continue to be challenged over the next 12 months--Our current supply/demand forecast shows oversupplied market in 2012. 2011 price forecast \$4.15 and \$4.54 for 2012.	21
Gas Daily	↔	Long	Economic factors are not expected to increase gas demand this winter and that will likely result in flat prices. "When we weighted and combined all the different influences on supply and demand, the big picture that emerged for the coming winter appears to be a stable outlook for natural gas consumers."	22-23
<b>Government Agencies</b>				
Energy Information Administration Winter 2011/12: \$4.102 Summer 2012: \$4.280	↑	Long	The projected Henry Hub natural gas spot price averages \$4.148/MMBtu for 2011 and \$4.320.	24
<b>Technical Analysis</b>				
Winter 2011-12 Strip Chart	↔	Short	Closed at \$3.83	25
Summer 2012 Strip Chart	↔	Short	Closed at \$4.01	26
Winter 2012-13 Strip Chart	↔	Short	Closed at \$4.53	27
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to grow by 1.2 Bcf/d in 2011 and 0.5 Bcf/d in 2012, resulting from an increase in the industrial and electric power consumption	28
Supply	↔	Long	EIA expects average total production to increase by 6.7% to 66.0 Bcf/d in 2011. Production growth is forecast to continue at a much slower pace in 2012, increasing 2.1% to average 67.4 Bcf/d.	28
Oil Market	↑	Long	WTI spot prices fell from an average of \$97 per barrel in July to \$86 per barrel in August and September. EIA expects the U.S. cost of crude oil will average about \$99 per barrel in 2011 to \$98 per barrel in 2012.	28

Meeting Minutes: 412 Annex Conference Room - 1:00 pm  
Attendees: Jim Mehring, Jeff Kern, Terry Bates, Mitch Martin, Steve Niederbauer

Discussed market fundamentals including weather (end of the hurricane season), storage levels, PIRA and EIA price forecasts, analysts projections of gas prices, amount of supply available, economic influences on supply and demand and the current positions of the DEO and DEK Hedging Programs. Based on discussions, a decision was made that additional hedging is necessary at this time. Significant discussion took place regarding the amount and type of hedging that was recommended. Consensus was reached for the following: ██████████ Dth/d (OH) and ██████████ Dth/d (KY) for the Summer 2012 and ██████████ Dth/d OH and KY for Nov. 1, 2012--Oct. 31, 2013. In addition, discussed the results of the hedge completed September 29, 2011 for the storage injections on ██████████ to replace the withdrawals during the Winter 2011-2012.

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2010 - October 2011  
 As of 10/18/11

Nov-10 Dec-10 Jan-11 Feb-11 Mar-11 Apr-11 May-11 Jun-11 Jul-11 Aug-11 Sep-11 Oct-11



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

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

Embedded Hedged Cost  
 Winter  
 Summer

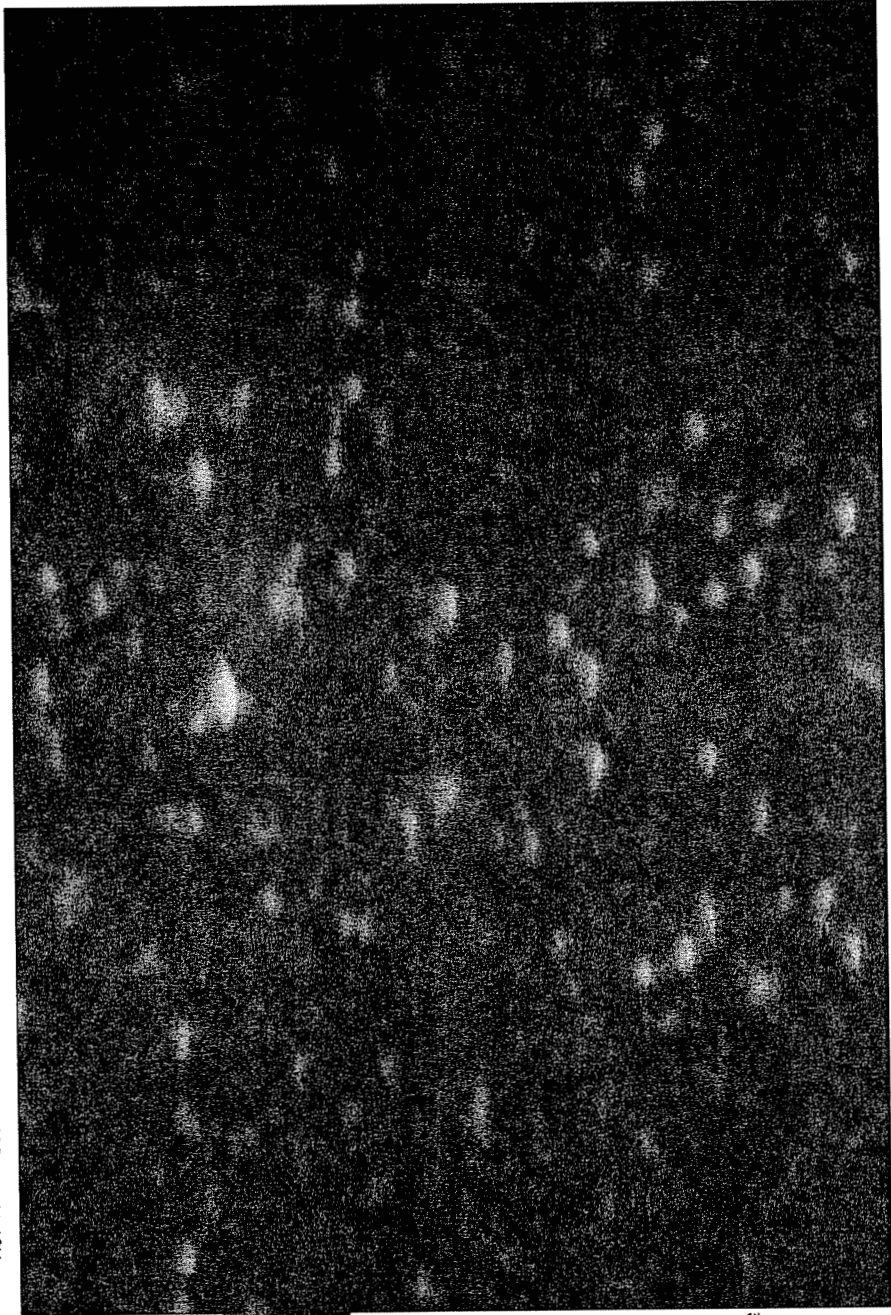
Estimated EGC per Dth at City Gate  
 Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

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

5

Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2011 - October 2012  
 As of 10/18/11

Nov-11 Dec-11 Jan-12 Feb-12 Mar-12 Apr-12 May-12 Jun-12 Jul-12 Aug-12 Sep-12 Oct-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  
 Fixed Price  
 Collar  
 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

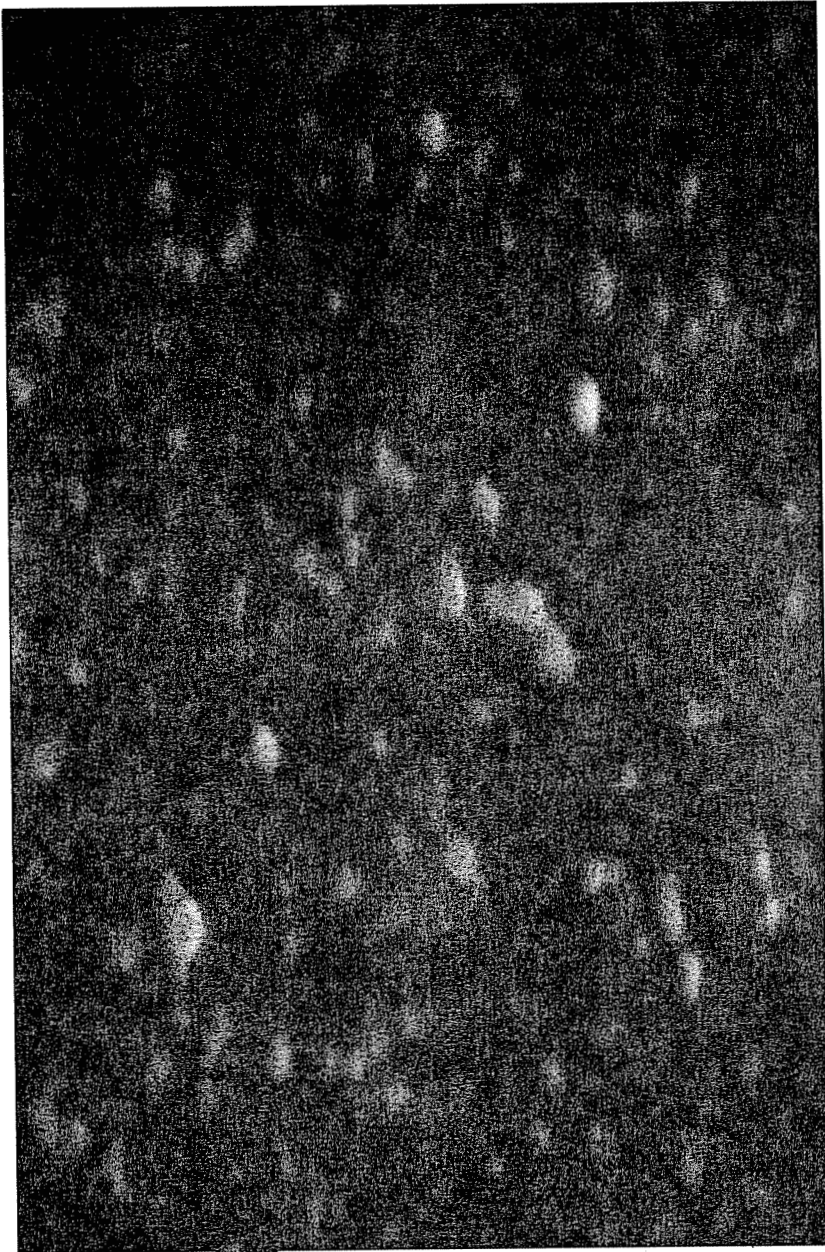
Amt. Hedged with Storage @ City Gate  
 Hedged (City Gate) (Dth)  
 Storage Withdrawal (Dth)  
 Market (Dth)  
 Total (incl. Injections) (Dth)  
 % Hedged & Storage  
 Seasonal %

(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 2012 - October 2013  
 As of 10/18/11

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  
 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 2013 - October 2014  
As of 10/18/11

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  
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.

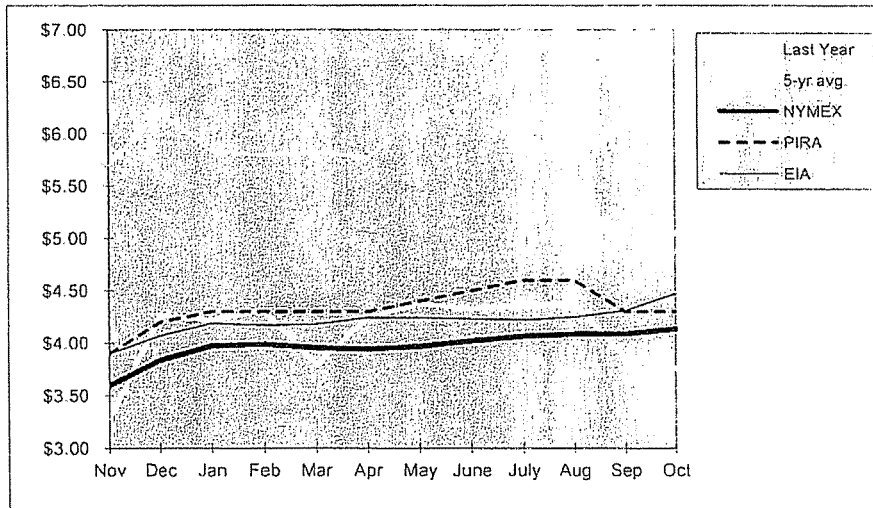
10/18/2011

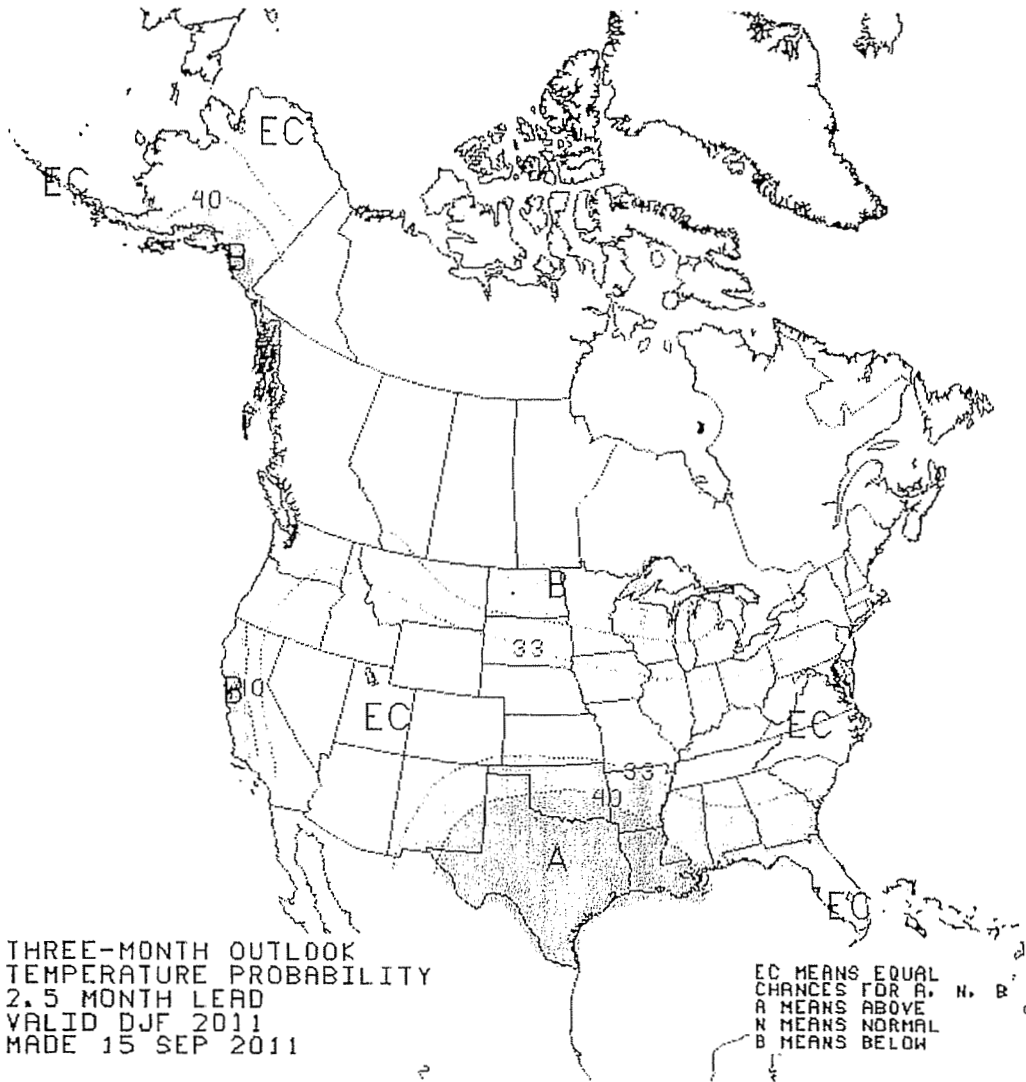
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (10/31/11)	
		Total Dth/day	Dth/mo	Required dth/day	Allowed dth/day
Apr-11					
May-11					
Jun-11					
Jul-11					
Aug-11					
Sep-11					
Oct-11					
Summer 2011					
Target Levels By March 31, 2011					
Nov-11					
Dec-11					
Jan-12					
Feb-12					
Mar-12					
Winter 11/12					
Target Levels By October 31, 2011					
Apr-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2011					
Nov-12					
Dec-12					
Jan-13					
Feb-13					
Mar-13					
Winter 12/13					
Target Levels By October 31, 2011					
Apr-13					
May-13					
Jun-13					
Jul-13					
Aug-13					
Sep-13					
Oct-13					
Summer 2013					
Target Levels By March 31, 2011					
Nov-13					
Dec-13					
Jan-14					
Feb-14					
Mar-14					
Winter 13/14					
Target Levels By October 31, 2011					

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

Historic Prices:							Hedged Prices	
	NYMEX Closing Price		PIRA	EIA	NYMEX		Ohio	Kentucky
	5-yr. avg. (06/07-10/11)	Last Year (2010-2011)						
Nov	\$5.69	\$3.29		\$3.900	\$3.597			
Dec	\$6.23	\$4.27		\$4.070	\$3.836			
Jan	\$5.84	\$4.22		\$4.190	\$3.972			
Feb	\$5.80	\$4.32		\$4.170	\$3.989			
Mar	\$5.83	\$3.79		\$4.180	\$3.955			
Apr	\$5.77	\$4.24		\$4.240	\$3.942			
May	\$6.15	\$4.38		\$4.240	\$3.968			
June	\$6.31	\$4.33		\$4.230	\$4.020			
July	\$6.61	\$4.36		\$4.220	\$4.064			
Aug	\$5.57	\$4.37		\$4.250	\$4.085			
Sep	\$4.84	\$3.86		\$4.310	\$4.090			
Oct	\$5.04	\$3.76		\$4.470	\$4.133			
12 Month Avg	\$5.81	\$4.10		\$4.206	\$3.971			
Summer Average				\$4.280	\$4.043			
Winter Average				\$4.102	\$3.870			





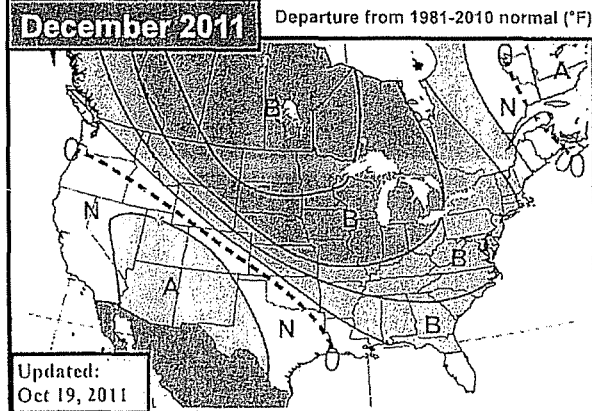
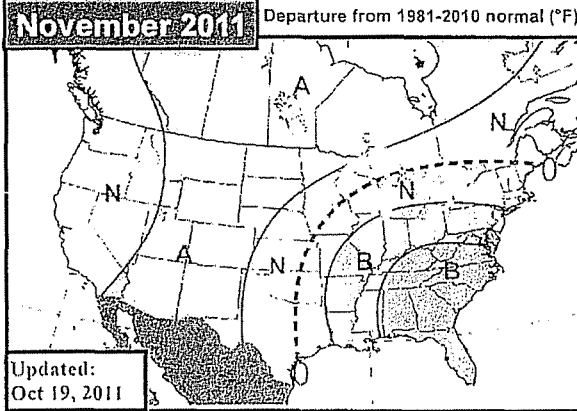
# EarthSat's 30-60 Day Outlook



Wednesday, October 19, 2011

Meteorologists: SS/BH/TH/RG

EarthSat Weather



**Previous**

**Colder in Florida**

More substantial changes were made to the forecast this week, as most were focused in the warmer direction over the West. That said, warmer tweaks were also made over the Western Midwest southward through Texas, and over the Northeast. The Mid-Atlantic, Eastern Midwest and Mid-South have all trended slightly colder. Pacific signaling such as the second-year La Nina continue to offer strong support for the forecast, but other factors such as a possible upper-latitude blocking event (perhaps starting later in the month) and the MJO would provide additional support. The establishment of -AO and/or -NAO blocking would help focus belows over the Eastern half, while allowing some potential warmth to develop over the West. There's some uncertainty as to how strong the MJO signal will be as November begins, however, progression into phases 3 and 4 would support warm anomalies over the northern tier. If the MJO emerges into phase 5 toward the back half of November, a widespread below-normal outcome over the Eastern half could be seen.

Nov GWHDD** Forecasts	*10Y Normal updated to '01-10	
Nov 2011 Fcst: <b>595.0</b>	10Y Normal*	523.4
	30Y Normal	555.7
	Nov-2010	548.8
Change -5	**National Pop-Weighted CDDs	

**Previous**

**No Changes**

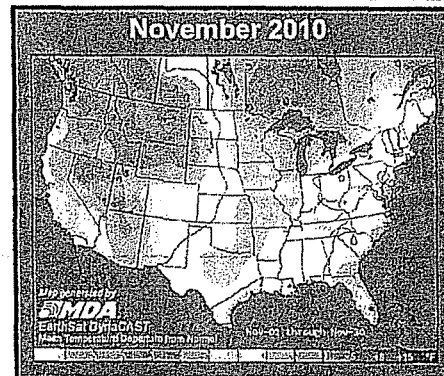
**Strong cold in the northern Plains**

This forecast features no changes, with enhanced belows still expected from western Canada through the Midwest and Interior East, a typical result for the first winter month of a second-year La Nina. A recent update on the MEI confirmed that the Nina continues to strengthen, and now ranks just short of moderate strength according to this metric, the set of all MEI analogs correlates with a comparably cold outlook for the Midwest and other parts of the Northern U.S. The -PDO seasonal signal nearly mirrors our forecast for widespread much below-normal anomalies from Alberta through the Ohio Valley. A possibly strong upper-latitude blocking event (very -AO and/or -NAO), perhaps aided by the recently-established -QBO (easterly phase) would also support the very cold forecast for the northern half of the U.S. It's important to note that not all second-year Nina analogs favor a cold outcome for the Eastern half, as the Decembers of 1971, 1974 and 1999 reveal, however, these years featured either very positive values of the AO or NAO and thus little-to-no blocking.

Dec GWHDD** Forecasts	*10Y Normal updated to '01-10	
Dec 2011 Fcst: <b>930.0</b>	10Y Normal*	855.3
	30Y Normal	867.5
	Dec-2010	938.7
No Change	**National Gas-Weighted HDDs	

**Oct so far**

The current 1-15 Day forecast now extends through the end of October and gives a good idea as to where our 30/60 Day outlook stands. Things have changed a bit since last week, with the current verification/forecast now showing widespread above across the West (which is warmer than both our 60 and 30 day outlooks). Meanwhile, our forecast seems to have underestimated the strength of cold air in the South as the cold push over the next several days drives temperatures down to 3-5F below normal thanks to the large scale dynamics of the unstable weather over the East. The final 30 Day outlook did anticipate a cooling trend in that region, but not nearly enough. The forecast was also too warm in Texas and parts of the southern Midwest. (It has done reasonably well in the northern Plains and upper Midwest, but looks to cool in the Northeast.)



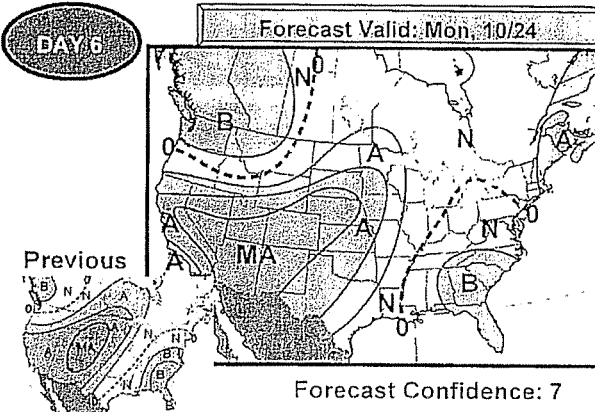
# 6-10 Day Forecast—Detailed

Wednesday, October 19, 2011

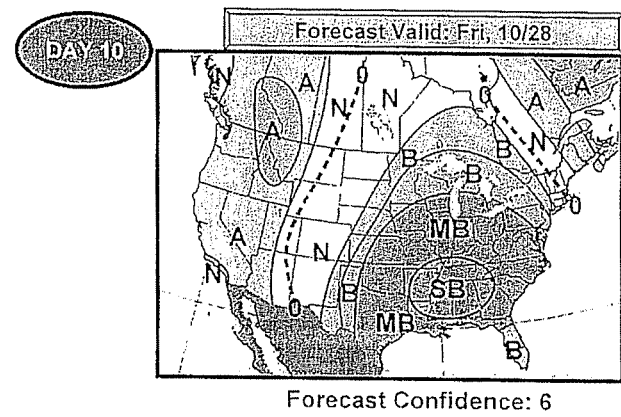
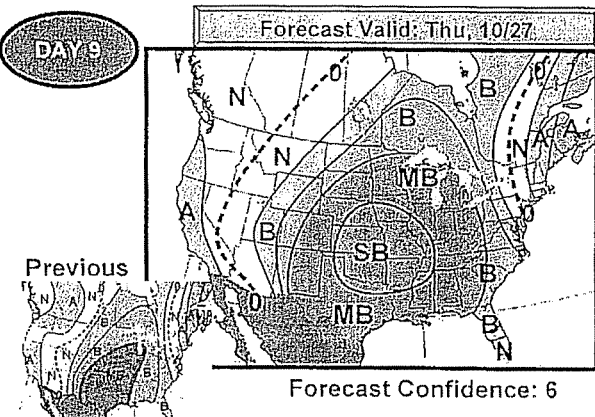
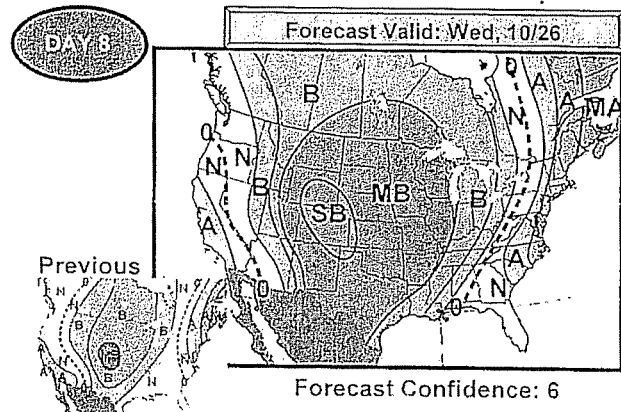
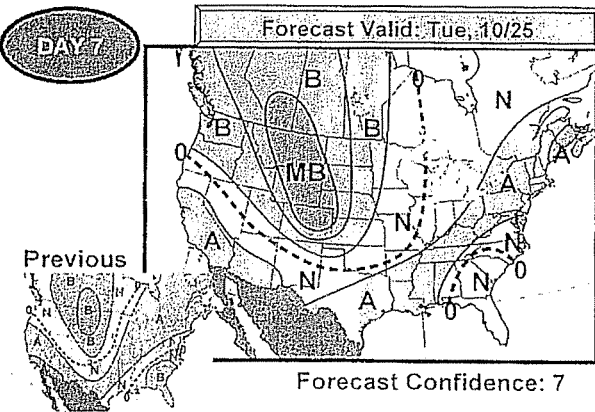
Meteorologist: AC/BH



## Forecast Temperature Deviations




*'Still Potentially Warmer in MW, NE Early'*  
**\*Strong Belongs Appear In Second Half Of Period\***  
 The warm air mass pushing through the Midwest and Northeast during the early part of the period could provide more warmth to these regions. Yet, the main weather feature is the cold air mass diving into the Plains, Midwest, Texas, and South through the second half of the period. Should this air mass have a better connection to the upper latitudes, a stronger cooling could occur. This set up would allow more widespread strong below normal readings through the latter part of the period for these areas. High pressure in the West could still inhibit any warming around mid period. However, this breaks down and a warm up builds late in the period, bringing above normal temperatures 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

 U.S. Energy Information Administration  
Independent Statistical and Analytical  
Home > Natural Gas > Weekly Natural Gas Storage Report

[Glossary](#)

Weekly Natural Gas Storage Report

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

Released: October 20, 2011 at 10:30 a.m. (eastern time) for the Week Ending October 14, 2011  
Next Release: October 27, 2011

Working Gas in Underground Storage, Lower 48

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

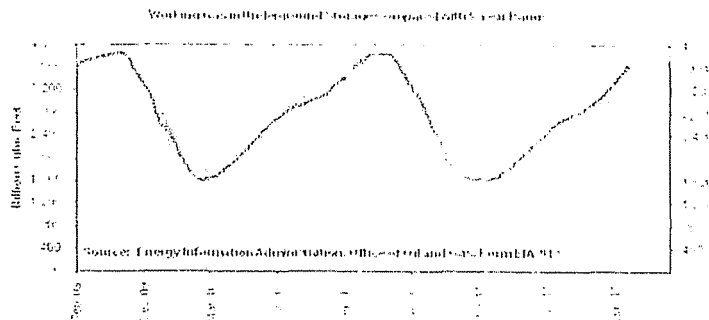
Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	10/14/11	10/07/11	Change	Year Ago (10/14/10)		5-Year (2006-2010) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,993	1,935	58	2,007	-0.7	1,988	0.3
West	491	482	9	507	-3.2	473	3.8
Producing	1,140	1,104	36	1,156	-1.4	1,050	8.6
<b>Total</b>	<b>3,624</b>	<b>3,521</b>	<b>103</b>	<b>3,670</b>	<b>-1.3</b>	<b>3,511</b>	<b>3.2</b>

Notes and Definitions

Summary

Working gas in storage was 3,624 Bcf as of Friday, October 14, 2011, according to EIA estimates. This represents a net increase of 103 Bcf from the previous week. Stocks were 46 Bcf less than last year at this time and 113 Bcf above the 5-year average of 3,511 Bcf. In the East Region, stocks were 5 Bcf above the 5-year average following net injections of 58 Bcf. Stocks in the Producing Region were 90 Bcf above the 5-year average of 1,050 Bcf after a net injection of 36 Bcf. Stocks in the West Region were 18 Bcf above the 5-year average after a net addition of 9 Bcf. At 3,624 Bcf, total working gas is within the 5-year historical range.

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- 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 2006 through 2010.  
Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

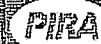
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Fedstats | USA.gov | Department of Energy



PIRA  
 North American Gas Price Overview  
 Per MMBTU  
 September 26, 2011 Release

Jan-09		Jan-10		Jan-11		Jan-12	
Feb-09		Feb-10		Feb-11		Feb-12	
Mar-09		Mar-10		Mar-11		Mar-12	
Apr-09		Apr-10		Apr-11		Apr-12	
May-09		May-10		May-11		May-12	
Jun-09		Jun-10		Jun-11		Jun-12	
Jul-09		Jul-10		Jul-11		Jul-12	
Aug-09		Aug-10		Aug-11		Aug-12	
Sep-09		Sep-10		Sep-11		Sep-12	
Oct-09		Oct-10		Oct-11		Oct-12	
Nov-09		Nov-10		Nov-11		Nov-12	
Dec-09		Dec-10		Dec-11		Dec-12	
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009- 2010	\$	Winter 2010- 2011	\$	Winter 2011- 2012	\$		

**North American Gas Forecast Monthly**



September 26, 2011

NATURAL GAS

**GAS PRICE SCORECARD: NOVEMBER 2011 – MARCH 2012**

Bearish Outlook

U.S. Supply Issues	Outlook	Commentary
U.S. Production		Despite our continued expectation of slower sequential growth in the months ahead, Y/Y gains in Lower 48 production will remain very sizable with some help from weather-driven weakness in 1Q11.
LNG Imports		No change from last month when we noted that LNG imports are expected to average 0.4-0.5 BCF/D less than a year ago, reflecting overseas tightness and much higher prices.
Canadian Trade		The ongoing strength of western Canadian gas production poses a newly emerging bearish risk for U.S. balances, but imports should lag year-earlier levels nonetheless.
Mexican Trade		Faster associated gas production growth is limiting the impact of declining non-associated gas and thereby providing a steadying influence on imports from the U.S.
Storage Levels		We continue to foresee an all-time record high level of gas remaining in storage by end-March 2012 unless Mother Nature comes up with another frigid surprise.
U.S. Demand Issues	Outlook	Commentary
Economy		By an increasingly narrow margin we are keeping next year's economy in the neutral column, but bearish risks continue to grow pointing to a double-dip recession.
Electric Generation (EG)		Until major questions regarding the implementation of the EPA's Cross-State Air Pollution Rule are resolved, the post Jan. 1 outlook for gas-fired EG will remain very unstable. But we continue to project a higher Y/Y gas burn for EG.
Industrial Sector		Industrial gas demand prospects are moving along the same increasingly unstable path facing the U.S. economy as a whole. The lack of incremental project spending in the gas-intensive chemical industry highlights downside risks to our demand forecast.
Res/Com Heating		The recent pattern of colder heating seasons looks like an absolute necessity to keep storage within a functional range during 1Q12, but last winter's GWHDDs remain a hard act to follow.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation		The NYMEX/ICE non-commercial net short position had steadily swelled since its recent bottom on May 31. While it looked like the March 2011 levels would be challenged, the upheaval in many financial markets last week is likely leading to a pullback in holdings, which should be evident in this Friday's update. Such buying will offer n/t price support.
Overall Assessment	Outlook	Commentary
Price Outlook		Outside of any additional speculative short-covering, near-term fundamentals suggest further price weakness ahead. Tighter balances by mid-October, though, due to seasonal heating gains, which last October's mild temps would magnify, appears to be the lone source of price support, barring other surprises. Tougher Y/Y temperature comparisons thereafter stand in the way of sustained gas price strength.

## *Inside FERC's Gas Market Report*

October 14, 2011

Barclays sees initial indications gas production is nearing plateau

US gas production may be showing signs of moderating from its rapid pace, Barclays Capital analysts believe, pointing to a flat monthly production picture reported by the Energy Information Administration and a large number of drilled but uncompleted wells.

"Even though production should continue to grow at the current rig count, in our view, the swelling number of drilled but uncompleted wells will most likely continue to decelerate production growth," reads Barclays' October 3 report. "The worst of the North American gas oversupply is behind us, in our view. US supply growth is expected to plateau and fall slightly in [the second half] of 2012 when the rig count falls sufficiently next year."

Barclays analysts believe that a lot will ultimately depend on any potential growth in rig efficiency. "If the industry does not boost rig efficiency at all this year or next, then our supply outlook would be cut by 0.6 Bcf/d in 2012, and US gas production would fall into decline early in 2012," they said.

Les Deman, an independent energy consultant, said supply indicators are somewhat ambiguous. EIA's monthly production numbers have been relatively flat on a net basis since April, which may be attributable to production management, drilling economics, seasonal factors and weakening demand. Also, EIA data shows that gas drilling has been essentially flat over the past 18 months.

At the same time, however, the monthly EIA-914 production data also shows that the gas production declines in conventional areas — such as offshore Gulf of Mexico, New Mexico and Oklahoma — have been offset by growth in the gas shale states of Louisiana, Texas and others, Deman said.

In addition, the EIA's 12-month year-over-year production series, an intensity index that removes most of the seasonal variability by a taking 12-month average of production and comparing it to the 12-month average a year ago, shows production is still in an upward trend as of July. "Perhaps you could argue that the rate is decelerating compared to the end of 2010," Deman said.

George Lippman, president at Lippman Consulting, said he also believes there are signs of the growth in production slowing down. Notably, this drilling rig slowdown has been particularly pronounced in the Haynesville Shale and other dry-gas plays as more rigs move to oil- or liquids-rich plays.

"Over the past year, September 2010 to September 2011, we see Lower-48 wellhead production growth of 3.7 Bcf/d," Lippman said. "I do not think we will see another 3.7 Bcf/d growth over the next 12 months."

The growth in production from the shales was responsible for this uptick, with shale production having increased by over 5.2 Bcf/d during this same period. US production will continue to grow, but at a much slower pace, perhaps half the rate that was seen so far, Lippman said.

Navigant Consulting analysts said in an August research note that it had predicted a supply plateau for 2011, an event that has not yet occurred. "What does appear to be the case is that producers are facing a good deal of uncertainty and that in order to continue with the efforts to unlock the potential of shale gas, large investments will continue to be required," they said.

According to Navigant analysts, a plateau will happen when capital markets become more reluctant to provide funds to producers in response to low gas prices.

While at the moment the growth in number of uncompleted wells means decelerating production, in the future — particularly over the next several years — the impact of uncompleted wells is unknown, said Barclays analysts. "We do not explicitly account for the elimination of this backlog in 2011 or 2012, even as the service industry is expected to add capacity. Working this backlog down to an expected normal level would add perhaps 1 Bcf/d or more of supply on an annual average basis. A rally in gas prices relative to oil would be one catalyst that could decrease this inventory."

Barclays analysts would view a supply plateau as a "psychological watershed event to the market." The significant price inflection point for gas will come when the market perceives that supply is set to peak, they said.

Such point would need a convincing proof, they added, which would come in the form of "hard data of an actual, measured production decline." — *Anastasia Gnezditskaia*

# Gas Daily

Friday, October 14, 2011

## Gas glut is exaggerated, Conoco exec maintains

Undeniably a game changer for the industry, the shale boom has also caused a misconception that the US is vastly oversupplied with gas, a ConocoPhillips Gas & Power executive said Wednesday in Los Angeles.

Speaking at the LDC Gas Forum Rockies & West, Jim Duncan said although global gas reserves are estimated at more than 6,000 Tcf, with 23% of that in North America, several factors could quickly throw supply/demand fundamentals off balance.

"The talk of shale makes everyone think we're way oversupplied," said Duncan, the firm's director of structured products. "The reality is that we're not. The signposts are already here."

One of the largest risks to gas supplies is the shift in drilling rigs away from gas fields to oil- and liquids-rich plays.

"We're losing natural gas wells because the return on investment is not there. There's more dimensional variability with crude oil. That's a problem if you think we're going to be oversupplied," Duncan said.

Another factor that could weigh heavily on gas supplies is power generation, Duncan said. A little more than a year ago, nuclear power was among the resources being considered for expansion to help meet the growing demand for power. The tsunami and subsequent events in Fukushima, Japan, however, may have stopped that movement in its tracks, Duncan said.

That, he said, could have a "direct impact" on gas as power generators rethink their strategies and as the retirement of coal plants, whether due to age or to environmental regulation, occurs.

Concerns about hydraulic fracking also create uncertainty about future gas supplies, especially if public opposition leads to increased regulation and more conventional, higher-cost production, Duncan said.

In addition, the prospect of LNG exports and an increase in natural gas vehicles also could disrupt the supply/demand equilibrium, he said.

And while Duncan said he remained bearish on gas prices, weather could provide some upswing to the market as the last two winters have set records in the US and last summer went down as the hottest in 60 years.

"In Houston, it never got above 120 degrees. It never got below 105 either," Duncan quipped. "The East Coast had a hurricane and an earthquake. This has not been a good year to be a Yankee. Some would say it's never a good year to be a Yankee."

"You would think this would have had a huge impact on the market, but it didn't. It was fairly muted," Duncan said. "Whether we like it or not, this market is defined by its supply/demand fundamentals."

# Gas Daily

Thursday, October 6, 2011

## Wells Fargo clips price forecast 15% for 2012

With natural gas supplies still ticking up despite the move towards liquids and demand slowing in a cooling economy, Wells Fargo's energy analyst slashed his natural gas price forecasts by double digits Wednesday.

"Wish we could start off this section pointing out how the market is wrong and how the outlook for natural gas has turned. But we can't," Wells Fargo's David Tameron said. "Plain and simple, it's just not very encouraging."

Tameron cut his 2011 price forecast 11% to \$4.15/MMBtu and then took a bigger whack of next year's call, trimming 15% to \$4.54. In 2013, Wells Fargo sees some tightening, but still cut its forecast 10% to \$5.15.

"Longer term, we still believe in natural gas and the power of the blue flame," Tameron said, noting positive signs with announcements of new chemical plants. "Power generation demand is still in the early innings of a secular uptrend," Tameron added, saying gas is cleaner and, often, cheaper than coal.

Despite these signs, Tameron cut 8% off his long-term gas price forecast, lowering it to \$5.50.

Tameron had thought gas production would decrease toward the end of this year as joint-venture arrangements ended and the need to drill leases to hold them by production slowed. But the JVs kept coming and producers kept drilling leases to hold-by-production, increasing the size of North America's gas supply, Tameron said.

"In addition, natural gas liquids prices are up dramatically versus a year ago, with the third quarter of 2011 up 39% from the third quarter 2010."

"Many of these plays that operators are saying are 'liquids-rich' are really just natural gas plays with an NGL component," Tameron explained. "Not saying the economics don't work, just saying that NGL prices rather than natural gas prices are likely the determining factors."

In his supply model, Tameron sees US gas production increasing 6% this year, to 62.4 Bcf/d, before slowing to 1.3% next year, with Canadian imports declining to around 6 Bcf/d and with liquefied natural gas imports staying flat this year at less than 1 Bcf/d.

While industrial demand should tick up 2.3% to 18.5 Bcf/d this year, demand from the residential, commercial and power sectors are all expected to be flat, Tameron said.

"We think the supply-driven natural gas market will continue to be challenged over the next 12 months," Tameron said. "Our current supply/demand forecast shows another oversupplied market in 2012. We are currently forecasting full-year supply to exceed demand by 1.8 Bcf/d [in 2012], although we note this im-balance is front-end loaded." — Bill Holland

# Gas Daily

Wednesday, October 5, 2011

## NGSA expects flat demand, prices this winter

Economic factors are not expected to increase gas demand this winter and that will likely result in flat prices, the Natural Gas Supply Association said Tuesday in its annual Winter Outlook.

"When we weighed and combined all the different influences on supply and demand, the big picture that emerged for the coming winter appears to be a stable outlook for natural gas consumers," said Skip Horvath, president and CEO of NGSA

NGSA expects the economy and the weather, two factors that most influence winter demand, to place subtle downward pressure on market prices this winter. The unemployment rate "is not getting any better," he noted.

Manufacturing is projected to improve by 2.7% this winter compared to 6.1% last winter. The projected increase, he said, "is better than nothing."

At the same time, supply and storage data suggest a mix of moderate downward to flat pressure on gas prices, Horvath said.

All the factors the NGSA considers are interrelated and a change in any one of them could influence all of them. "This year, we see the weather as the most influential factor," he said. "Of course, it's also the most difficult to predict."

NGSA said demand from residential and commercial customers is expected to modestly decrease from 38.2 Bcf/d last winter to 35.8 Bcf/d this coming winter.

Horvath said the National Oceanic and Atmospheric Administration has forecast comparatively warmer temperatures for most of the country. Energy Ventures Analysis has predicted the upcoming winter will be 3% warmer than last winter, he added.

Demand from the electric sector is expected to modestly increase —17.3 Bcf/d this winter compared with 17.0 Bcf/d last winter, Horvath noted. The increase is due to the low price of natural gas relative to the price of coal, he said, adding that fuel switching from coal to gas has been an ongoing phenomenon for the last three years.

"Production is anticipated to set a record this winter, as producers concentrate on liquids-rich shale formations," he said. "In fact, the data shows that shale wells are yielding ever greater amounts of natural gas."

Average winter production last winter was 60 Bcf/d. This coming winter, he said production is forecast to be 63.1 Bcf/d. He pointed out that liquefied natural gas imports are expected to be halved from 1.3 Bcf/d to 0.6 Bcf/d. Canadian imports are expected to slip to 5.9 Bcf/d from 6.1 Bcf/d because the Canadians are using more gas to develop their shale oil reserves.

Shale gas production now accounts for 26% of the total gas production in the United States, Horvath said, adding that he expected to see it increase "soon" to 30% of total US gas production.

Even though production is up, the amount of gas placed in storage is expected to decline. Horvath said 3,847 Bcf of gas was injected into storage for use last winter. NGS&A predicts 3,800 Bcf will be put in storage before the heating season starts in November.

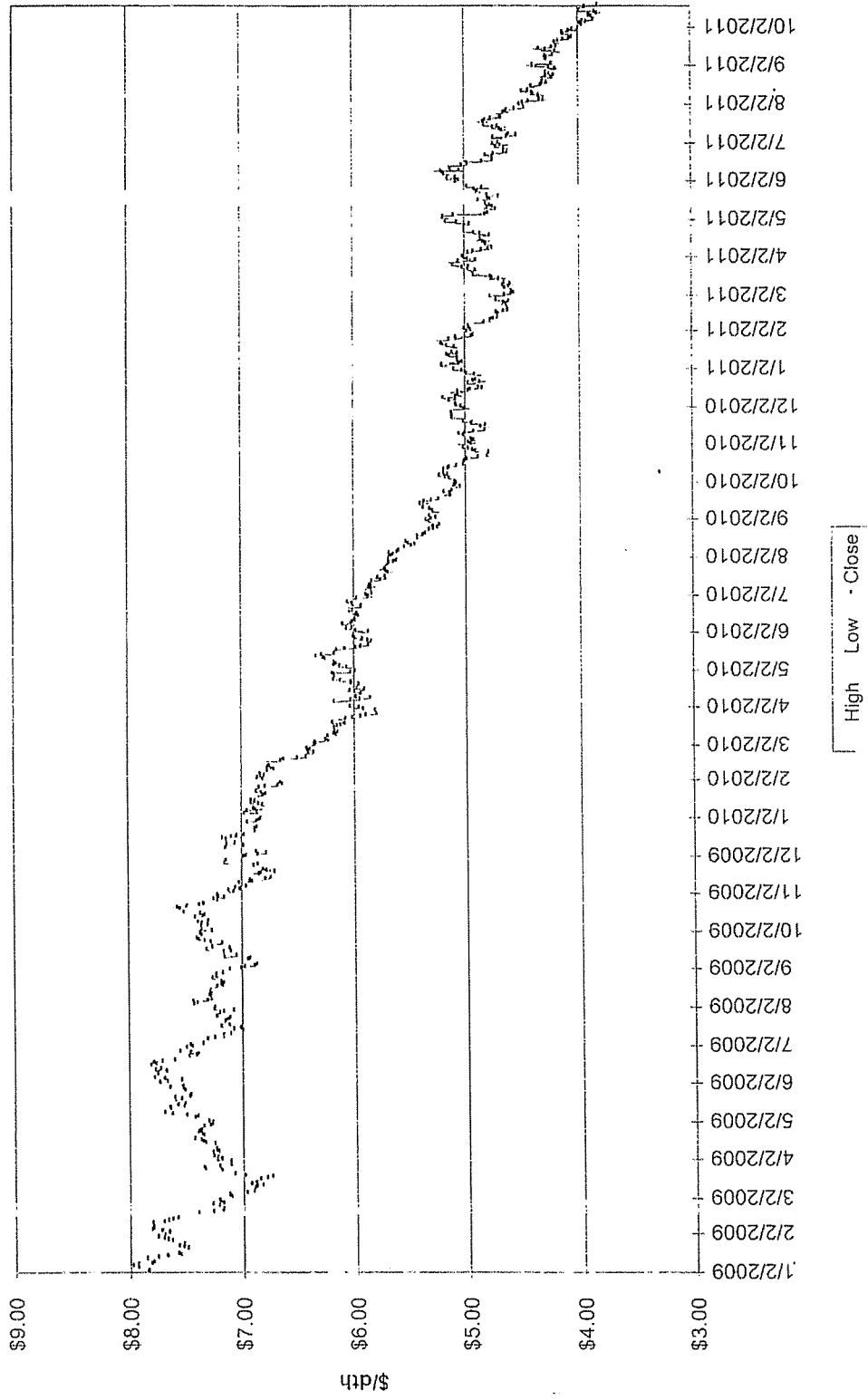
The decline in gas storage indicates gas customers are more confident in the industry's ability to deliver gas as it is needed this winter, he said. — *Rodney White*



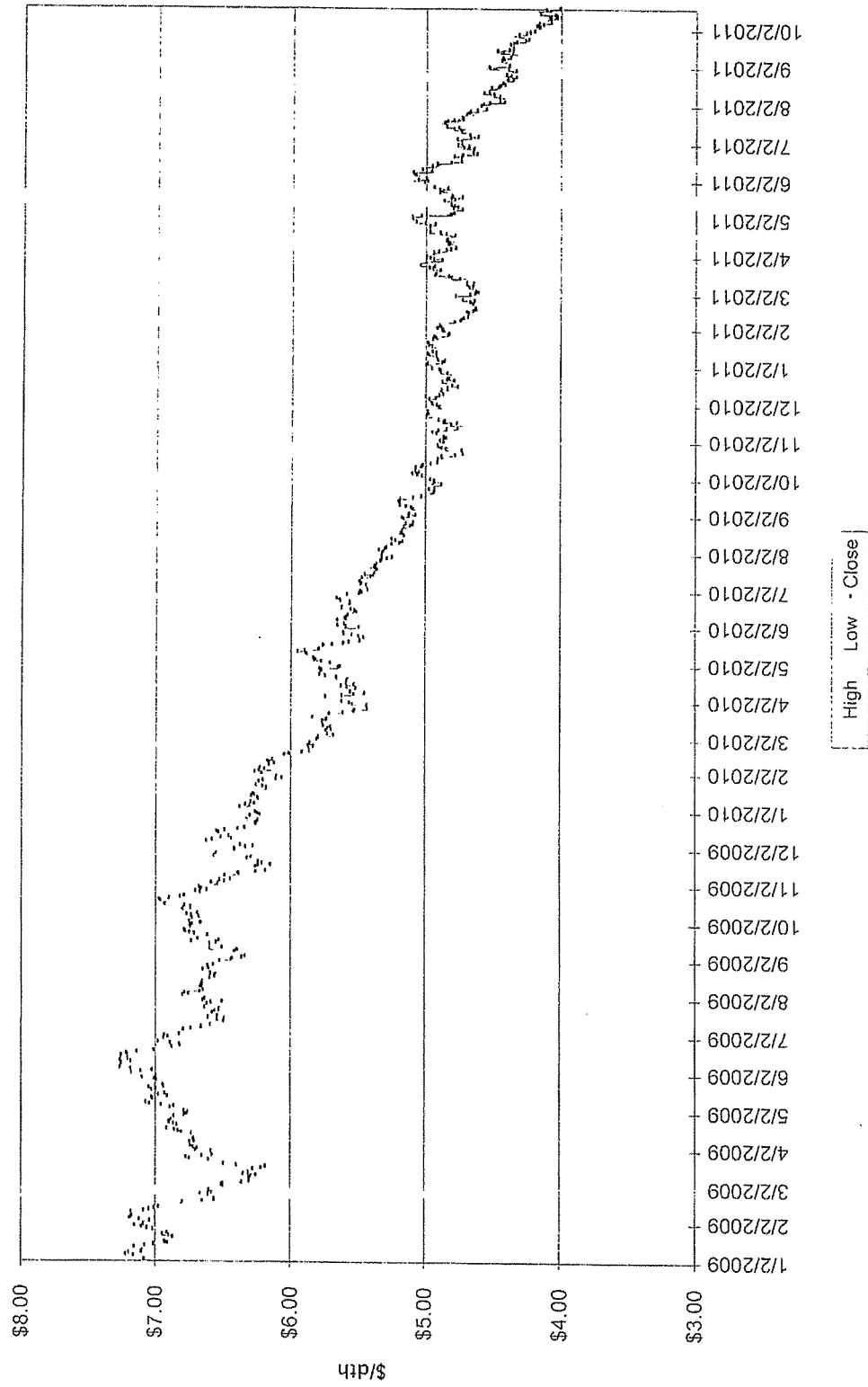
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**October 12, 2011 Release**

Jan-09	5.24	Jan-10	5.83	Jan-11	4.49	Jan-12	4.19
Feb-09	4.51	Feb-10	5.32	Feb-11	4.09	Feb-12	4.17
Mar-09	3.96	Mar-10	4.29	Mar-11	3.97	Mar-12	4.18
Apr-09	3.49	Apr-10	4.03	Apr-11	4.25	Apr-12	4.24
May-09	3.83	May-10	4.14	May-11	4.31	May-12	4.24
Jun-09	3.80	Jun-10	4.80	Jun-11	4.55	Jun-12	4.23
Jul-09	3.38	Jul-10	4.63	Jul-11	4.42	Jul-12	4.22
Aug-09	3.14	Aug-10	4.32	Aug-11	4.05	Aug-12	4.25
Sep-09	2.97	Sep-10	3.89	Sep-11	3.90	Sep-12	4.31
Oct-09	4.00	Oct-10	3.43	Oct-11	3.78	Oct-12	4.47
Nov-09	3.66	Nov-10	3.71	Nov-11	3.90	Nov-12	4.55
Dec-09	5.34	Dec-10	4.25	Dec-11	4.07	Dec-12	4.79
Average 2009	\$ [REDACTED]	Average 2010	\$ [REDACTED]	Average 2011	\$ [REDACTED]	Average 2012	\$ [REDACTED]
Summer 2009	\$ [REDACTED]	Summer 2010	\$ [REDACTED]	Summer 2011	\$ [REDACTED]	Summer 2012	\$ [REDACTED]
Winter 2009-2010	\$ [REDACTED]	Winter 2010-2011	\$ [REDACTED]	Winter 2011-2012	\$ [REDACTED]		

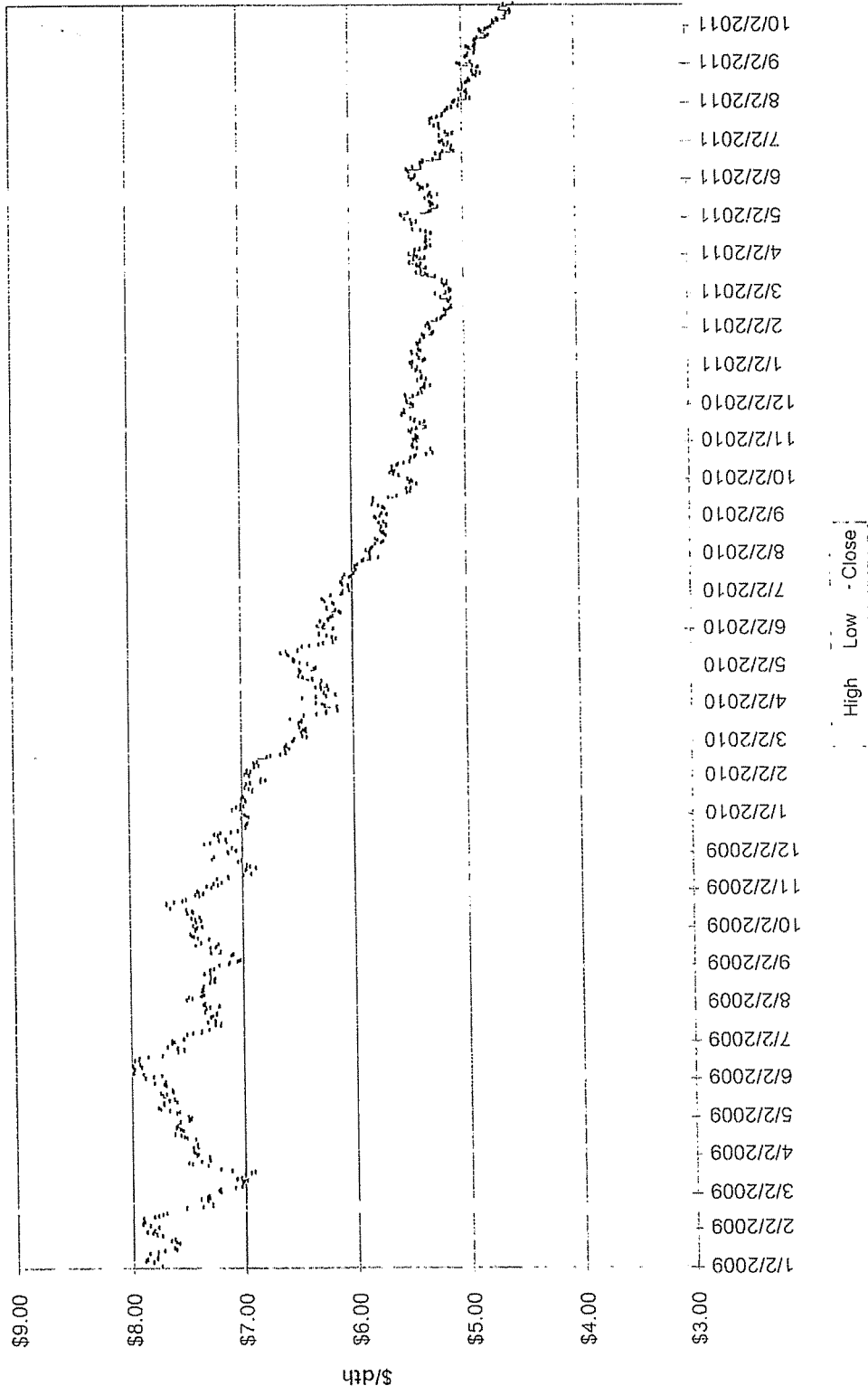
Winter Strip Nov'11 - Mar'12



Summer Strip 2012



Winter Strip Nov12 - Mar13



# Short-Term Energy and Winter Fuels Outlook

October 12, 2011 Release  
(Next update November 8, 2011)

## Natural Gas

U.S. Natural Gas Consumption. Projected natural gas consumption increases by an average 1.2 billion cubic feet per day (Bcf/d) in 2011 and 0.5 Bcf/d in 2012, with growth in the electric power and industrial sectors driving the increases. Projected natural gas consumption for electricity generation increases by 0.36 Bcf/d and 0.37 Bcf/d in 2011 and 2012, respectively. EIA expects consumption in the industrial sector to rise from 18.1 Bcf/d to 18.5 Bcf/d in 2011 and 18.6 Bcf/d in 2012, as the projected natural-gas-weighted industrial production index also continues to rise but at a slowing rate.

Natural gas consumption for the third quarter of 2011 averaged an estimated 57.9 Bcf/d, with consumption in the electric power sector making up almost half of the total. There were an estimated 942 cooling degree-days for the third quarter 2011, about 22 percent more than the 30-year normal, and above the 930 cooling degree-days for the record-breaking heat of the third quarter of 2010.

U.S. Natural Gas Production and Imports. EIA expects marketed natural gas production to average 66.0 Bcf/d in 2011, a 4.2 Bcf/d (6.7 percent) increase over 2010. The entirety of this growth is coming from increases in onshore production in the lower 48 States, which will more than offset a steep year-over-year decline of over 0.9 Bcf/d (15 percent) in the Federal Gulf of Mexico (GOM) and a small decline in Alaska. EIA expects that overall production will continue to grow in 2012, but at a slower pace, increasing 1.4 Bcf/d (2.1 percent) to an average of 67.4 Bcf/d.

## Global Crude Oil and Liquid Fuels

Crude Oil Prices. West Texas Intermediate (WTI) crude oil spot prices fell from an average of \$97 per barrel in July to \$86 per barrel in August and September. The WTI spot price began October below \$80 per barrel. EIA revised the projected oil price paths downward from last month's *Outlook*. EIA expects that the U.S. refiner average crude oil acquisition cost will average about \$99 per barrel in 2011 and \$98 per barrel in 2012 compared with \$100 per barrel and \$103 per barrel for 2011 and 2012, respectively, in last month's *Outlook*.

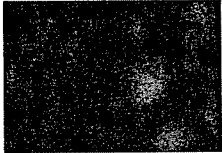
## Highlights

EIA projects average household heating expenditures for natural gas, propane, and heating oil will increase by 3 percent, 7 percent, and 8 percent, respectively, this winter (October 1 to March 31) compared with last winter, while electricity heating expenditures fall by less than 1 percent. Average expenditures for households that heat with oil are forecast to be higher than in any previous winter.

Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2011-12

Duke Energy Ohio

Previously Hedged

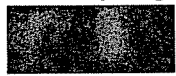


Col Gulf Mainline  
 Col Gulf Mainline  
 Gulf South-DE Field Services  
 Col Gulf Mainline  
 Col Gulf Mainline  
 Tex Gas Zone 1

Total  
 System Supply

Duke Energy Kentucky

Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Col Gulf Mainline

Total  
 System Supply

Duke Energy--Total

Previously Hedged

Total

	November	December	Dth/Day January	February	March	Total	% System Supply
Duke Energy Ohio							
Duke Energy Kentucky							
Duke Energy--Total							

Gas Commercial Operations  
Hedging Program  
Market Indicators Summary  
November 17, 2011

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Dec 11–Feb 12)	↔	Long	NOAA predicting above average temperatures for December 2011--February 2012 for portions of the South-Central portion of CONUS. Below normal temperatures on West coast and Northern portions of CONUS. Equal chances of Above, Normal, or Below for the rest of CONUS.	12
Mid Term Forecast (30-60 days)	↔	Long	December is predicted to be 2.3% colder than normal based on 10 year normals and January weather is predicted to be 5.2% colder than normal.	13
Short Term Forecast (6-10 days)	↓	Short	Above, Much Above and Strong Above move from the West to the Eastern portions of CONUS during the period.	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage injections for the week ending November 11th were 19 BCF. Storage levels are at 3.850 TCF which is 0.4% higher than last year and 6.2% higher than the 5 year average.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2011/12: ██████ Summer 2012: ██████	↑	Long	GAS PRICE SCORECARD: January 2012--March 2012 US Production and Storage Levels remain bearish while Electric Generation and Industrial Sector demand are bullish.	16-17
Gas Daily	↑	Long	Key factors impacting the US gas market through 2015 include: environmental regulations for power plants, hydraulic fracturing and LNG exports. These factors to lead to a higher-price gas environment by 2015.	18
Gas Daily	↓	Long	Poll results show that less than 50% of utility executives believe shale gas is a "game-changer". "Dash to gas" that was expected for electric generation due to environmental rules now seeing a "slow jog to gas" based on low gas prices.	19
Gas Daily	↑	Long	"We now foresee a surplus emerging this month that will likely persist through most of 2012." "This inventory hang-over largely reduces the scope for a winter price rally and potentially, opportunities for gas prices to firm up materially in 2012."	20
Gas Daily	↑	Long	"In the absence of a very cold winter, we expect natural gas prices to stay low because of record-setting production, high storage levels and a weak demand picture." 2012 price of gas to average \$4.30/Mmbtu.	21
<b>Government Agencies</b>				
Energy Information Administration Winter 2011/12: \$3.930 Summer 2012: \$4.079	↑	Long	The projected Henry Hub natural gas spot price averages \$4.094/MMBtu for 2011 and \$4.128. Winter natural gas futures prices at lowest levels since 2001-2002.	22-23
<b>Technical Analysis</b>				
Summer 2012 Strip Chart	↔	Short	Closed at \$3.63	24
Winter 2012-13 Strip Chart	↔	Short	Closed at \$4.17	25
Summer 2013 Strip Chart	↔	Short	Closed at \$4.24	26
Winter 2013-14 Strip Chart	↔	Short	Closed at \$4.66	27
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to grow by 1.7% to 67.1Bcf/d in 2011 and grow 1.1% to 67.9 Bcf/d in 2012, resulting from an increase in the industrial and electric power consumption.	28
Supply	↔	Long	EIA expects average total production to increase by 6.1% to 65.6 Bcf/d in 2011. Production growth is forecast to continue at a much slower pace in 2012, increasing 2.0% to average 66.9 Bcf/d.	28
Oil Market	↔	Long	WTI spot prices fell from an average of \$110 per barrel in April to \$86 per barrel in August. EIA expects the U.S. cost of crude oil will average about \$100 per barrel in 2011 and 2012.	28

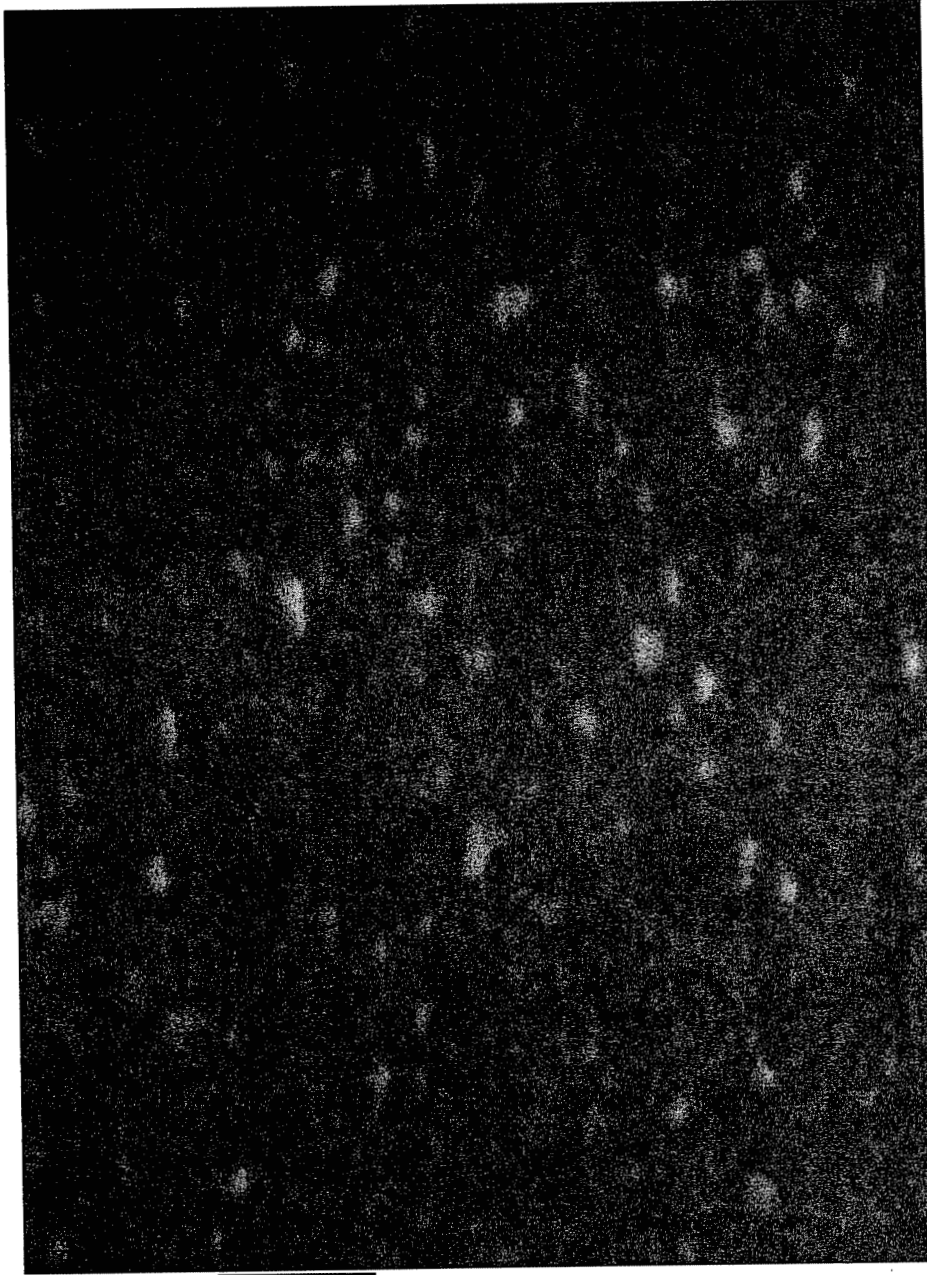
Meeting Minutes: 412 Annex Conference Room - 1:00 pm

Attendees: Jeff Kern, Mike Brumback, 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. Discussed the two deals that Duke Ohio and Duke Kentucky entered into since the last hedging meeting: Called three suppliers to provide ██████ dth/d for DEO and ██████ dth/d for DEK for the period 11/1/2012--10/31/2013 at Columbia Gulf Mainline. The supplier and their bids were: ██████ \$█████, ██████ \$█████ and ██████ \$█████. ██████ was awarded the deal. Called three suppliers to provide ██████ dth/d for DEO and ██████ dth/d for DEK for the period 4/1/2012--10/31/2012 at Columbia Gulf Mainline. The suppliers were asked to provide a Floor for a Costless Collar with a provided Ceiling of \$█████. The suppliers and their bids were: ██████, ██████ and ██████. ██████ of was the lowest and it was accepted. Based on previously discussed factors, a decision was made to hedge additional volumes at this time. After significant discussion, agreement was reached to contact suppliers to provide the following: Winter 12/13--DEO ██████ dth/d, DEK ██████ dth/d and Winter 13/14--DEO ██████ dth/d, ██████ dth/d.

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2011 - October 2012  
As of 11/16/11

Nov-11 Dec-11 Jan-12 Feb-12 Mar-12 Apr-12 May-12 Jun-12 Jul-12 Aug-12 Sep-12 Oct-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  
Collar  
Collar  
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

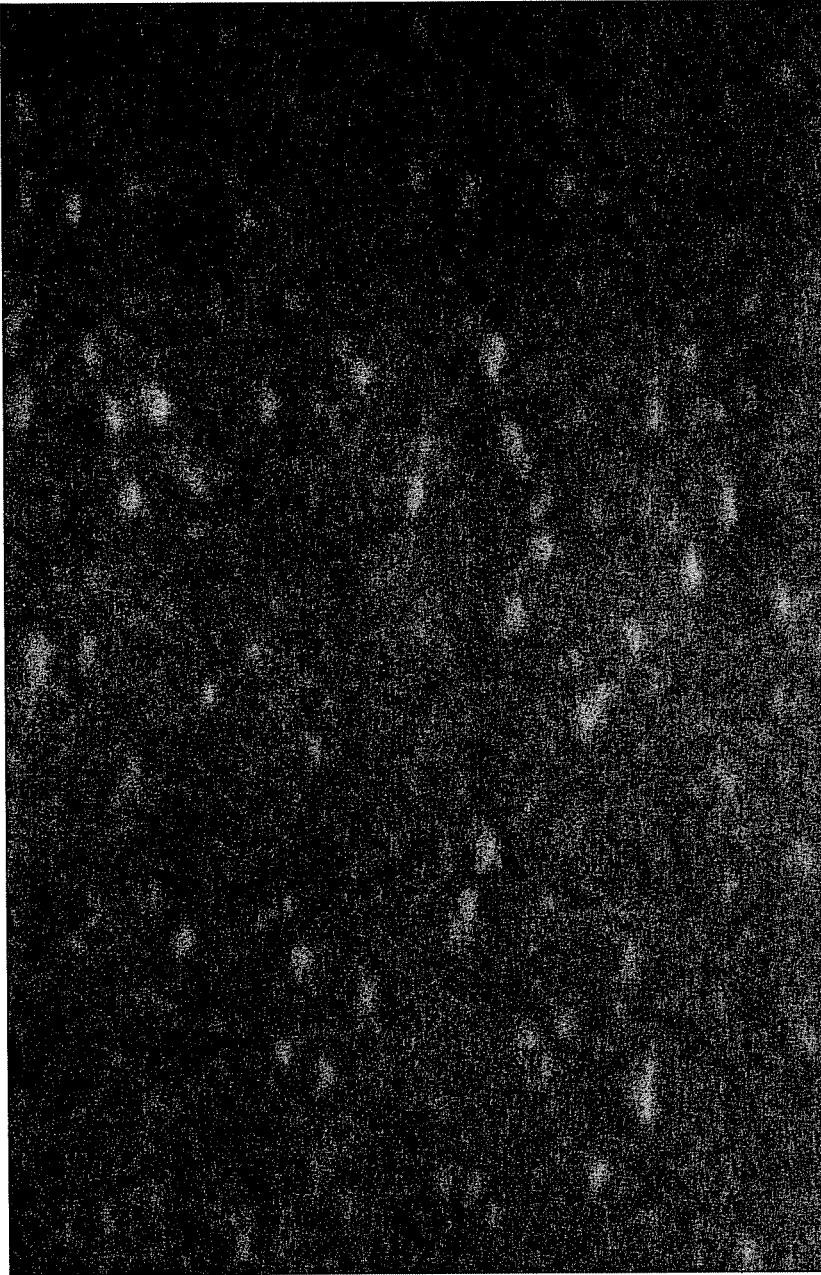
Amt. Hedged with Storage @ City Gate  
Hedged (City Gate) (Dth)  
Storage Withdrawal (Dth)  
Market (Dth)  
Total (incl. Injections) (Dth)  
% Hedged & Storage  
Seasonal %

(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 2012 - October 2013  
 As of 11/16/11

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  
 Total Hedged (sum/day)  
 Total Hedged (dth)

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

Embedded Hedged Cost  
 Winter  
 Summer

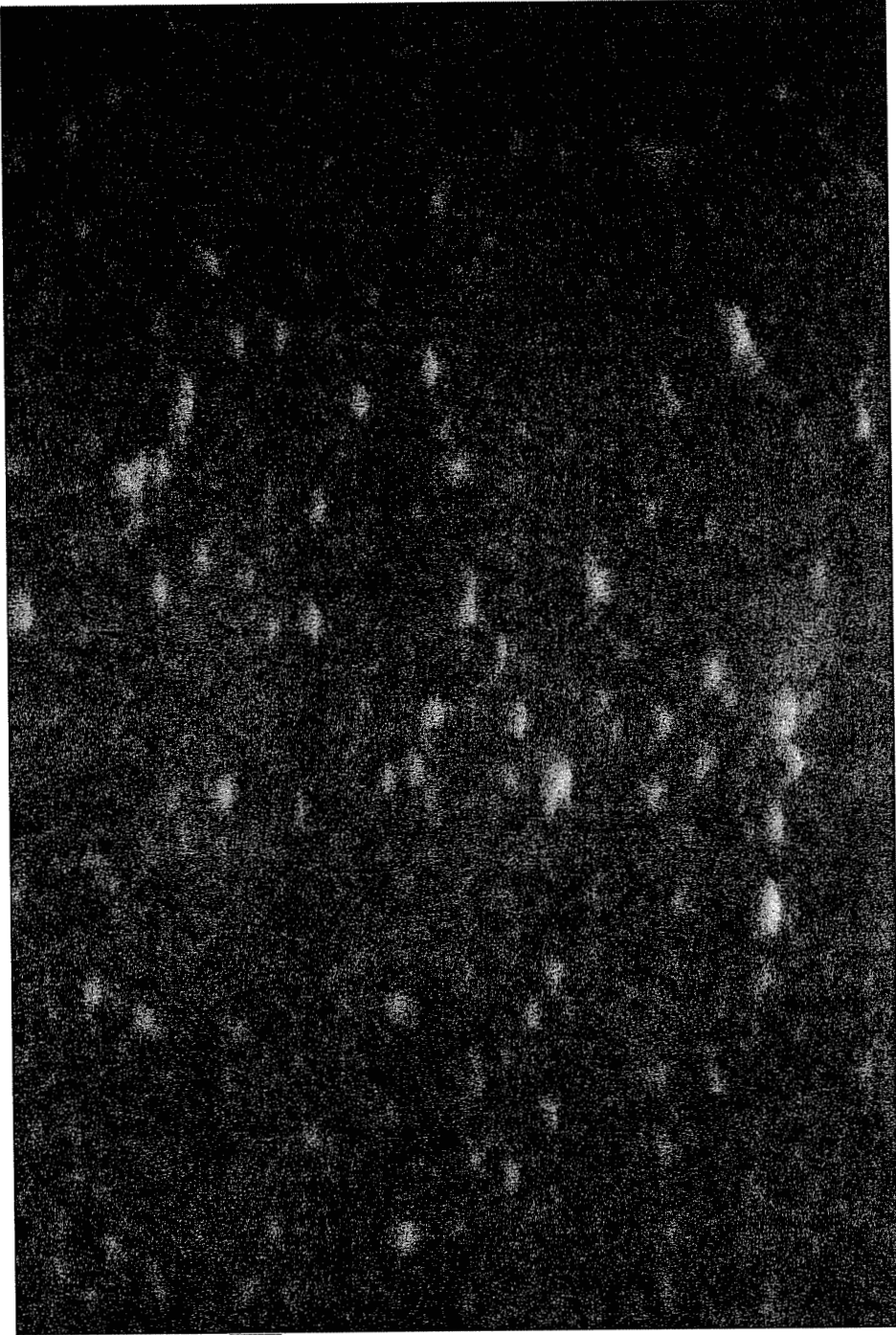
Estimated EGC per Dth at City Gate  
 Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

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 11/16/11

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  
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

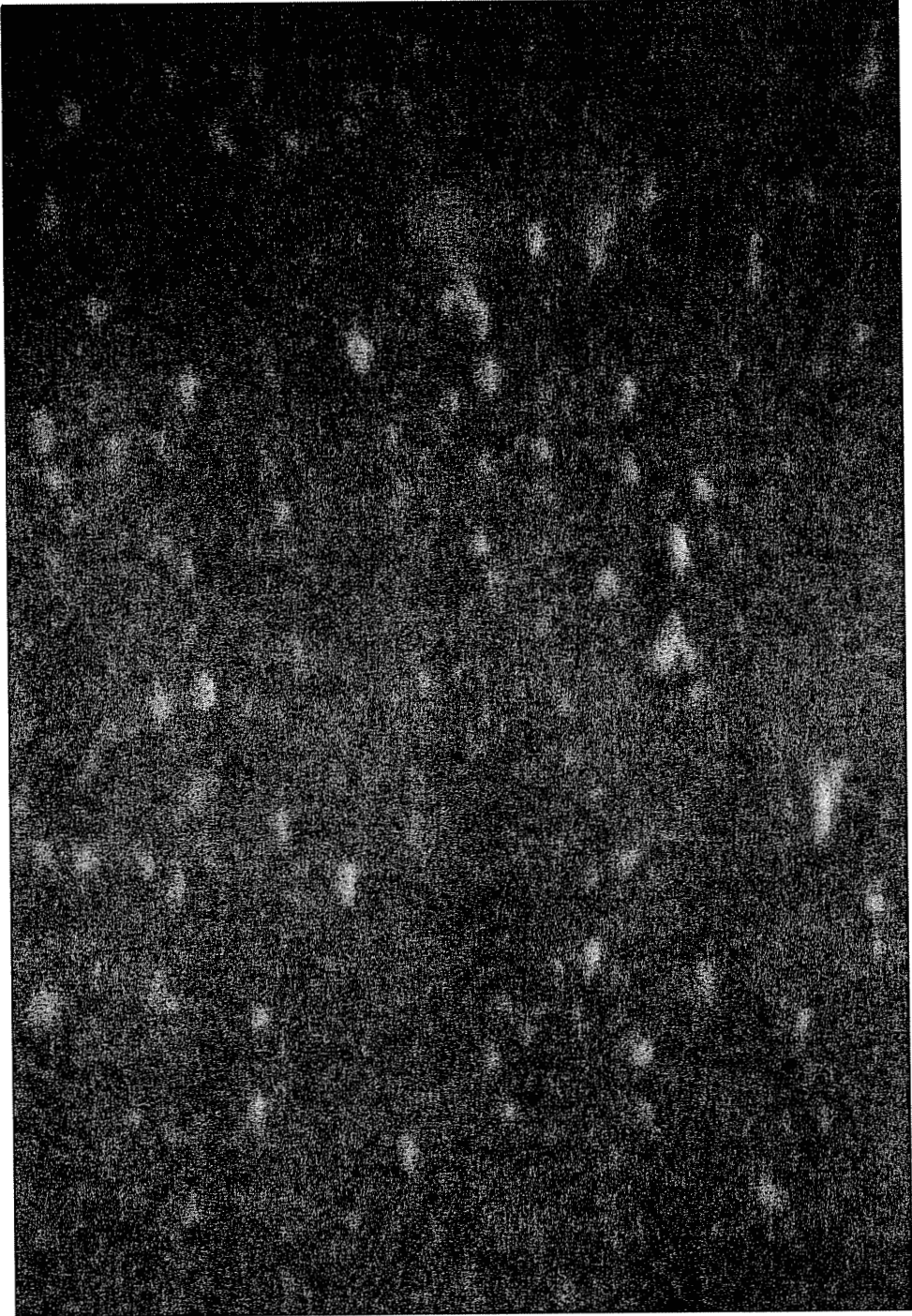
Estimated EGC per Dth at City Gate  
  
Estimated System Supply (Gross)  
Hedged % of System Supply  
Seasonal % of System Supply

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.

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2014 - October 2015  
As of 11/16/11

Nov-14    Dec-14    Jan-15    Feb-15    Mar-15    Apr-15    May-15    Jun-15    Jul-15    Aug-15    Sep-15    Oct-1



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.

11/16/2011

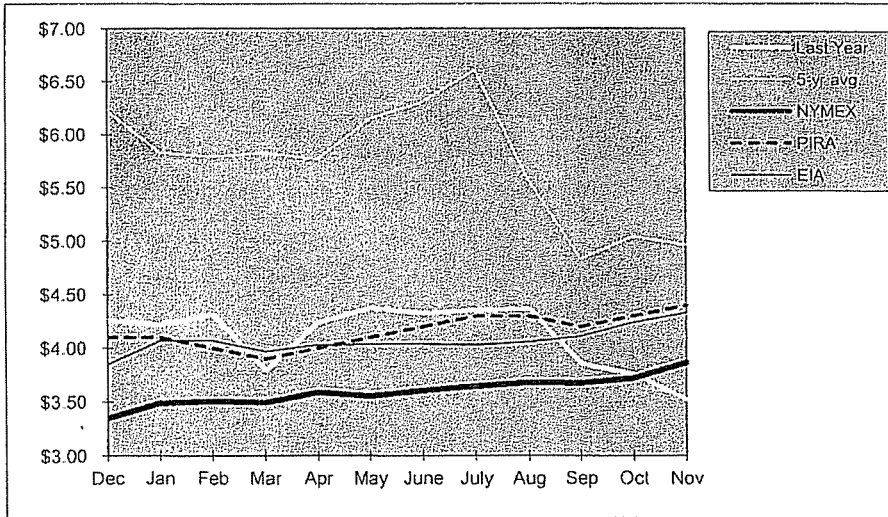
Duke Energy Kentucky  
 Hedging Program  
 Current Position

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-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2012					
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, 2012					
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, 2012					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					

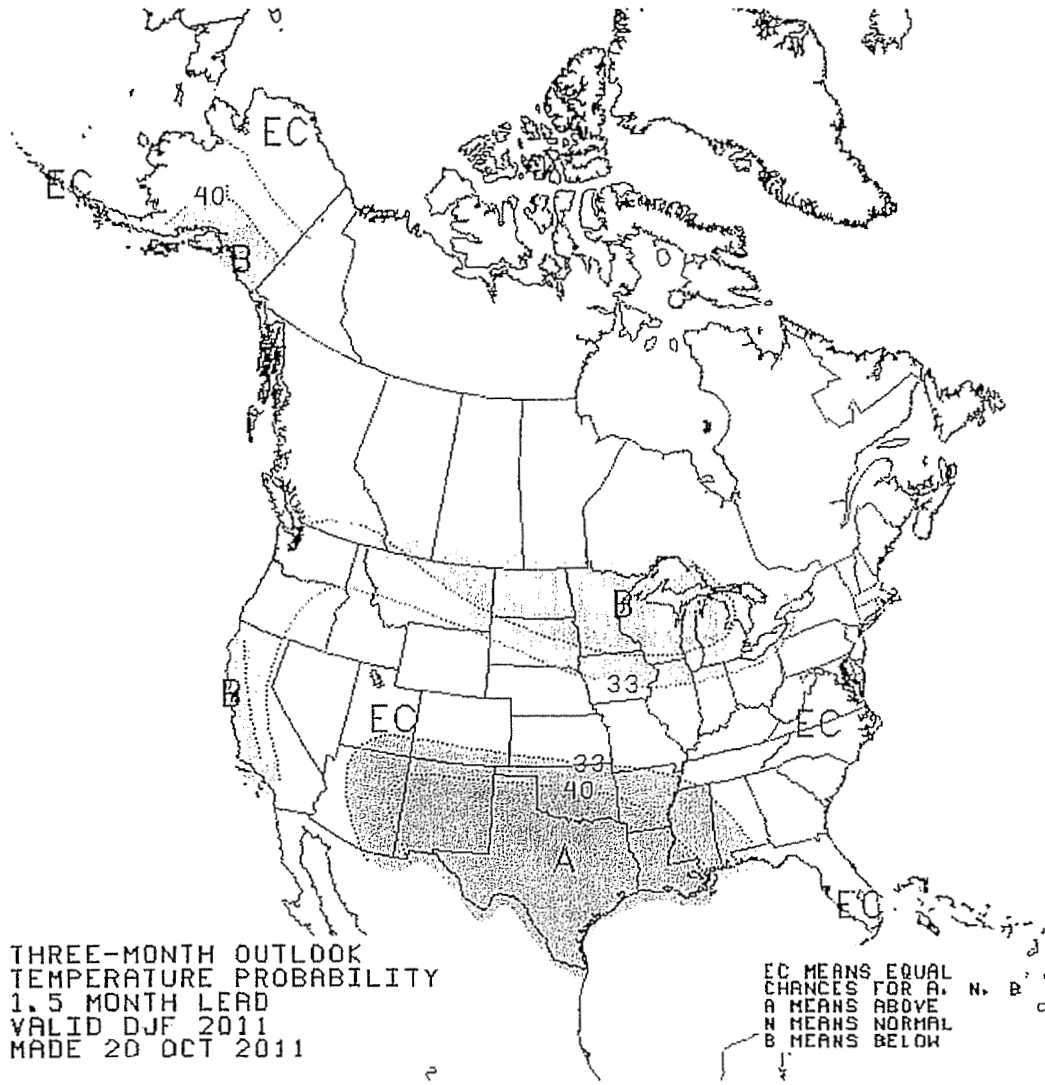
**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
TO CURRENT FUTURES PRICES**

Historic Prices:						
NYMEX Closing Price						
	5-yr. avg. (06/07-10/11)	Last Year (2010-2011)		PIRA 25-Oct-11	EIA 8-Nov-11	NYMEX 16-Nov-11
Dec	\$6.23	\$4.27			\$3.850	\$3.347
Jan	\$5.84	\$4.22			\$4.070	\$3.488
Feb	\$5.80	\$4.32			\$4.070	\$3.506
Mar	\$5.83	\$3.79			\$3.970	\$3.493
Apr	\$5.77	\$4.24			\$4.030	\$3.590
May	\$6.15	\$4.38			\$4.040	\$3.556
June	\$6.31	\$4.33			\$4.040	\$3.604
July	\$6.61	\$4.36			\$4.030	\$3.646
Aug	\$5.57	\$4.37			\$4.060	\$3.681
Sep	\$4.84	\$3.86			\$4.110	\$3.674
Oct	\$5.04	\$3.76			\$4.240	\$3.718
Nov	\$4.97	\$3.52			\$4.330	\$3.865
12 Month Avg	\$5.75	\$4.12			\$4.070	\$3.597
Summer Average					\$4.079	\$3.638
Winter Average					\$4.058	\$3.540

Hedged Prices	
Ohio	Kentucky



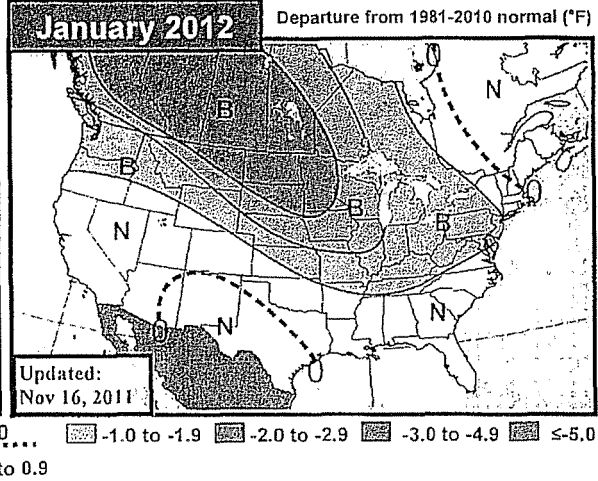
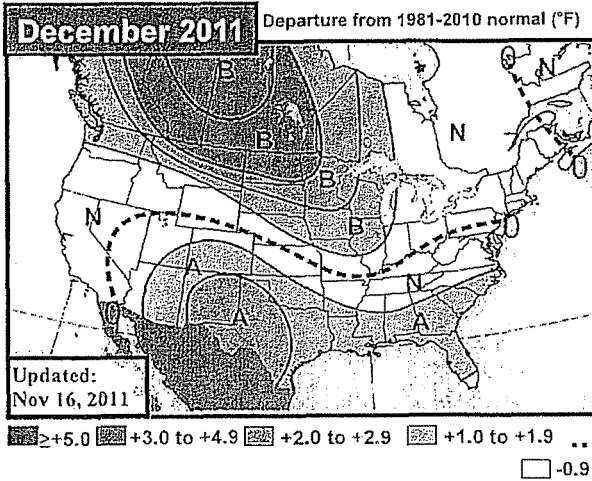
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# EarthSat's 30-60 Day Outlook

Wednesday, November 16, 2011

Meteorologists: SS/BH/TH/RG



**Previous**  
Dramatic warm change across eastern and southern US  
Colder along the West Coast

Significant warm changes were applied to most of the eastern half, leaving the forecast substantially warmer overall. To counter the warmer changes, we've cooled the West Coast, though the most significant chill is still favored to impact Canada. The warmer changes stem from our revised thinking that blocking will play much less of a role as a pattern driver. Instead, a La Nina-like pattern looks like it will remain in place through the start of December. Tropical forcing mechanisms focused in and around the Indian Ocean suggest the flow from the Pacific will continue to be a strong driver to the global atmospheric patterns. With the absence of any real credible sign that blocking will manifest itself during this first two-week period, the pattern looks to be a mild one in the eastern half with cool troughing over the West. It's important to note that if blocking can develop by mid-December, the colder air bottled up in Canada could move southeastward into the East and South during the back half of the month, providing some sort of HDD recovery for these regions.

Dec GWHDD** Forecasts	*10Y Normal updated to '01-'10	
Dec 2011 Fcst:	875.0	10Y Normal* 855.3
		30Y Normal 867.5
		Dec-2010 938.7

Change: -35      \*\*National Gas-Weighted HDDs

**Previous**  
Slightly less cold overall  
Strongest cold remains in Canada and northern Plains

Changes were much less substantial compared to those made for December, though warmer adjustments were still made over the eastern half while colder tweaks stayed focused on the West Coast. These changes have done little to alter the composite map, which continues to feature widespread belows. The La Nina seasonal signal (as simulated by the set of all ENSO 3.4 analogs) favors this broad chill, and also placement of the strongest cold from western Canada through the North-Central U.S. Interestingly, not all of the years included in the ENSO 3.4 analog dataset featured significant -NAO blocking, but the composite still supports widespread cold. Analogs (1955, 1971, and 1985) that did indeed feature substantially strong -NAO blocking (average January NAO values of -0.50 or lower) show more expansive coverage of belows into parts of California and the Southwest. However, the analogs (1984, 2000, and 2008) featuring January NAO values of +0.50 or higher present a slight warmer risk to the forecast, especially over western Canada and parts of the northern tier where our predictions are coldest.

Jan GWHDD** Forecasts	*10Y Normal updated to '01-'10	
Jan 2012 Fcst:	980.0	10Y Normal* 931.3
		30Y Normal 946.3
		Jan-2011 1016.2

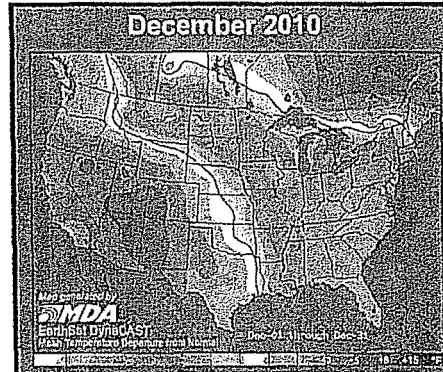
Change: -7      \*\*National Gas-Weighted HDDs

**Nov so far**

Final 60 Day Outlook      Final 30 Day Outlook      Current Verif. Forecast (11/16/11)

Our current forecast now extends out to the end of the month, and adding that to the varied conditions for the first half of the month one can plainly see that things are transpiring a bit different than initially thought. A lack of North Atlantic blocking with a persistent positive NAO, as well as a persistent positive EPO has allowed for widespread warmth across the eastern half of the US and cold across the Western US. The warmth is further east and stronger than expected, and there aren't any belows in the South as our initial forecasts had presumed. It does appear that the November update issued in the Editor's Note earlier this month will have been more on target, but even that update appears to have underestimated the overall warmth.

Special Nov Update



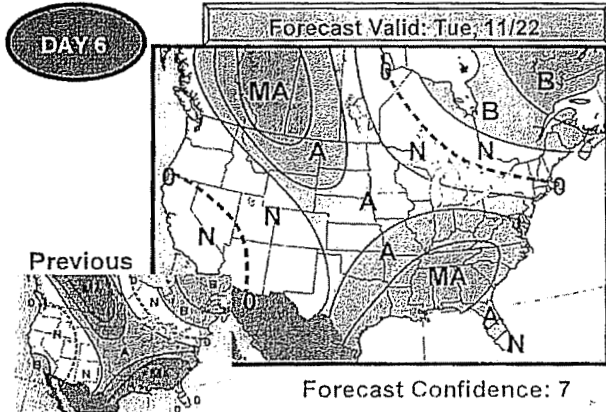
# 6-10 Day Forecast—Detailed

Thursday, November 17, 2011

Meteorologist: AC/BH

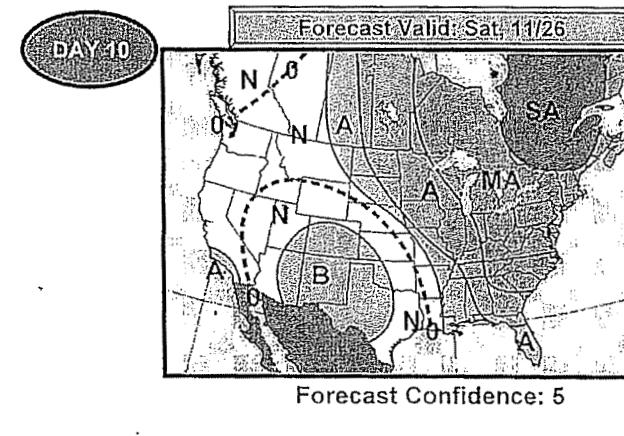
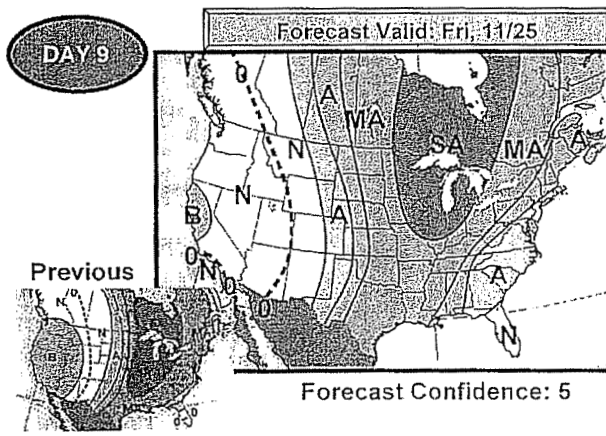
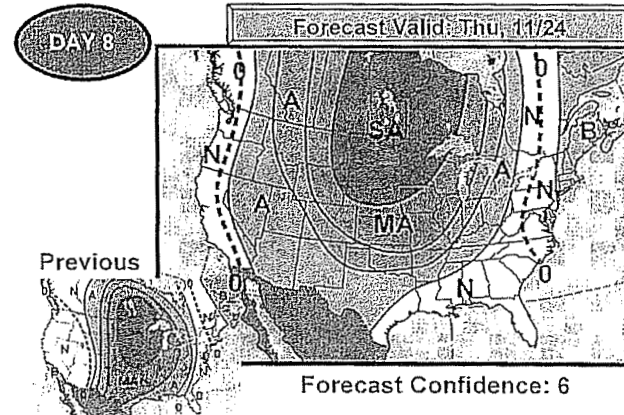
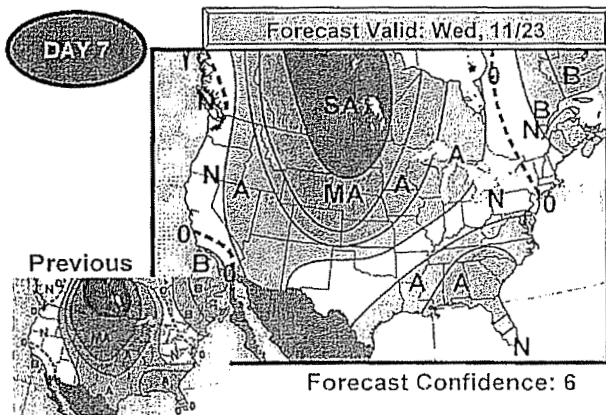


## Forecast Temperature Deviations



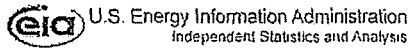
**\*More Expansive Warmth Possible In Midwest\***  
**\*Variability Still Present From Plains Into East\***

An upper level disturbance continues to be featured during the early half of the forecast period, which will cause some variability to be seen as it progresses eastward. This system develops in the Southwest for the onset of the period and advances through the Plains and into the East by mid-period. There could still be more widespread warmth across the Midwest during the middle of the period, leading to the chance for more expansive much above to strong above normal readings. In the latter part of the period, a cold air mass is depicted amongst the models coming out of the West into the South-Central U.S. Operational models are more intense with this air mass than the ensemble models are. With a cold air connection to the high latitudes lacking, a more marginal cold air mass is expected for now.



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: November 17, 2011 at 10:30 a.m. (eastern time) for the Week Ending November 11, 2011.  
Next Release: November 23, 2011

### Working Gas in Underground Storage, Lower 48

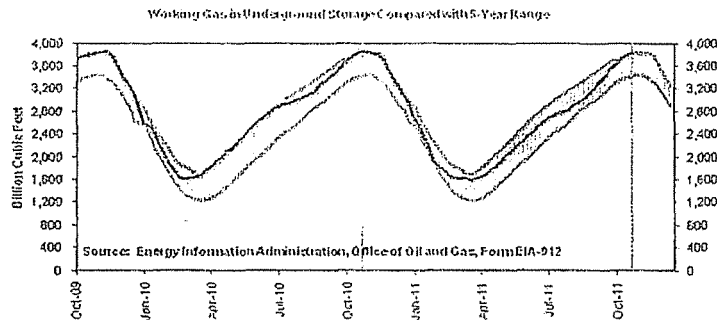
other formats: [Summary TXT](#) [CSV](#)

Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	11/11/11	11/04/11	Change	Year Ago (11/11/10)		5-Year (2006-2010) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	2,094	2,085	9	2,080	0.7	2,036	2.8
West	510	511	-1	518	-1.5	492	3.7
Producing	1,246	1,235	11	1,237	0.7	1,098	13.5
Total	3,850	3,831	19	3,836	0.4	3,626	6.2

#### Notes and Definitions

#### Summary

Working gas in storage was 3,850 Bcf as of Friday, November 11, 2011, according to EIA estimates. This represents a net increase of 19 Bcf from the previous week. Stocks were 14 Bcf higher than last year at this time and 224 Bcf above the 5-year average of 3,626 Bcf. In the East Region, stocks were 58 Bcf above the 5-year average following net injections of 9 Bcf. Stocks in the Producing Region were 148 Bcf above the 5-year average of 1,098 Bcf after a net injection of 11 Bcf. Stocks in the West Region were 18 Bcf above the 5-year average after a net drawdown of 1 Bcf. At 3,850 Bcf, total working gas is above the 5-year historical range.



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2006 through 2010.  
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  
 October 25, 2011 Release

Jan-09		Jan-10		Jan-11		Jan-12	
Feb-09		Feb-10		Feb-11		Feb-12	
Mar-09		Mar-10		Mar-11		Mar-12	
Apr-09		Apr-10		Apr-11		Apr-12	
May-09		May-10		May-11		May-12	
Jun-09		Jun-10		Jun-11		Jun-12	
Jul-09		Jul-10		Jul-11		Jul-12	
Aug-09		Aug-10		Aug-11		Aug-12	
Sep-09		Sep-10		Sep-11		Sep-12	
Oct-09		Oct-10		Oct-11		Oct-12	
Nov-09		Nov-10		Nov-11		Nov-12	
Dec-09		Dec-10		Dec-11		Dec-12	
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		

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**North American Gas Forecast Monthly**



October 25, 2011

NATURAL GAS

**GAS PRICE SCORECARD: JANUARY 2012 – MARCH 2012**

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
U.S. Production		Despite slower expected sequential growth in the months ahead, Lower 48 production will remain ~3 BCF/D higher Y/Y, partly owing to 1Q11 weather-driven losses of ~0.8 BCF/D.
LNG Imports		A new re-gas terminal, Gulf LNG, brings U.S. capacity up to 17 BCF/D, but 1Q12 imports, excluding re-exports, are forecast to average only 0.7 BCF/D, down 0.2 BCF/D Y/Y.
Canadian Trade		Canada will begin its heating season with slightly more gas in storage than a year ago, but exports are forecast to decline Y/Y owing to reduced storage draws. A more similar draw to a year earlier should not be ruled out that would minimize any export gap.
Mexican Trade		In 1Q12, imports from the U.S. are projected to increase by only 0.1 BCF/D, but upside risks to that forecast will depend on the uncertain near-term pace of production declines.
Storage Levels		Despite stronger Y/Y non-core demand, R/C heating losses coupled with higher U.S. gas production should push end-March 2012 to an all-time high of 1.9-2.0 TCF.
U.S. Demand Issues	Outlook	Commentary
Economy		Economic data have been better than anticipated recently, thereby mitigating double-dip recession worries and contributing to a stock market rally.
Electric Generation (EG)		Questions regarding the implementation of the EPA's Cross-State Air Pollution Rule (CSAPR) linger, but the odds still favor Phase 1, effective Jan. 1, helping to boost gas-fired EG.
Industrial Sector		A more upbeat overall economic outlook points to upside potential for industrial gas demand relative to our conservative 1Q12 Y/Y growth forecast of 0.4-0.5 BCF/D.
Res/Com Heating		The return to another La Niña winter now expected by weather gurus raises the prospect of smaller Y/Y losses in R/C space heating, but we're sticking with our mild weather "hybrid" GWHDD assumption for now.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation		Despite the fresh lows made by the front end of the NYMEX gas futures, which helped pull the 12-month strip below \$4.00 at times of late, speculators have not responded with any substantive buying. Non-commercial NYMEX/ICE short futures positions were reduced relative to late September, but holdings remain near the most recent August 23 <sup>rd</sup> high and the March 1 <sup>st</sup> high for the year. On balance, NYMEX futures appear vulnerable to upside risks ahead of the heating season's demand peak.
Overall Assessment	Outlook	Commentary
Price Outlook		In the early stages of 1Q12, upside price risks relative to the NYMEX forward curve will reflect in part the preference of gas distributors to maintain maximum deliverability from storage until the second half of the heating season kicks in. But we expect the opposite from around mid-February as the anticipated Y/Y storage surplus continues to expand unless colder-than-normal weather prevails.

# Gas Daily

Thursday, November 17, 2011

## Policy risks to affect gas market more than supply/demand: Goldman Sachs

Policy risks related to environmental regulations for power plants, hydraulic fracturing and liquefied natural gas exports will supplant supply and demand as the key factors affecting the US gas market through 2015, David Greely, a managing director at Goldman Sachs, told the LDC Gas Forum in Toronto on Tuesday.

The gas market landscape will be shaped by the way environmental regulations for electricity generation will play out, said Greely, adding that currently the market is facing uncertainty over the timing and scope of the Cross-State Air Pollution Rule and the Maximum Achievable Control Technology.

"There is ongoing litigation around CSAPR, and further changes and delays may still happen," said Greely, adding that the final rule will be released in December, but a 2014-15 implementation date is expected.

CSAPR is expected to be less stringent than MACT, but is planned to be implemented in January 2012, and is expected to result in coal-fired generation curtailments.

The final MACT rule is expected on December 17, Greely added.

As a result of these Environmental Protection Agency regulations, more than 40 GW of coal-fired generation capacity is expected to be retired through 2015, which would drive gas prices higher.

Additional policy risk factors include the future of federal rules for hydraulic fracturing, since a lot will be decided depending on the results of an ongoing EPA study. "EPA is conducting a much awaited study of the relationship between hydraulic fracturing and drinking water resources, and the initial research results are expected by the end of 2012 with a goal for a full report for 2014," Greely said, adding that the White House will likely make a decision on hydraulic fracturing after the 2012 presidential elections.

Finally, despite several LNG export terminals currently being on track and being considered economically viable, Greely expects the debate on LNG exports to intensify.

"While Cheniere's Sabine Pass export project is clearing the hurdles with surprising ease, the political debate around energy security and independence may still heat up as the 2015 start-up approaches," he said, adding that he expects a possible recession to fire such debates.

Each of the factors taken separately — coal displacement, LNG exports and fracturing regulations — is not expected to push gas prices up significantly, but together they will lead to a higher-price gas environment by 2015, Greely predicted. — Anastasia Gnezditskaia

# Gas Daily

Wednesday, November 16, 2011

## Analyst: Utility execs wary of gas as 'game-changer'

Many officials in the US power industry are not convinced that cheap shale gas is here to stay, even though today's production does not face the same exploration risks as deepwater gas, Jen Snyder, a principal natural gas analyst with Wood Mackenzie, told state regulators Monday.

Snyder was "pretty shocked" after a poll this summer showed that less than 50% of utility executives believe shale gas is a "game-changer," she told a meeting of the National Association of Regulatory Utility Commissioners in St. Louis.

"As it turned out, there were real concerns about the resource base itself, basically because of what happened in the late '90s the last time the power industry made a bet on gas," she said.

Gas producers have to explain to the power industry that environmental and exploratory risks for shale gas are manageable, she added. "There's still a good bit to do in terms of talking up the resource base and really the lack of exploratory risk, which is kind of what we had back in the late 90s when we made a bet on deepwater gas."

It is different this time around with shale gas, according to Snyder.

She had expected to see utilities "dash to gas" because of strict new environmental rules. But instead, she is seeing a "slow jog to gas" because coal-to-gas conversions are being driven by low gas prices, not environmental regulations.

"We have got great long-term opportunities for gas as a low-cost resource base, but it is going to take a while for those opportunities to develop," she said. — *Kate Winston*

# Gas Daily

Friday, November 11, 2011

## BNPP lowers gas price forecast through 2012

Citing a larger-than-expected storage build, BNP Paribas on Thursday lowered its fourth-quarter 2011 gas price estimate by 70 cents to \$3.75/MMBtu, while also trimming its price estimates through next year.

The new forecast for the fourth quarter of 2012 is \$4.40/MMBtu, a drop of about 30 cents from the previous estimate. For the entire calendar year 2012, BNP called for an average NYMEX price of \$4.30, a drop of 25 cents from its previous forecast done in March.

BNP analyst Teri Viswanath, said in a report that US storage balances are roughly 2 Bcf/d looser than earlier projections and therefore, the industry is on its way to developing an inventory surplus earlier than anticipated.

"We now foresee a surplus emerging this month that will likely persist through most of 2012," the report said. "This inventory hang-over largely reduces the scope for a winter price rally and potentially, opportunities for gas prices to firm up materially in 2012."

The new estimates reflect "our anticipated higher levels of working gas in storage ahead of the peak winter heating season," Viswanath said.

On Thursday, the Energy Information Administration reported that the storage injection season ended with levels at 3 831 Tcf, slightly shy of last year's record-busting level.

In early August, BNP Paribas had warned that increased supplies were likely to pressure gas prices lower in the last stretch of the injection season.

"Given the magnitude and duration of the current sell-off, the market has fallen below our initial anticipations," Viswanath added.

In addition, she said BNP Paribas underestimated the impact of the loss of electric power demand in the West, stemming from a fall in air-conditioning demand. This contributed to even more supplies accumulating in storage, thus exacerbating the market's imbalance, Viswanath said.

The report also suggested some price recovery in the near future.

"While we think that next year's fundamentals are not particularly constructive for prices, we do see tighter balances progressively emerging, albeit slowly," the report stated. "Next year's slow down in production hints at a possible turning point for US balances by 2013." -- Eunice Bridges

# Gas Daily

Thursday, November 3, 2011

## Bank of America trims 2012 gas price by 9%

Bank of America Merrill Lynch's commodities team cut its forecast price for gas next year 9% on Wednesday to \$4.30/MMBtu.

"In the absence of a very cold winter, we expect natural gas prices to stay low because of record-setting production, high storage levels and a weak demand picture," Bank of America said in a note to clients.

The analysts raised their production growth forecast for 2012 by 16%, and now expect US drillers to grow gas production by 2.2 Bcf/d next year as rigs get more efficient and associated gas from liquids-rich plays begins to account for 20% of the total gas supply.

"Exploration-and-production companies continue to boost production because of the ongoing infrastructure build-out, particularly in pipelines," Bank of America said, "and because of ongoing efficiency gains, which are helping to shield revenues from low prices."

"Encana, for instance, drilled 164 wells in the last quarter, 44 less than a year ago, yet output rose 6% because of such efficiency gains," they said.

The shift to oil and liquids isn't alleviating the supply overhang, Bank of America said. "Oil-directed drilling produces associated gas contributing to the supply glut. Thus, drilling for higher priced oil and natural gas liquids will likely continue to add to the high natural gas supply in 2012."

Bank of America sees only a 200,000 Mcf/d growth in demand from the industrial sector as the economy sputters along.

They withdrew their previous prediction that demand from the power sector would climb with the implementation of the Environmental Protection Agency's Cross State Air Pollution Rule because they say the new version of the rule going into effect is watered down from the original.

The analysts cut 1.2 Bcf/d worth of power demand from their model because of the weakened cross-state rule.

With the EPA relaxing the rules on interstate trading of emissions credits and delaying the penalties for over-emitting until 2014, "the hold-up of these two elements effectively lowers the burden of compliance."

— Bill Holland

**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**November 8, 2011 Release**

Jan-09	5.24	Jan-10	5.83	Jan-11	4.49	Jan-12	4.07
Feb-09	4.51	Feb-10	5.32	Feb-11	4.09	Feb-12	4.07
Mar-09	3.96	Mar-10	4.29	Mar-11	3.97	Mar-12	3.97
Apr-09	3.49	Apr-10	4.03	Apr-11	4.25	Apr-12	4.03
May-09	3.83	May-10	4.14	May-11	4.31	May-12	4.04
Jun-09	3.80	Jun-10	4.80	Jun-11	4.55	Jun-12	4.04
Jul-09	3.38	Jul-10	4.63	Jul-11	4.42	Jul-12	4.03
Aug-09	3.14	Aug-10	4.32	Aug-11	4.05	Aug-12	4.06
Sep-09	2.97	Sep-10	3.89	Sep-11	3.90	Sep-12	4.11
Oct-09	4.00	Oct-10	3.43	Oct-11	3.56	Oct-12	4.24
Nov-09	3.66	Nov-10	3.71	Nov-11	3.69	Nov-12	4.33
Dec-09	5.34	Dec-10	4.25	Dec-11	3.85	Dec-12	4.54
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		

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U.S. Energy Information  
Administration

## Today in Energy

November 7, 2011

### Winter (November-March) natural gas futures prices at lowest levels since 2001-2002

Average (November - March) natural gas futures prices for each winter heating season since 1999-2000, as of October 20  
dollars per million British thermal units



2011-2012	3.86
2010-2011	4.27
2009-2010	4.73
2008-2009	6.40
2007-2008	7.73
2006-2007	8.38
2005-2006	11.92
2004-2005	8.54
2003-2004	4.83
2002-2003	4.25
2001-2002	3.00
2000-2001	5.91
1999-2000	2.51

Source: U.S. Energy Information Administration, based on Bloomberg, L.P.

Note: October 20 was selected because it represents a date near the start of the natural gas winter heating season yet still has information for five months of the upcoming winter's natural gas NYMEX future's strip. These prices do not reflect expectations for the cost of transporting natural gas from Henry Hub to downstream market locations. The Henry Hub, in Erath, Louisiana, is the physical delivery location for the NYMEX natural gas futures contract. Sabine Pipeline is the operator of the Henry Hub.

The average natural gas futures price for the upcoming winter is less than \$4 per million British thermal units (MMBtu), the lowest level entering the winter since 2001-2002. The so-called "winter strip," the average natural gas futures price for the contract months November through March as settled on the New York Mercantile Exchange (NYMEX), is a closely followed measure of market participants' price expectations. In markets such as New England and California, where natural gas prices often set on-peak, wholesale power prices, the NYMEX winter strip for natural gas also can influence expectations for forward wholesale power prices.

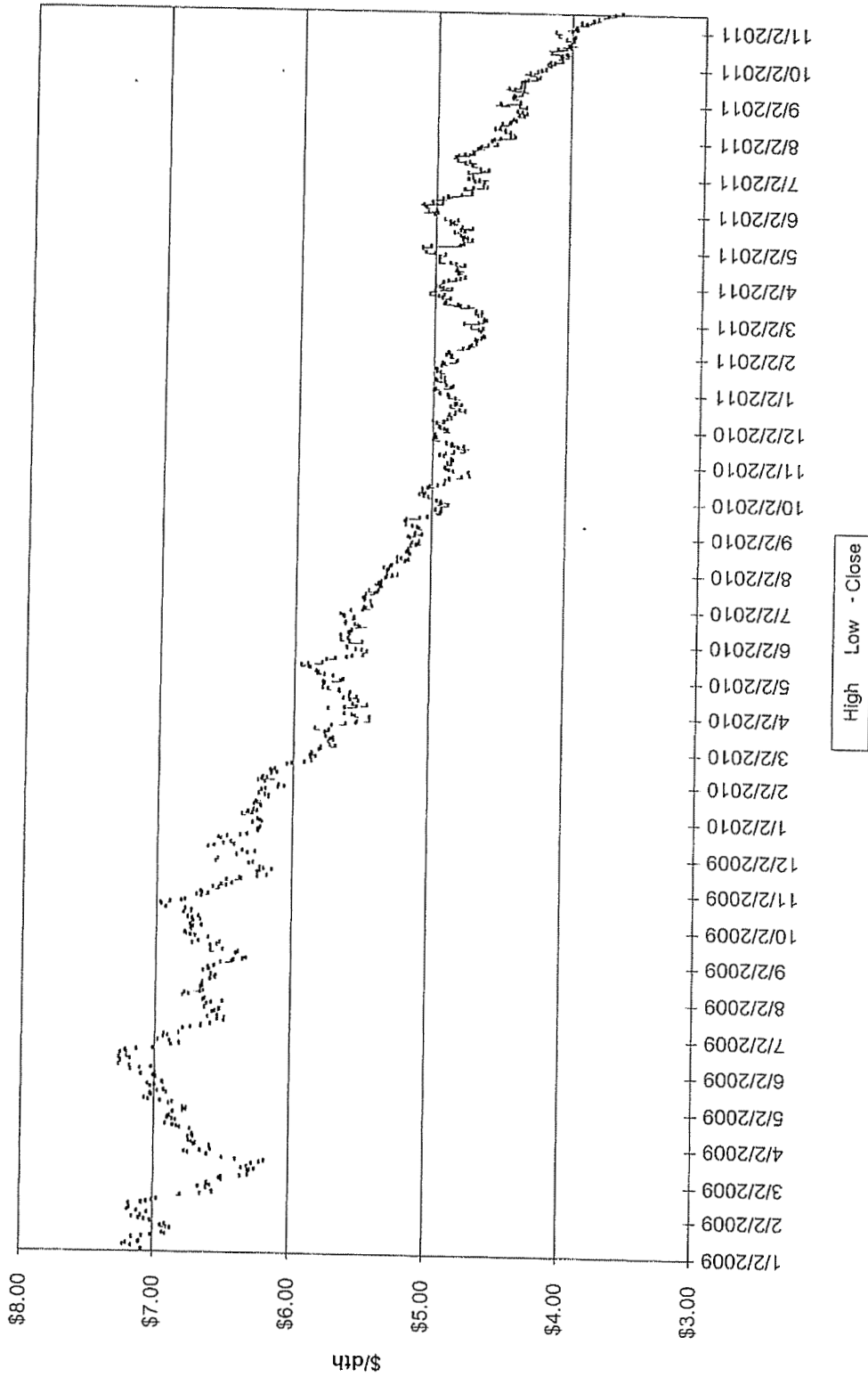
Late October expectations for average winter natural gas prices have not been this low since the winter of 2001-2002. Winter price expectations, as reflected through the winter strip on NYMEX, peaked at almost \$12 per MMBtu in 2005 in the aftermath of supply disruptions related to Hurricanes Katrina and Rita. Starting in 2009, late fall expectations for average winter natural gas futures prices dipped under \$5 per MMBtu as domestic natural gas production from shale plays grew rapidly.

tags: futures , natural gas , prices

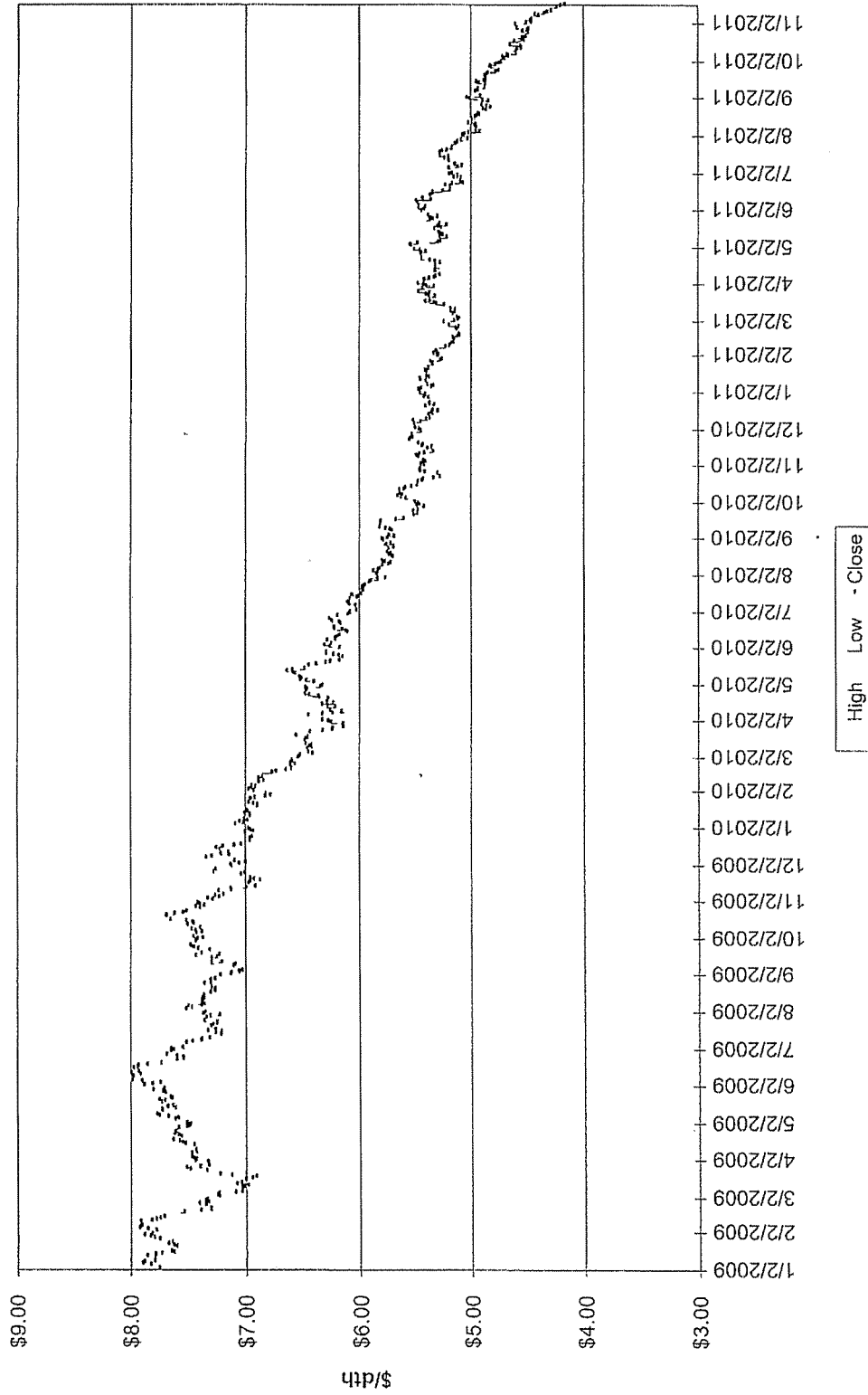
- Email
- Share
- Print

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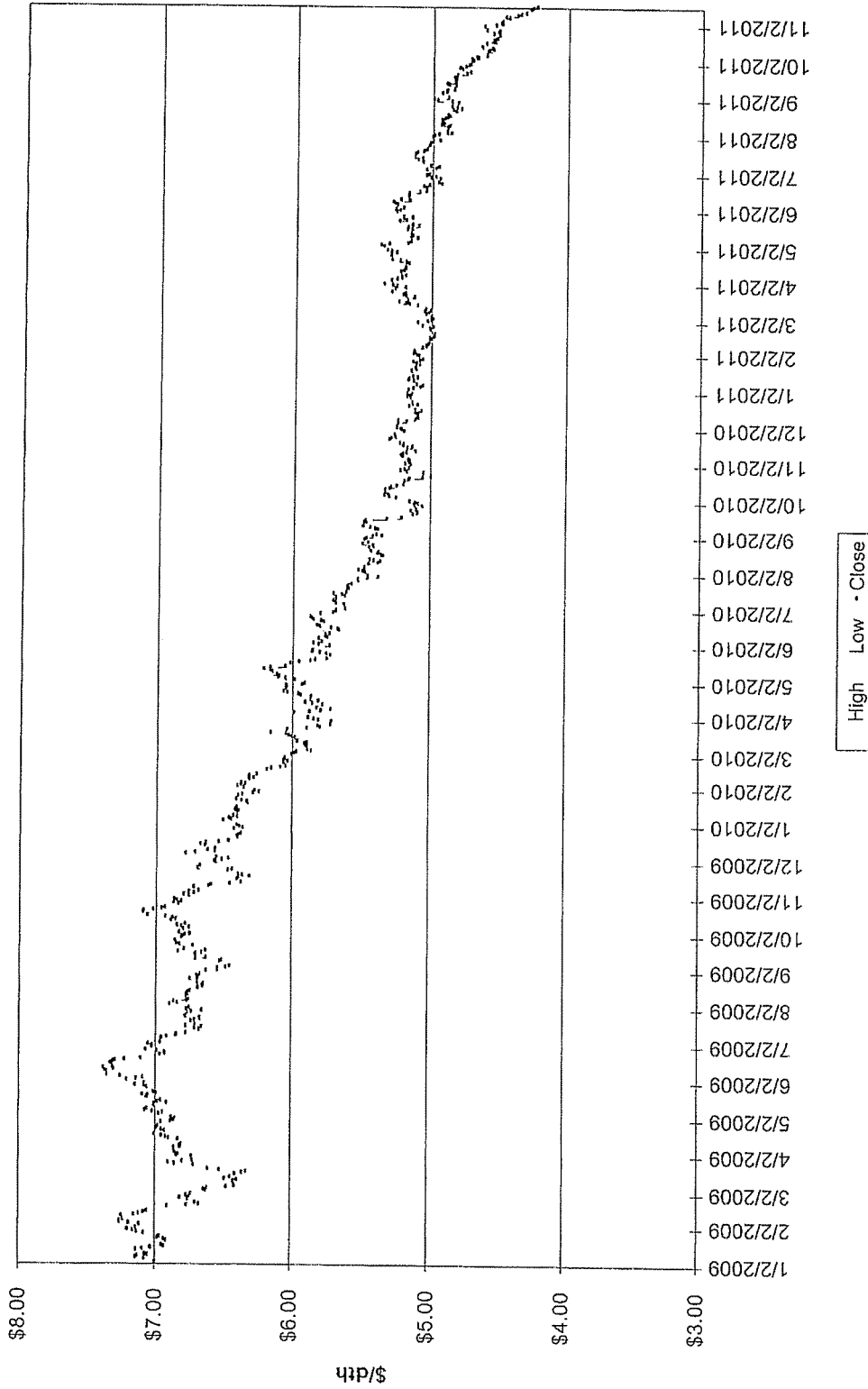
Summer Strip 2012



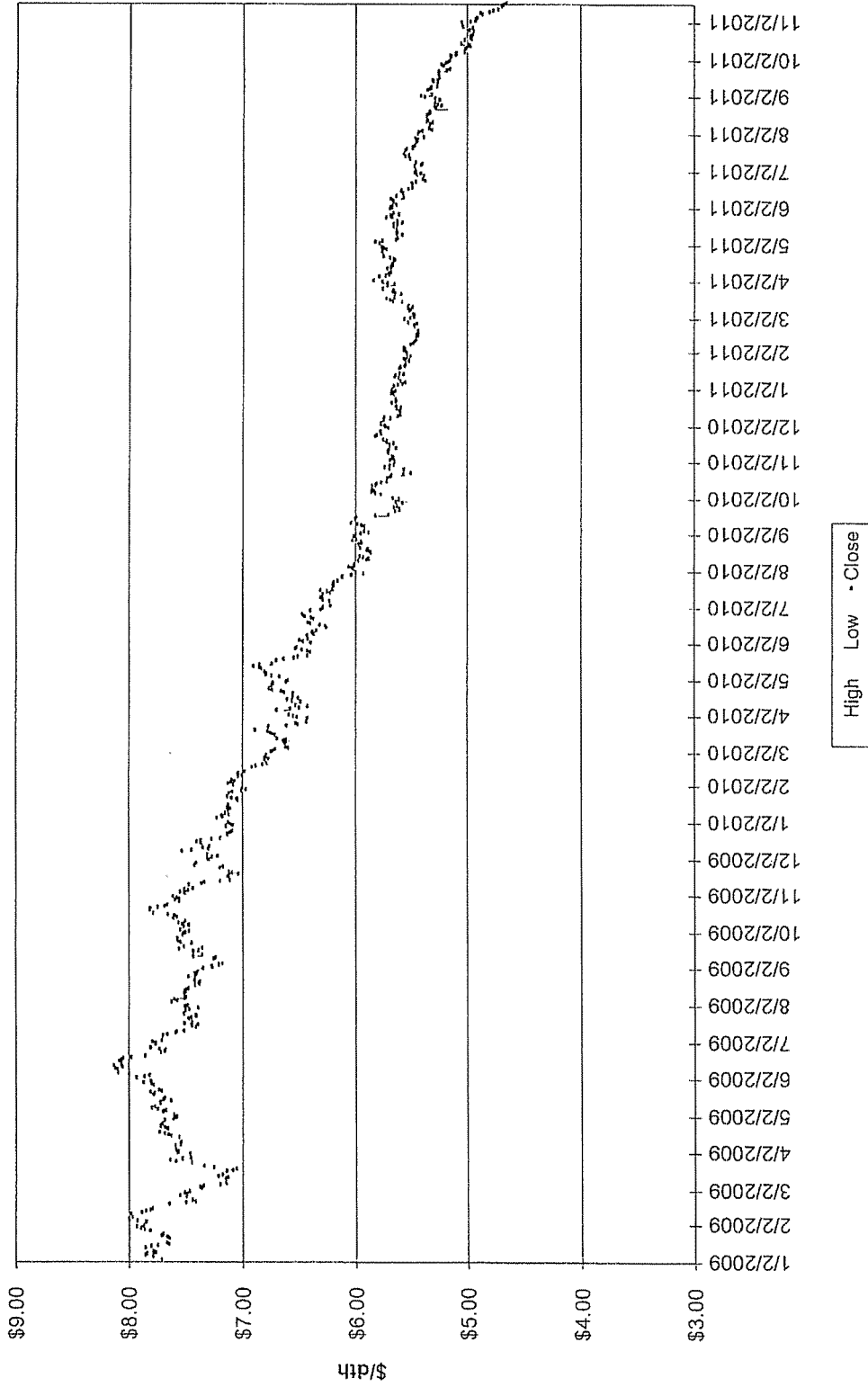
Winter Strip Nov12 - Mar13



Summer Strip 2013



Winter Strip Nov13 - Mar14



# U.S. Energy Information Administration November 2011 Short - Term Energy Outlook

November 8, 2011 Release

## Natural Gas

**U.S. Natural Gas Consumption.** EIA expects that total natural gas consumption will grow by 1.7 percent to 67.1 billion cubic feet per day (Bcf/d) in 2011. Rising use of natural gas in the industrial and electric power sectors accounts for most of the increase in total consumption this year, with projected growth rates of 2.0 percent and 1.5 percent, respectively. **Projected total natural gas consumption increases by 1.1 percent in 2012 to 67.9 Bcf/d,** compared with a projected level of 67.7 Bcf/d in last month's *Outlook*. Higher projections of residential and commercial consumption account for much of this change in the forecast, driven by the 1.1 percent increase in heating degree-days from 2011 to 2012.

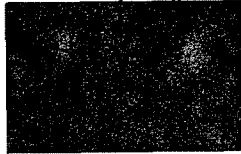
**U.S. Natural Gas Production and Imports.** EIA expects U.S. marketed natural gas production to average 65.6 Bcf/d in 2011, a 3.8-Bcf/d (6.1 percent) increase over 2010. All of this growth comes from higher onshore production in the lower 48 States, which more than offsets a year-over-year decline of 1.0 Bcf/d (17 percent) in the Federal Gulf of Mexico (GOM). **EIA expects that total marketed production will continue to grow in 2012, but at a slower pace, increasing 1.3 Bcf/d (2.0 percent) to an average of 66.9 Bcf/d.**

Drilling activity has been resilient despite lower natural gas spot and futures prices. According to Baker Hughes, the October 28 rig count was 934 active drilling rigs targeting natural gas, higher than this year's low of 866 on May 20 and higher than last month. If drilling continues to increase, production could grow more than expected in 2012.

**Crude Oil Prices.** West Texas Intermediate (WTI) crude oil spot prices fell from an average of \$110 per barrel in April to \$86 per barrel in August, and remained near this level through October. EIA has revised the projected oil price paths slightly upward from last month's *Outlook*. **EIA expects that the U.S. refiner average crude oil acquisition cost will average \$100 per barrel in 2011 and 2012,** slightly higher than the projections of \$99 per barrel and \$98 per barrel for 2011 and 2012, respectively, in the previous *Outlook*.

Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2011-12

Duke Energy Ohio  
 Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Gulf South-DE Field Services  
 Col Gulf Mainline  
 Col Gulf Mainline  
 Tex Gas Zone 1

Total  
 System Supply

Duke Energy Kentucky  
 Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Col Gulf Mainline

Total  
 System Supply

Duke Energy--Total  
 Previously Hedged  
 Total

						Dth/Day		
November	December	January	February	March	Total	% System Supply		
[Redacted Data]								
[Redacted Data]								
[Redacted Data]								

Gas Commercial Operations  
Hedging Program  
Market Indicators Summary  
December 15, 2011

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Dec 11--Feb 12)	↔	Long	NOAA predicting above average temperatures for December 2011--February 2012 for portions of the South-Central to South-Eastern portions of CONUS. Below normal temperatures on West coast and Northern portions of CONUS. Equal chances of Above, Normal, or Below for the rest of CONUS.	12
Mid Term Forecast (30-60 days)	↔	Long	January is predicted to be 2.5% colder than normal based on 10 year normals and February weather is predicted to be 2.3% warmer than normal.	13
Short Term Forecast (6-10 days)	↓	Short	Above and Much Above span the Midwest and East Coast through the entire period. Below moves from Southwest to South-Central portions of CONUS during the period.	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage withdraws for the week ending December 2nd were 20 BCF. Storage levels are at 3.831 TCF which is 2.7% higher than last year and 8.7% higher than the 5 year average.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2011/12: ██████ Summer 2012: ██████	↑	Long	GAS PRICE SCORECARD: January 2012--June 2012 Price Outlook revised from last month to BULLISH. Lower NYMEX prices have set the bar lower to be bullish about gas prices. US Production and Storage Levels remain bearish while LNG Sendout, Canadian Trade, Electric Generation and Industrial Sector demand are bullish.	16-17
Gas Daily	↑	Long	EPA found that groundwater contamination: "contains compounds likely associated with gas production practices, including hydraulic fracturing." The finding of a direct link between the contamination of groundwater and fracking could mark a dramatic turning point in the argument over the safety of the drilling completion practice.	18-19
Gas Daily	↑	Long	Gas industry groups charged the EPA with practicing bad science and poor politics last week by linking hydraulic fracturing to contaminated drinking water. "further regulation of fracking is inevitable, but the value of the shale resource is too great for fracking to be stopped or even slow down in a meaningful way.	20-21
Gas Daily	↑	Long	Prices likely 'very low' through 2012 if weather stays normal. Natural gas prices at \$3.55/MMBtu for 2012 on weak economic growth and continued strong production, with weather providing the only potential stimulus.	22
Gas Daily	↑	Long	2012 price forecasted at \$3.50/Mcf based on growing supplies will smother anemic demand. Prices could drop below \$3.00/Mcf this summer as storage fills.	23
Gas Daily	↑↓	Long	Moody's reduced its price assumptions for gas delivered at Henry Hub to \$3.50/MMBtu in 2012, \$4.00/MMBtu in 2013 and \$4.00/MMBtu thereafter. Moody's assumes a price of \$90/barrel for WTI in 2012 and \$85/barrel in 2013, dropping to \$80/barrel beyond 2013.	24
<b>Government Agencies</b>				
Energy Information Administration Winter 2011/12: \$3.446 Summer 2012: \$3.671	↑	Long	The projected Henry Hub natural gas spot price averages \$4.017/MMBtu for 2011 and \$3.703/MMBtu for 2012	25
<b>Technical Analysis</b>				
Summer 2012 Strip Chart	↔	Short	Closed at \$3.51	26
Winter 2012-13 Strip Chart	↔	Short	Closed at \$4.00	27
Summer 2013 Strip Chart	↔	Short	Closed at \$4.06	28
Winter 2013-14 Strip Chart	↔	Short	Closed at \$4.46	29
<b>Economy</b>				
Demand	↔	Long	EIA projects total natural gas consumption to grow by 1.7% to 67.2 Bcf/d in 2011 and grow 1.7% to 68.4 Bcf/d in 2012, resulting from an increase in the industrial and electric power consumption.	30
Supply	↔	Long	EIA expects average total production to increase by 6.6% to 65.9 Bcf/d in 2011. Production growth is forecast to continue at a much slower pace in 2012, increasing 2.8% to average 67.7 Bcf/d.	30
Oil Market	↓	Long	Moody's predicts WTI spot prices to average \$90/barrel in 2012, \$85/barrel in 2013 and dropping to \$80/barrel beyond 2013.	24

**Meeting Minutes: 412 Annex Conference Room - 1:00 pm**  
Attendees: Jim Mehring, Jeff Kern, Mike Brumback, Milch Martin, Terry Bates, Joachim Fischesser, Steve Niederbaumer  
Discussed results of November 21, 2011 deals: ██████ was the lowest bidder for a fixed price deal for the period Nov. 1, 2012--Mar. 31, 2013 for ██████ Dth/day for DEO and ██████ Dth/day for DEK. The winning price was ██████. ██████ was the lowest bidder for a fixed price deal for the period Nov. 1, 2013--Mar. 31, 2014 for ██████ Dth/day for DEO and ██████ Dth/day for DEK. The winning price was ██████. In addition, discussed current market conditions including current weather forecasts, storage levels (including the 102 Bcf withdrawal released 12/15/2011) various analysts projections, discussed the technical charts (lowest prices ever for these strips) as well as EIA's forecasts for Supply and Demand of the Natural Gas markets and Oil prices. Discussed the current hedging positions for both DEO and DEK. The Hedging Committee decided to lock in a fixed price using cost averaging to start in January 2012 through February 29, 2012 to bring the total hedged for the winter season to around 20%. (██████ Dth/day for Ohio and ██████ Dth/day for Kentucky).



Duke Energy Kentucky  
Hedging Program - Current Position  
November 2011 - October 2012  
As of 12/13/11

	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 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 12/13/11

	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												
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 12/13/11

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

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

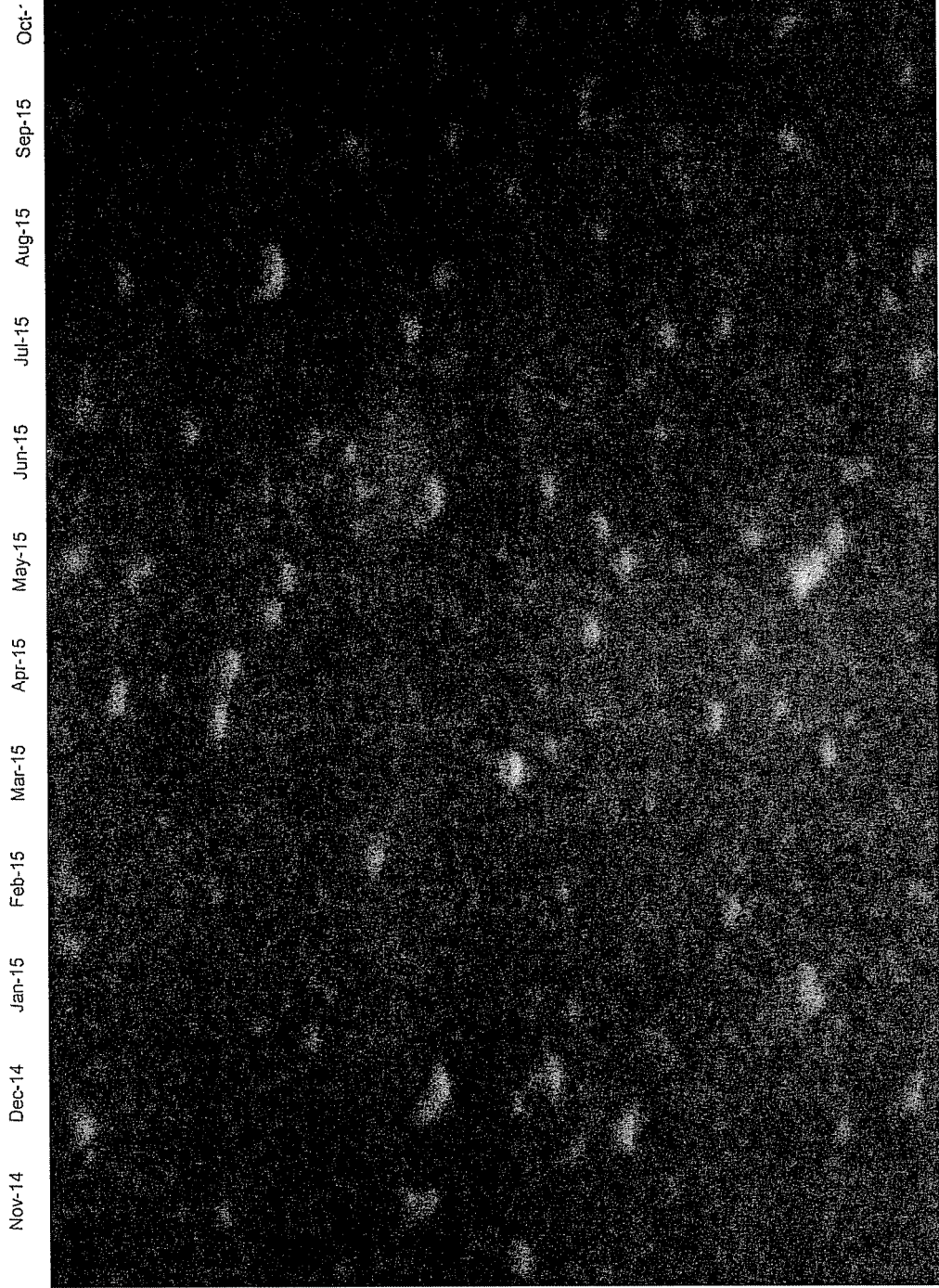
Embedded Hedged Cost  
Winter  
Summer

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 2014 - October 2015  
As of 12/13/11



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.

12/13/2011

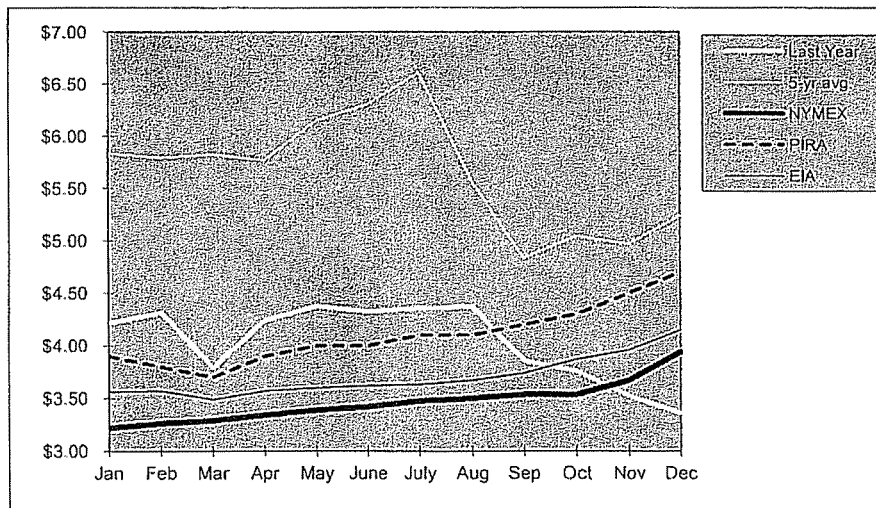
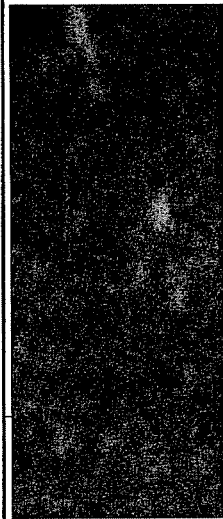
Duke Energy Kentucky  
 Hedging Program  
 Current Position

Delivery Month	System Supply Dth/mo	Hedged to Date		Next Target (3/31/12)	
		Total		Required dth/day	Allowed dth/day
		Dth/day	Dth/mo		
Apr-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2012					
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, 2012					
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, 2012					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					

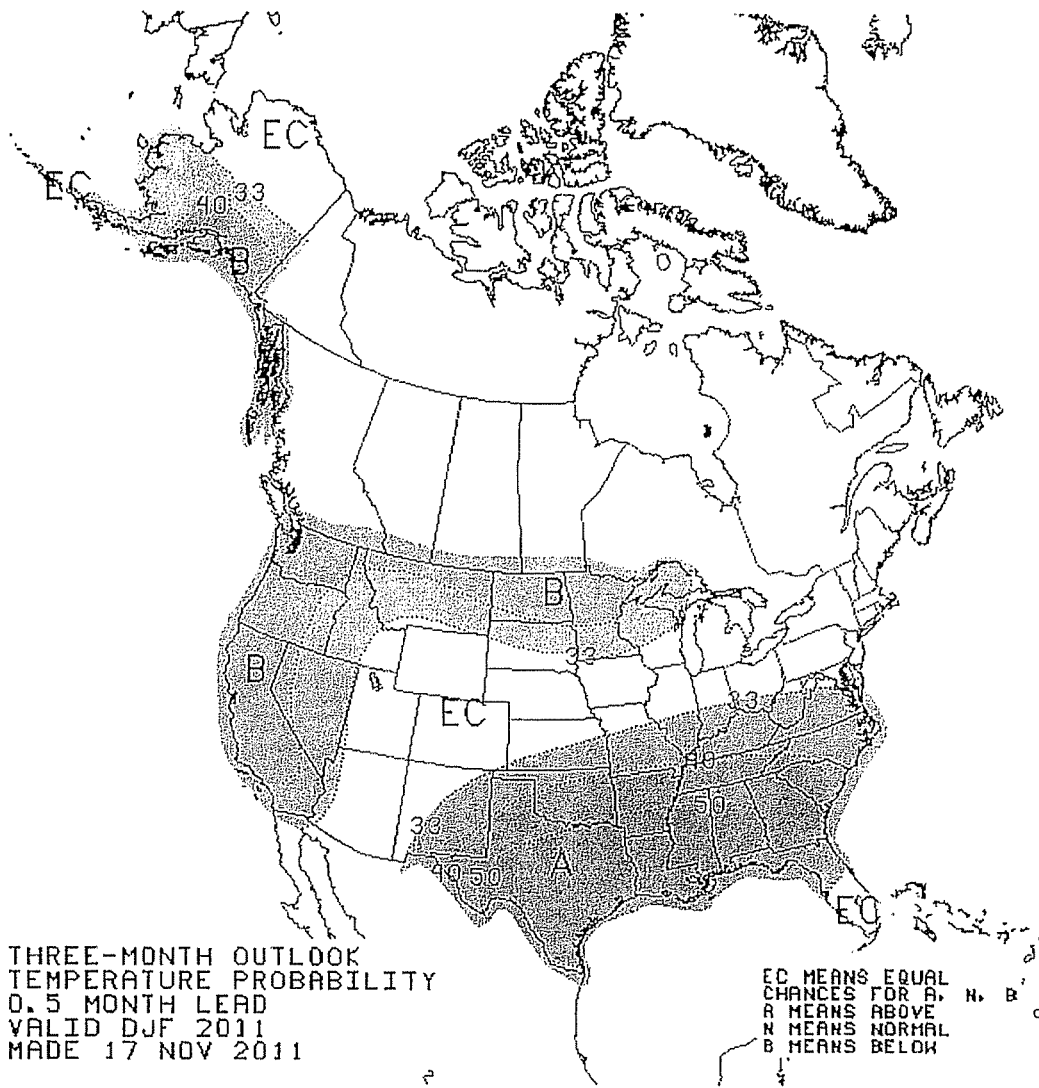
**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

Historic Prices: NYMEX Closing Price						
	5-yr. avg. (06/07-10/11)	Last Year (2010-2011)		PIRA 23-Nov-11	EIA 6-Dec-11	NYMEX 14-Dec-11
Jan	\$5.84	\$4.22			\$3.560	\$3.219
Feb	\$5.80	\$4.32			\$3.570	\$3.264
Mar	\$5.83	\$3.79			\$3.490	\$3.288
Apr	\$5.77	\$4.24			\$3.570	\$3.342
May	\$6.15	\$4.38			\$3.600	\$3.390
June	\$6.31	\$4.33			\$3.620	\$3.422
July	\$6.61	\$4.36			\$3.630	\$3.472
Aug	\$5.57	\$4.37			\$3.670	\$3.500
Sep	\$4.84	\$3.86			\$3.740	\$3.536
Oct	\$5.04	\$3.76			\$3.870	\$3.536
Nov	\$4.97	\$3.52			\$3.960	\$3.671
Dec	\$5.24	\$3.36			\$4.150	\$3.940
12 Month Avg	\$5.66	\$4.04			\$3.703	\$3.465
Summer Average					\$3.671	\$3.457
Winter Average					\$3.746	\$3.476

Hedged Prices  
 Ohio    Kentucky



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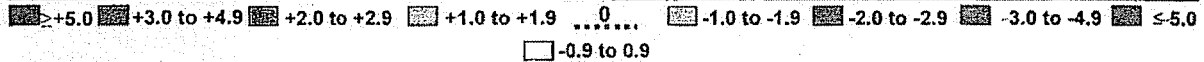
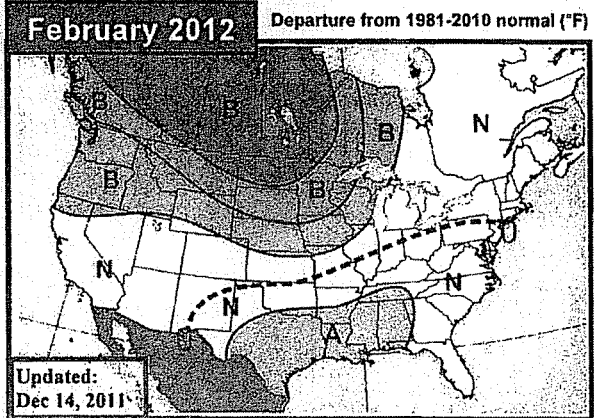
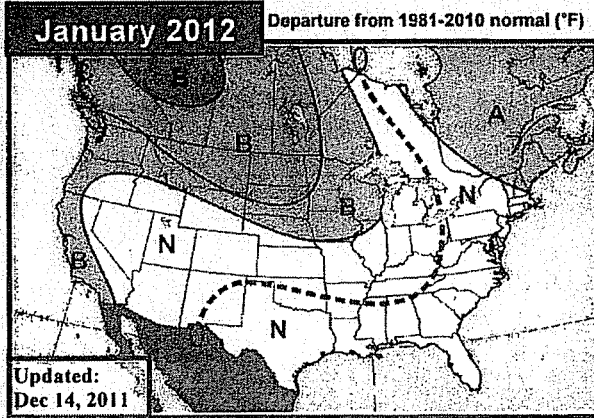


12

# EarthSat's 30-60 Day Outlook

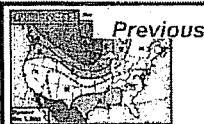
Wednesday, December 14, 2011

Meteorologists JS/BE/TE/RG



**Warm changes in the Midwest and East**  
**Colder West Coast**

Warmer changes have continued this week for much of the eastern half, with much of the East now expected to average seasonably mild for the month, while the belows we had previously extended into the eastern and southern Midwest have retreated. Without much if any blocking (AO and NAO stay neutral/positive) through the first half of the month, Pacific signals such as the +EPO/+WPO should have more influence on the pattern. The cool waters of the Pacific (attributed to both the -PDO and La Nina) may attract colder air to the West, which has been coldest compared to normal in December. If the AO averages positive (greater than 0.50) for the month of January, the La Nina analogs (1957, 1975, 1989, 2000 and 2008) featuring this +AO characteristic would present a major warm risk to our forecast for much of the South and East. However, the risk of a stratospheric warming event developing late in December could force a change in the upper latitudes that might produce better development for high latitude blocking. Any colder impacts for the East and South would likely be felt during the back half of Jan if this potential event follows a similar timeline to some of the historical events seen previous, such as in December 2006 - January 2007 for example.



**Slightly colder West Coast**  
**Cold anomalies scaled back in the North**

Some cold changes were made in the West while some minor warm changes were noted in the Midwest. The net result between these two changes was negligible, so no change was made to the overall HDD number. These changes have not altered the major themes of the forecast, which include a seasonably mild East and South, along with a colder Midwest and West. Some of the same seasonal drivers (La Nina and -PDO) are generally supportive of the forecast anomaly pattern. In addition, five of the weak La Nina analogs (1951, 1955, 1957, 2001 and 2009) from the +AMO / -PDO era also match the forecast pattern quite well, though warm risks are noted over the South. Out of the five January La Nina / +AO analogs referenced in the January discussion, three of the years (1989, 2000 and 2008) maintained a monthly-averaged +AO signal in February. The corresponding analog composite favors the mild signal along the East Coast and over the South, but presents a cold risk over the Midwest. Finally, the aforementioned strato-warming analog (2007) shows a much colder risk over the eastern half, but the AO and NAO would likely have to turn negative for this cold risk to be realized.

Jan GWHDD\*\* Forecasts      \*10Y Normal updated to '01-10

<b>Jan 2012 Fcst:</b>	<b>955.0</b>	10Y Normal*	931.3
		30Y Normal	946.3
		Jan-2011	1016.2

Change: -10      \*\*National Gas-Weighted HDDs

Feb GWHDD\*\* Forecasts      \*10Y Normal updated to '01-10

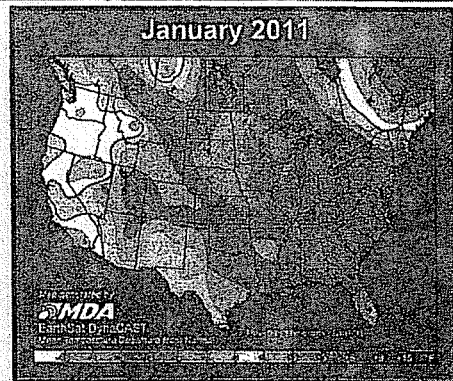
<b>Feb 2012 Fcst:</b>	<b>805.0</b>	10Y Normal*	823.9
		30Y Normal	798.6
		Feb-2011	794.1

No Change      \*\*National Gas-Weighted HDDs

Dec so far

Final 60 Day Outlook      Final 30 Day Outlook      Current ver + forecast (12/1-12/28)

With the verification plus our current 1-15 Day forecast now valid for almost the whole month of December, it's clear that the final 60 Day outlook for the month will have missed the target. Temperatures look to be above average across most of the eastern half of the US, particularly in the northern Plains and upper Midwest, two areas that were forecast to see the strongest cold. Meanwhile, the coldest temperatures have been in the southern Rockies and the South-west, where conditions were initially expected to have been warmer. Our final 30 Day outlook made up for some of the changes, leading up on the right side of normal in the Southwest and the Northeast, but short of expectations in areas across the North. A lack of any upper latitude blocking and a primarily negative PNA have been the main reasons behind this different outcome.





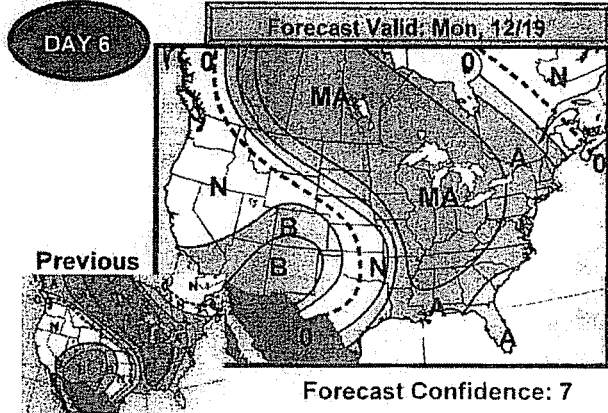
# 6-10 Day Forecast—Detailed



Wednesday, December 14, 2011

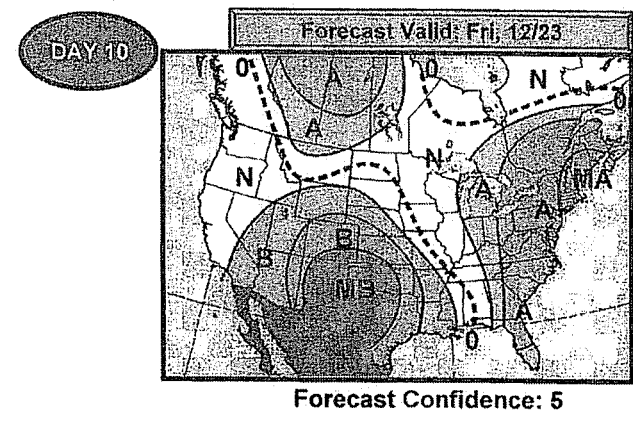
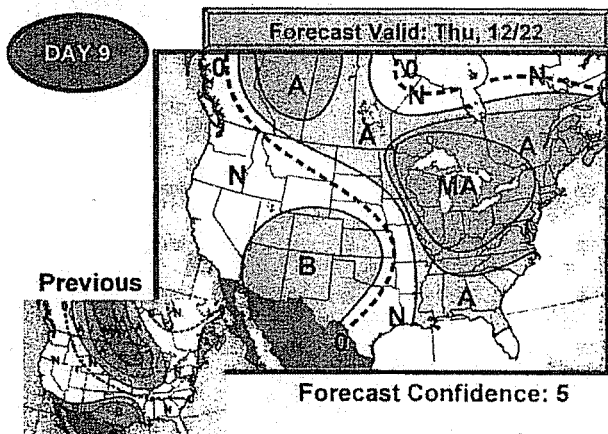
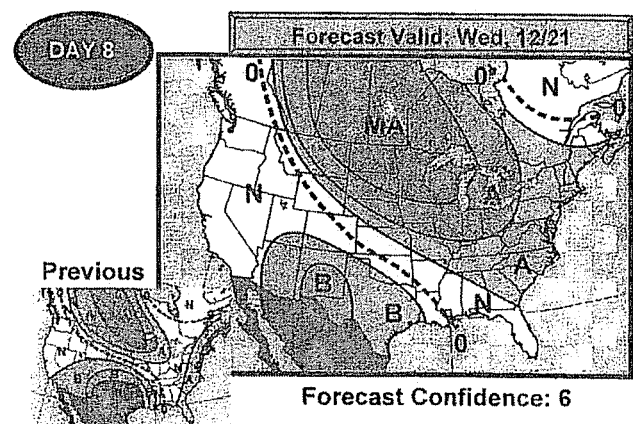
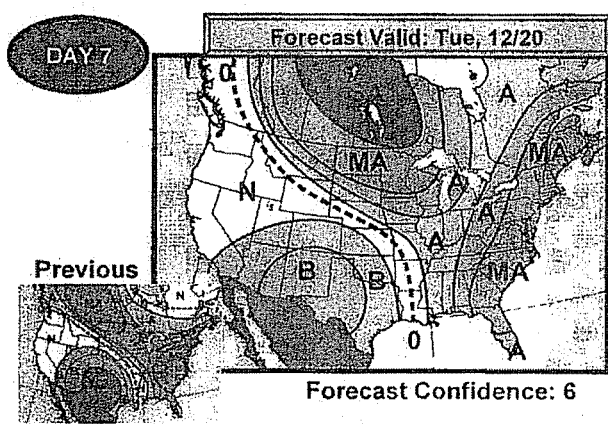
Meteorologist: JS/BH

## Forecast Temperature Deviations



**\*Warmth Remains The Story In East, Midwest\***  
**\*Stronger Cold Threatens Rockies, Texas Late\***

Warm conditions span the Midwest and East Coast through the entire period, and warm risk seems to outweigh any cold risk for these locales. The southern states have trended warmer compared to yesterday due to trends across most of the models, and these models suggest that there could be potential for even higher amounts of warmth. An active storm pattern across the Midwest and Plains could also lead to brief spikes of warmer than forecast temperatures due to southerly flows ahead of the systems. While Texas has trended warmer compared to yesterday early in the period, a stronger surge of cold threatens this area and the Rockies at the end of the period. The Pac NW also houses some colder risk due to recent verifications.



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

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

Released: December 15, 2011 at 10:30 a.m. (eastern time) for the Week Ending December 9, 2011.  
Next Release: December 22, 2011

### Working Gas in Underground Storage, Lower 48

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

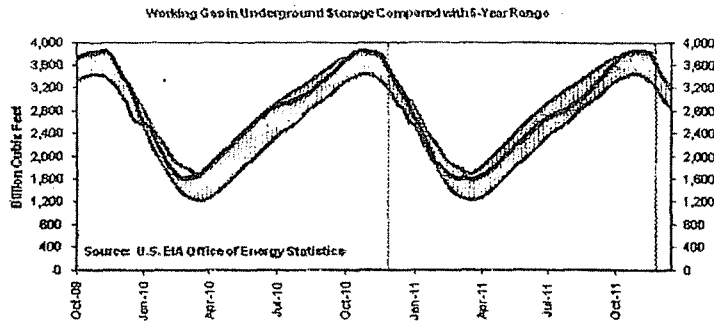
Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	12/09/11	12/02/11	Change	Year Ago (12/09/10)		5-Year (2006-2010) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	2,008	2,058	-50	1,907	5.3	1,875	7.1
West	493	517	-24	468	5.3	458	7.6
Producing	1,228	1,256	-28	1,200	2.3	1,048	17.2
<b>Total</b>	<b>3,729</b>	<b>3,831</b>	<b>-102</b>	<b>3,575</b>	<b>4.3</b>	<b>3,382</b>	<b>10.3</b>

#### Notes and Definitions

#### Summary

Working gas in storage was 3,729 Bcf as of Friday, December 9, 2011, according to EIA estimates. This represents a net decline of 102 Bcf from the previous week. Stocks were 154 Bcf higher than last year at this time and 347 Bcf above the 5-year average of 3,382 Bcf. In the East Region, stocks were 133 Bcf above the 5-year average following net withdrawals of 50 Bcf. Stocks in the Producing Region were 180 Bcf above the 5-year average of 1,048 Bcf after a net withdrawal of 28 Bcf. Stocks in the West Region were 35 Bcf above the 5-year average after a net drawdown of 24 Bcf. At 3,729 Bcf, total working gas is above the 5-year historical range.

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- 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 2006 through 2010.  
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 23, 2011 Release**

Jan-09		Jan-10		Jan-11		Jan-12	
Feb-09		Feb-10		Feb-11		Feb-12	
Mar-09		Mar-10		Mar-11		Mar-12	
Apr-09		Apr-10		Apr-11		Apr-12	
May-09		May-10		May-11		May-12	
Jun-09		Jun-10		Jun-11		Jun-12	
Jul-09		Jul-10		Jul-11		Jul-12	
Aug-09		Aug-10		Aug-11		Aug-12	
Sep-09		Sep-10		Sep-11		Sep-12	
Oct-09		Oct-10		Oct-11		Oct-12	
Nov-09		Nov-10		Nov-11		Nov-12	
Dec-09		Dec-10		Dec-11		Dec-12	
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		

North American Gas Forecast Monthly



November 23, 2011

NATURAL GAS

**GAS PRICE SCORECARD: JANUARY 2012 – JUNE 2012**

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
<i>U.S. Production</i>		Slow sequential growth is forecast with Haynesville causing a sharp net contraction of total shale gas expansion, but losses from the Lower 48's "fourth bucket" should continue to narrow even at relatively flat gas drilling rates.
<i>LNG Sendout</i>		Net Y/Y declines in the LNG sendout from U.S. regas plants are forecast to escalate to ~0.4 BCF/D in 2Q12 as the U.S. LNG market's attention focuses on exports.
<i>Canadian Trade</i>		Reduced imports from Canada in 1Q12 will depend on winter weather and the severity of storage draws. Thereafter, we foresee narrower Y/Y declines due to relatively resilient Canadian gas production.
<i>Mexican Trade</i>		The exceptional strength of Mexican imports from the U.S. especially in 2Q11 sets a high bar for additional volumes in 2012.
<i>Storage Levels</i>		Although our end-March 2012 storage projection would represent an all-time high for that date, projected incremental Y/Y levels narrow to 100-150 BCF by end-May 2012.
U.S. Demand Issues	Outlook	Commentary
<i>Economy</i>		Next year's economic outlook remains in the neutral column, but bearish risks have been mitigated in recent weeks despite the increasing dark clouds overhanging Europe.
<i>Electric Generation (EG)</i>		The EPA's <i>Cross-State Air Pollution Rule</i> (CSAPR), coupled with cheap gas-fired EG relative to steam coal, should keep gas demand in the sector above year-earlier levels.
<i>Industrial Sector</i>		Industrial gas demand prospects have become increasingly problematic given weak demand growth throughout 2011 coupled with mixed signals from forward looking indicators.
<i>Res/Com Heating</i>		Last winter's unusually abundant gas-weighted HDDs remain a hard act to follow, and November has gotten the 2011-2012 heating season off to a slow start.
Other Issues	Outlook	Commentary
<i>NYMEX Prices and Speculation</i>		NYMEX/ICE non-commercial net shorts are now near the high set in mid-March despite a more than 40,000 increase in long positions since 10/25. Considering the relatively lopsided split, along with upwards of \$0.5 billion — equivalent to 12,000-14,000 contracts — in commodity fund buying due in January, NYMEX should garner some price support, as long as winter is not cancelled.
Overall Assessment	Outlook	Commentary
<i>Price Outlook</i>		The past month's NYMEX 2012 gas futures price nosedive, partly tied to the recent lack of heating demand, sets a lower bar to be bullish about gas prices. Also, a lower HH price path, likely to extend into early next year, should pare gas producer capital budgets for 2012. But gas producers' response to lower wellhead prices has been unstable to say the least up until the past month's drilling downturn.

# Gas Daily

Friday, December 9, 2011

## EPA study links water contamination to fracking

**The Environmental Protection Agency on Thursday found that groundwater contamination in a tiny western Wyoming town "contains compounds likely associated with gas production practices, including hydraulic fracturing."**

**The statement, which caps a three-year investigation into tainted water in Pavillion, Wyoming, in the Wind River Basin, marks the first time a federal agency has associated water contamination with fracking.**

EPA said it began investigating water quality concerns in private drinking water wells three years ago and tested water in private and public drinking water wells in the community, as well as drilling two deep monitoring wells into the aquifer.

**"To ensure a transparent and rigorous analysis, EPA is releasing these findings for public comment and will submit them to an independent scientific review panel," the agency said in a statement.**

**"The draft findings announced today are specific to Pavillion, where the fracturing is taking place in and below the drinking water aquifer and in close proximity to drinking water wells — production conditions different from those in many other areas of the country," EPA said.**

Residents of the area have long suspected that contamination of their water was associated with nearby gas development. But industry representatives led by Encana, which operates in the area, have long contended that the pollution most likely stems from other sources.

"EPA's highest priority remains ensuring that Pavillion residents have access to safe drinking water," said Jim Martin, EPA's regional administrator in Denver. Martin said the agency would "continue to work cooperatively with the state, tribes, Encana and the community to secure long-term drinking water solutions."

Earlier Thursday, US Senator Inhofe, an Oklahoma Republican, issued a statement strongly critical of the draft report's findings.

**"EPA's conclusions are not based on sound science but rather on political science. Its findings are premature, given that the agency has not gone through the necessary peer-review process, and there are still serious outstanding questions regarding EPA's data and methodology," said Inhofe, the ranking member of the Senate Committee on Environment and Public Works.**

EPA spokespeople did not respond to calls for comment on Inhofe's statement.

**The finding of a direct link between the contamination of groundwater and fracking could mark a dramatic turning point in the argument over the safety of the drilling completion practice, which industry representatives often tout as not having harmed groundwater in its 60 years in use.**

**In a statement accompanying the release of the 121-page draft study, EPA said its analysis of samples taken from the two deep monitoring wells in the aquifer "indicates detection of synthetic chemicals, like glycols and alcohols consistent with gas production and hydraulic fracturing fluids, benzene concentrations well above Safe Drinking Water Act standards, and high methane levels.**

"Given the area's complex geology and the proximity of drinking water wells to ground water contamination, EPA is concerned about the movement of contaminants within the aquifer and the safety of drinking water wells over time," EPA said.

In addition, EPA said its most recent sampling of drinking water wells in the Pavillion area found chemicals that "include methane, other petroleum hydrocarbons and other chemical compounds." These findings were consistent with those identified in earlier EPA samples, the agency noted.

"The presence of these compounds is consistent with migration from areas of gas production. Detections in drinking water wells are generally below established health and safety standards," EPA said.

In the fall of 2010, the US Department of Health and Human Services' Agency for Toxic Substances and Disease Registry reviewed EPA's data and recommended that affected well owners take several precautionary steps, including using alternate sources of water for drinking and cooking, and using ventilation when showering.

Those recommendations remain in place, and Encana has been funding the purchase of alternate water supplies for affected residents.

**Doug Hock, a spokesman for Encana, said EPA's attempt to link the water contamination to fracking is not supported by the data. "This isn't a conclusion. It's a probability," he said. "We think it's wrong."**

Hock said EPA's tests of drinking water wells in Pavillion found no components associated with natural gas production.

**He said that although the chemical components EPA found in its two deep monitoring wells could be associated with gas development, they could also be traced to a number of other likely sources, while the methane found in the wells is a naturally occurring mineral.**

**"They're not talking in definitive conclusions. They're talking in probabilities and that's kind of astonishing from an agency that prides itself on its science," Hock said.**

In a statement Thursday, Wyoming Governor Matt Mead also said EPA's findings on Pavillion were "scientifically questionable" and called for more testing.

**"We believe that the draft study could have a critical impact on the energy industry and on the country, so it is imperative that we not make conclusions based on only four data points," Mead said. "Those familiar with the scientific method recognize that it would not be appropriate to make a judgment without verifying all of the testing that has been done."**

Mead said the state, which has been working to address the concerns of Pavillion residents for several years, formed a working group — including residents, state agencies, Indian tribes, EPA and the Bureau of Land Management — to investigate the problem. "The first review of the study by the Pavillion Working Group was unable to resolve many of the questions related to the sources of the compounds detected," said John Corra, director of the Wyoming Department of Environmental Quality and a member of the working group.

But Louis Meeks, a Pavillion-area rancher whose well water was contaminated, praised EPA's draft report.

"I'm really happy about it. No one else would help us. We're living in a cesspool out here," he said Thursday.

"The state agencies, instead of fighting EPA, they should be helping them. If they had done their job this wouldn't be happening," Meeks said. "Our state representatives will wake up one day and say, 'why did we let these oil and gas companies run rampant?'"

"Experts, families in Wyoming, and communities nationwide have known for some time that fracking poses serious threats to safe drinking water," Amy Mall of the Natural Resources Defense Council said in a statement. "EPA's latest acknowledgment of that fact underscores the urgent need to get federal rules and safeguards on the books to help protect all Americans from the dangers of fracking."

"This finding feels like a case of déjà vu," Dusty Horwitt, Environmental Working Group's senior public lands analyst, said in a statement. "Almost a quarter century ago, EPA concluded that hydraulic fracturing can contaminate groundwater. The new finding points to the need for broader testing to determine how fracking endangers groundwater and what steps can be taken to prevent toxic pollution by gas drilling."

EPA said the draft report will be available for a 45-day public comment period and a 30-day peer-review process led by a panel of independent scientists. Apart from the Pavillion investigation, EPA has launched a multi-year study of the impact of fracking on water supplies, the preliminary results of which are due out next year. — *Jim Magill*

# Gas Daily

Monday, December 12, 2011

## Analysts: EPA study won't likely derail fracking

While gas industry groups charged the Environmental Protection Agency with practicing bad science and poor politics last week by linking hydraulic fracturing for tight gas in Wyoming to contaminated drinking water, analysts Friday cautioned against overreacting to what might be a one-off event that doesn't apply to modern shale plays.

The report is "not a game changer for fracturing, but does give EPA another arrow in their quiver in the anti-frack debate," analysts at Tudor Pickering Holt said.

Analyst Benjamin Salisbury at FBR Capital said further regulation of fracking is "inevitable," but the value of the shale resource is too great for fracking to be stopped or even slow down in a meaningful way.

EPA on Thursday released a draft report saying that its three-year investigation into contaminated groundwater in Pavillion, Wyoming, tied the contamination to 40 years of gas drilling and fracturing of the tight sands formation — the first time a federal agency has made a link between fracking and tainted water.

EPA said samples from two monitoring wells the agency drilled into the aquifer outside the town contained "glycols and alcohols consistent with gas production and hydraulic fracturing," as well as benzene above Safe Water Drinking Act levels and a high amount of methane.

Environmental groups seized on the report last week as evidence that greater federal regulation is needed immediately.

"The report reads like a primer on what NOT to do when developing unconventional gas," Mark Brownstein of the Environmental Defense Fund said in Texas last week.

"It's all here: poor cement quality, cement not injected to the proper depth to isolate the well from the groundwater, fracturing activity taking place in close proximity to the water table, soil contamination around waste water pits indicating spills at the surface that migrated to groundwater, and lack of clarity about what went down the well because of incomplete disclosure of the chemicals used in the fracturing process," Brownstein said.

But Doug Hock, a spokesman for Encana, the primary driller in Pavillion, took exception to EPA's findings and Brownstein's conclusions, saying the town's water was of poor quality long before gas drillers arrived on the scene.

"The poor water quality is due to sulfates, sodium, total dissolved solids and pH which commonly exceed state and federal drinking water standards," he said. "The EPA drilled two deep monitoring wells into a natural gas reservoir and found components of natural gas, which is an entirely expected result. Natural gas developers didn't put the natural gas there, nature did."

If the draft report's conclusions prove true — the study will have a 45-day public comment period before a 30-day scientific peer review — EPA will have found an exception to industry's consistent public mantra that fracking has never been linked to water contamination.

**EPA was careful to point out that the drilling and geology around Pavillion is unique: shallower than most recent shale plays by thousands of feet, with the tight sandstone missing the hard cap rocks that inhibit vertical flows of fluids.**

Unlike most new shale plays in the US, Pavillion's tight gas resource lies directly beneath its freshwater aquifer at depths of less than 5,000 feet. The current hot US shales offer thousands of feet of vertical separation between water aquifers and the deeper shale rock formation.

**TPH called the Pavillion case a "unique situation with a gas reservoir just below freshwater aquifer" and that the issue "most likely stems from surface casing not set deep enough (completely through the aquifer) and the proximity of gas zones to the aquifer."**

EPA found that drillers didn't case the shallow wells below the overlying aquifer or below the depth of nearby water wells.

FBR's Salisbury said his clients worry about overreaction from politicians. "This is only a problem if you believe that fracking is 100% safe," Salisbury said. "Very few people in finance and in policy believed that."

**Policy analysts at Clearview Energy Partners said the real risks of additional fracking rules don't come from EPA, which has just started a multi-year study of fracking and its impacts on drinking water, but from states.**

"State-level regulators themselves may seek to augment existing rules in an effort to stave off federal intervention," Clearview analyst Kevin Book said.

Additionally, Book said, after BP's 2010 Macondo well blowout in the Gulf of Mexico, "policymakers perceive a heightened risk of energy infrastructure failures and may be prone to 'fill in the blanks' established by circumstantial evidence." — *Bill Holland*



# Gas Daily

Tuesday, November 22, 2011

## Prices likely 'very low' through 2012 if weather stays normal

Natural gas prices are likely to idle at around \$3.55/MMBtu next year on weak economic growth and continued strong production, with weather providing the only potential stimulus, analyst Ron Denhardt said Monday.

In his latest monthly report, Denhardt, vice president of natural gas services at Strategic Energy and Economic Research, predicts that December Henry Hub prices will average \$3.50/MMBtu, then gain only a nickel on average for all of 2012.

"Weather will be the primary determinant of how prices actually play out," he noted. If temperatures are normal, he expects storage inventories to be 1.956 Tcf at the end of March and a record 3.955 Tcf at the end of October next year.

However, if heating degree days are 10% greater than normal, prices would jump to an average of \$4.25/MMBtu through March, he said. Conversely, warmer-than-normal weather would pummel winter prices below the \$3 mark, he said.

Overall demand this winter is expected to be below last winter — when temperatures averaged 4% below normal — even with a slight increase in gas demand from the power-generation sector expected this year due to lower gas prices, which Denhardt said should spur some 100 Bcf in coal-to-gas switching.

Denhardt says he expects gas supply to be 6% higher this winter due to ongoing production growth and the presumed absence of the wellhead freeze-offs experienced last winter in key producing regions.

Outside the heating season, electric power consumption is expected to shoot some 6.6% higher due to the federal Cross-State Air Pollution Rule implementation next year, even as Texas is given additional time to comply with the new rule, he said.

Denhardt also expects the Environmental Protection Agency to be "highly flexible in granting exceptions and delays where grid reliability is an issue." — Stephanie Seay

# Gas Daily

Tuesday, December 6, 2011

## Raymond James slashes 2012 gas price by 12% on flagging demand

Investment bank Raymond James' top natural gas analyst sliced 12% off his 2012 natural gas price forecast Monday, saying growing supplies will smother anemic demand, and prices will have to go below \$3/Mcf in the summer to avoid overwhelming storage capacity.

Raymond James slashed its previous \$4/Mcf forecast by 50 cents to \$3.50/Mcf, and predicted prices could drop below \$3/Mcf this summer as storage fills. This is the second time in two months the bank has trimmed its gas price forecast.

"According to our working model, the gas market has been running 2.5 Bcf/d looser over the past 20 weeks, a trend we don't anticipate slowing in the near term," analyst Marshall Adkins said in a note to clients. "We remain firmly in the bearish camp and don't see demand being able to catch up with supply anytime soon."

Adkins said natural gas production is still growing at 4 Bcf/d per year pace because of dry gas production associated with liquids-rich plays. Cheap gas in the US will trim imports from Canada back to 1 Bcf/d next year, Adkins said, while liquefied natural gas imports will continue to decline below their sub-1 Bcf/d level.

Demand can't grow much, Adkins said because most of the "low-lying fruit" of coal-to-gas switching has already happened, industrial demand is hobbled by the slow economy, and weather-induced demand, using 30-year models, won't be as high as the 2011 season.

"Our 2012 gas storage model indicates 4.59 Tcf of summer-ending gas inventories," Adkins said, "but we estimate there to be only roughly 4 Tcf of total storage capacity."

"This means that gas prices will need to be low enough to encourage production shut-ins or more coal-to-gas switching," Adkins concluded. "Either way, it doesn't bode well for gas prices." — Bill Holland

# Gas Daily

Monday, December 12, 2011

## Moody's cuts gas, raises oil price assumptions

Moody's Investors Service Friday raised its 2012 and 2013 price assumptions for the two main benchmarks for crude oil while lowering its price assumptions for North American natural gas in both years.

The ratings agency said the changes reflect its expectations that oil prices will remain robust over the next two years, while natural gas "will remain significantly oversupplied."

Moody's reduced its price assumptions for gas delivered at the Henry Hub to \$3.50/MMBtu in 2012, \$4/MMBtu in 2013 and \$4/MMBtu thereafter. Moody's had assumed Henry Hub spot prices of \$4/MMBtu in 2012 and \$4.50/MMBtu thereafter.

"A glut of natural gas supply has grown even more abundant over the past year, and the rush to develop unconventional resources -- partly with the help of large integrated and national oil companies -- has kept supplies high and prices low. This condition will persist beyond Moody's near-term window of 12-18 months."

As for oil, Moody's said it now assumes a price of \$90/barrel for WTI in 2012 and \$85/b in 2013, dropping to \$80/b in the medium term beyond 2013. It had previously assumed a price of \$80/b for WTI in 2012 and beyond.

For Brent crude, Moody's said it is assuming a price of \$95/b in 2012, \$90/b in 2013 and \$80 in the medium term, compared with the previous assumption of \$90/b in 2012 and \$80/b thereafter.

A significant bottleneck at the important Cushing, Oklahoma, transportation hub kept WTI prices at a steep and unusual discount to Brent during 2011, Moody's said, adding that recent plans to reverse the Seaway pipeline will narrow the WTI/Brent spread to just \$5/b in 2012 and 2013, down from its previous assumption of \$10/b. According to the new price assumptions, this spread will disappear entirely after 2013.

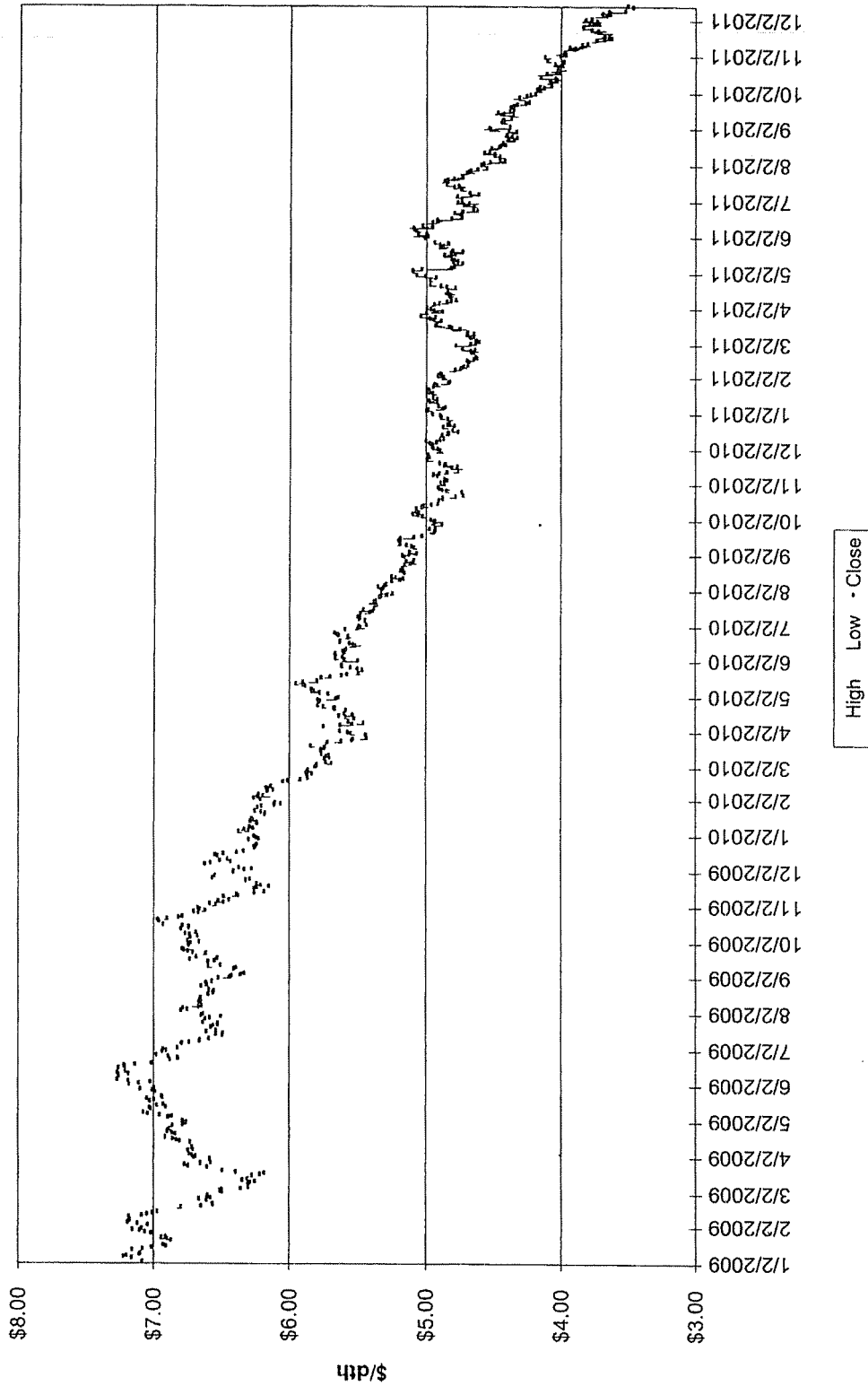
Still, Moody's said it believes oil prices face more risks of pressure in 2012, including potential economic contraction in Europe, slowing growth in China and other emerging economies, and a growing supply as Libya re-enters the market. These risks are tempered by the producing countries' need for higher prices to support social spending programs, along with their growing domestic demand.— *Jeff Barber*

**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**December 6, 2011 Release**

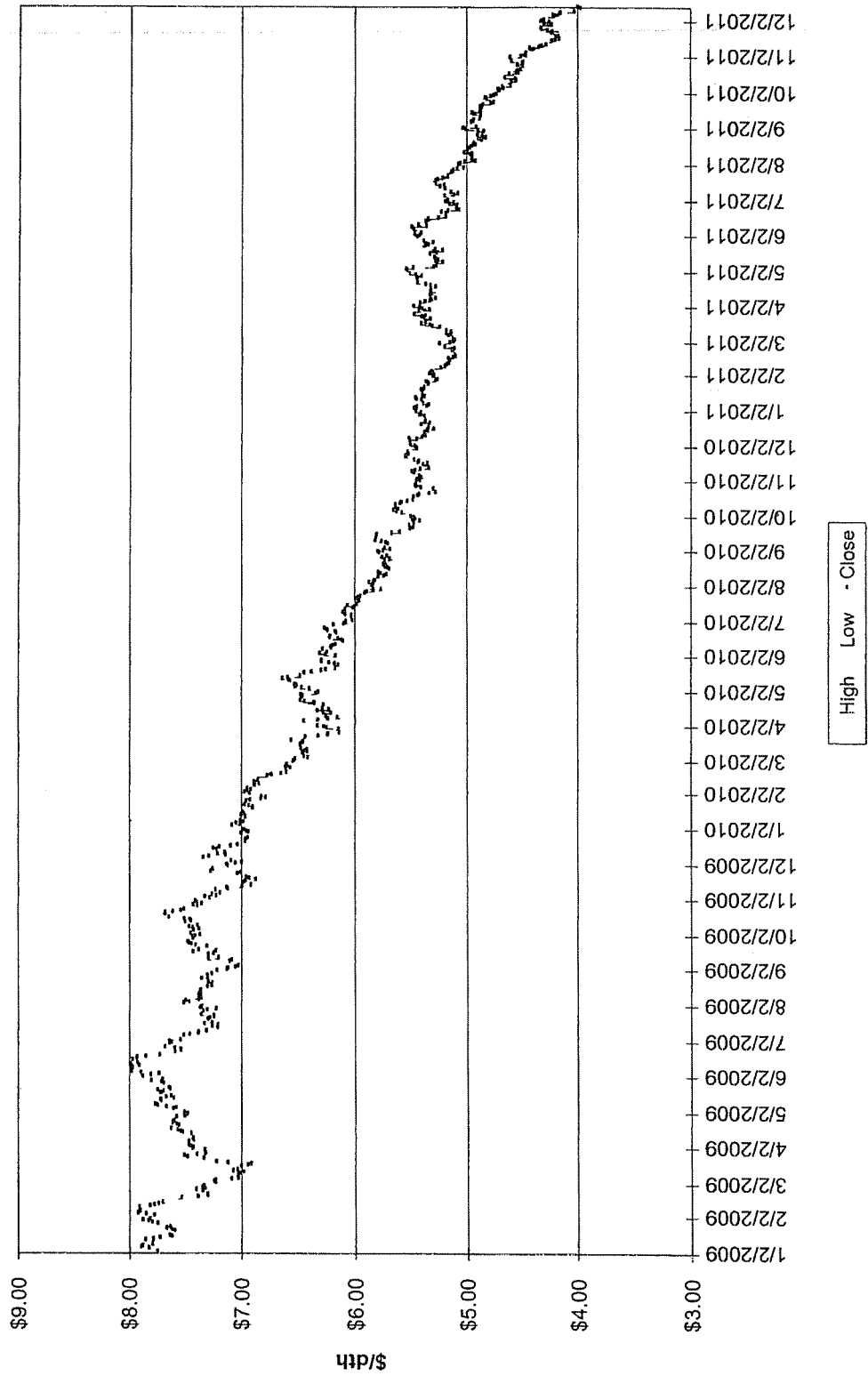
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Feb-09	4.51	Feb-10	5.32	Feb-11	4.09	Feb-12	3.57
Mar-09	3.96	Mar-10	4.29	Mar-11	3.97	Mar-12	3.49
Apr-09	3.49	Apr-10	4.03	Apr-11	4.25	Apr-12	3.57
May-09	3.83	May-10	4.14	May-11	4.31	May-12	3.60
Jun-09	3.80	Jun-10	4.80	Jun-11	4.55	Jun-12	3.62
Jul-09	3.38	Jul-10	4.63	Jul-11	4.42	Jul-12	3.63
Aug-09	3.14	Aug-10	4.32	Aug-11	4.05	Aug-12	3.67
Sep-09	2.97	Sep-10	3.89	Sep-11	3.90	Sep-12	3.74
Oct-09	4.00	Oct-10	3.43	Oct-11	3.56	Oct-12	3.87
Nov-09	3.66	Nov-10	3.71	Nov-11	3.24	Nov-12	3.96
Dec-09	5.34	Dec-10	4.25	Dec-11	3.37	Dec-12	4.15

Average 2009	\$		Average 2010	\$		Average 2011	\$		Average 2012	\$	
Summer 2009	\$		Summer 2010	\$		Summer 2011	\$		Summer 2012	\$	
Winter 2009-2010	\$		Winter 2010-2011	\$		Winter 2011-2012	\$				

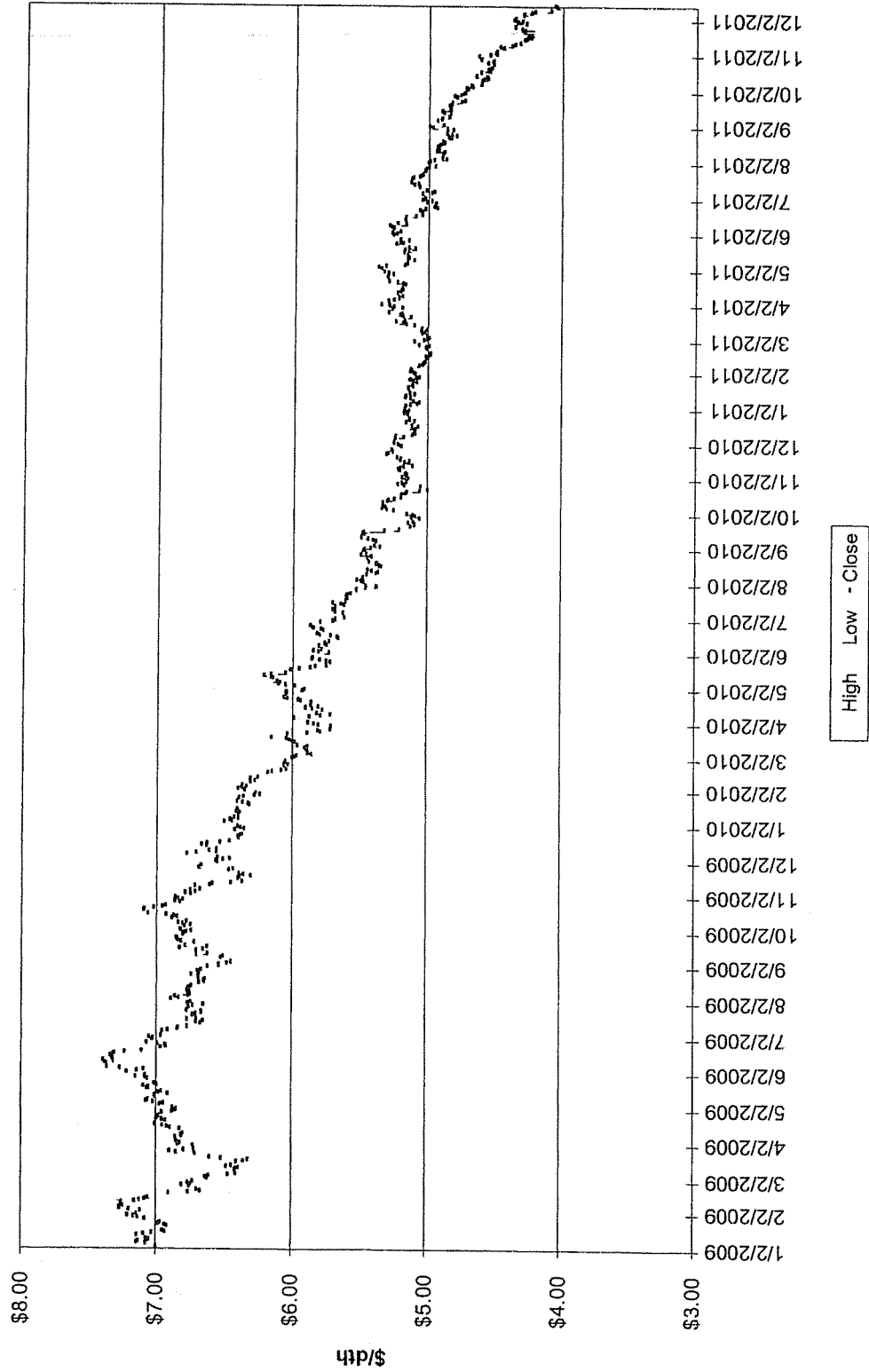
Summer Strip 2012



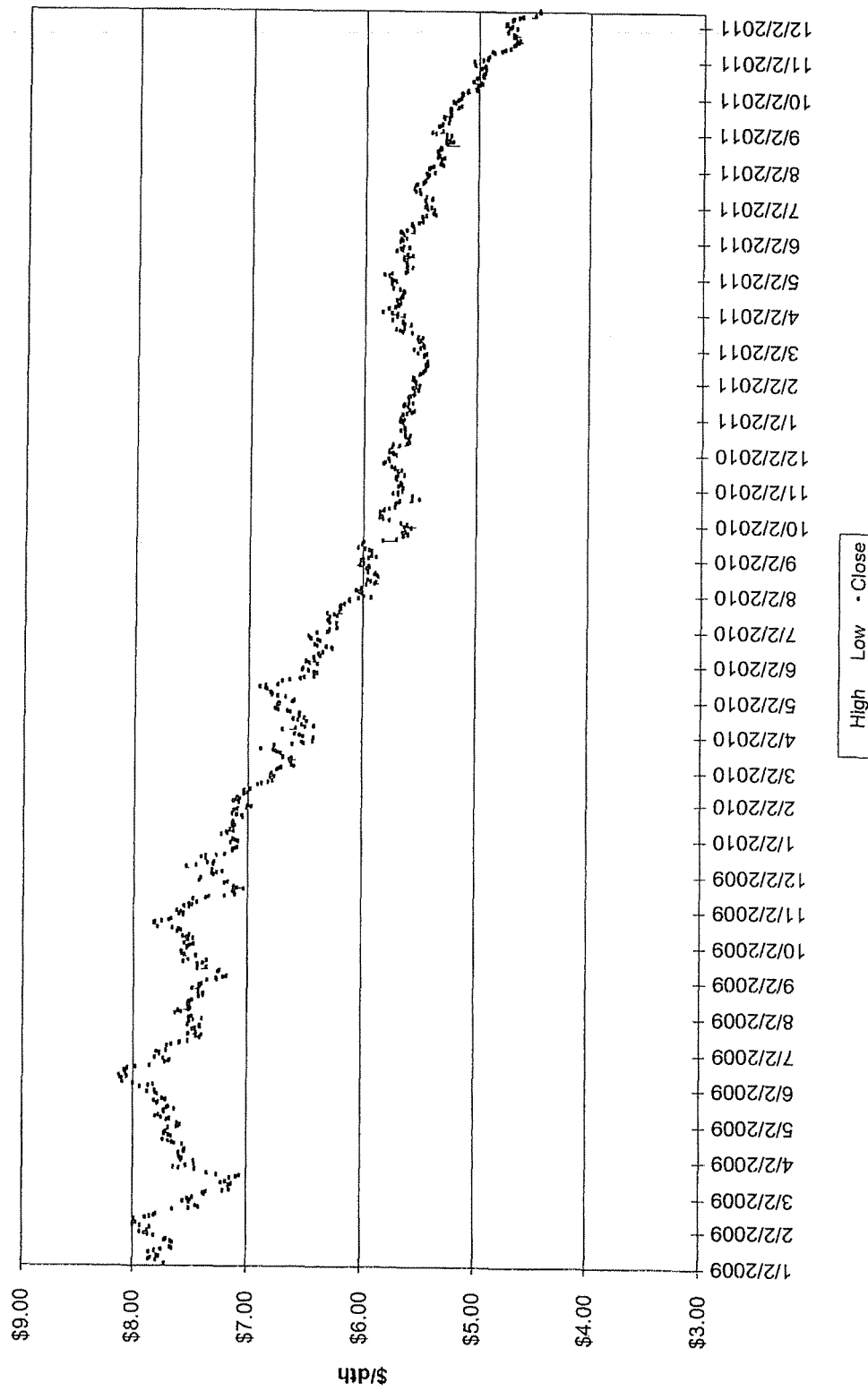
Winter Strip Nov12 - Mar13



Summer Strip 2013



Winter Strip Nov13 - Mar14





# Gas Daily

Wednesday, December 7, 2011

## EIA slashes autumn, winter gas price forecasts

Pointing to a very strong supply picture, the Energy Information Administration on Tuesday took an axe to its earlier natural gas price estimates, cutting its fourth-quarter 2011 and first-quarter 2012 predictions by 31 cents and 50 cents — about 8% and 12%, respectively — to \$3.39/MMBtu and \$3.54/MMBtu.

Similarly, it cut its month-ago estimate for the 2011 Henry Hub spot price average by 7 cents to \$4.02/MMBtu and next year's target by a 43 cents, or about 10%, to \$3.70/MMBtu.

"Strength in domestic production and abundant storage supplies have led to relatively low prices this year and EIA expects supply growth to continue," the agency said in the December short-term energy outlook.

EIA noted that the Henry Hub spot price averaged just \$3.24/MMBtu in November, 32 cents lower than October and 66 cents lower than September. "November marks the fifth consecutive month in which Henry Hub prices have fallen," it said.

EIA noted that gas working inventories at the end of November were at a record high, about 1% above the same time last year.

"This winter began with fairly mild weather," said the report, noting that heating degree days were estimated to be down by 8% in October and 12% in November from the 30-year (1970-2000) norms.

"The warm weather, combined with the strong production growth this year, enabled stocks to reach such high levels," said EIA, which now expects working gas inventories to total about 1.8 Tcf at the end of March 2012.

US marketed gas production should average 65.9 Bcf/d for all of 2011, a 6.6% increase over 2010, the report said. For 2012, marketed production will continue to grow, but at a slower 2.8% pace.

"All of this growth comes from higher onshore production in the Lower-48 states, which more than offsets a year-over-year decline of 1.2 Bcf/d (20%) in the federal Gulf of Mexico," it said.

Growing domestic gas production "has reduced reliance on natural gas imports and contributed to increased exports," EIA observed. It expects pipeline gross imports will fall by 6.5% to 8.5 Bcf/d this year and by another 3.6% to 8.2 Bcf/d in 2012.

Projected US imports of liquefied natural gas will fall from 1.2 Bcf/d in 2010 to 0.9 Bcf/d in 2011 and to 0.7 Bcf/d in 2012, according to the report.

Meanwhile, pipeline gross exports to Mexico and Canada are expected to average 4.3 Bcf/d this year and 4.4 Bcf/d in 2012, compared with 3.1 Bcf/d in 2010.

Addressing the demand side of the equation, EIA said it expects overall gas consumption to average 67.18 Bcf/d this year, up 100,000 Mcf/d from its month-ago estimate.

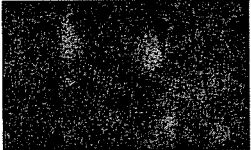
Greater use of gas in the industrial and electric power sectors will account for most of the increase with projected growth rates of 2.3% and 2.2%, respectively, the report said.

EIA also hiked its earlier estimate for 2012 gas consumption by 1.7% to 68.4 Bcf/d. — Chris Newkumet

**Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2011-12**

**Duke Energy Ohio**

Previously Hedged

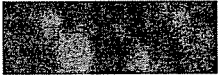


Col Gulf Mainline  
 Col Gulf Mainline  
 Gulf South-DE Field Services  
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 Tex Gas Zone 1

**Total  
 System Supply**

**Duke Energy Kentucky**

Previously Hedged



Col Gulf Mainline  
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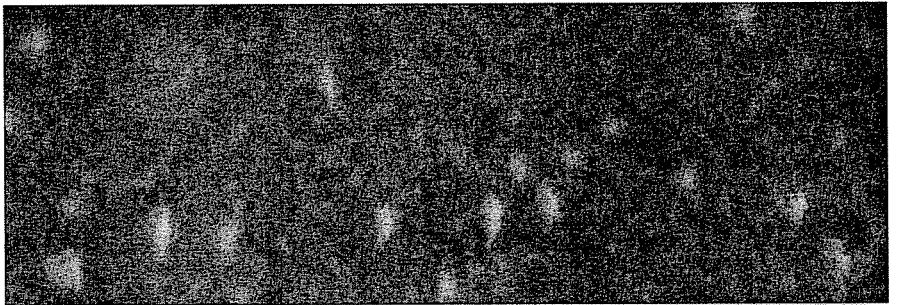
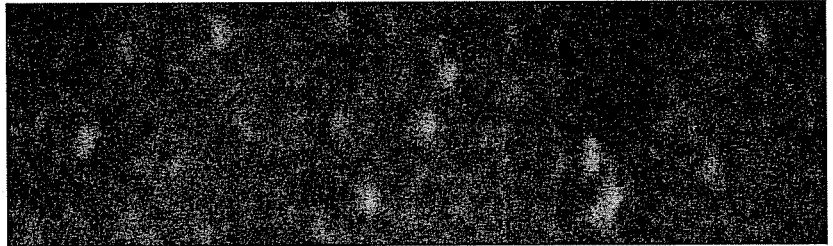
**Total  
 System Supply**

**Duke Energy--Total**

Previously Hedged

**Total**

Dth/Day					Total	% System Supply
November	December	January	February	March		



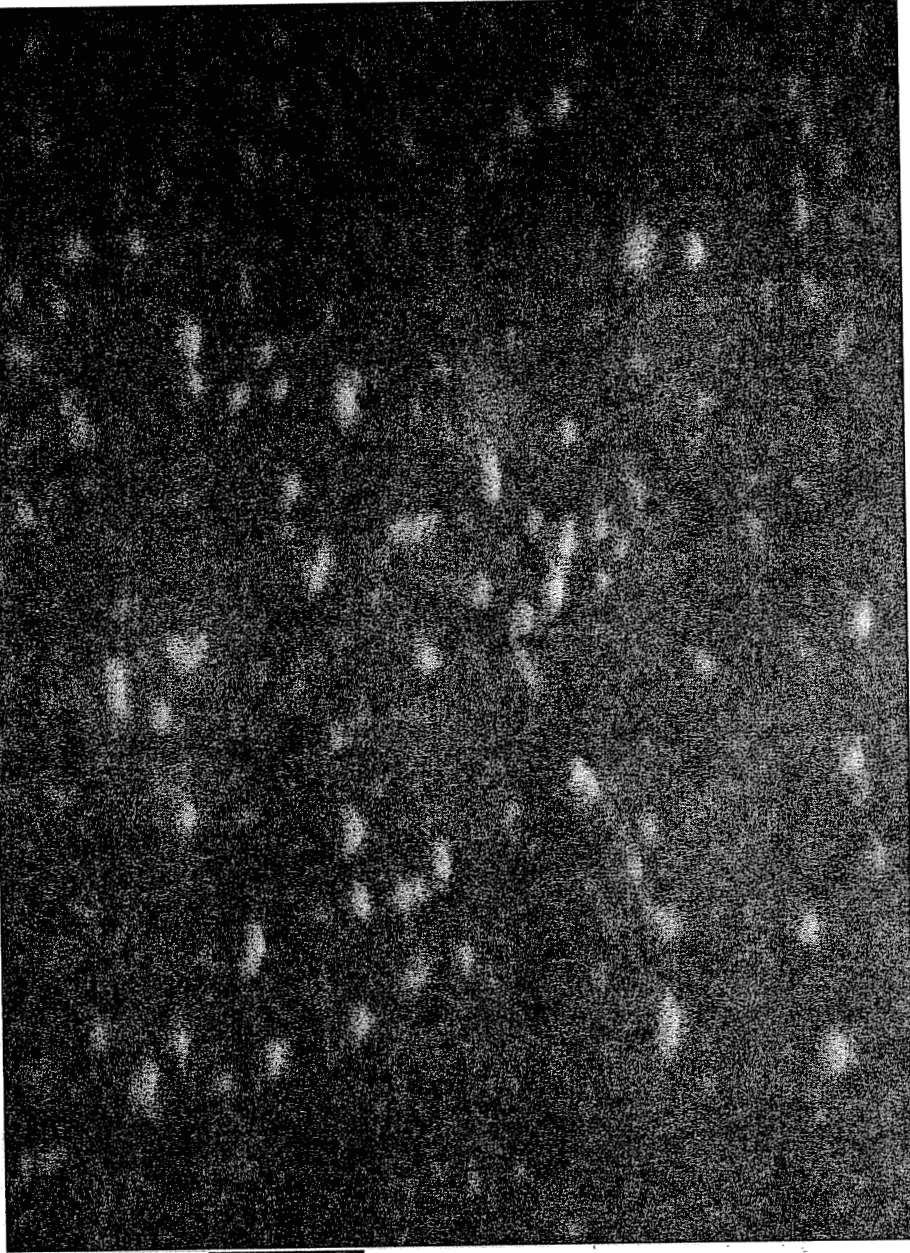
**Gas Commercial Operations  
Hedging Program  
Market Indicators Summary  
January 19, 2012**

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Jan 12–Mar 12)	↓	Long	NOAA predicting above average temperatures for January 2012–March 2012 for portions of the Mid-Continent to the East Coast. Below normal temperatures on West coast to Montana portions of CONUS. Equal chances of Above, Normal, or Below for the rest of CONUS.	12
Mid Term Forecast (30-60 days)	↓	Long	February is predicted to be 7.1% warmer than normal based on 10 year normals and March weather is predicted to be normal.	13
Short Term Forecast (6-10 days)	↓	Short	Above, Much Above and Strong Above across the CONUS except for western states during the period.	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage withdrawals for the week ending January 13th were 87 BCF. Storage levels are at 3.290 TCF which is 19.6% higher than last year and 20.8% higher than the 5 year average.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2011/12: ██████ Summer 2012: ██████	↑	Long	GAS PRICE SCORECARD: April 2012–October 2012 US Production and Storage Levels remain bearish while Electric Generation and Industrial Sector demand are bullish.	16-17
BNP Paribas	↔	Long	Federal court stay of the EPA's Cross-State Air Pollution Rule ("CSAPR") eliminated the near-term regulatory incentive for the Coal to Gas switching. CSAPR not expected to be reinstated until 2013, depending on court ruling. Given storage levels, electric power demand growth from economic fuel-switching will not justify a significant recovery in US gas prices in 2012.	18
Argus Natural Gas Americas	↓	Long	Storage levels could hit record highs in 2012 and in 2013 as production continues to climb despite low prices. The growing storage overhang has put downward pressure on gas prices by easing concerns about a weather-related spike in demand or supply shortfall.	19
Argus Natural Gas Americas	↓	Long	The NYMEX front month contract fell to its lowest level in almost a decade. "We have not found the new bottom yet" and the price could move closer to the \$2.00 mark. The winter demand has not arrived and more supply is coming into the market.	20
BNP Paribas	↑	Long	Short-term spot market will probably get worse before it gets better. Longer term starting to see some bullish signs: Rig count is down, winter without snow could mean drought conditions this winter which may limit some nuclear capacity, and very warm winter tends to make us believe that we are headed for a very warm summer.	21
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$4.084 Summer 2012: \$3.490	↑	Long	The projected Henry Hub natural gas spot price averages \$3.527/MMBtu for 2012 and \$4.139/MMBtu for 2013.	22
<b>Technical Analysis</b>				
Summer 2012 Strip Chart	↔	Short	Closed at \$2.77	23
Winter 2012-13 Strip Chart	↔	Short	Closed at \$3.38	24
Summer 2013 Strip Chart	↔	Short	Closed at \$3.52	25
Winter 2013-14 Strip Chart	↔	Short	Closed at \$3.96	26
<b>Economy</b>				
Demand	↑	Long	EIA projects total natural gas consumption to grow by 2.0% to 68.2 Bcf/d in 2012 and grow 1.3% to 69.1 Bcf/d in 2013, resulting from increases in all sectors with the largest volume increase coming from electric power consumption.	27
Supply	↑	Long	EIA expects average total production to increase by 1.4 Bcf/d or 2.2% in 2012. Production growth is forecast to continue at a much slower pace in 2013, increasing 1.0% or 0.7 Bcf/d.	27
Oil Market	↔	Long	EIA expects WTI spot prices to average of \$100 per barrel in 2012, \$ 5 per barrel higher than the average price last year. For 2013, EIA expects pricing reaching \$106 per barrel in the fourth quarter for 2013.	27

**Meeting Minutes: 412 Annex Conference Room - 1:00 pm**  
**Attendees: Jim Mehring, Jeff Kern, Mike Brumback, Mitch Martin, Terry Bates, Steve Niederbaumer**  
 Discussed the current market fundamentals including weather, storage levels (████ Bcf withdrawal for week ending January 13, 2012 vs. █████ Bcf withdrawal in 2011) current storage level is █████% higher than the 5-year average, supply and demand and analyst thoughts on the current gas market conditions. Discussed DEO and DEK's hedging programs. Discussed the Cost Averaging deal currently being priced. Significant discussion took place around the storage levels and the current NYMEX prices (lowest in the last 10 years). Based on these factors, a decision was made to hedge additional volumes for the period November 2013 through March 2015.

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2011 - October 2012  
As of 01/17/12

Nov-11 Dec-11 Jan-12 Feb-12 Mar-12 Apr-12 May-12 Jun-12 Jul-12 Aug-12 Sep-12 Oct-12



**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  
Collar  
Collar  
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

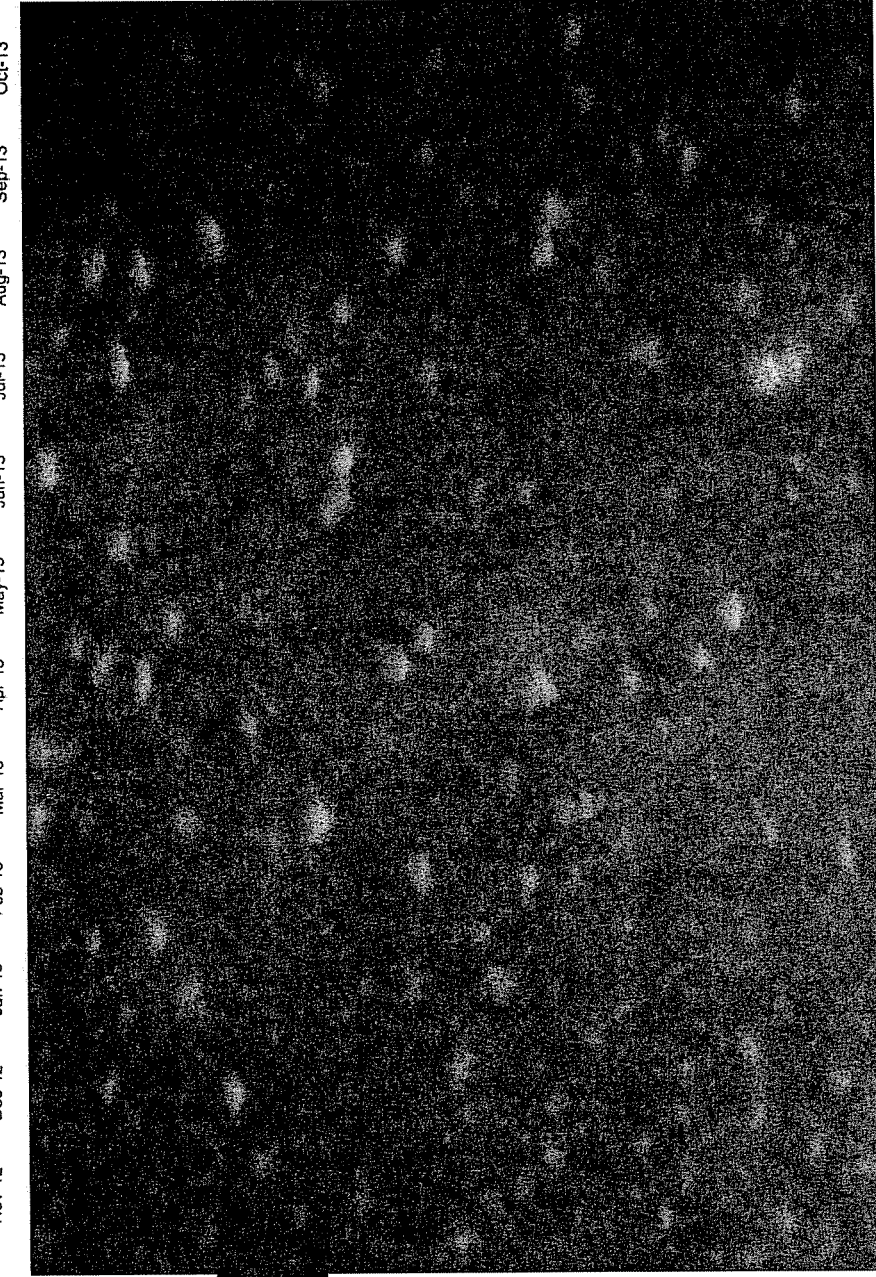
**Amt Hedged with Storage @ City Gate**

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 2012 - October 2013  
 As of 01/17/12**

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



**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  
 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

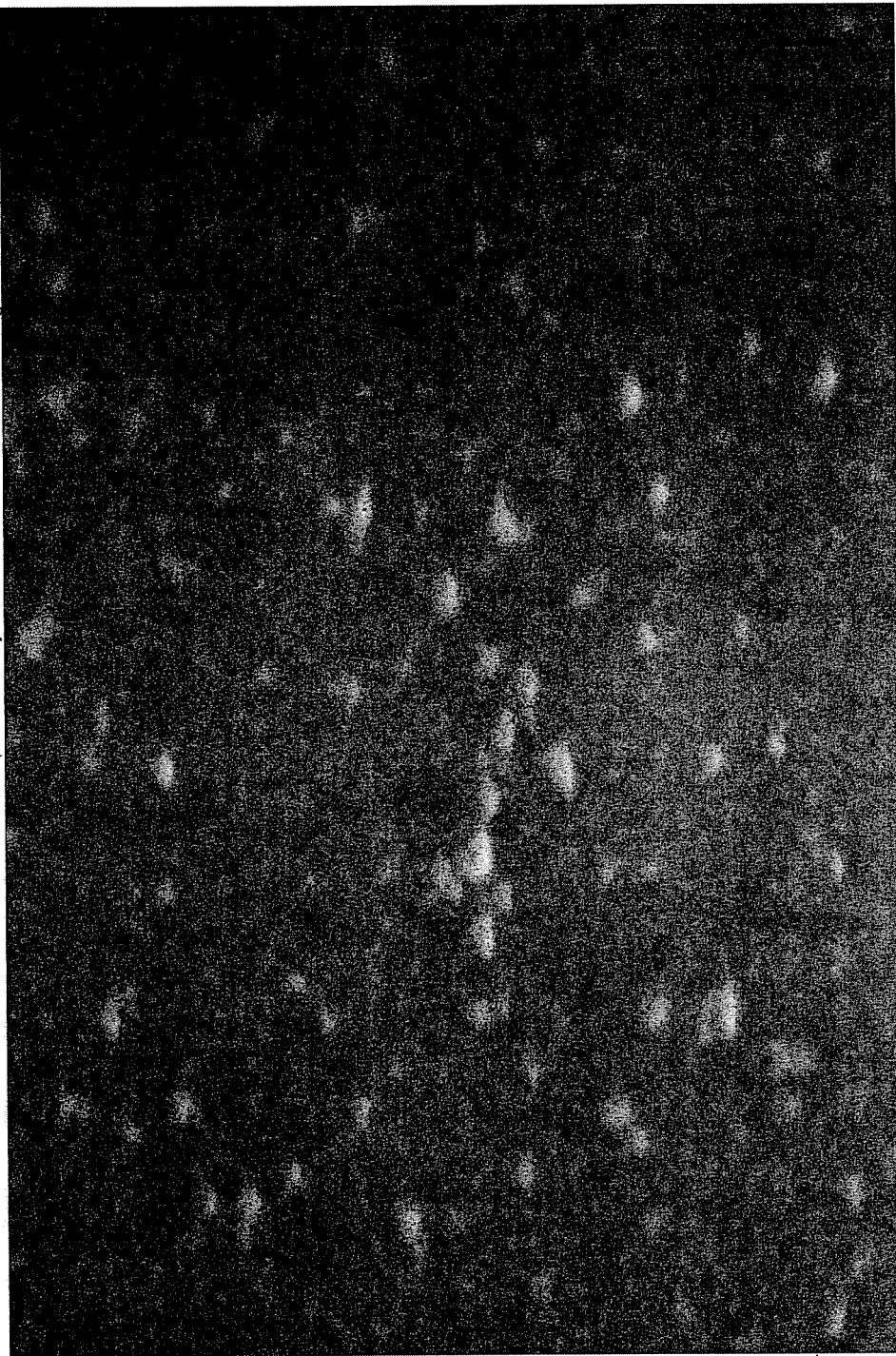
**Estimated EGC per Dth at City Gate**  
 Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

**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 2013 - October 2014  
As of 01/17/12

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  
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

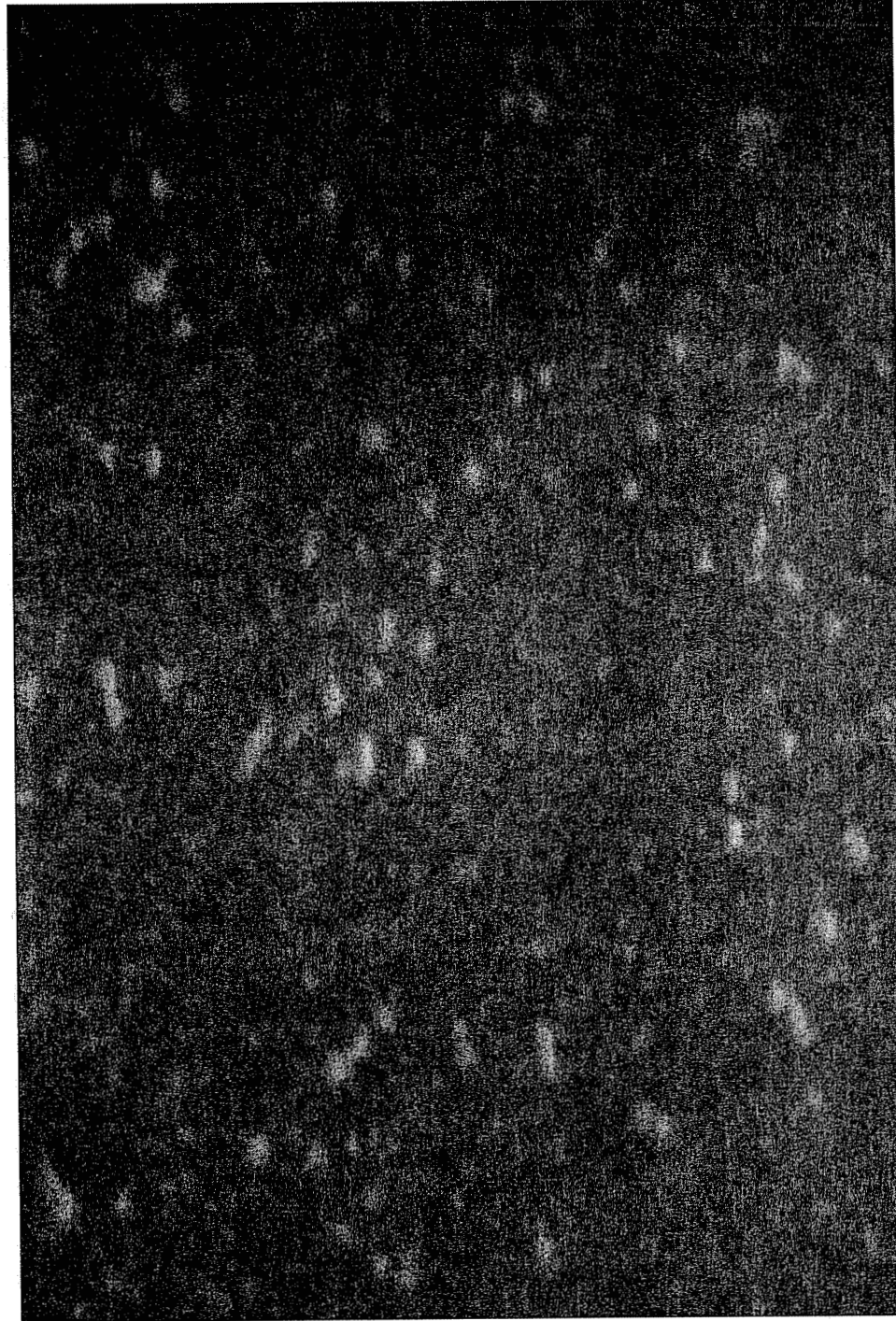
**Amt Hedged with Storage @ City Gate**

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 2014 - October 2015  
As of 01/17/12

Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-1



**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.

1/18/2012

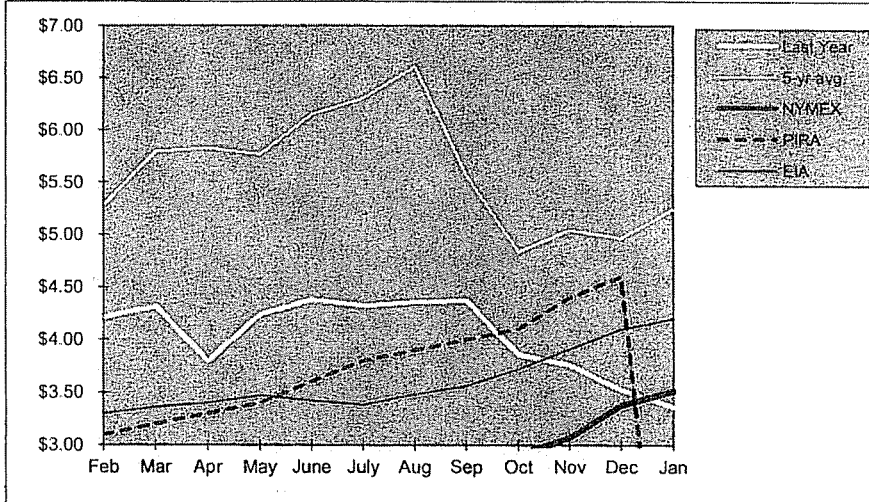
**Duke Energy Kentucky  
 Hedging Program  
 Current Position**

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-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2012					
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, 2012					
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, 2012					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					

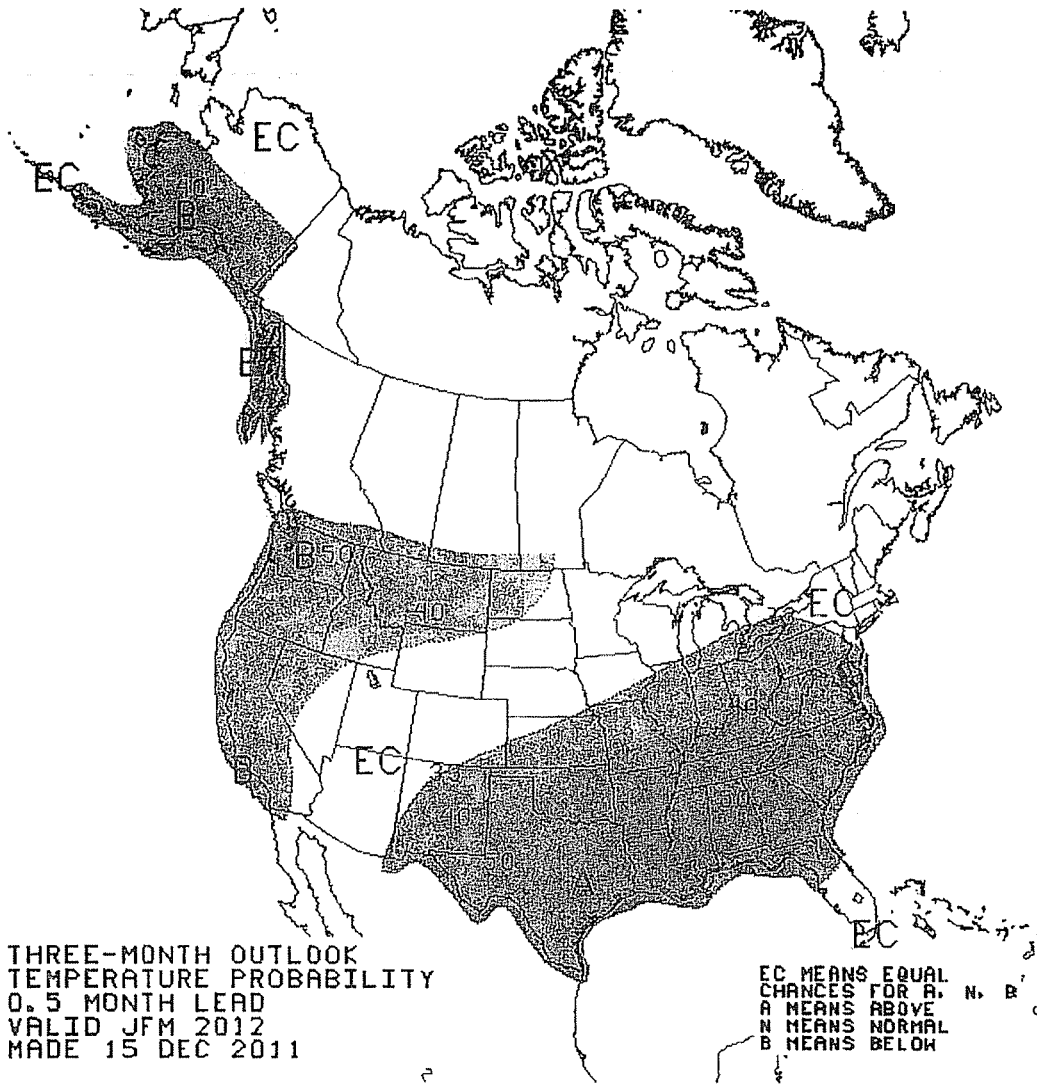


**COMPARISON OF HISTORIC SPOT & PROJECTED PRICES  
 TO CURRENT FUTURES PRICES**

Historic Prices: NYMEX Closing Price							Hedged Prices	
	5-yr. avg. (07/08-11/12)	Last Year (2011-2012)		PIRA 20-Dec-11	EIA 10-Jan-12	NYMEX 18-Jan-12	Ohio	Kentucky
Feb	\$5.28	\$4.22			\$3.300	\$2.531		
Mar	\$5.80	\$4.32			\$3.360	\$2.566		
Apr	\$5.83	\$3.79			\$3.400	\$2.654		
May	\$5.77	\$4.24			\$3.470	\$2.723		
June	\$6.15	\$4.38			\$3.420	\$2.776		
July	\$6.31	\$4.33			\$3.380	\$2.827		
Aug	\$6.61	\$4.36			\$3.480	\$2.852		
Sep	\$5.57	\$4.37			\$3.560	\$2.859		
Oct	\$4.84	\$3.86			\$3.720	\$2.905		
Nov	\$5.04	\$3.76			\$3.910	\$3.070		
Dec	\$4.97	\$3.52			\$4.100	\$3.377		
Jan	\$5.24	\$3.36			\$4.200	\$3.514		
12 Month Avg	\$5.62	\$4.04			\$3.608	\$2.888		
Summer Average					\$3.490	\$2.799		
Winter Average					\$3.774	\$3.012		

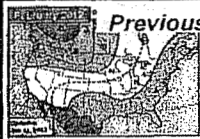
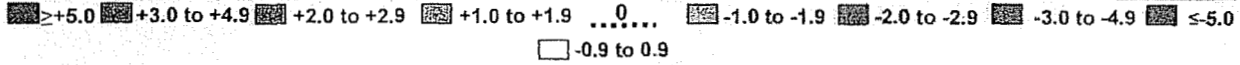
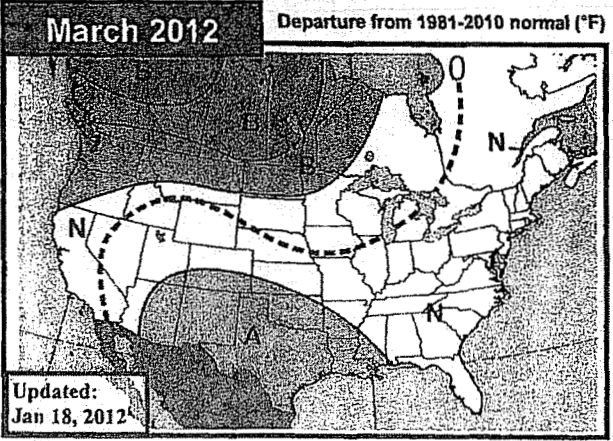
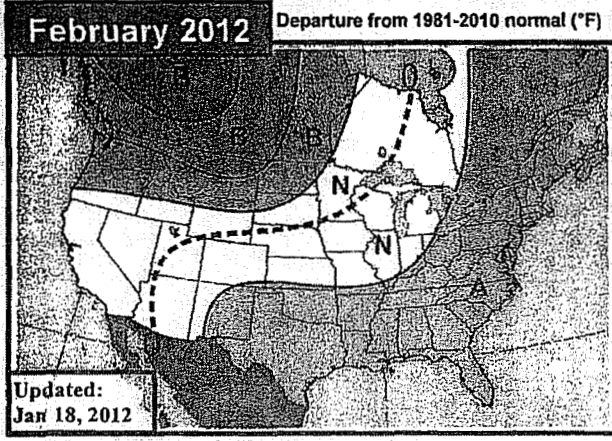


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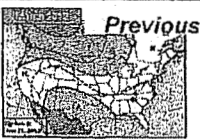
# EarthSat's 30-60 Day Outlook

www.earthsat.com January 18, 2012 Meteorologists: EH/SS/RG



**Warmer in the Ohio Valley**  
**Little Change to West**

Warm changes are seen this week, resulting in expanded coverage of aboves into the eastern Midwest. Only very minor tweaks were made out West. Influences from the +EPO as January comes to a close may carry over into February as well. This warm Pacific forcing coupled with the failure of high-latitude blocking to develop this winter over the Western Hemisphere (NAO has remained positive) would allow for the persistence of a mild pattern. That said, the most recent model guidance has shown a tendency towards more variability and a relaxation of the Gulf of Alaska low, which leads to some potential colder risks. Additionally, a renewed round of stratospheric warming currently underway could increase cold risks over the North, perhaps introducing colder variability to the pattern here. If the stratospheric warming is especially effective, there's a chance that the NAO could turn negative and help deliver more sustained, stronger shots of cold air to the US. Persistence remains a player here, as warmth has continued to find a way to remain the dominant outcome all winter.



**Cold scaled back in the Midwest**  
**Slightly warmer in the East**

Warm changes have continued to scale back the previously-forecast chill for the Midwest, and have turned the Northeast seasonably warm. The anomaly pattern is bearing greater resemblance to those which were seen in the most recent March's featuring second-year La Ninas with little or no blocking (1997, 2000 and 2009). The La Nina and -PDO account for warm background signals, especially throughout the southern tier. However, with blocking possibly remaining a relative non-factor, the southern warm source would likely have greater influence on northern parts of the US. The risk remains that upper-latitude blocking could develop into a stronger driver, which would bring colder air into play over more of Canada and areas from the northern Rockies through the Northeast.

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

<b>Feb 2012 Fcst:</b>	<b>765.0</b>	<b>10Y Normal*</b>	<b>823.9</b>
		<b>30Y Normal</b>	<b>798.6</b>
		<b>Feb-2011</b>	<b>794.1</b>

Change: -10      \*\*National Gas-Weighted HDDs

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

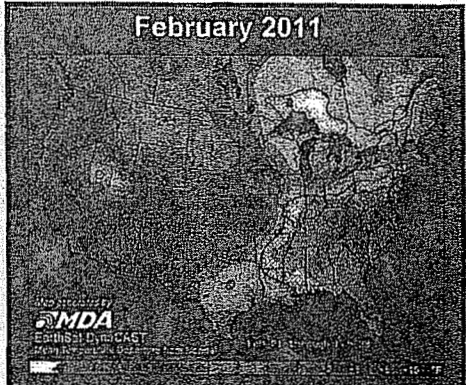
<b>Mar 2012 Fcst:</b>	<b>620.0</b>	<b>10Y Normal*</b>	<b>619.9</b>
		<b>30Y Normal</b>	<b>626.0</b>
		<b>Mar-2011</b>	<b>629.6</b>

Change: -15      \*\*National Gas-Weighted HDDs

**Jan so far**

Final 60 Day Outlook      Final 30 Day Outlook      Current Verif + forecast (1/1-1/31)

The current 1-15 Day Forecast now extends through the end of the month, and combined with the verification out to January 17, it shows an extremely warm month, with widespread above normal temperatures across the eastern 2/3 of the US. Anomalies range from 5°F above normal across much of the Plains, Midwest, and Mid-Atlantic, while any cold is limited to the Northwest. If the 1-15 Day forecast is correct, January would total 80+ HDDs, which qualifies as the third warmest January since 1950 (January 2006 came in with a remarkable 745 HDDs). The 60 Day outlook certainly missed the mark, as at that point it was still favored that blocking would occur during the month. We corrected this assumption in the final 30 Day outlook, but it would appear that we were still not nearly warm enough.



# 6-10 Day Forecast—Detailed

Wednesday, January 18, 2012

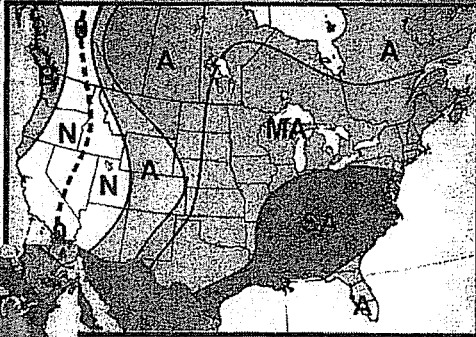
Meteorologist: AC/BH



## Forecast Temperature Deviations

DAY 6

Forecast Valid: Mon, 1/23



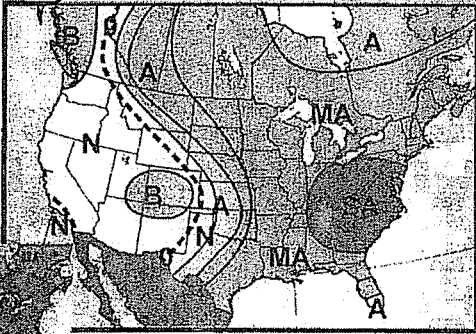
Forecast Confidence: 7

**\*Still Quite Warm Across Eastern Half Of Country\***  
**\*Variability Within Models Brings Down Confidence\***

Models are agreeing less today, and combined with more variability for the eastern half of the country, the confidence for the forecast period has been lowered a bit. The result is the strength of the very warm air present in yesterday's thinking diminishing a bit. However, not even seasonal readings are projected yet at any point across the eastern half of the nation. Meanwhile, a disturbance in the Desert Southwest during the mid-period could provide chances for below normal temperatures in this region, as well as the chance for colder temperatures to press into Texas. A fresh round of below normal readings begins to dive into the Northwest late.

DAY 7

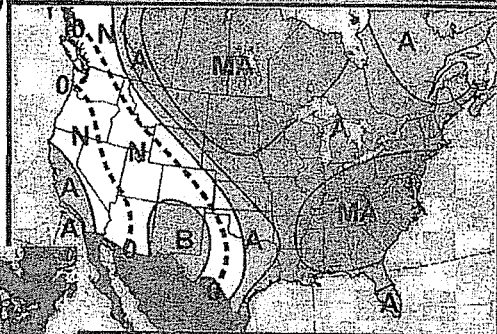
Forecast Valid: Tue, 1/24



Forecast Confidence: 7

DAY 8

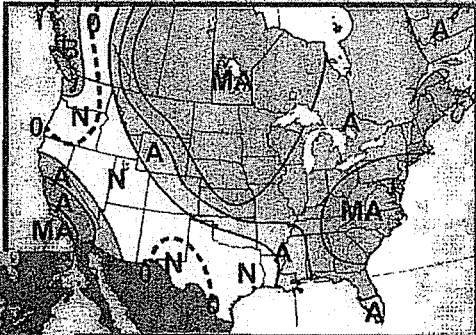
Forecast Valid: Wed, 1/25



Forecast Confidence: 6

DAY 9

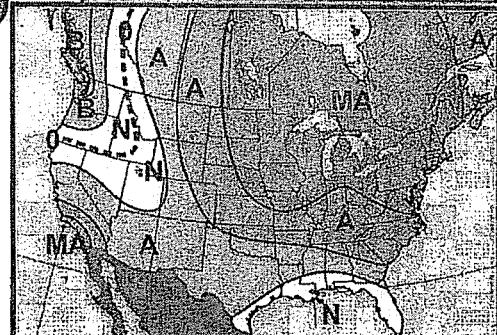
Forecast Valid: Thu, 1/26



Forecast Confidence: 6

DAY 10

Forecast Valid: Fri, 1/27



Forecast Confidence: 5

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

14

## Weekly Natural Gas Storage Report

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

### Working Gas in Underground Storage, Lower 48

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

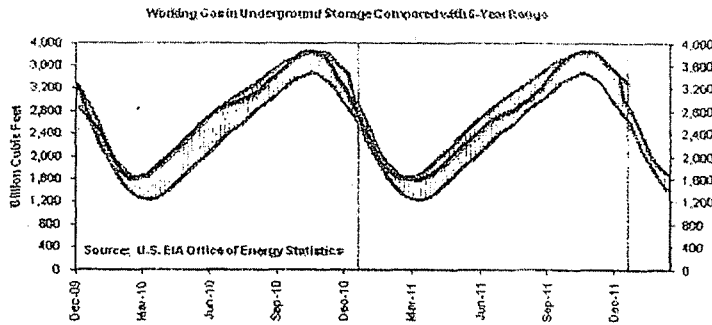
Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	01/13/12	01/06/12	Change	Year Ago (01/13/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,693	1,754	-61	1,402	20.8	1,469	15.2
West	433	444	-11	368	17.7	367	18.0
Producing	1,164	1,179	-15	981	18.7	888	31.1
<b>Total</b>	<b>3,290</b>	<b>3,377</b>	<b>-87</b>	<b>2,751</b>	<b>19.6</b>	<b>2,724</b>	<b>20.8</b>

#### Notes and Definitions

##### Summary

Working gas in storage was 3,290 Bcf as of Friday, January 13, 2012, according to EIA estimates. This represents a net decline of 87 Bcf from the previous week. Stocks were 539 Bcf higher than last year at this time and 566 Bcf above the 5-year average of 2,724 Bcf. In the East Region, stocks were 224 Bcf above the 5-year average following net withdrawals of 61 Bcf. Stocks in the Producing Region were 276 Bcf above the 5-year average of 888 Bcf after a net withdrawal of 15 Bcf. Stocks in the West Region were 66 Bcf above the 5-year average after a net drawdown of 11 Bcf. At 3,290 Bcf, total working gas is above the 5-year historical range.

- Data
- History (XLS)
- 5-Year Averages, Maximum, Minimum, and Year-Ago Stocks (XLS)
- References
- Methodology
- Differences Between Monthly and Weekly Data
- Revision Policy
- 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**  
**December 20, 2011 Release**

2009		2010		2011		2012	
Jan-09		Jan-10		Jan-11		Jan-12	
Feb-09		Feb-10		Feb-11		Feb-12	
Mar-09		Mar-10		Mar-11		Mar-12	
Apr-09		Apr-10		Apr-11		Apr-12	
May-09		May-10		May-11		May-12	
Jun-09		Jun-10		Jun-11		Jun-12	
Jul-09		Jul-10		Jul-11		Jul-12	
Aug-09		Aug-10		Aug-11		Aug-12	
Sep-09		Sep-10		Sep-11		Sep-12	
Oct-09		Oct-10		Oct-11		Oct-12	
Nov-09		Nov-10		Nov-11		Nov-12	
Dec-09		Dec-10		Dec-11		Dec-12	
Average 2009	\$	Average 2010	\$	Average 2011	\$	Average 2012	\$
Summer 2009	\$	Summer 2010	\$	Summer 2011	\$	Summer 2012	\$
Winter 2009-2010	\$	Winter 2010-2011	\$	Winter 2011-2012	\$		

North American Gas Forecast Monthly



December 20, 2011

NATURAL GAS

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

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
U.S. Production		The anticipated failure of Haynesville to capitalize on new pipeline takeaway capacity did not appear to stop sequential growth thanks to the upsurge of Marcellus filling new pipeline capacity. Despite much slower post 1Q12 Y/Y growth, production gains will persist in 2012.
LNG Sendout		LNG send-outs from U.S. regas plants will be moderately lower Y/Y, falling to minimal contractual volumes. But, progress on new LNG export terminals is speeding up.
Canadian Trade		Resilient domestic production and weak heating demand have not inflated exports due to minimal storage draws. The resulting Y/Y storage surplus should keep exports from declining post 1Q12.
Mexican Trade		The Manzanillo LNG import delay's impact on U.S. exports should be limited, thereby keeping trade in line with our prior outlook for only moderate Y/Y growth.
Storage Levels		The current heating season's slow start suggests that more mild weather lies ahead, and both point to a massive end-March storage surplus that, more or less, undermines any large near-term price recovery.
U.S. Demand Issues	Outlook	Commentary
Economy		A dark cloud hanging over next year's economy remains uncertainty over whether Congress will extend the cut in payroll taxes and emergency long-term unemployment benefits. Spillover from the Eurozone's increasingly negative economic prospects is another worry.
Electric Generation (EG)		PIRA expects coal to take another big hit from gas-fired CCGTs. During 1H12, steam coal EG is forecast to decline Y/Y by almost 15 average Gigawatts, or ~3 BCFe/D, with help from the EPA's Cross-State Air Pollution Rule (CSAPR).
Industrial Sector		Industrial gas demand remains stuck in "neutral" despite the benefit of plunging gas prices. Gas intensive exports will be a key to faster growth and chemical manufacturers appear more optimistic about 2012 than before.
Res/Com Heating		So far, zero traction for cold weather has undermined heating demand to date. But post-1Q12, heating demand's importance will be marginalized quickly.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation		NYMEX non-commercial shorts fell by ~27,000 lots over the last three weeks and augmented the ~35,000 increase in long positions over the last four weeks. But buying was overshadowed by commercial selling. While non-commercial traders are net short, more selling power remains and would be encouraged if mild temperatures persist in 1Q12.
Overall Assessment	Outlook	Commentary
Price Outlook		The December NYMEX gas futures price resedive is understandable given the lack of heating demand, and high year-end storage exposes HH prices to further downside risk in 1Q12. Low HH prices should extend the recent gas rig swoon that, in turn, ultimately seems likely to pave the way for a modest 2012 injection season price recovery.

BNP Paribas Natural Gas Markets Comment  
6 January 2012

## CSAPR, Dead on Arrival?

### No Regulatory Incentive to Switch to Gas

The last minute federal court stay of the EPA's Cross-State Air Pollution Rule ("CSAPR") a week ago effectively eliminated the near-term regulatory incentive for the power industry to switch from coal to cleaner burning natural gas. In fact, by directing the EPA to continue to administer the Clean Air Interstate Rule ("CAIR"), we expect little change in the utilization of heavier emitting eastern coal plants.

The combination of i) slightly more stringent emission reductions, ii) the absence of a significant allowance backlog, and iii) the limited provisions for allowance trading suggested that the power industry would become more reliant on natural gas in order to meet the CSAPR emission requirements. We had previously suggested that, if the entire emission reductions were made by substituting the high emitting coal plants with natural gas combined cycle units, gas demand would increase by 7 Bcf/d by 2014. Based on a more realistic scenario that existing controlled coal units and lower emitting fuels would be employed to meet the emission reductions, we calculated that gas demand would likely increase by 1 to 1.25 Bcf/d in 2012 followed by another increase of 1.5 to 2 Bcf/d in 2014.

Now, however, the reinstatement of CAIR allowances next week and the relatively unfettered trading available under that program will largely remove any regulatory incentive to switch to natural gas in 2012. Given a reasonable time-table for the court to arrive at a final decision for CSAPR, we think that under the most optimistic scenario the program would only be reinstated in 2013.

### Only Economic Fuel-Switching in 2012...

Although the court-ordered stay of the new EPA regulations undermines our earlier expectations for natural gas demand, rising fuel competition will likely support a significant portion of the regulatory-induced demand we envisioned for 2012. In fact, our initial estimates indicate that fuel-switching will play nearly the same role it did in 2009 in balancing the market.

Fuel competition has risen significantly over the past year with spot coal prices currently trading ~\$0.75/mmbtu higher than natural gas if differences in transportation costs and plant efficiency are accounted for. Consequently, as inexpensive long-term coal contracts expire, increased fuel-switching will likely occur as utilities are exposed to more costly spot prices.

Obviously, given elevated inventory levels, the electric power demand growth we envision from economic fuel-switching in 2012 will not justify a significant recovery in US gas prices. However, over a longer time-frame, the steady loss of coal-fired market share to natural gas generators will tighten the balances sufficiently to lift prices. Teri Viswanath



## North American LNG

its Alaska's Kenai LNG terminal by mid-2012 after securing sufficient Cook Inlet supply and an LNG tanker lease.

Development of Alaska's oil and gas resources has been hampered by difficulties in obtaining federal permits.

Last month, the US Army Corps of Engineers finally issued ConocoPhillips a permit that would enable the company to access a drilling site in the National Petroleum Reserve-Alaska (NPR-A). The permit authorizes ConocoPhillips to build a bridge and pipeline system across a channel of the Colville river, enabling the company to drill on acreage it has leased west of the Alpine field. ConocoPhillips has been trying to obtain a permit to drill at the site since 2005.

President Barack Obama's administration has been trying to

streamline the permitting process in Alaska to boost oil and gas development there.

Shell has been trying for years to obtain the necessary permits to drill starting in July in federal waters off the Alaskan coast, in the Beaufort and Chukchi seas. And while the company has seen some progress, Shell has yet to obtain all the necessary permits.

Today, deputy interior secretary David Hayes, appearing with Persily, said the administration is committed to give Shell a "timely up or down" on its permit requests. But Hayes did not provide any other specifics or a timetable.

Shell said today that it continues to work toward starting drilling this year, including securing assets as well as recruiting and training personnel.

## Natural Gas News

### EIA sees record gas stocks ahead

US natural gas inventories could hit record highs this year and in 2013 as production from onshore fields continues to climb despite relatively low prices, the US Energy Information Administration (EIA) said today.

The agency expects US stockpiles to climb to 3.960 Tcf (112bn m<sup>3</sup>) by the end of October, topping last year's all-time high of 3.852 Tcf, amid relatively warm weather this winter and growing domestic production that has led to "large storage accumulations," according to the agency's *Short-Term Energy Outlook*. In addition, stockpiles are projected to reach 3.99 Tcf in 2013.

While the EIA does not see stockpiles exceeding 4.388 Tcf of working gas storage design capacity, regional facilities could face restrictions below those levels, leading to temporary production shut-ins and lower natural gas prices.

The expectations for two consecutive years of record-setting inventories underscore how growing supply is helping to offset weather-driven demand and boosting inventories relative to historical measures.

Natural gas in US storage facilities for the week that ended 30 December stood at 3.472 Tcf — 11pc above the same period last year and 15pc higher than the five-year average. That growing storage overhang has put downward pressure on gas prices by easing concerns about a weather-related spike in demand or supply shortfall. In recent weeks, natural gas futures prices have been trading at levels not seen since September 2009, when the recession undermined demand.

The EIA forecasts that Henry Hub spot prices will average \$3.53/mmBtu in 2012, down 17¢/mmBtu from last month's outlook.

Natural gas production, which grew by a record 7.4pc in 2011, is expected to grow by 1.4 Bcf/d, or 2.2pc, in 2012 and another

0.7pc in 2013. Production will be buoyed by improved output from wells in shale fields, the associated gas related to higher levels of oil drilling, and a backlog of uncompleted wells that will be brought on line, the EIA said.

Production increases this year will more than offset growing demand growth. Consumption of natural gas is expected to climb by 1.3 Bcf/d this year over last to 68.2 Bcf/d as low natural gas prices continue boost demand for the fuel among electric utilities.

Imports of LNG are forecast to fall by 26pc, or 0.2 Bcf/d, this year as cargoes of the fuel are sent to higher priced overseas markets. But a small amount of the fuel will still arrive at US terminals to meet contractual obligations or to capture weather-related price spikes.

Pipeline imports also will decline as domestic production displaces some Canadian supply. But exports to Mexico will increase as gas output grows from fields near the border.

### Encana seeks halt to Wyo. comments

Canadian independent Encana has asked the US Environmental Protection Agency (EPA) to restart the clock on a public comment period relating to its draft report that concluded groundwater samples taken from Pavillion, Wyoming, contained compounds likely associated with natural gas development.

The central Wyoming town lies on top of a gas field under development by Encana. The EPA launched an investigation in 2008 after residents said they were concerned about well water quality.

Encana's request, submitted to the EPA last week, stemmed from what the company said was a lack of access to all the data it had requested via submittals under the Freedom of Information Act to the agency on 21 December, which it said were needed to provide full and complete comment.

Natural gas prices in \$/mmBtu		Transaction date: 17-Jan-2012 Flow Date(s): 18-Jan-2012		
Argus North America Index: \$2.720/mmBtu	Volume weighted average	Daily delta	HH cash basis	Bid week delta
Midcontinent	2.640	-0.115	0.135	
Alliance into interstates	2.740	-0.095	0.205	-0.825
ANR ML7	2.745	-0.085	0.240	-0.580
ANR Oklahoma	2.515	-0.100	0.010	-0.460
CenterPoint	2.445	-0.130	-0.080	-0.525
Chicago Citygates	2.665	-0.130	0.160	-0.650
Consumers Citygates	2.695	-0.145	0.190	-0.565
Emerson/Viking GL	2.925	-0.035	0.420	-0.345
Mich Con Citygates	2.700	-0.145	0.195	-0.610
Northern Border Ventura Transfer				N/A
NBPL Ventura	2.650	-0.105	0.145	N/A
NGPL Amarillo	2.630		0.025	N/A
NGPL Midcontinent	2.500	-0.115	-0.005	-0.555
NGPL Texas zone	2.500	-0.200	0.005	-0.585
NNG Demarc	2.650	-0.095	0.145	-0.510
NNG Ventura	2.665	-0.080	0.160	-0.490
Oneok Oklahoma	2.450	-0.190	-0.055	-0.595
Panhandle Oklahoma Mainline	2.485	-0.055	0.020	-0.570
Southern Star	2.505	-0.080	0.000	-0.515
Rockies	2.510	-0.060	0.005	
AECO (CAD/GJ)	2.415	-0.060		-0.295
AECO (USD/mmBtu)	2.515	-0.035	0.010	-0.235
Chiyenna	2.485	-0.135	-0.020	-0.560
CIG Rocky Mountains	2.465	-0.130	-0.040	-0.560
El Paso Permian Basin	2.595	-0.100	0.080	-0.550
Empress (CAD/GJ)	2.090	-0.080		-0.170
Empress (USD/mmBtu)	2.175	-0.060	0.330	-0.170
Kern River Receipts	2.600	-0.125	0.095	-0.520
Northwest Wyoming	2.585	-0.130	0.080	-0.510
Northwest s of Green River	2.515	-0.115	0.010	N/A
Opal	2.600	-0.130	0.080	-0.510
Questar	2.530	-0.125	0.025	-0.560
White River	2.490	-0.165	-0.015	N/A
West	2.765	-0.120	0.260	
El Paso Bonnad	2.530	-0.090	0.025	N/A
El Paso Permian Basin	2.530	-0.090	0.025	-0.525
El Paso South Mainline	2.960	-0.035	0.455	N/A
GTN Kingsgate	2.690	-0.080	0.185	N/A
Kern River Delivered	2.655	-0.095	0.350	N/A
Northwest Sumas	3.135	0.005	0.630	-0.330
PG&E Citygates	3.030	-0.050	0.525	-0.400
PG&E Malin Oregon	2.745	-0.095	0.240	-0.415
PG&E South	2.855	-0.100	0.350	-0.520
SoCal Citygates	2.960	-0.080	0.455	-0.545
SoCal Gas Co	2.850	-0.115	0.345	-0.525
Stanfield	2.745	-0.080	0.240	N/A
Transwestern Permian Basin	2.500	-0.080	-0.005	-0.530
Transwestern San Juan Basin	2.545	-0.110	0.040	-0.825
Waha	2.605	-0.085	0.000	-0.525
Westcoast, station 2 (CAD/GJ)	2.400	0.000		-0.300
Westcoast, station 2 (USD/mmBtu)	2.500	0.030	0.005	-0.800

## Nymex falls to a 10-year low

**The Nymex front month delivery contract today fell to its lowest level in almost a decade, with futures trading extending the streak of losses into the sixth consecutive trading session as weather outlooks continue to point to slack residential demand at key consuming markets.**

Natural gas for February delivery fell by 18.2¢/mmBtu, or 6.8pc, to **\$2.488/mmBtu, marking the lowest prompt month settlement price since 5 March 2002.** The 12-month calendar strip shed 5.8pc to \$2.859/mmBtu, also a 10-year low. The 2013 calendar strip was down by 3.7pc to \$3.563/mmBtu.

The prompt contract plunged to a low of \$2.439/mmBtu in late morning trading today, compounding losses accumulated since 6 January.

**"We have not found the new bottom yet" and the price could move closer to the \$2.00/mmBtu mark.** Tradition Energy analyst Gene McGillian said. **Believing the downward trend is a "perfect storm" of winter demand that never arrived in earnest and more supply coming into the market,** McGillian added.

The futures curve does not reach \$3.00/mmBtu until November and does not climb above \$4.00/mmBtu until January 2014.

Mild weather has restricted residential demand during the first half of the 2011-12 heating season at key midcontinent and the northeast US markets and weather outlooks point to a similar trend in the near term. The National Weather Service projects warmer than normal temperatures from California to Florida and New England from 22-30 January.

**Weak demand is expected to leave record volumes of gas in storage at the end of the heating season, and robust production from US shale plays continues to bring more supply into the market.**

In the nearer term, federal meteorologists project 180 population-weighted heating degree days for the US during the week ending 21 January, which is 14pc below seasonal norm but 5.3pc more than last week's recorded total.

Nymex natural gas settlements			\$/mmBtu
Contract	Price	Change	Volume*
Feb-12 M1	2.488	-0.182	198,358
Mar-12 M2	2.528	-0.185	128,608
Apr-12 M3	2.617	-0.180	58,561
May-12 M4	2.690	-0.177	36,944
Jun-12 M5	2.744	-0.181	23,690
Jul-12 M6	2.797	-0.184	16,493
Aug-12 M7	2.824	-0.183	9,986
Sep-12 M8	2.830	-0.182	11,018
Oct-12 M9	2.877	-0.176	24,335
Nov-12 M10	3.048	-0.170	9,443
Dec-12 M11	3.859	-0.162	6,180
Jan-13 M12	3.501	-0.146	12,671
Feb-13 M13	3.500	-0.145	2,204
Mar-13 M14	3.473	-0.143	2,177
Apr-13 M15	3.436	-0.140	5,874
May-13 M16	3.459	-0.138	239
Jun-13 M17	3.491	-0.167	633
Jul-13 M18	3.534	-0.137	282
Aug-13 M19	3.552	-0.167	269

\*Volume data estimated by Nymex, subject to verification.

BNP Paribas Natural Gas Market Watch  
17 January 2012

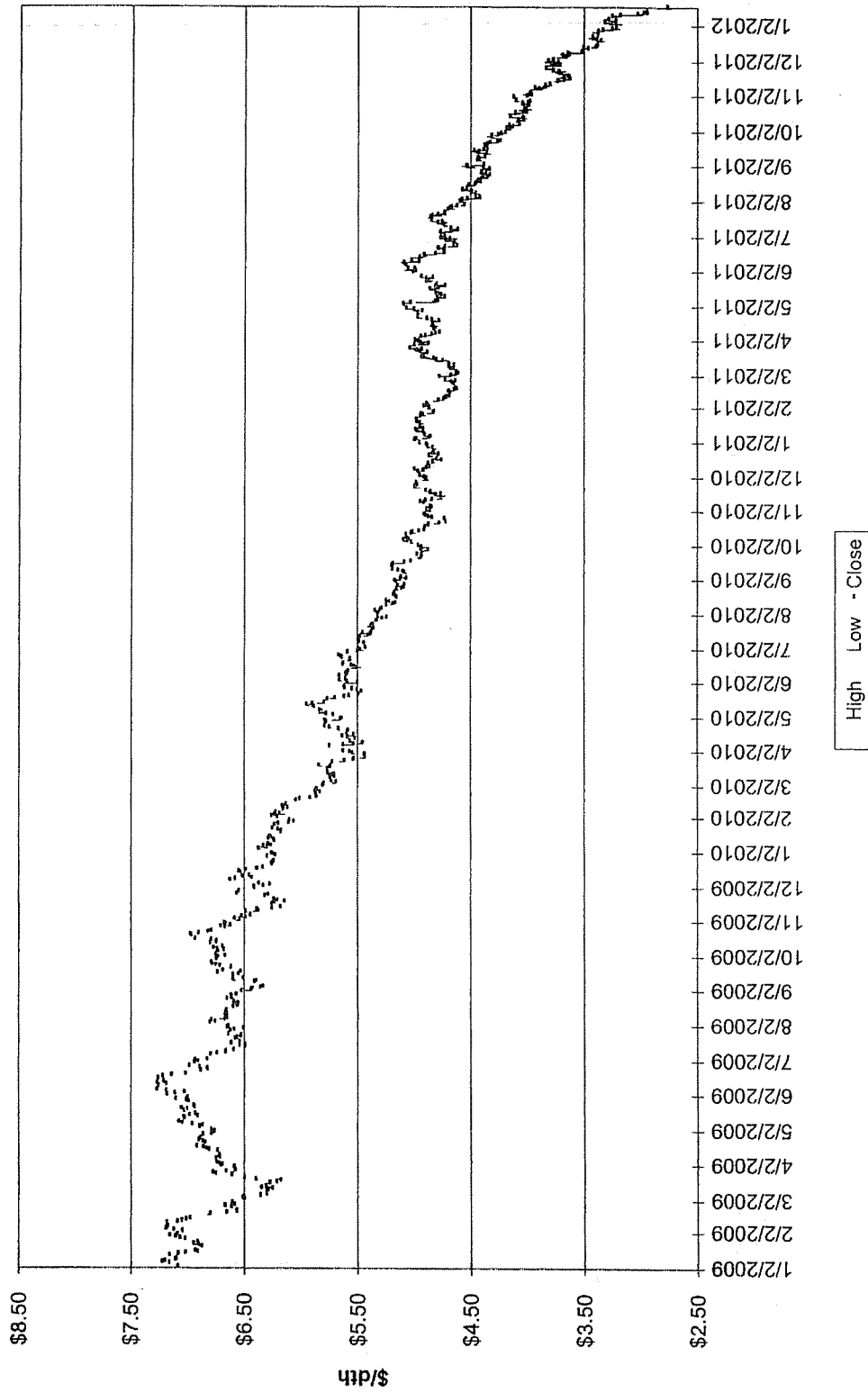
### **Commentary**

The Natural gas freefall continued today on very high volume and a spike in volatility. We haven't settled below \$2.60 in a decade and with the 6 to 10 day weather forecast calling for severely above average temperatures for just about everywhere east of the Rocky Mountains, the short term spot market will probably get worse before it gets better. Longer term, we are starting to see some possible bullish factors. First, the rig count is down to 791. Second, a winter without snow could facilitate more widespread drought conditions this summer which may limit some nuclear capacity. And third, a very warm winter tends to make us believe that we are headed for a very warm summer. La Nina may produce mild conditions but right now it sure doesn't feel like it.

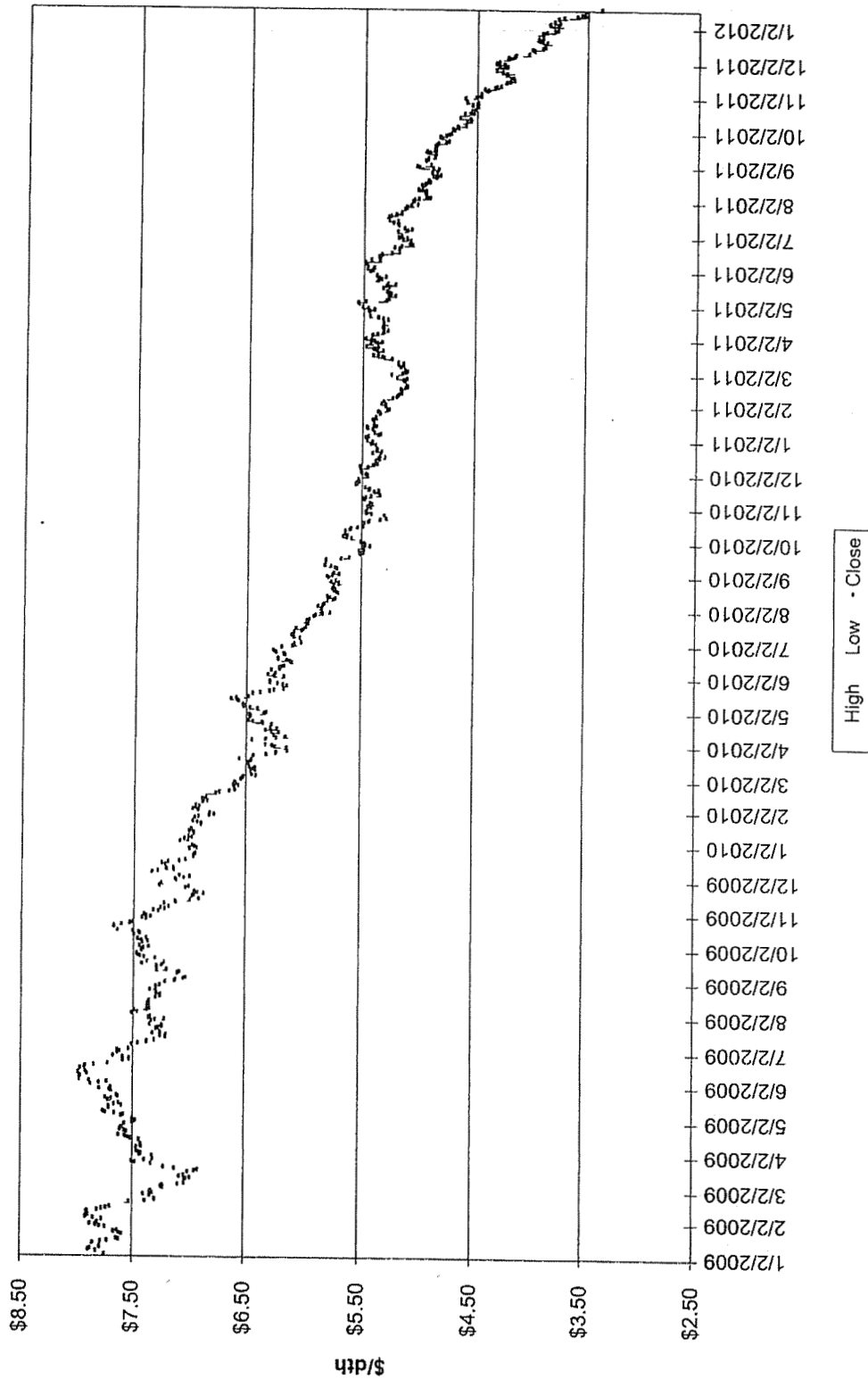
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**January 10, 2012 Release**

Jan-10	5.83	Jan-11	4.49	Jan-12	3.22	Jan-13	4.20
Feb-10	5.32	Feb-11	4.09	Feb-12	3.30	Feb-13	4.14
Mar-10	4.29	Mar-11	3.97	Mar-12	3.36	Mar-13	4.07
Apr-10	4.03	Apr-11	4.25	Apr-12	3.40	Apr-13	4.05
May-10	4.14	May-11	4.31	May-12	3.47	May-13	4.06
Jun-10	4.80	Jun-11	4.55	Jun-12	3.42	Jun-13	4.08
Jul-10	4.63	Jul-11	4.42	Jul-12	3.38	Jul-13	4.07
Aug-10	4.32	Aug-11	4.05	Aug-12	3.48	Aug-13	4.07
Sep-10	3.89	Sep-11	3.90	Sep-12	3.56	Sep-13	4.08
Oct-10	3.43	Oct-11	3.56	Oct-12	3.72	Oct-13	4.17
Nov-10	3.71	Nov-11	3.24	Nov-12	3.91	Nov-13	4.27
Dec-10	4.25	Dec-11	3.17	Dec-12	4.10	Dec-13	4.41
Average 2010	\$ [REDACTED]	Average 2011	\$ [REDACTED]	Average 2012	\$ 3.527	Average 2013	\$ [REDACTED]
Summer 2010	\$ [REDACTED]	Summer 2011	\$ [REDACTED]	Summer 2012	\$ 3.490	Summer 2013	\$ [REDACTED]
Winter 2010-2011	\$ [REDACTED]	Winter 2011-2012	\$ [REDACTED]	Winter 2012-2013	\$ 4.084		

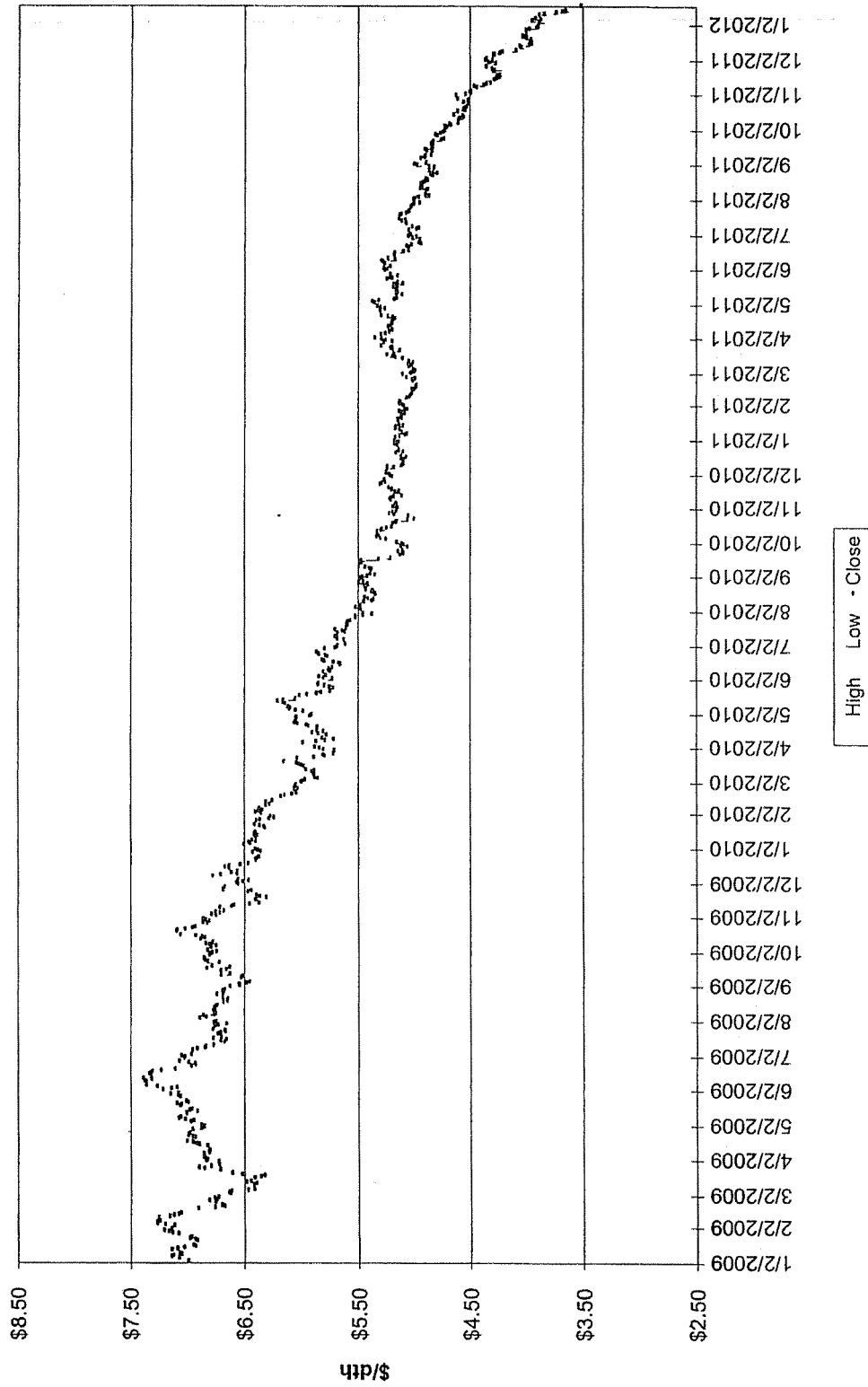
Summer Strip 2012



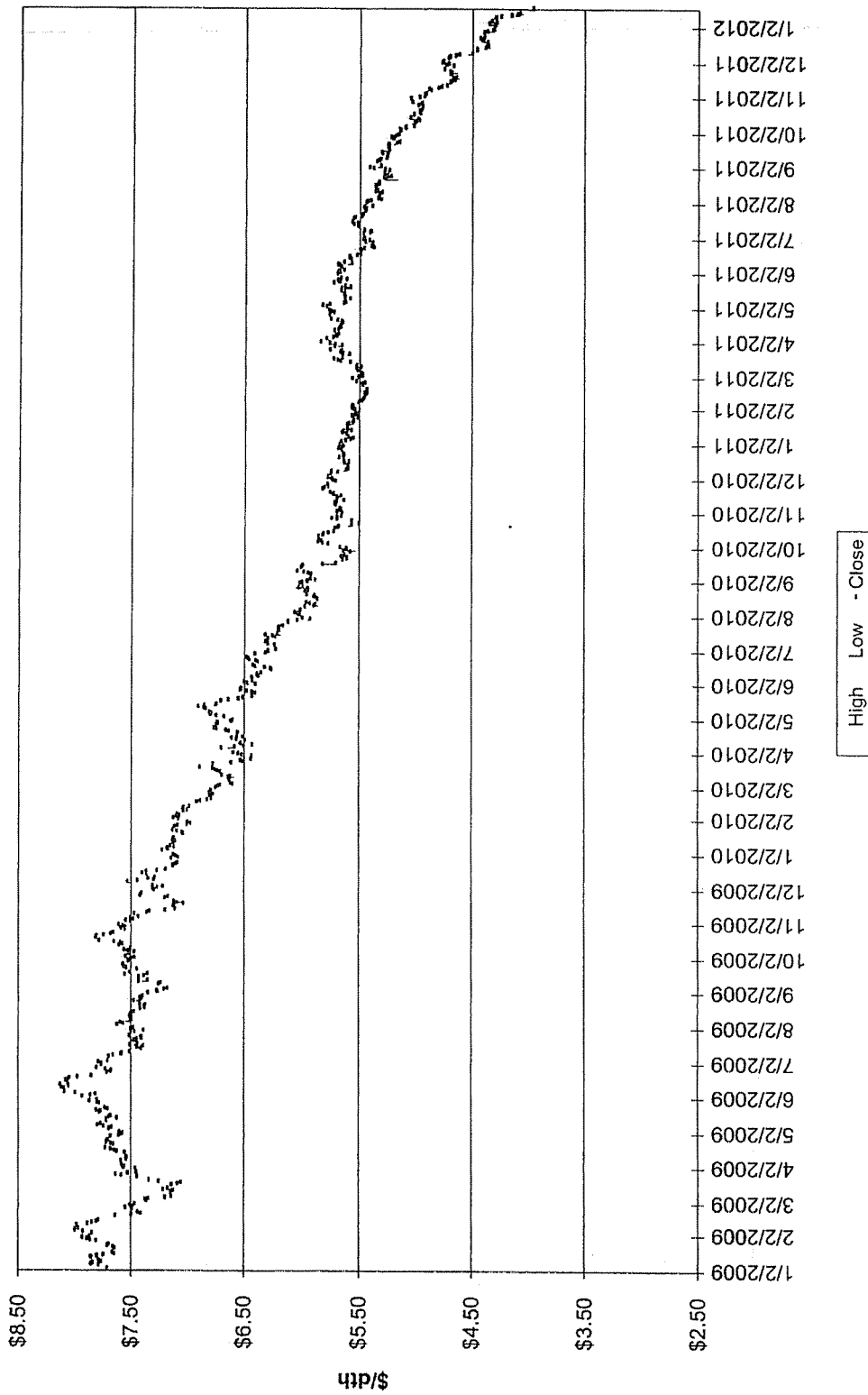
Winter Strip Nov12 - Mar13



Summer Strip 2013



Winter Strip Nov13 - Mar14





*Independent Statistics & Analysis*

## U.S. Energy Information Administration January 2012 Short-Term Energy Outlook

January 10, 2012 Release

### **Natural Gas**

***U.S. Natural Gas Consumption.*** EIA expects that natural gas consumption will average 68.2 billion cubic feet per day (Bcf/d) in 2012, an increase of 1.3 Bcf/d (2.0 percent) from 2011. From 2011 to 2012, projected consumption increases in all sectors, with the largest volume increase (0.7 Bcf/d) coming from the electric power sector. Natural gas consumption growth continues into 2013, with projected total consumption averaging 69.1 Bcf/d. Increases in the consumption of natural gas for power generation are likely to continue as domestic production continues to grow and natural gas remains a relatively inexpensive option for generators.

***U.S. Natural Gas Production and Imports.*** Total marketed production grew by an estimated 4.5 Bcf/d (7.4 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. EIA expects production to grow by 1.4 Bcf/d (2.2 percent) in 2012 and 0.7 Bcf/d (1.0 percent) in 2013 as low prices reduce new drilling plans and consumption grows at a measured pace. In the face of continued low spot and future prices as well as record high storage levels for this time of year, drillers appear to have begun cutting back on new production plans for 2012. According to Baker Hughes, the natural gas rig count has fallen to 809 as of December 29, 2011, from a 2011 high of 936 in mid-October. However, high initial production rates from new wells, associated natural gas production from oil drilling, and a backlog of uncompleted or unconnected wells contribute to our forecast of further production increases in 2012, albeit at a significantly lower rate than 2011.

### **Crude Oil**

EIA expects the price of West Texas Intermediate (WTI) crude oil to average about \$100 per barrel in 2012, \$5 per barrel higher than the average price last year. For 2013, EIA expects WTI prices to continue to rise, reaching \$106 per barrel in the fourth quarter of next year. EIA's forecast assumes that U.S. real gross domestic product (GDP) grows by 1.8 percent in 2012 and 2.5 percent in 2013, while world real GDP (weighted by oil consumption) grows by 2.9 percent and 3.8 percent in 2012 and 2013, respectively.

**Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2011-12**

**Duke Energy Ohio**

Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Gulf South-DE Field Services  
 Col Gulf Mainline  
 Col Gulf Mainline  
 Tex Gas Zone 1

Total  
 System Supply

**Duke Energy Kentucky**

Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Col Gulf Mainline

Total  
 System Supply

**Duke Energy--Total**

Previously Hedged

Total

						Dth/Day		
November	December	January	February	March	Total		% System Supply	
[Redacted Data]								
[Redacted Data]								
[Redacted Data]								

**Duke Energy Kentucky  
 Hedging Program for 2012/13  
 Cost Averaging with [REDACTED] @ Columbia Gulf Mainline**

	Total Amount						5 Month Strip	Total Cost	Locked in To Date
		Nov-12	Dec-12	Jan-13	Feb-13	Mar-13			
3-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
4-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
5-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
6-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
9-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
10-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
11-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
12-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
13-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
17-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
18-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
19-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
20-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
23-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
24-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
25-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
26-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
27-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
30-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
31-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
1-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
2-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
3-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
6-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
7-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
8-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
9-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
10-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
13-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
14-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
15-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
16-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
17-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
21-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
22-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
23-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
24-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
27-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
28-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
29-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	

Basis to Columbia Gulf Mainline

Price to be paid for [REDACTED] dth/day delivered Nov. 1, 2012 to Mar. 31, 2013:

**Gas Commercial Operations  
Hedging Program  
Market Indicators Summary  
February 16, 2012**

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Feb 12–Apr 12)	↓	Long	NOAA predicting above average temperatures for February 2012–April 2012 for portions of the Mid-Continent to the East Coast. Below normal temperatures on Pacific North West to Montana. Equal chances of Above, Normal, or Below for the rest of CONUS.	12
Mid Term Forecast (30-60 days)	↓	Long	March is predicted to be 5.6% warmer than normal based on 10 year normals and April weather is predicted to be normal.	13
Short Term Forecast (6-10 days)	↓	Short	Southwest below normal early in the period. Above and Much Above from central CONUS to the east coast for the later portion of the period.	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage withdrawals for the week ending February 10th were 127 BCF. Storage levels are at 2.761 TCF which is 42.0% higher than last year and 38.3% higher than the 5 year average.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2011/12: [REDACTED] Summer 2012: [REDACTED]	↓	Long	GAS PRICE SCORECARD: April 2012–October 2012 US Production and Storage Levels remain bearish while Electric Generation and Industrial Sector demand are bullish. Price Outlook reflects change from Bullish to Neutral.	16-17
Gas Daily–Price Predictions	↓	Long	Analysts have slashed their 2012 forecasts. The range of prices for 2012 is \$2.25 to \$3.25/MMBtu. The reasons for the forecast revisions include mild weather, gains in gas production resulting from increased liquids and crude production and delay in the policy shift to favor additional gas burn for electric generation.	18
Gas Daily–Production Curtailments	↑	Long	Recent production curtailment announcement include: Chesapeake Energy will curtail 0.5 Bcf/day and could cut production by another 0.5 Bcf/day–Conoco could shut-in 0.1 Bcf/day–BG Energy reducing rig count from 35 to 8 by end of 2012–Noble Energy to reduce spending by \$250 million (5% cut).	19
Gas Daily–LNG Exports	↑	Long	Several articles have been recently published regarding LNG exports. EIA forecasts that gas prices to rise by 54% by 2018 based of certain assumptions. EIA also forecasts that US will have the capacity to liquify 1.1 Bcf/day by 2016, doubling to 2.2 Bcf/day by 2019. Department of Energy will consider the impact on gas prices when granting permits for exporting LNG. A Bill was introduced in the House of Representatives aimed at blocking the export of US LNG.	20
Planalytics–Winter Energy Market Update	↑	Long	Bottom line Planalytics is forecasting prices to begin to rise at the end of 2012 going into 2013 and that by the end of 2013 we should see a remarkably different picture than now. The fundamentals supporting their conclusion include: increase in demand due to retired and replaced coal-fired generation, reopened chemical and fertilizer plants, and the continued reduction in gas drilling rigs.	
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$4.000 Summer 2012: \$3.370	↑	Long	The projected Henry Hub natural gas spot price averages \$3.350/MMBtu for 2012 and \$4.070/MMBtu for 2013.	21
<b>Technical Analysis</b>				
Summer 2012 Strip Chart	↔	Short	Closed at \$2.93	22
Winter 2012-13 Strip Chart	↔	Short	Closed at \$3.60	23
Summer 2013 Strip Chart	↔	Short	Closed at \$3.77	24
Winter 2013-14 Strip Chart	↔	Short	Closed at \$4.15	25
<b>Economy</b>				
Demand	↑	Long	EIA projects total natural gas consumption to grow by 2.4% to 68.5 Bcf/d in 2012 and grow 1.8% to 69.7 Bcf/d in 2013, resulting from increases in all sectors with the largest volume increase coming from electric power consumption.	26
Supply	↔	Long	Total marketed production grew by an estimated 4.8 Bcf/day or 7.8% in 2011, the largest volumetric increase in history. Production growth will continue in 2012 and 2013 but at a much lower rate.	26
Oil Market	↔	Long	EIA expects WTI spot prices to average of \$100 per barrel in 2012, \$ 5 per barrel higher than the average price last year. For 2013, EIA expects prices to average \$104 per barrel	26

**Meeting Minutes: 412 Annex Conference Room - 1:00 pm**  
**Attendees: Jim Mehring, Jeff Kern (by telephone), Mike Brumback, Mitch Marlin, Terry Bates, Steve Niederbaumer**  
 Discussed the current market fundamentals including weather, storage levels ( [REDACTED] Bcf withdrawal for week ending February 10, 2012) current storage level are [REDACTED] % higher than the 5-year average, supply and demand and analyst thoughts on price predictions, production curtailments and LNG exports and those impacts on gas prices. Discussed DEO and DEK's hedging programs. Discussed the Cost Averaging deal currently being priced as well as the fixed price deal completed January 23, 2012 (DEO-[REDACTED] Dth/d, DEK-[REDACTED] Dth/d for the period November 1, 2013–March 31, 2015 awarded to [REDACTED] at a price of \$ [REDACTED]). Based on these factors, a decision was made not to hedge additional volumes at this time.

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2011 - October 2012  
As of 02/14/12

Nov-11 Dec-11 Jan-12 Feb-12 Mar-12 Apr-12 May-12 Jun-12 Jul-12 Aug-12 Sep-12 Oct-12



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  
Collar  
Collar  
Total Hedged (dth/day)  
Total Hedged (dth)

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

Embedded Hedged Cost  
Winter  
Summer

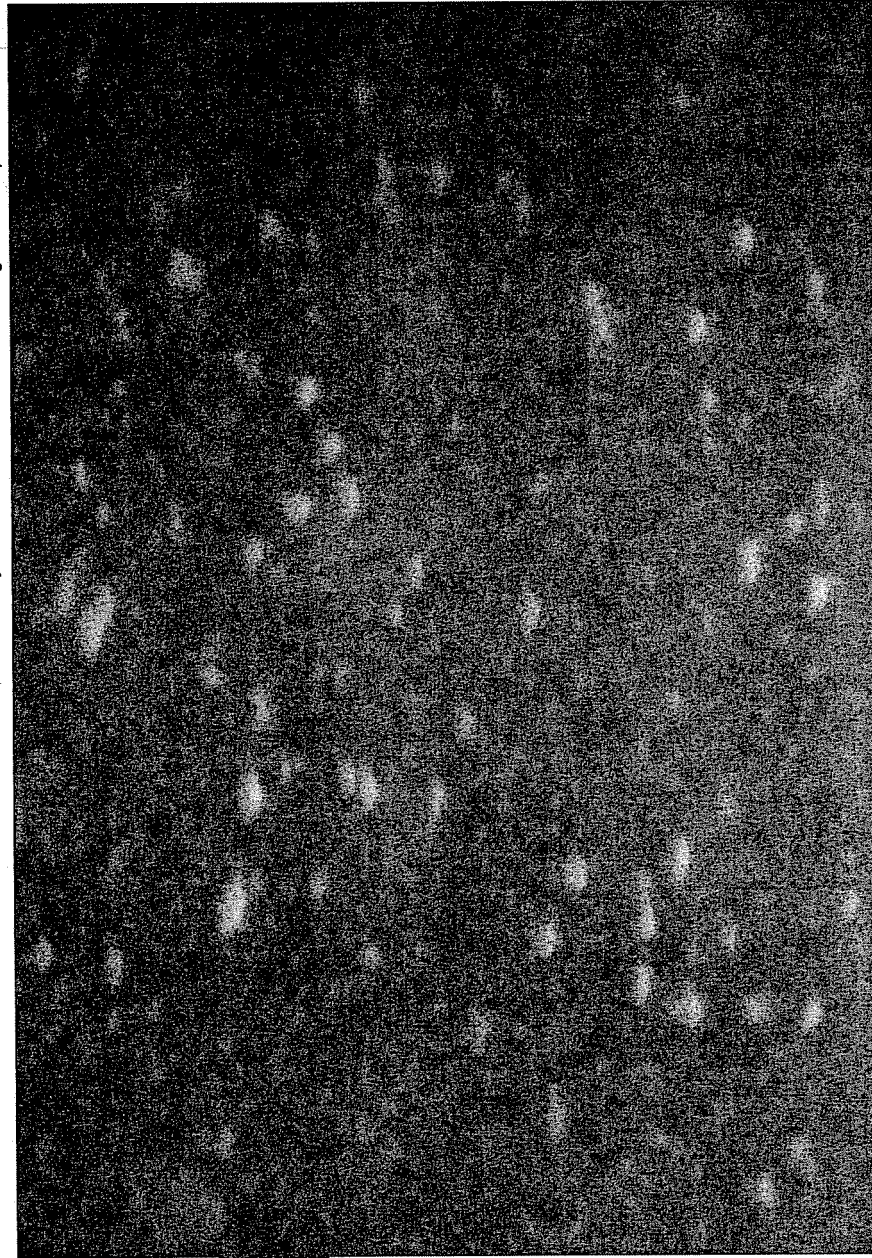
Estimated EGC per Dth at City Gate  
Estimated System Supply (Gross)  
Hedged % of System Supply  
Seasonal % of System Supply

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 2012 - October 2013  
As of 02/14/12

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/day)</b>	Fixed Price	Fixed Price	Fixed Price	Fixed Price	Fixed Price	Total Hedged (dth/day)
<b>Types of Hedging Products (1)</b>	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.

6

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2013 - October 2014  
As of 02/14/12

	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 (dth/day)</b>												
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 02/14/12

Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15

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

**Types of Hedging Products (1)**

Fixed Price  
Price Caps  
No-Cost Collars

**Embedded Hedged Cost**

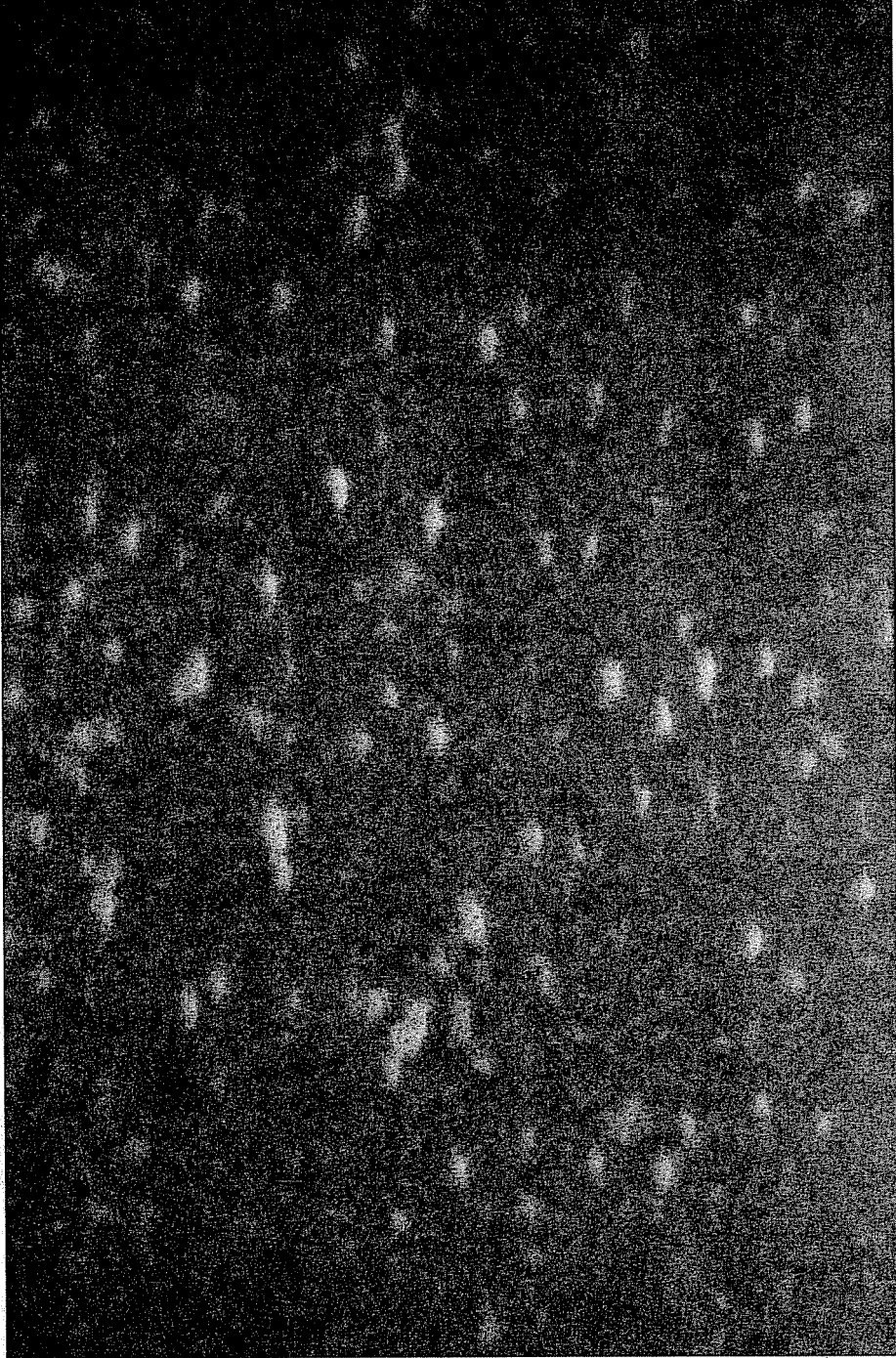
Winter  
Summer

**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.



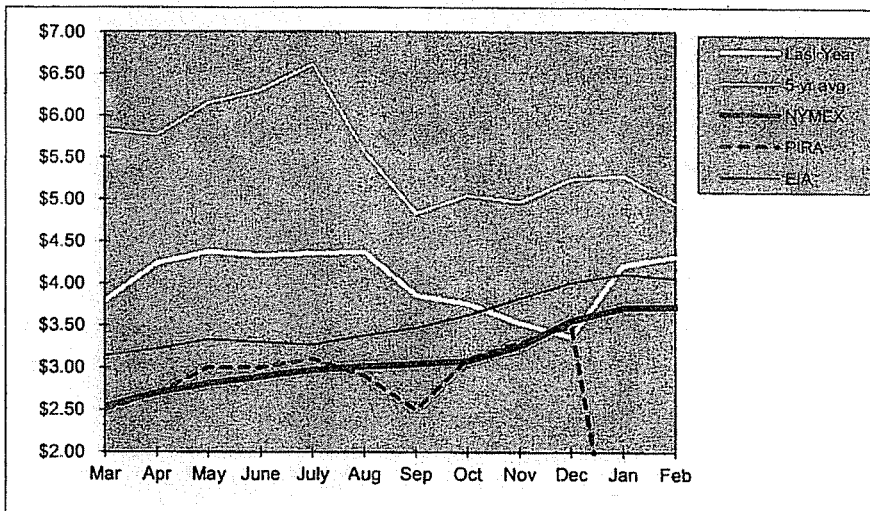
2/14/2012

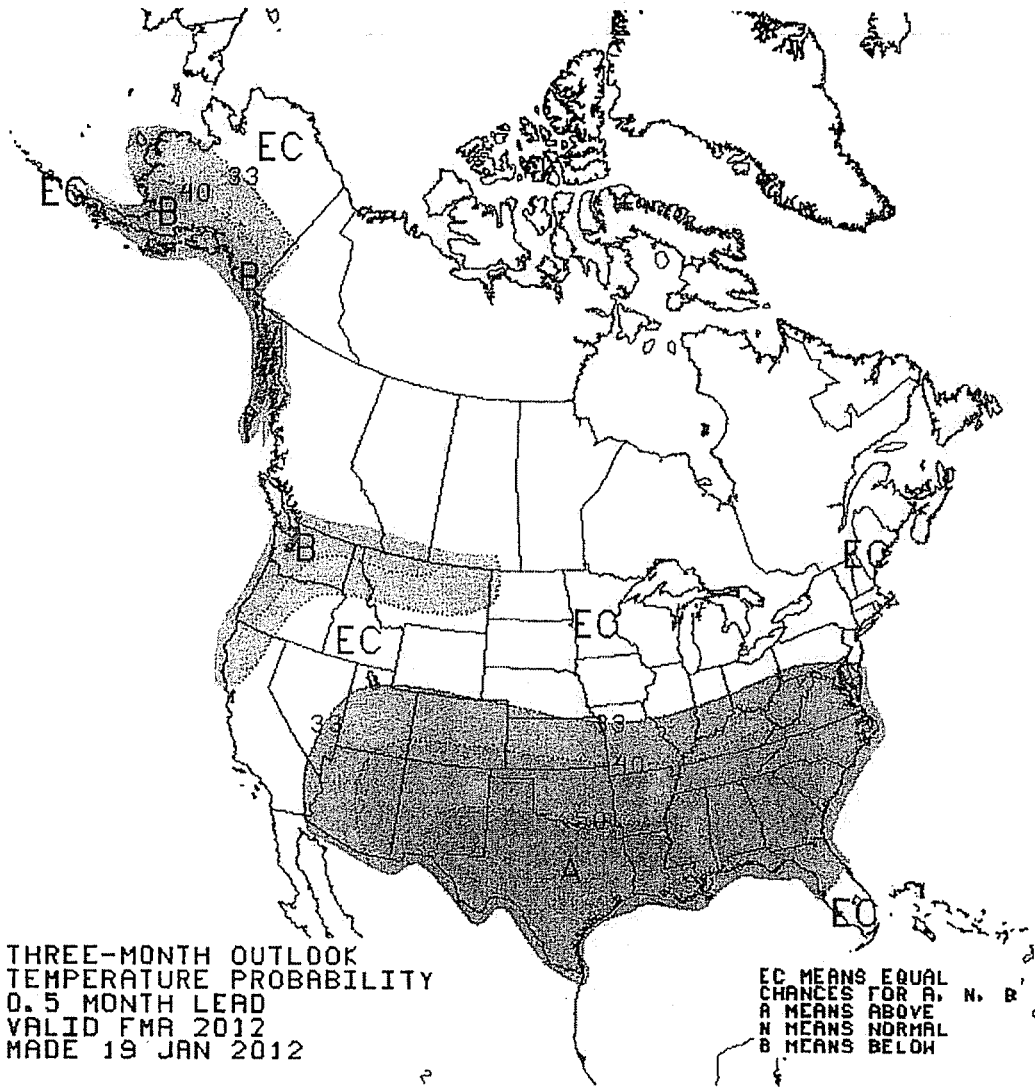
**Duke Energy Kentucky  
 Hedging Program  
 Current Position**

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-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2012					
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, 2012					
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, 2012					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					

### 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-Jan-12	EIA 7-Feb-12	NYMEX 15-Feb-12	Ohio	Kentucky
Mar	\$5.83	\$3.79			\$3.140	\$2.540		
Apr	\$5.77	\$4.24			\$3.220	\$2.700		
May	\$6.15	\$4.38			\$3.330	\$2.810		
June	\$6.31	\$4.33			\$3.300	\$2.890		
July	\$6.61	\$4.36			\$3.270	\$2.971		
Aug	\$5.57	\$4.37			\$3.380	\$3.012		
Sep	\$4.84	\$3.86			\$3.470	\$3.043		
Oct	\$5.04	\$3.76			\$3.620	\$3.079		
Nov	\$4.97	\$3.52			\$3.820	\$3.252		
Dec	\$5.24	\$3.36			\$4.010	\$3.558		
Jan	\$5.28	\$4.22			\$4.110	\$3.708		
Feb	\$4.95	\$4.32			\$4.060	\$3.725		
12 Month Avg	<b>\$5.55</b>	<b>\$4.04</b>			<b>\$3.561</b>	<b>\$3.107</b>		
Summer Average					\$3.370	\$2.929		
Winter Average					\$3.828	\$3.357		

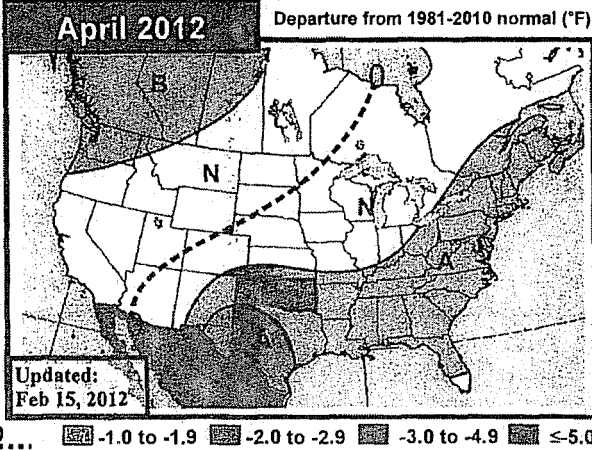
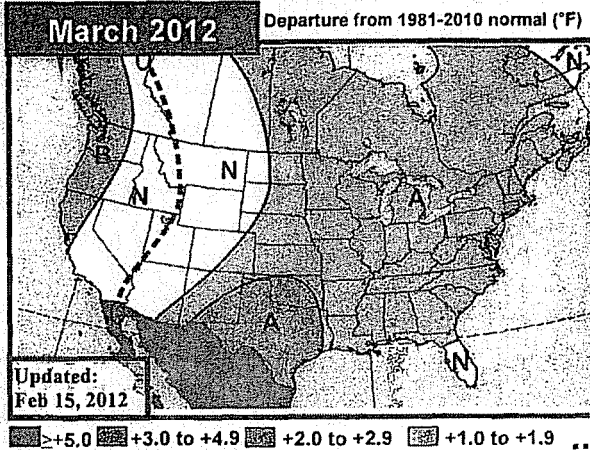




# EarthSat's 30-60 Day Outlook

Wednesday, February 15, 2012

Meteorologists: BH/SS/RC



Updated:  
Feb 15, 2012

Updated:  
Feb 15, 2012

Legend for temperature departure from 1981-2010 normal (°F):  
 >+5.0, +3.0 to +4.9, +2.0 to +2.9, +1.0 to +1.9, 0, -1.0 to -1.9, -2.0 to -2.9, -3.0 to -4.9, ≤-5.0  
 □ -0.9 to 0.9

**Previous** Significant warm changes in the eastern half  
Slight cold changes in the NW

The forecast has trended warmer over much of the Eastern half, leaving nearly all of the region above normal. Slight cooler changes were focused on the West Coast. A combination of signals including the +WPO and limited high-latitude blocking (neutral-positive AO / positive NAO) should keep plenty of warmth in place over the East, South and Midwest. If the MJO continues to progress at its current pace, it should also be within some of its warmer phases as we turn the calendar to March. It appears that there will be some cold in the pattern, but much of the chill should focus on the West as per the +WPO and -PNA, at least early in the month. Cooler spells could also be associated with storms, some of which could briefly draw down colder air from Canada.

**Previous** Warm adjustments in Texas  
Still warm in the East

Changes here were more modest, but headed slightly warmer over the South. We expect the warmer-than-normal pattern to carry over into April, with the most anomalous warmth favored over West Texas and the Southeast. Much of this area is currently under drought conditions, and with little sign of a significantly wetter pattern developing through early spring, drought should provide warmer feedback. This was the case last April as severe drought had been in place (and in fact was more widespread throughout the South). Cooler variability is possible via the MJO, and any unexpected trends toward significant blocking could introduce cool risks as well.

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

Mar 2012 Fcst:	585.0	10Y Normal*	619.9
		30Y Normal	626.0
		Mar-2011	629.6

Change: -15      \*\*National Gas-Weighted HDDs

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

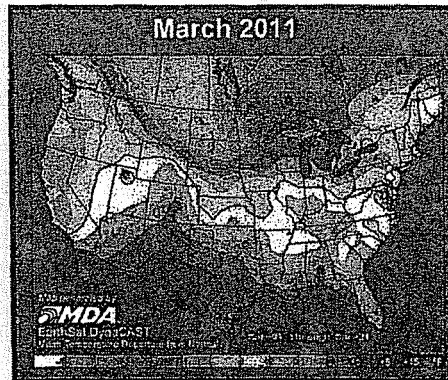
Apr 2012 Fcst:	333.0	10Y Normal*	336.1
		30Y Normal	354.3
		Apr-2011	337.8

Change: -2      \*\*National Gas-Weighted HDDs

Feb so far

Final 60 Day Outlook      Final 30 Day Outlook      Verif + current forecast (2/1-2/29)

The current 1-15 Day forecast now extends to the end of February and gives us an idea of what the month will look like as a whole. The month is still expected to generally be warmer than our forecasts with anomalies of 3-5F above normal across the South and 5-8F above normal across the upper Midwest and much of the Northeast. Our final 30 Day outlook captured the overall trend, but missed on the magnitude of the warmth, while our final 60 Day outlook was simply too cold. If the current 1-15 Day forecast holds, February would total 766 GWHDDs which would be the 10th warmest February since 1950.



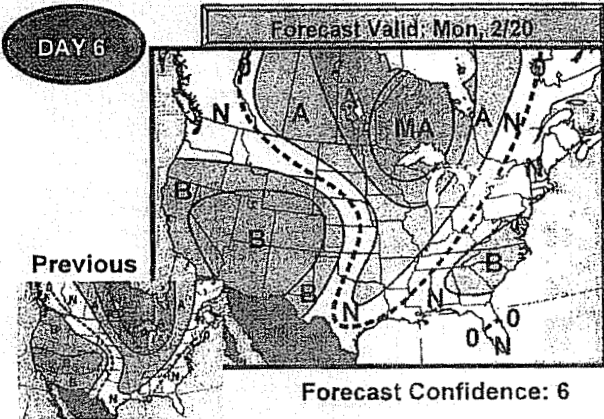
# 6-10 Day Forecast—Detailed

Wednesday, February 15, 2012

Meteorologist: AC/BH

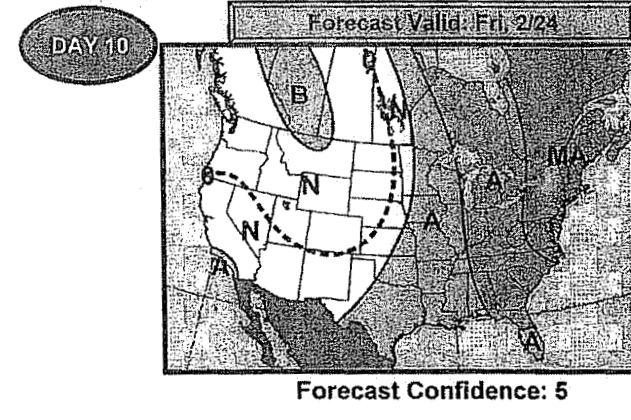
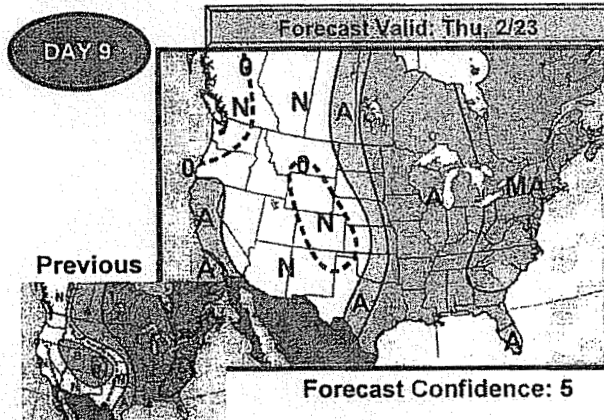
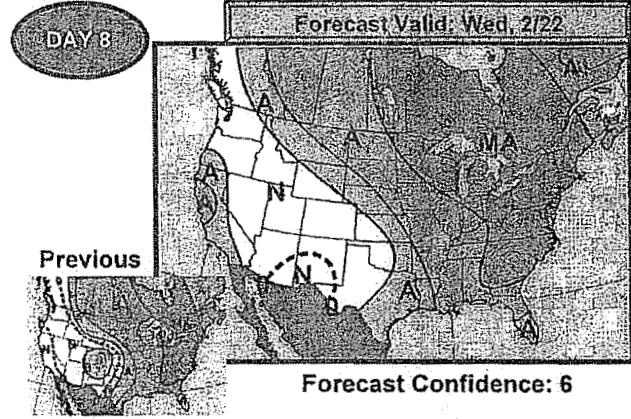
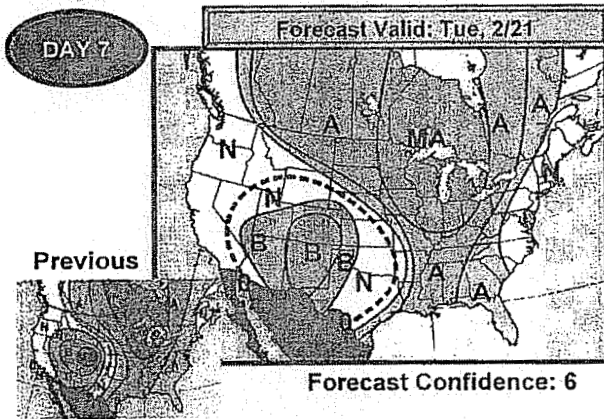


## Forecast Temperature Deviations



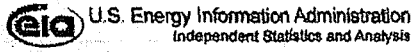
**\*Southwest May Be Under Much Belows Early\***  
**\*Still Warming Across Eastern Half By Mid-Period\***

With a uncertainty surrounding a storm system late in the prior period across the East Coast, the onset of this period carries some risks for this region, though not for extremes. The Southwest may take on much below normal temperatures for the early period, but a warming trend does take shape for the second half of the period across the West. A possible return to above normal readings might occur as a result of this warm up. Colder air could dive out of central Canada late into the Northern Plains. This air mass could be rushed a bit, but it still deserves monitoring. Warmer spikes may be seen from the Midwest to Northeast mid to late period.



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

Working Gas in Underground Storage, Lower 48

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

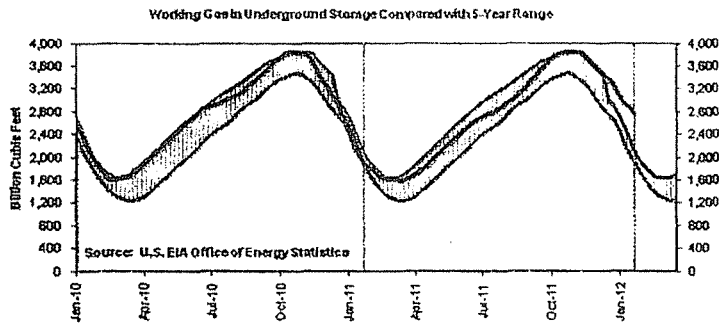
Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	02/10/12	02/03/12	Change	Year Ago (02/10/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,329	1,412	-83	954	39.3	1,027	29.4
West	381	388	-7	279	36.6	282	35.1
Producing	1,051	1,088	-37	711	47.8	686	53.2
Total	2,761	2,888	-127	1,944	42.0	1,996	38.3

Notes and Definitions

Summary

Working gas in storage was 2,761 Bcf as of Friday, February 10, 2012, according to EIA estimates. This represents a net decline of 127 Bcf from the previous week. Stocks were 817 Bcf higher than last year at this time and 765 Bcf above the 5-year average of 1,996 Bcf. In the East Region, stocks were 302 Bcf above the 5-year average following net withdrawals of 83 Bcf. Stocks in the Producing Region were 365 Bcf above the 5-year average of 686 Bcf after a net withdrawal of 37 Bcf. Stocks in the West Region were 99 Bcf above the 5-year average after a net drawdown of 7 Bcf. At 2,761 Bcf, total working gas is above the 5-year historical range.

- 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.

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

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

Jan-09
Feb-09
Mar-09
Apr-09
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09
Nov-09
Dec-09



Jan-10
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Jan-11
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Dec-11



Jan-12
Feb-12
Mar-12
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Jun-12
Jul-12
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Sep-12
Oct-12
Nov-12
Dec-12



Average 2009	\$
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Average 2010	
--------------	--

Average 2011	\$
--------------	----

Average 2012	\$
--------------	----

Summer 2009	\$
-------------	----

Summer 2010	
-------------	--

Summer 2011	\$
-------------	----

Summer 2012	\$
-------------	----

Winter 2009-2010	\$
------------------	----

Winter 2010-2011	
------------------	--

Winter 2011-2012	\$
------------------	----

North American Gas Forecast Monthly



January 25, 2012

NATURAL GAS

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

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
U.S. Production		The need to trim gas production has become much more severe than a month ago partly due to our projected end-March storage now in excess of 2.1 TCF, ~150 BCF above a month ago. Worse yet, a faster accumulating Y/Y storage surplus in Canada will push imports higher into an already glutted U.S. market.
LNG Sendout		Slightly lower Y/Y LNG send-outs from regas plants will generally reflect minimum contract volumes. Plans for new LNG export terminals has been placed in greater jeopardy by a new DOE report on gas price impacts of LNG exports.
Canadian Trade		Thanks in large part to unusually mild weather, the Canadian Y/Y end-March storage surplus appears headed to reach 230 BCF with upside risks depending on remaining heating season weather. We foresee this price-inelastic excess being dumped into the U.S.
Mexican Trade		Relatively flat Y/Y comparisons, but slower gas-fired EG growth of late than previously expected, raises a red flag warning of downside risks to U.S. exports.
Storage Levels		All-time high storage at end-March has become a foregone conclusion that will severely impinge the amount of U.S. gas production that can be absorbed into the market.
U.S. Demand Issues	Outlook	Commentary
Economy		U.S. economic news has been decidedly upbeat of late, but forecasts of 2012 GDP have been generally stable, reflecting in part concerns regarding the spillover impact of the Eurozone's worsening debt crisis.
Electric Generation (EG)		The postponed implementation of the EPA's Cross-State Air Pollution Rule (CSAPR) should be negated by more intensive coal-to-gas substitution resulting from lower gas prices.
Industrial Sector		EIA's industrial gas demand estimate for October showed the strongest Y/Y percent growth (~5%) since May. But demand was especially weak in 4Q10 making Y/Y comparisons easier.
Res/Com Heating		Incredibly mild weather so far in the 2011-12 heating season has become a bearish "game changer" for 2012 gas balances. Producers will be glad when the season is over.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation		Some non-commercial bears were spooked following word of CHK's plans to shut in production. This helped lift the nearby contract from ~\$2.20 to over \$2.70. Next week's COT report will capture a part of any position changes tied to the rally. The latest NYMEX/ICE non-commercial net short futures of ~130,000, though, had already dropped from over 190,000 lots in mid-November. Given this week's pullback, other buying interest seems needed, if the rally is to continue.
Overall Assessment	Outlook	Commentary
Price Outlook		Our price outlook for the 2012 injection season has changed from bullish to neutral relative to the NYMEX forward curve. Reflecting the greater magnitude of expected excess end-March storage than a month ago, both NYMEX futures and PIRA's forecast have moved much lower than those respective price trajectories on December 20 <sup>th</sup> .



## Price Predictions

Jefferies slashes 2012 price 20% to \$3.25/Mcf due to large supply and no demand. According to Jefferies the only solution is for drillers to cut back on production. Jefferies expects that production cutback will occur but because of the associated gas resulting from driller shifting rigs to liquids plays there will be little impact on supply.

1/24/2012

Barclay reduces gas price forecast 75 cents for 2012 and 2013 to \$3/MMBtu and \$3.50/MMBtu, respectively. Barclay's revisions based on mid-winter prices in the mid \$ 2's and high storage levels. Associated gas that is produced along with oil and NGL's account for an estimated 15% to 20% of new production. 1/27/2012

Raymond James reduced its 2012 price forecast to \$2.50/MMBtu or 23% reduction from the previous forecast and a 19% cut to \$3.25/MMBtu for 2013. Citing mild winter weather and continued gains in gas supply resulting from increased liquids and crude production. Marshall Adkins predicted a "chance of sub-\$1/MMBtu prices and significant producers cutback this summer as the train of runaway production collides with the wall of gas in storage and moderate weather". 2/7/2012

Barclays estimates that US producers would need to curtail production by 3.2 Bcf/day for prices to return to \$4/MMBtu. A 5% production cut is necessary to return the supply/demand balance to year-ago levels. Cuts announced so far total 1% of US output. 2/8/2012

FirstEnergy Capital reduced its 2012 forecast 40% from \$3.75/MMBtu to \$2.25/MMBtu. "Everything that could go wrong for North American gas producers has". Mild winter, US supply growth and delay in the policy shift to favor additional gas burn for electric generation. 2/9/2012

## Production Curtailments

Chesapeake Energy will immediately curtail .5 Bcf/day reflecting about 8% of its total output, and could cut production by another .5 Bcf/day if conditions warrant. Prices have fallen below levels that are economically attractive for dry gas producers. Chesapeake will cut the number of drilling rigs to 24 by the 2<sup>nd</sup> quarter of 2012 down from an average of 75 rigs in 2011. Chesapeake will also delay completion of dry gas wells and defer pipeline connections. 1/23/2012

Conoco could shut-in 4% of its North American production (100,000 Mcf/day) and would limit investment in North American production in response to low prices. 1/26/2012

BG Energy Group reducing drilling program due to low current gas prices. BG reducing rig count from 35 at the end of 2011 to 8 by the end of 2012. Factors keeping gas price low: mild winter and continued drilling to meet lease obligations. 2/10/2012

Noble Energy to reduce spending in Marcellus Shale by \$250 million in response to falling gas prices this is a 5% cut. According to Noble, the Henry Hub price would need to rise above \$4/Mcf and stay there for 3 months before they would increase drilling in Marcellus. 2/10/2012

## LNG Exports

EIA has stated that significant LNG exports would lead to "higher domestic natural gas prices, increased domestic natural gas production, reduced domestic natural gas consumption, and increased natural imports from Canada via pipeline." EIA forecasts domestic gas prices to rise by 54% in 2018 before sliding back down based on the most extreme export volume. 1/20/2012

According to the EIA's "Annual Energy Outlook 2012" the US will have the capacity to liquefy 1.1 Bcf/day for export by 2016, doubling to 2.2 Bcf/d (520 Bcf/year) in 2019. 1/23/2012

Seven LNG projects have been announced in the US and 3 projects have been proposed in Canada resulting from gas supplies and low prices in North America. "North American LNG exports are likely to reach only 2 Bcf/day by 2017 because of contracting hurdles and possible regulatory limits," according to Barclays. 1/26/2012

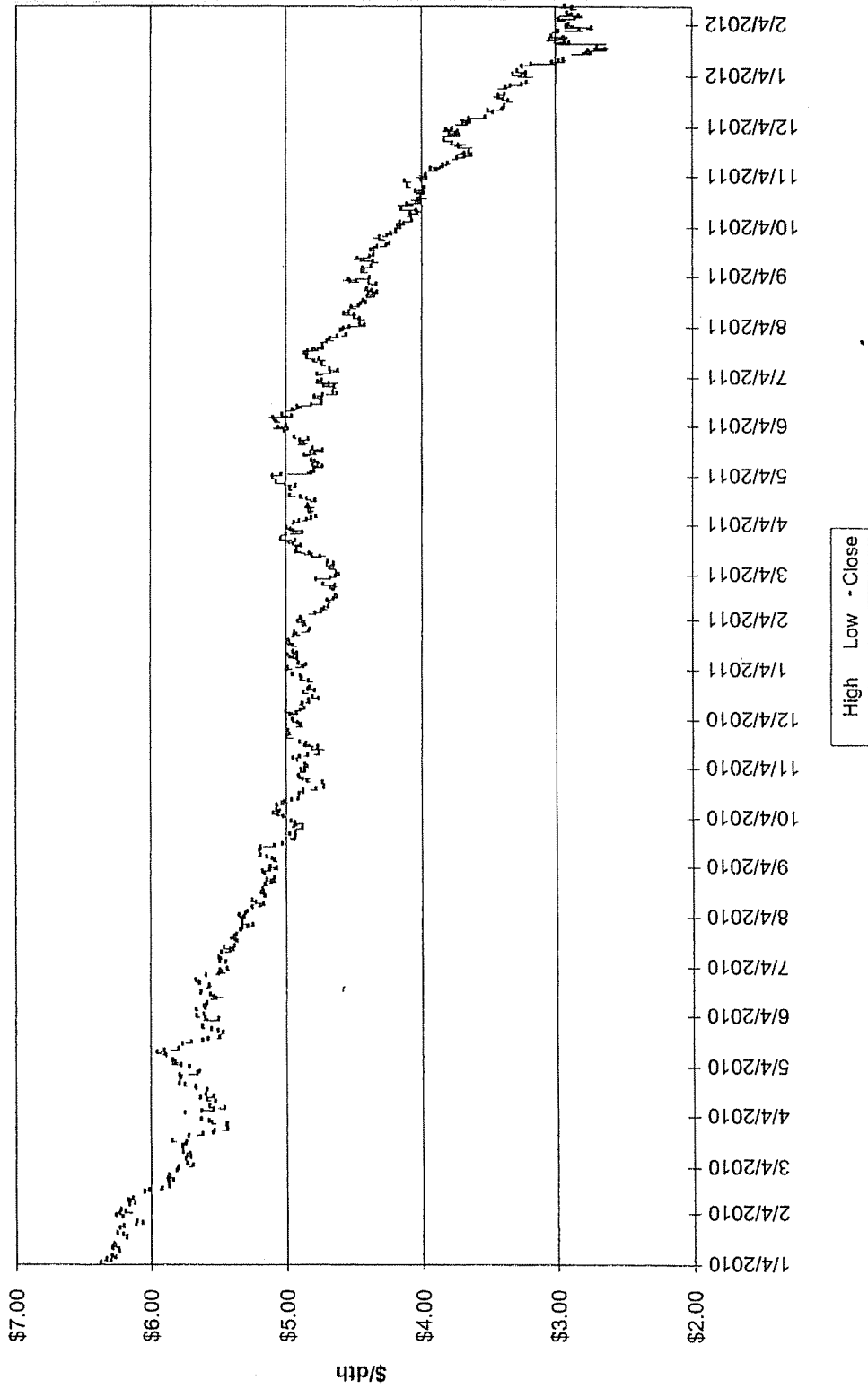
The Department of Energy will consider the impact on gas prices when deciding to grant permits for exporting LNG. "We do not want natural gas prices to spike the way they have historically done in the last several decades." 2/3/2012

House of Representatives Democrat introduces bill aimed at blocking the export of US LNG. "Whether it's through a pipeline or a shipping tanker, we shouldn't allow our domestic natural gas to be siphoned off to Asia, Europe or other markets when it's needed here in the United States." Analysts have forecast US gas price increases ranging from 2 cents/MMBtu to 30 cents/MMBtu, at Henry Hub, for each incremental Bcf/day of LNG exports. 2/15/2012

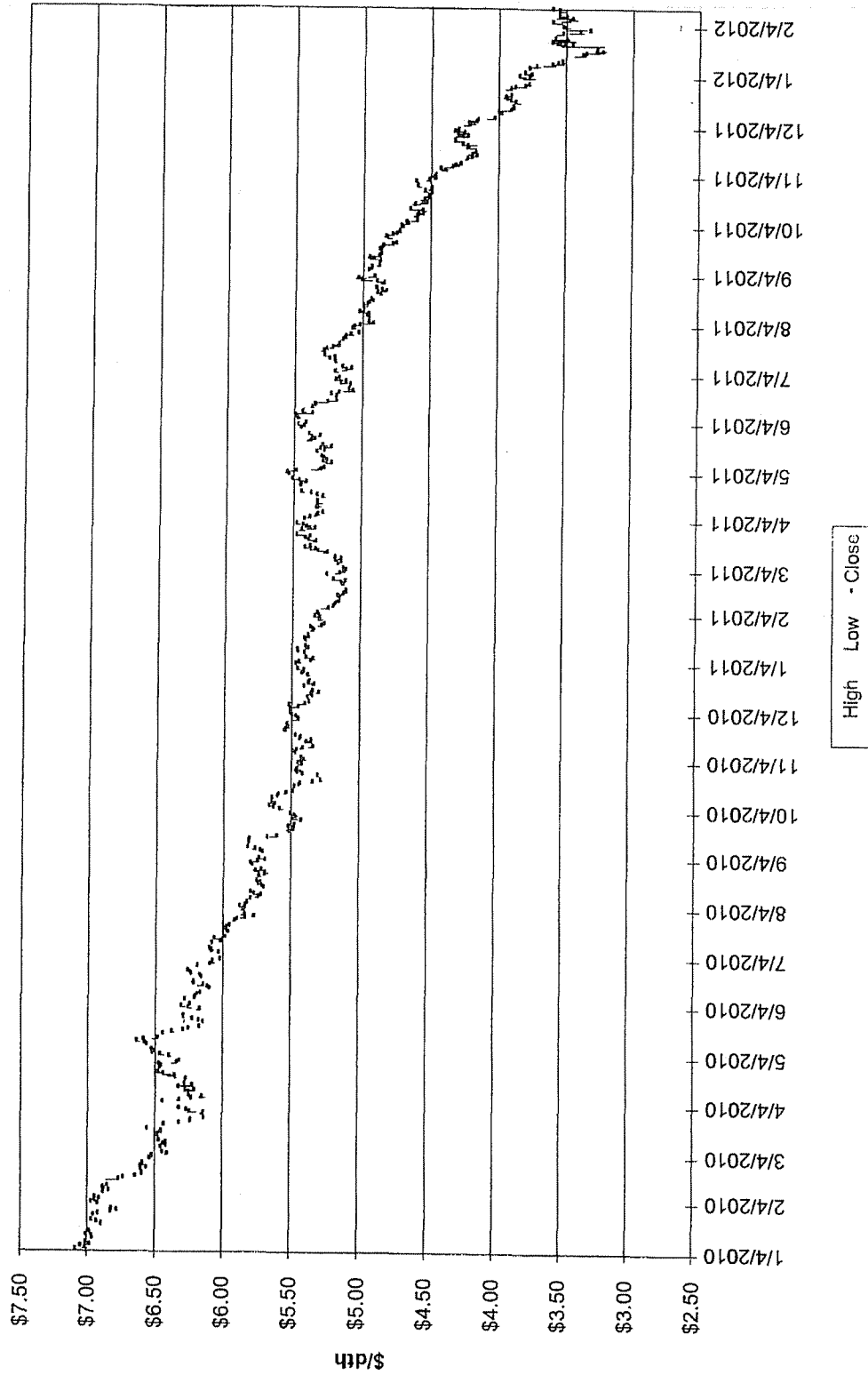
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**February 7, 2012 Release**

Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	4.11
Feb-10	5.32	Feb-11	4.09	Feb-12	2.97	Feb-13	4.06
Mar-10	4.29	Mar-11	3.97	Mar-12	3.14	Mar-13	4.00
Apr-10	4.03	Apr-11	4.25	Apr-12	3.22	Apr-13	3.98
May-10	4.14	May-11	4.31	May-12	3.33	May-13	3.99
Jun-10	4.80	Jun-11	4.55	Jun-12	3.30	Jun-13	4.01
Jul-10	4.63	Jul-11	4.42	Jul-12	3.27	Jul-13	4.00
Aug-10	4.32	Aug-11	4.05	Aug-12	3.38	Aug-13	4.00
Sep-10	3.89	Sep-11	3.90	Sep-12	3.47	Sep-13	4.02
Oct-10	3.43	Oct-11	3.56	Oct-12	3.62	Oct-13	4.11
Nov-10	3.71	Nov-11	3.24	Nov-12	3.82	Nov-13	4.21
Dec-10	4.25	Dec-11	3.17	Dec-12	4.01	Dec-13	4.35
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]		

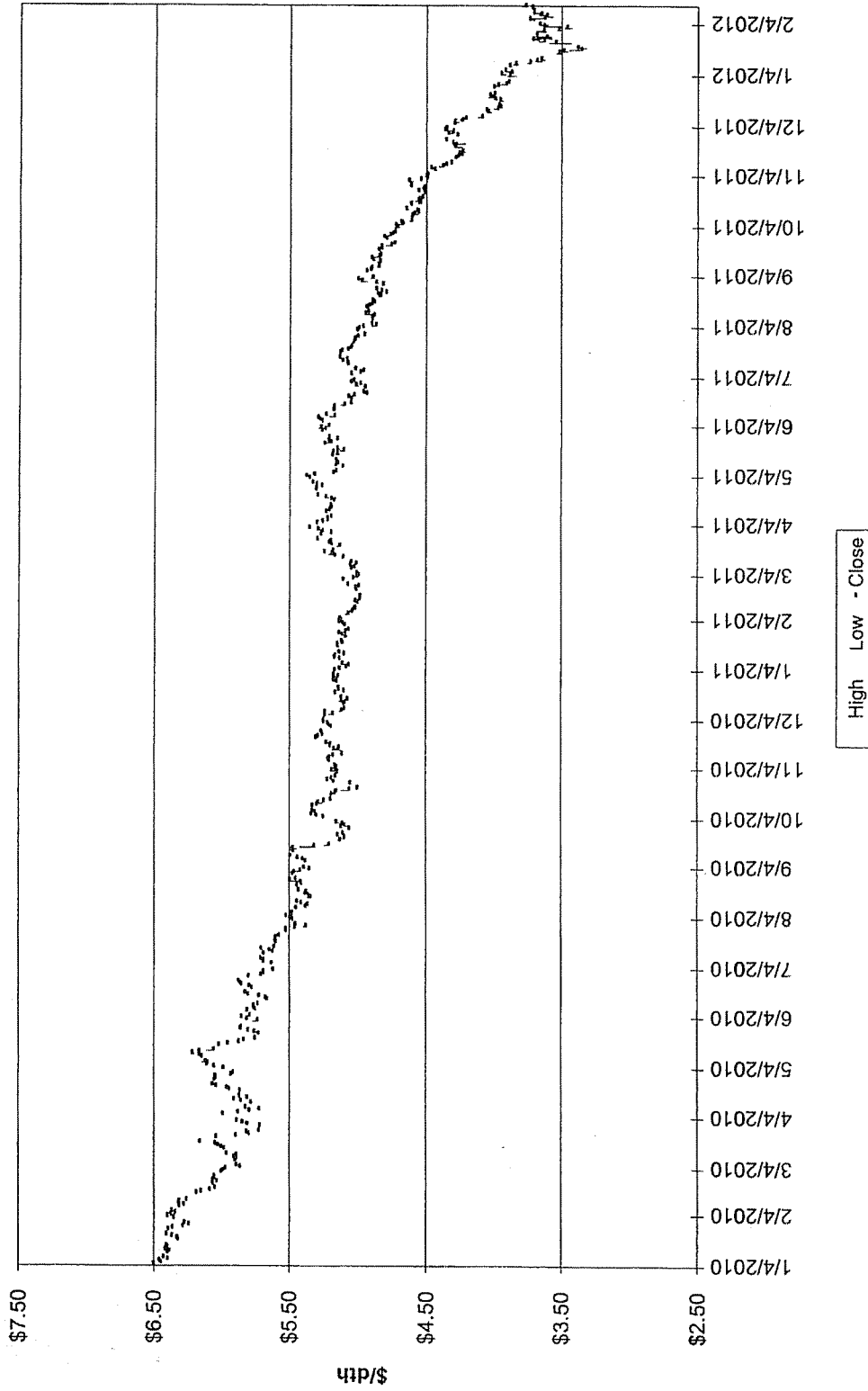
Summer Strip 2012



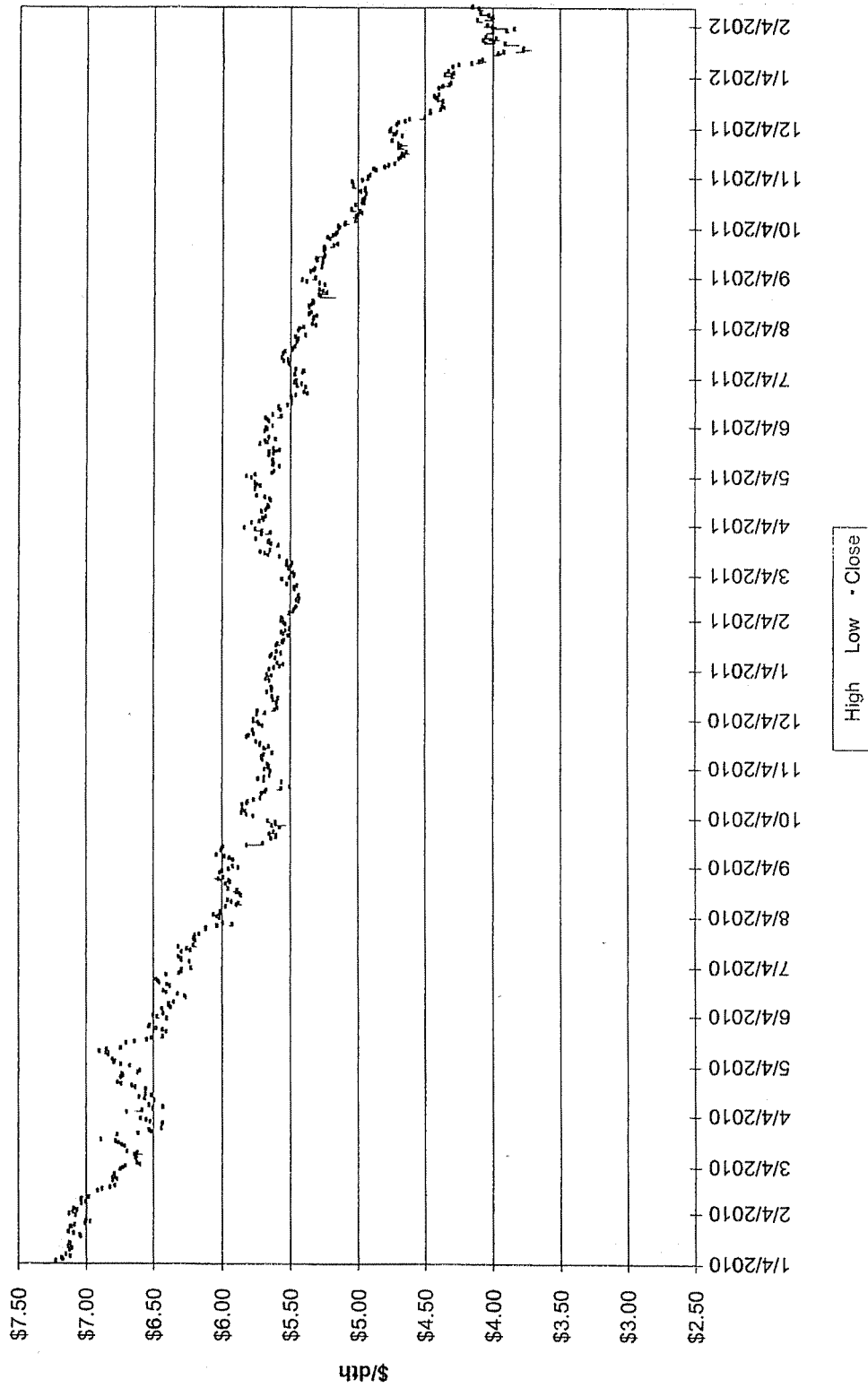
Winter Strip Nov12 - Mar13



Summer Strip 2013



Winter Strip Nov13 - Mar14





*Independent Statistics & Analysis*

## U.S. Energy Information Administration February 2012 Short - Term Energy Outlook

February 7, 2012 Release

### Natural Gas

***U.S. Natural Gas Consumption.*** EIA expects that natural gas consumption will average 68.5 billion cubic feet per day (Bcf/d) in 2012, an increase of 1.6 Bcf/d (2.4 percent) from 2011. Consumption increases in all sectors, with the largest volume increase (1.2 Bcf/d) coming from the electric power sector. Natural gas consumption growth continues into 2013, with projected total consumption averaging 69.7 Bcf/d. Increases in the consumption of natural gas for power generation are likely to continue as domestic production continues to grow and natural gas remains a relatively inexpensive option for generators.

***U.S. Natural Gas Production and Imports.*** Total marketed production grew by an estimated 4.8 Bcf/d (7.8 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 production growth to continue in 2012 and 2013, 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 has fallen to 745 as of February 3, 2012, from a 2011 high of 936 in mid-October. Declines in production have not accompanied declines in the rig count, partly reflecting improving drilling efficiency. That fact, combined with high initial production rates from new wells, associated natural gas production from oil drilling, and a backlog of uncompleted or unconnected wells contribute to EIA's forecast of further production increases in 2012 and 2013.

***Crude Oil Prices.*** EIA's forecast of the WTI spot price is unchanged from last month's Outlook, averaging about \$100 per barrel in 2012 and \$104 per barrel in 2013. The projected WTI price discount to other U.S. and world crude oils narrows over the forecast. The projected average refiner acquisition cost (RAC) of crude oil averages \$105 per barrel and \$106 per barrel in 2012 and 2013, respectively.

**Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2011-12**

**Duke Energy Ohio**

Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Gulf South-DE Field Services  
 Col Gulf Mainline  
 Col Gulf Mainline  
 Tex Gas Zone 1

**Total  
 System Supply**

**Duke Energy Kentucky**

Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Col Gulf Mainline

**Total  
 System Supply**

**Duke Energy--Total**

Previously Hedged

**Total**

	Dth/Day						%
	November	December	January	February	March	Total	System Supply
<b>Duke Energy Ohio</b>							
Col Gulf Mainline							
Col Gulf Mainline							
Gulf South-DE Field Services							
Col Gulf Mainline							
Col Gulf Mainline							
<b>Total</b>							
<b>Duke Energy Kentucky</b>							
Col Gulf Mainline							
Col Gulf Mainline							
Col Gulf Mainline							
<b>Total</b>							
<b>Duke Energy--Total</b>							

**Duke Energy Kentucky  
 Hedging Program for 2012/13  
 Cost Averaging with [REDACTED] @ Columbia Gulf Mainline**

	Total Amount						5 Month Strip	Total Cost	Locked in To Date
		Nov-12	Dec-12	Jan-13	Feb-13	Mar-13			
3-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
4-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
5-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
6-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
9-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
10-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
11-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
12-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
13-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
17-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
18-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
19-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
20-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
23-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
24-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
25-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
26-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
27-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
30-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
31-Jan	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
1-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
2-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
3-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
6-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
7-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
8-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
9-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
10-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
13-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
14-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
15-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
16-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
17-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
21-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
22-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
23-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
24-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
27-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
28-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
29-Feb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	

Basis to Columbia Gulf Mainline  
 Price to be paid for [REDACTED] dth/day delivered Nov. 1, 2012 to Mar. 31, 2013: [REDACTED]

**Gas Commercial Operations  
Hedging Program  
Market Indicators Summary  
March 15, 2012**

	Price Pressure	Term	Comments	Page Ref
<b>Weather</b>				
Long Term Forecast (Mar 12--May 12)	↓	Long	NOAA predicting above average temperatures for March 2012--May 2012 for the majority of the CONUS. Below normal temperatures on Pacific North West.	12
Mid Term Forecast (30-60 days)	↓	Long	April is predicted to be 5.4% warmer than normal based on 10 year normals and May weather is predicted to be 21.3% above normal.	13
Short Term Forecast (6-10 days)	↓	Short	Strong Above from the Mississippi River to the east coast early in the period. Above and Much Above covers most of the rest of CONUS with some Below Normal in the west.	14
<b>Storage Inventory</b>				
EIA Weekly Storage Report	↓	Long	Storage withdrawals for the week ending March 9th were 64 BCF. Storage levels are at 2.369 TCF which is 45.0% higher than last year and 51.7% higher than the 5 year average.	15
<b>Industry Publications</b>				
PIRA Energy Group Winter 2012/13: [REDACTED] Summer 2012: [REDACTED]	↑	Long	GAS PRICE SCORECARD: April 2012--October 2012 US Production and Storage Levels remain bearish while Electric Generation and Industrial Sector demand are bullish. Price Outlook reflects change from Neutral to Bearish.	16-17
Gas Daily--Price Predictions	↓	Long	Strong chance of sub-\$2 gas soon--Mild winter, limited heating demand, record storage and production levels difficult to curb could lead to \$2 prices. Dry gas producers are bracing for a long period of low prices but are unlikely to reduce output as they turn to liquids plays.	18
Gas Daily--Gas Supply	↔	Long	US gas production increased 4.3 Bcf/day in 2011. According to Bentek, overall US supply appears to be leveling off. Natural gas production is expected to decline 1.5 Bcf/d by year-end 2012. The current market imbalance is 4 Bcf/d, consisting of 1.4 Bcf/d supply vs. demand and 2.6 Bcf/d impact from elevated storage levels.	19
Gas Daily--Coal-to Gas Switching	↑	Long	TPH estimates that US power producers will add an incremental 2 Bcf/d demand in 2012 assuming gas prices stay below \$3/MMBtu. Gas will not cut into coal's market share beyond that because of regional transmission constraints and long-term coal contracts.	20
<b>Government Agencies</b>				
Energy Information Administration Winter 2012/13: \$3.924 Summer 2012: \$3.203	↑	Long	The projected Henry Hub natural gas spot price averages \$3.169/MMBtu for 2012 and \$3.963/MMBtu for 2013.	21
<b>Technical Analysis</b>				
Summer 2012 Strip Chart	↔	Short	Closed at \$2.30	22
Winter 2012-13 Strip Chart	↔	Short	Closed at \$3.28	23
Summer 2013 Strip Chart	↔	Short	Closed at \$3.48	24
Winter 2013-14 Strip Chart	↔	Short	Closed at \$3.88	25
<b>Economy</b>				
Demand	↑	Long	EIA projects total natural gas consumption to grow by 3.1% to 68.9 Bcf/d in 2012 and grow 0.6% to 69.3 Bcf/d in 2013, large volume increase coming from electric power consumption (9%) will offset declines in residential and commercial usage.	26
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.	26
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.	27

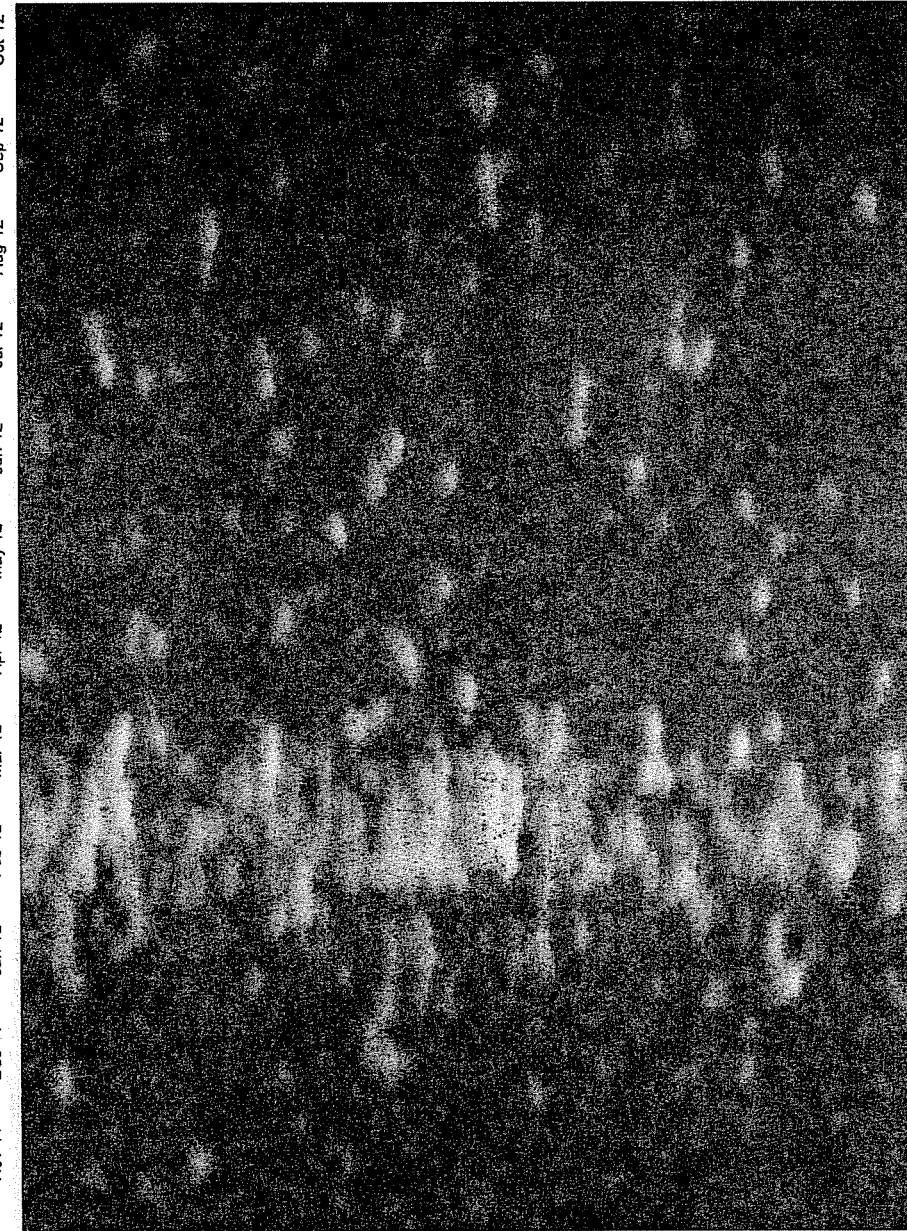
**Meeting Minutes: 412 Annex Conference Room - 1:00 pm**

*Attendees: Jim Mehring, Jeff Kern, Mike Brumback, Steve Niederbaumer*

Discussed market fundamentals including weather, storage levels, PIRA and EIA price forecasts, analysts projections of gas prices, amount of supply available, economic influences on supply and demand, coal-to-gas switching and the current positions of the DEO and DEK Hedging Programs. Significant discussion took place about the extreme level of gas in storage, injections forecasted to begin for the week ended March 16, 2012 (normally this does not happen until the month of April) and the storage level's impact on future price. Based on discussions, a decision was made that no additional hedging is necessary at this time. Discussed the final results of the Cost Averaging deal the was entered into in December 2012. The final price was \$[REDACTED].

Duke Energy Kentucky  
Hedging Program - Current Position  
November 2011 - October 2012  
As of 03/13/12

Nov-11 Dec-11 Jan-12 Feb-12 Mar-12 Apr-12 May-12 Jun-12 Jul-12 Aug-12 Sep-12 Oct-12



**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  
Fixed Price  
Collar  
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 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.

5

**Duke Energy Kentucky  
 Hedging Program - Current Position  
 November 2012 - October 2013  
 As of 03/13/12**

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

**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

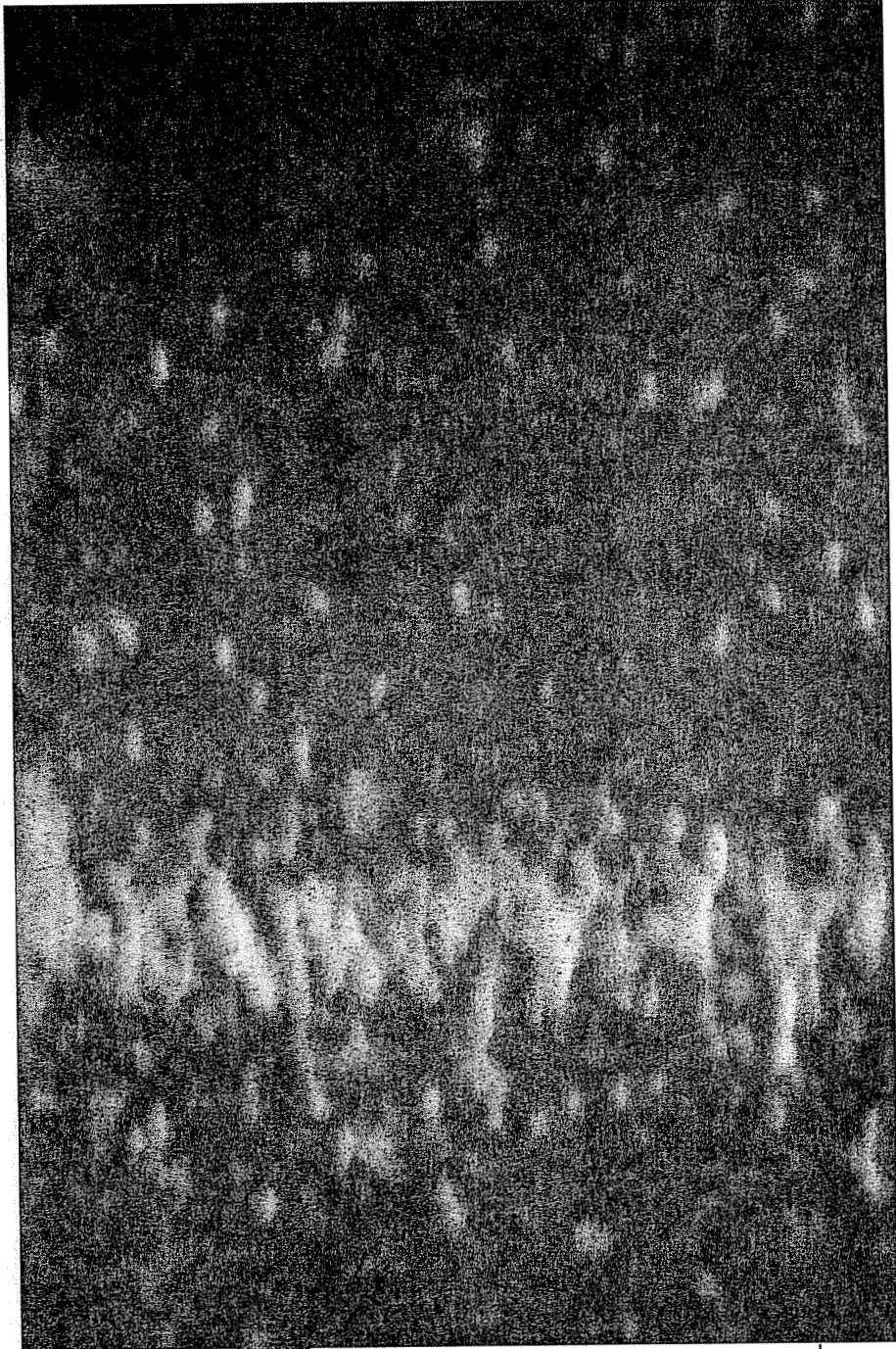
**Estimated EGC per Dth at City Gate**  
 Estimated System Supply (Gross)  
 Hedged % of System Supply  
 Seasonal % of System Supply

**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 03/13/12

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 (annuity)
- 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

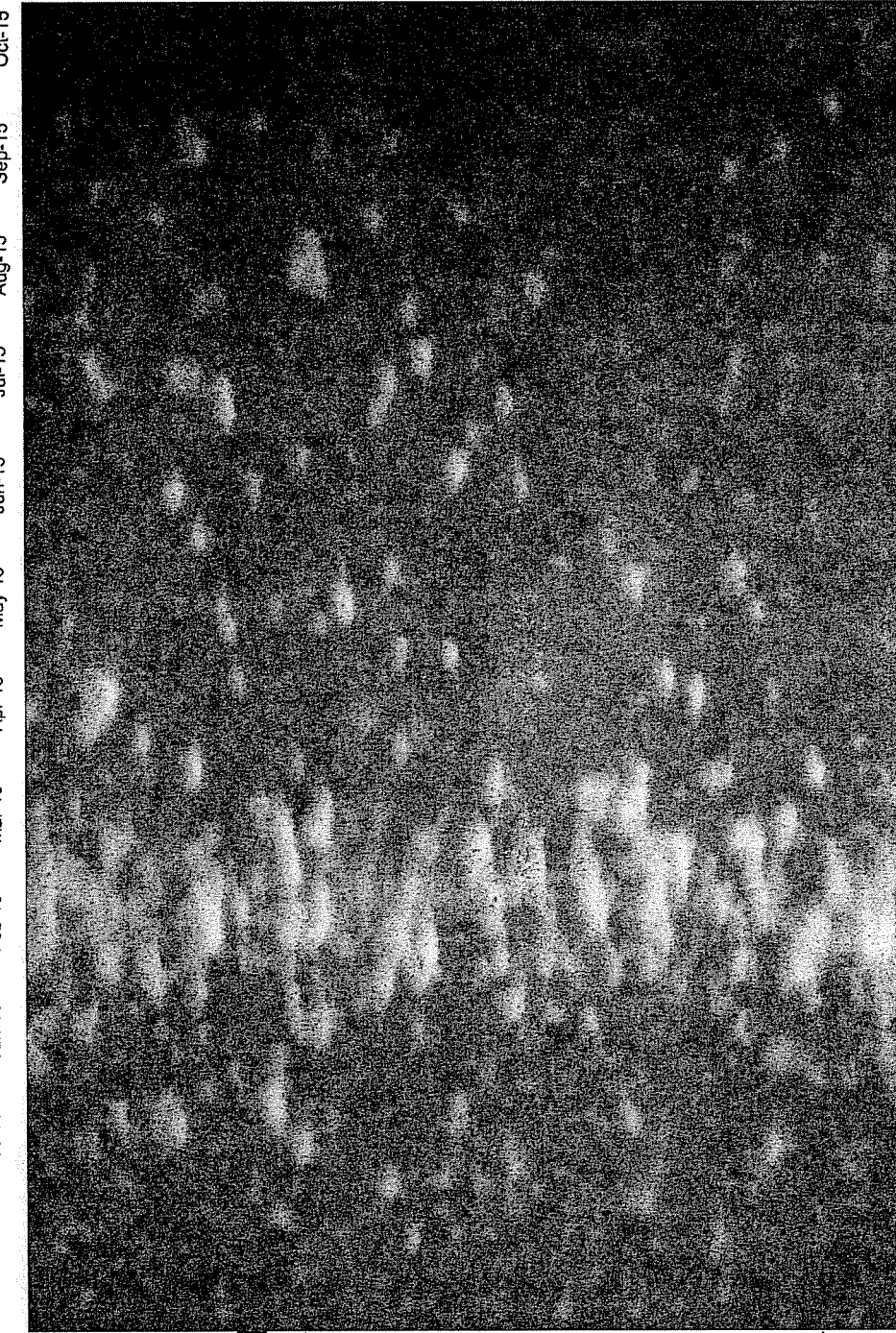
**Amt Hedged with Storage @ City Gate**

- 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 03/13/12

Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15



**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  
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.



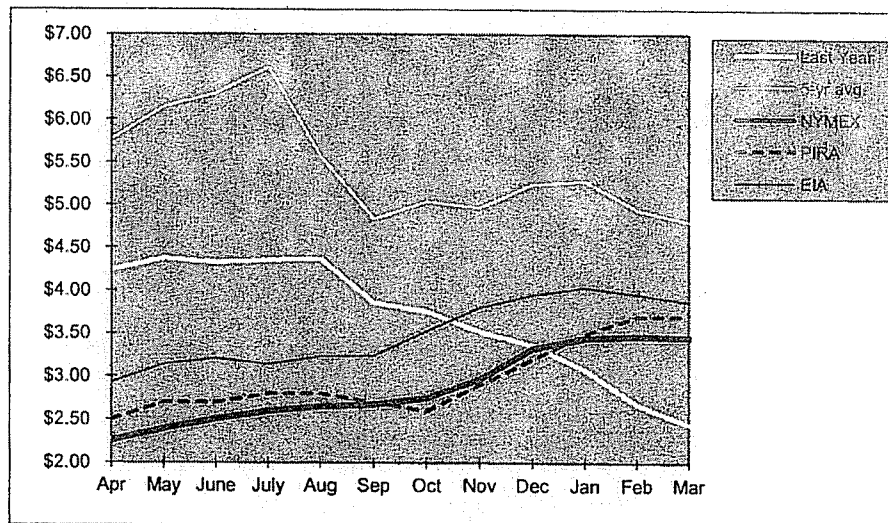
3/13/2012

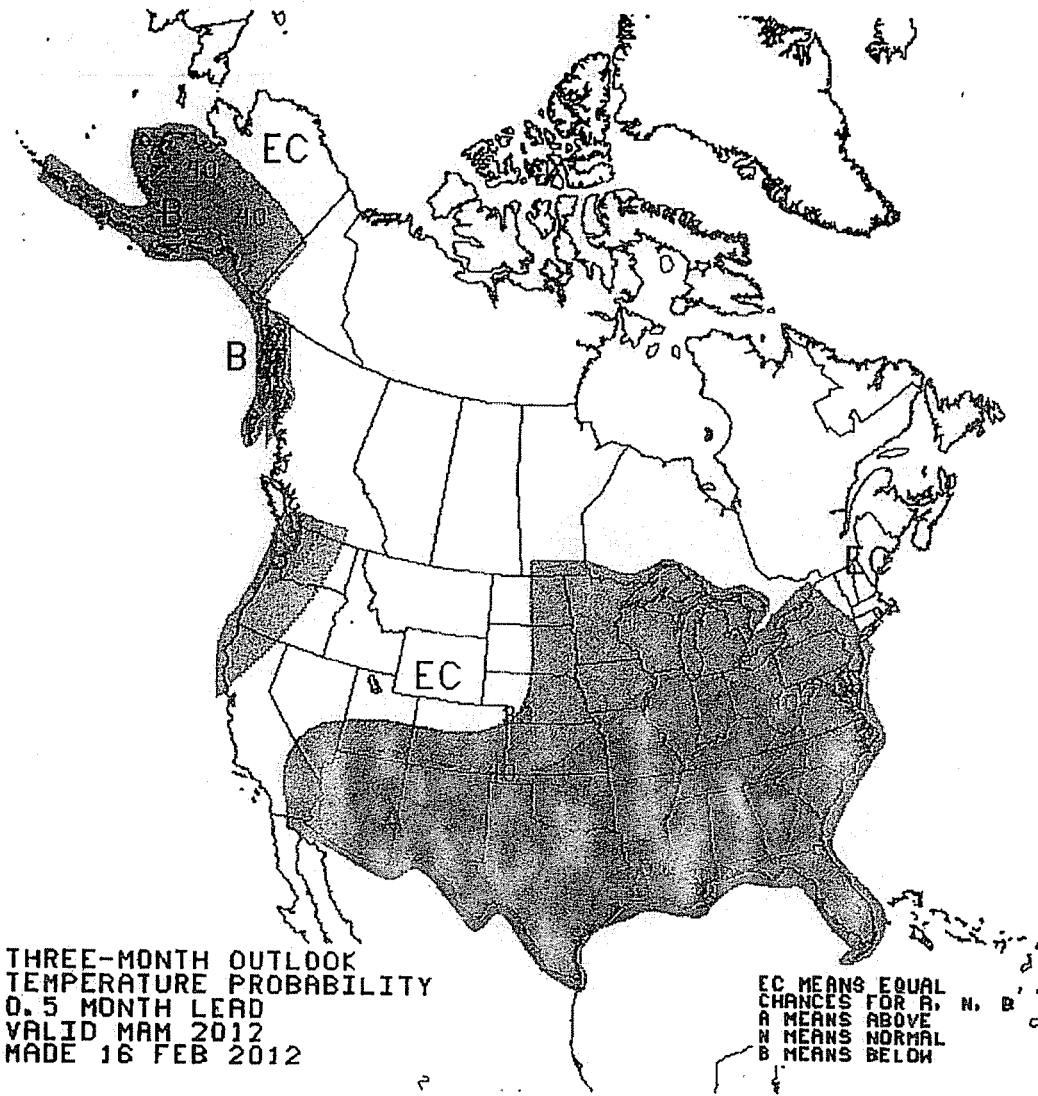
**Duke Energy Kentucky  
 Hedging Program  
 Current Position**

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-12					
May-12					
Jun-12					
Jul-12					
Aug-12					
Sep-12					
Oct-12					
Summer 2012					
Target Levels By March 31, 2012					
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, 2012					
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, 2012					
Nov-14					
Dec-14					
Jan-15					
Feb-15					
Mar-15					
Winter 14/15					
Target Levels By October 31, 2012					

**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 24-Feb-12	EIA 6-Mar-12	NYMEX 15-Mar-12
Apr	\$5.77	\$4.24			\$2.930	<b>\$2.257</b>
May	\$6.15	\$4.38			\$3.140	<b>\$2.392</b>
June	\$6.31	\$4.33			\$3.210	<b>\$2.506</b>
July	\$6.61	\$4.36			\$3.140	<b>\$2.598</b>
Aug	\$5.57	\$4.37			\$3.230	<b>\$2.651</b>
Sep	\$4.84	\$3.86			\$3.240	<b>\$2.676</b>
Oct	\$5.04	\$3.76			\$3.530	<b>\$2.753</b>
Nov	\$4.97	\$3.52			\$3.800	<b>\$2.968</b>
Dec	\$5.24	\$3.36			\$3.950	<b>\$3.323</b>
Jan	\$5.28	\$3.08			\$4.040	<b>\$3.447</b>
Feb	\$4.95	\$2.68			\$3.960	<b>\$3.471</b>
Mar	\$4.81	\$2.45			\$3.870	<b>\$3.454</b>
12 Month Avg	<b>\$5.46</b>	<b>\$3.70</b>			<b>\$3.503</b>	<b>\$2.875</b>
Summer Average					\$3.203	\$2.548
Winter Average					\$3.924	\$3.333





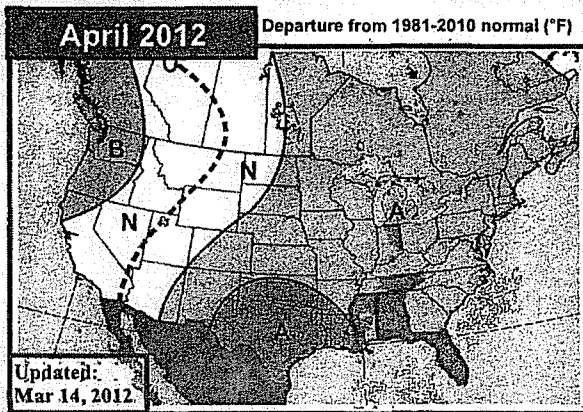
# EarthSat's 30-60 Day Outlook



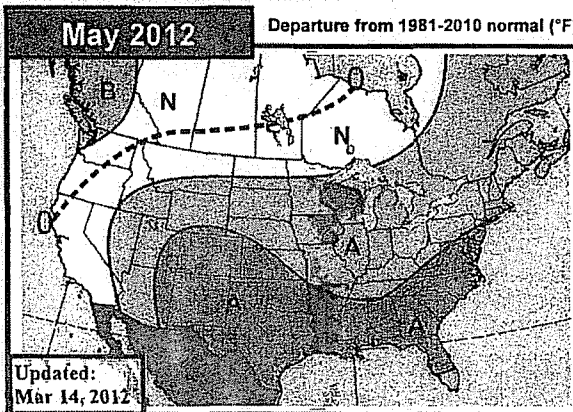
EarthSat Weather

Wednesday, March 14, 2012

Meteorologists: BH/SS



Updated:  
Mar 14, 2012



Updated:  
Mar 14, 2012

Legend for temperature departure from 1981-2010 normal (°F):  
 >+5.0, +3.0 to +4.9, +2.0 to +2.9, +1.0 to +1.9, 0, -1.0 to -1.9, -2.0 to -2.9, -3.0 to -4.9, ≤-5.0  
 □ -0.9 to 0.9

**Previous** Minor warm changes in the Plains and Rockies  
Remaining cool in the NW

Changes were mostly minor this week, but include further warming from the Rockies / Plains through the Midwest. The overall theme of broad warmth remains intact, as several of the signals would favor above normal temperatures from the Rockies east. We're expecting the EPO to average more positive than not, and blocking to stay a relative non-factor (+AO / +NAO). The -PDO seasonal signal may also help project a warm signal over much of the nation with cooling impacts limited to the Western third. MJO-based variability could cut into the warmth at times over the Eastern half, while a possible evolution toward increased blocking could provide a cooler outcome for the Eastern and Central US.

Apr GWHDD** Forecasts		*10Y Normal updated to '02-11	
Apr 2012 Fcst:	318.0	10Y Normal*	336.1
		30Y Normal	354.3
		Apr-2011	337.8

Change: -2      \*\*National Gas-Weighted HDDs

**Previous** Warmer across the South  
Slightly warmer Mid-Atlantic

The May forecast also features a number of marginal changes, including warmer adjustments over the South and Mid-Atlantic. The same signaling expected to drive the April pattern should weigh heavily into the outcome for May. A combination of the persistent lack of blocking, favorable north Pacific setup, and -PDO ought to keep aboves in place from parts of the Southwest and Rockies eastward through the East Coast. The recent issuance of the ECMWF seasonal model agrees with this idea, and much like our forecast shows enhanced warmth from the southern Rockies through Texas. Cool risks may be firmly tied to any changes in blocking, as the 2011 analog featured both an intensification of cool air over the West and expansion into the Plains / Midwest (the AO and NAO both decreased to near neutral).

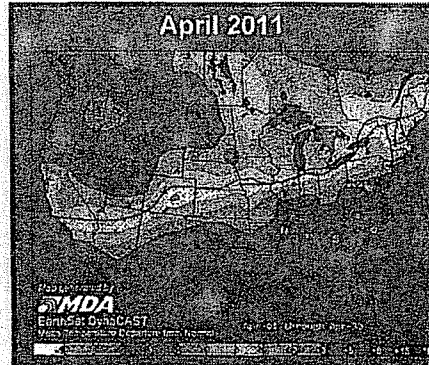
May PWCCD** Forecasts		*10Y Normal updated to '02-11	
May 2012 Fcst:	132.0	10Y Normal*	108.8
		30Y Normal	104.4
		May-2011	123.0

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

**Mar so far**

Final 60 Day Outlook      Final 30 Day Outlook      Vent + current forecast (3/1-2/3)

We remain on pace to shatter the previous record for warmest March, and could possibly be looking at the overall most anomalously warm month on record. Anomalies of 15F+ are seen in the Great Lakes region for the March 1-28 period, with anomalies of 8-14F across most of the Plains, South, East, and the rest of the Midwest. While the shape of the pattern fits our final 30 Day outlook well, we were obviously well under the magnitude of the warmth. The final 60 Day outlook was less successful, with warmth limited to Texas.

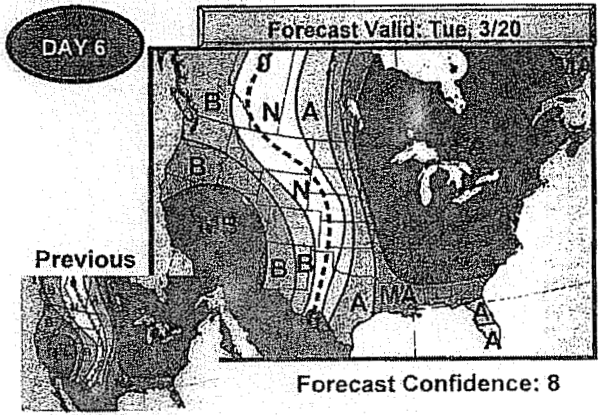


# 6-10 Day Forecast—Detailed



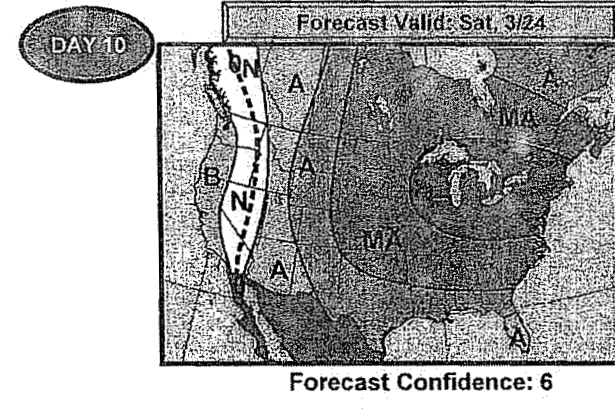
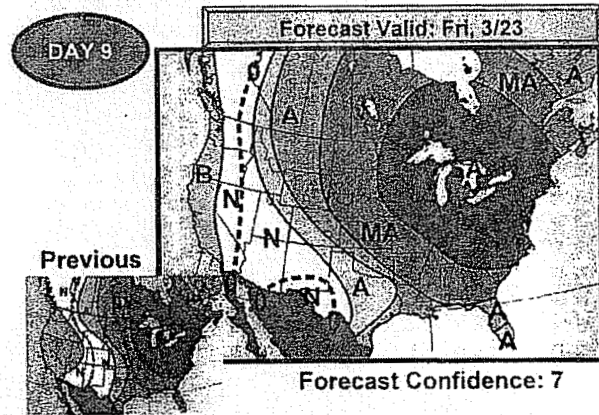
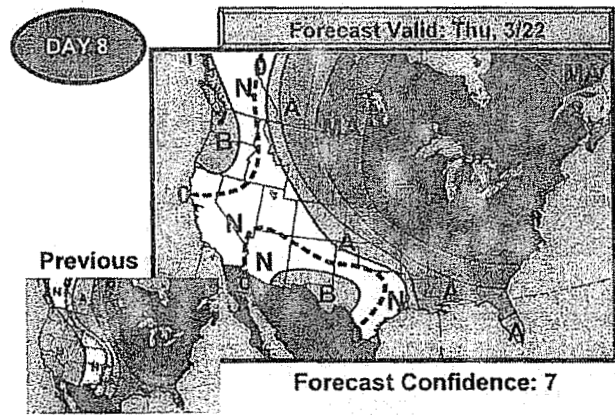
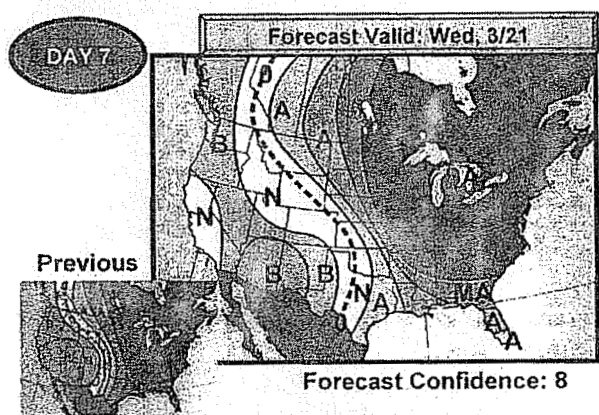
Thursday, March 15, 2012 Meteorologist: AC/BH

## Forecast Temperature Deviations



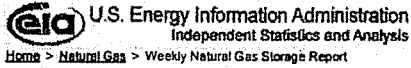
**\*Still Very Warm In Midwest & East Throughout\***  
**\*Upper Level Low May Bring Cooler Temps To Texas\***

An upper level low pressure system aims to appear across Texas for the early part of the period and may bring some cooler than expected readings to the state. The models handle this lows progression differently for the second half of the period though. The operational models portray a stalling of this system across the South while the ensemble models progress this system in a fashion similar to the handling of the last upper level low (Plains, western Midwest). Should the operational models be more accurate, a cool risk could be present for the South for the second half of the period. The Southwest may trend warmer faster for the late period. The strong warmth continues to be on track in the Midwest and East.



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



Weekly Natural Gas Storage Report

[Release Schedule](#)  
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Released: March 15, 2012 at 10:30 a.m. (eastern time) for the Week Ending March 9, 2012.  
Next Release: March 22, 2012

Working Gas in Underground Storage, Lower 48

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

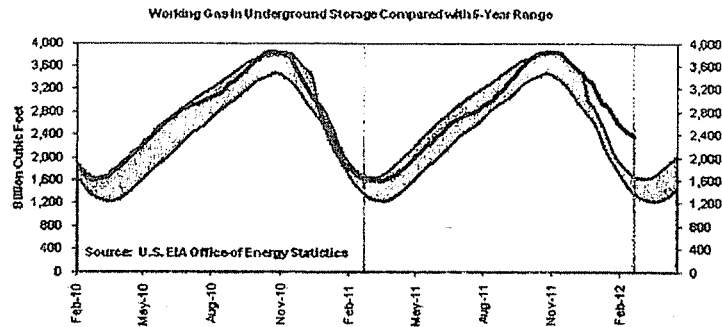
Region	Stocks in billion cubic feet (Bcf)			Historical Comparisons			
	03/09/12	03/02/12	Change	Year Ago (03/09/11)		5-Year (2007-2011) Average	
				Stocks (Bcf)	% Change	Stocks (Bcf)	% Change
East	1,059	1,114	-55	712	48.7	719	47.3
West	345	352	-7	222	55.4	239	44.4
Producing	965	967	-2	701	37.7	604	59.8
Total	2,369	2,433	-64	1,634	45.0	1,562	51.7

Notes and Definitions

Summary

Working gas in storage was 2,369 Bcf as of Friday, March 9, 2012, according to EIA estimates. This represents a net decline of 64 Bcf from the previous week. Stocks were 735 Bcf higher than last year at this time and 807 Bcf above the 5-year average of 1,562 Bcf. In the East Region, stocks were 340 Bcf above the 5-year average following net withdrawals of 55 Bcf. Stocks in the Producing Region were 361 Bcf above the 5-year average of 604 Bcf after a net withdrawal of 2 Bcf. Stocks in the West Region were 106 Bcf above the 5-year average after a net drawdown of 7 Bcf. At 2,369 Bcf, total working gas is above the 5-year historical range.

- 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.

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**PIRA**  
**North American Gas Price Overview**  
**Per MMBTU**  
**February 24, 2012 Release**

Month	2010	2011	2012	2013
Jan				
Feb				
Mar				
Apr				
May				
Jun				
Jul				
Aug				
Sep				
Oct				
Nov				
Dec				
Average	\$	\$	\$	\$
Summer	\$	\$	\$	\$
Winter	\$	\$	\$	\$

North American Gas Forecast Monthly



February 24, 2012

NATURAL GAS

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

Bearish Neutral Bullish

U.S. Supply Issues	Outlook	Commentary
U.S. Production	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Despite the apparent sequential production slowdown since 4Q11, the upward Y/Y momentum from last year's robust output gains remains a daunting problem given the glut of working gas storage in 1Q12.
LNG Sendout	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Slightly lower Y/Y LNG send-outs from regas plants remain in PIRA's 2012 forecast, and Cheniere's Sabine Pass plans for LNG exports have moved much closer to a final investment decision (FID).
Canadian Trade	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Unusually mild weather has contributed to an expected Canadian Y/Y end-March storage surplus of more than 250 BCF that eventually will be "dumped" into the already supply top-heavy U.S. gas market.
Mexican Trade	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	U.S. exports to Mexico will be indirectly limited by stiffer competition from LNG, given the imminent start-up of the new Manzanillo import terminal.
Storage Levels	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	All-time high storage at end-March will force production downward even when making an allowance for all-time high coal-to-gas substitution in the power sector.
U.S. Demand Issues	Outlook	Commentary
Economy	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	The manufacturing sector remains a bright spot of the U.S. economy measured by gains in employment as well as the recent and projected pace of IP growth.
Electric Generation (EG)	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Price-driven coal-to-gas substitution is expected to be the most intensive that has ever occurred. As a result, Y/Y gas demand gains should be substantial, unless gas prices move above our Reference Case outlook.
Industrial Sector	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Industrial gas demand growth will hinge on the enormous advantage of cheap gas being partially offset by a stronger U.S. dollar and weaker overseas markets, especially in Europe.
Res/Com Heating	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Near record-breaking mild weather in the 2011-12 heating season is the bearish "game changer" for 2012 gas balances that have gas producers running for cover.
Other Issues	Outlook	Commentary
NYMEX Prices and Speculation	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	The NYMEX/ICE non-commercial net short futures continues to narrow, and is now below 100,000 lots as compared to ~130,000, where it was before word of production shut-ins spread. This shift is the result of new speculative longs as opposed to short covering. Both long and short futures positions are at record highs.
Overall Assessment	Outlook	Commentary
Price Outlook	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Production shut-ins and announced spending plans by gas producers have been buttressed by the drop in gas drilling following late 2011 declines. Gas demand gains in the power sector have been equally impressive, driven by the greater competitiveness of gas prices relative to coal-fired generation, but PIRA's 2012 injection season price deck is ~5% below the NYMEX.

17



## Gas Price Predictions

Strong chance of sub-\$2 gas soon—Mild winter, limited heating demand, record storage and production levels difficult to curb could lead to \$2 prices. According to IAF Advisors there is a 50-50 chance that the NYMEX prompt month could fall below \$2/MMBtu in the near term. “The signs seem to suggest that these are prices at which these producers, to the extent that they can, will turn a field off and then turn it back on in a couple of years.” In addition, S&P indicated that it does not expect gas prices to rebound anytime soon because of the “seemingly inelastic production and mild winter weather.” According to TFS Energy Futures the contract could soon come under selling pressure when storage ratchets are imposed near the end of the withdrawal season, increasing the amount of gas on the market.

Dry gas producers are bracing for a long period of low prices but are unlikely to reduce output as they turn to liquids plays. Producers are hoping for increasing demand to help prices recover. The imbalance is large and it will take a long time for that imbalance to be taken out of the system. Southwestern Energy, the biggest producer in Fayetteville Shale indicated the answer is not to shut in production but to stimulate demand.

Barclay’s analysts visited 31 upstream and midstream companies to discuss the current market. They found that: low gas prices are not going to scare off US producers anytime soon, producers are set to do what they do best—drill, producers believe the biggest light at the end of the tunnel is the new demand that will be generated by LNG terminals. “Cutting back on production voluntarily sounds reasonable to the managers Barclays spoke with, but there is no confidence among those executives that any of their competitor will follow suit.

## Gas Supply

US gas production jumped 4.3 Bcf/day in 2011 or 7.5% according to Bentek. This increase is the largest year-on-year increase in 25 years. Marcellus Shale production is the main driver. The Northeast has seen the largest production increase reaching 7 Bcf/d by the end of 2011 vs. 4 Bcf/d for 2011. According to Bentek, overall US supply appears to be leveling off. In mid-February, production was 63.7 Bcf/d about the same level seen in mid-September 2011. "This stall in production growth is clearly the result of low natural gas prices, unattractive drilling economic for certain regions of the country and some infrastructure constraints." Production in the Marcellus Shale is the only thing hold up US production.

Natural gas production is expected to decline 1.5 Bcf/d by year-end 2012, associated gas from liquids-rich plays offset the drop-off in dry gas supplies. The current market imbalance is 4 Bcf/d, consisting of 1.4 Bcf/d supply-demand and 2.6 Bcf/d impact from elevated storage levels. Haynesville production is expected to fall 29.7% from its current level of 7.3 Bcf/d to 5.2 Bcf/d by the end of 2012. "Ultimately, while we feel declines in conventional resources and shut-ins show promise toward a recovery, given the massive amounts of gas in storage we remain confident that it won't impact the supply demand balance until 2013, leaving 2012 gas markets awash in supplies."

Gas production is expected to grow even with the dry rig count dropping below 700 (1<sup>st</sup> time in more than 2 years). The drop in dry rig drilling has been offset by growth in shale oil and natural gas liquids drilling. Barclays expects moderate supply growth this year and next, barring an even deeper plunge in the dry rig count.

Anadarko will sharply reduce drilling for dry natural gas this year in favor of oil and natural gas liquids. Anadarko will allocate 90% of its' E&P budget to oil and liquids assets, while reducing dry gas activity. Due to the lag time between drilling cutbacks and production levels, Anadarko expects 2012 dry gas production to be up 9% over 2011 volumes. "We have that portfolio ready to be regenerated again when this kind of pricing behavior comes back to us. We're cautiously optimistic about natural gas in the long term and certainly very constructive about the long term."

## Coal-to-Gas Switching

Tudor Pickering Holt estimates the US power producers will add about 2 Bcf/d in 2012 (4 Bcf/d in 2011) of natural gas use assuming gas prices stay below \$3/MMBtu. Gas will not cut into coal's market share beyond that because of regional transmission constraints and long-term coal contracts. "We estimate that sub-\$3/MMBtu gas puts much of the US gas generation fleet in front of coal on an economic dispatch basis according to TPH." Current gas prices are low enough to in theory to displace approximately 12 Bcf/d, however the reality is that the market is full of long-term fixed delivery contracts which does not allow utilities to make decisions on coal/gas price fundamentals.

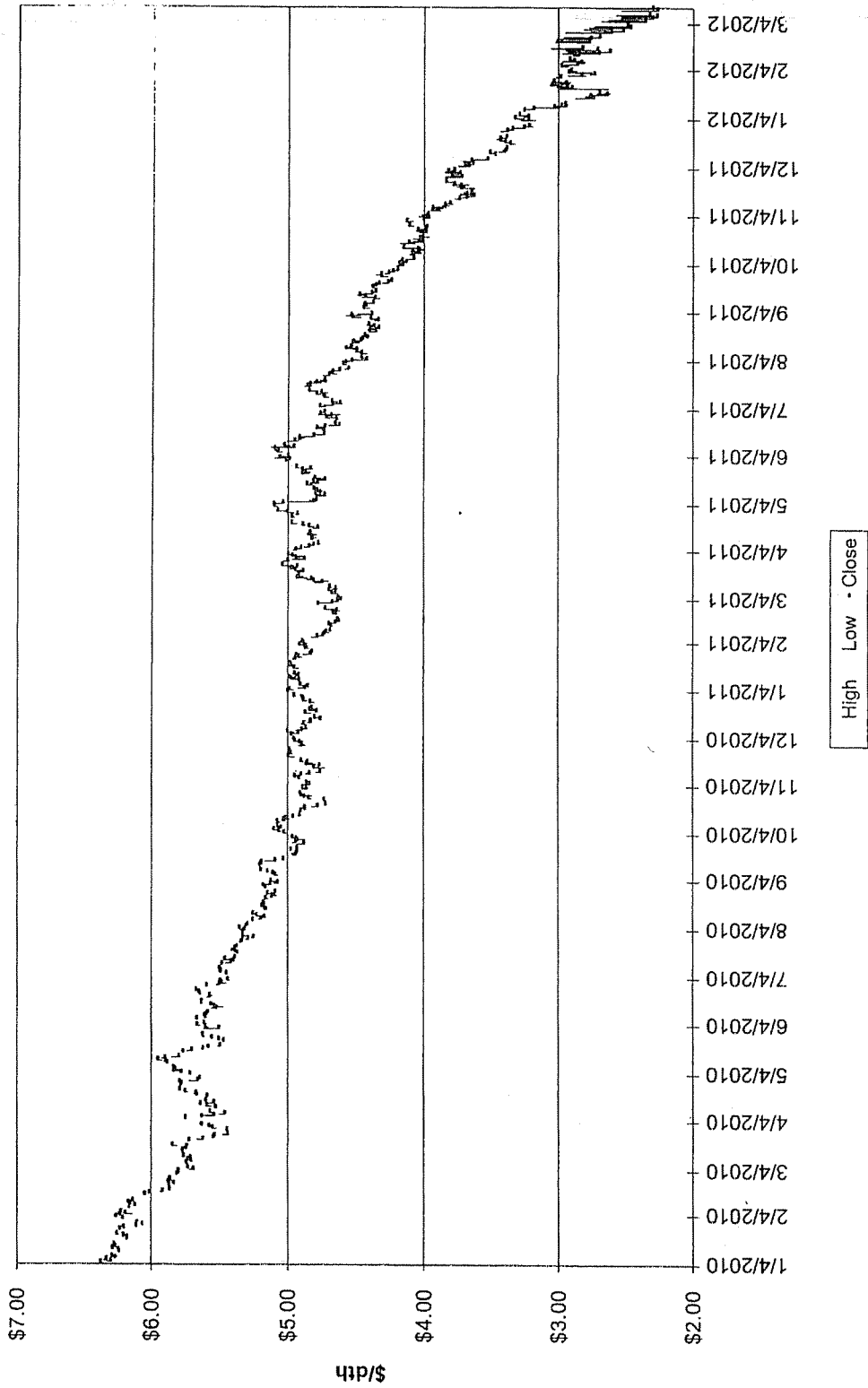
Gas has been displacing coal generation in the Southeast, Northeast and Central Industrial regions for the past several years but lower gas prices will displace coal generation for the first time in Texas, Louisiana and the Western power markets. Gas prices have been falling relative to coal spot prices. "If one were simply to compare the costs of producing a megawatt-hour of power from a coal plant using delivered spot coal prices in January 2012 with the cost of producing the same MWh from a gas-fired unit, the result would suggest that gas should be idling almost all coal." In reality it is not the most efficient gas-fired unit standing ready to displace the least efficient coal-burning plant. The least efficient coal plant seldom run and the most efficient gas-fired plant are running already. Coal displacement in the Midwest market is not expected due to the fact that the Midwest has the lowest delivered cost of coal in the country.

US electric utilities should not be heavily weighting their supply portfolio toward gas despite environmental and political pressure. Dominion's CEO stated that replacing 50,000 to 80,000 MW of coal fired generation with gas to meet EPA mandates amounts to a "train wreck". "You will have a reliability problem." "I don't think it is a good idea for the country to go toward one fuel source or another. There is a tradeoff for every source. Nothing is perfect."

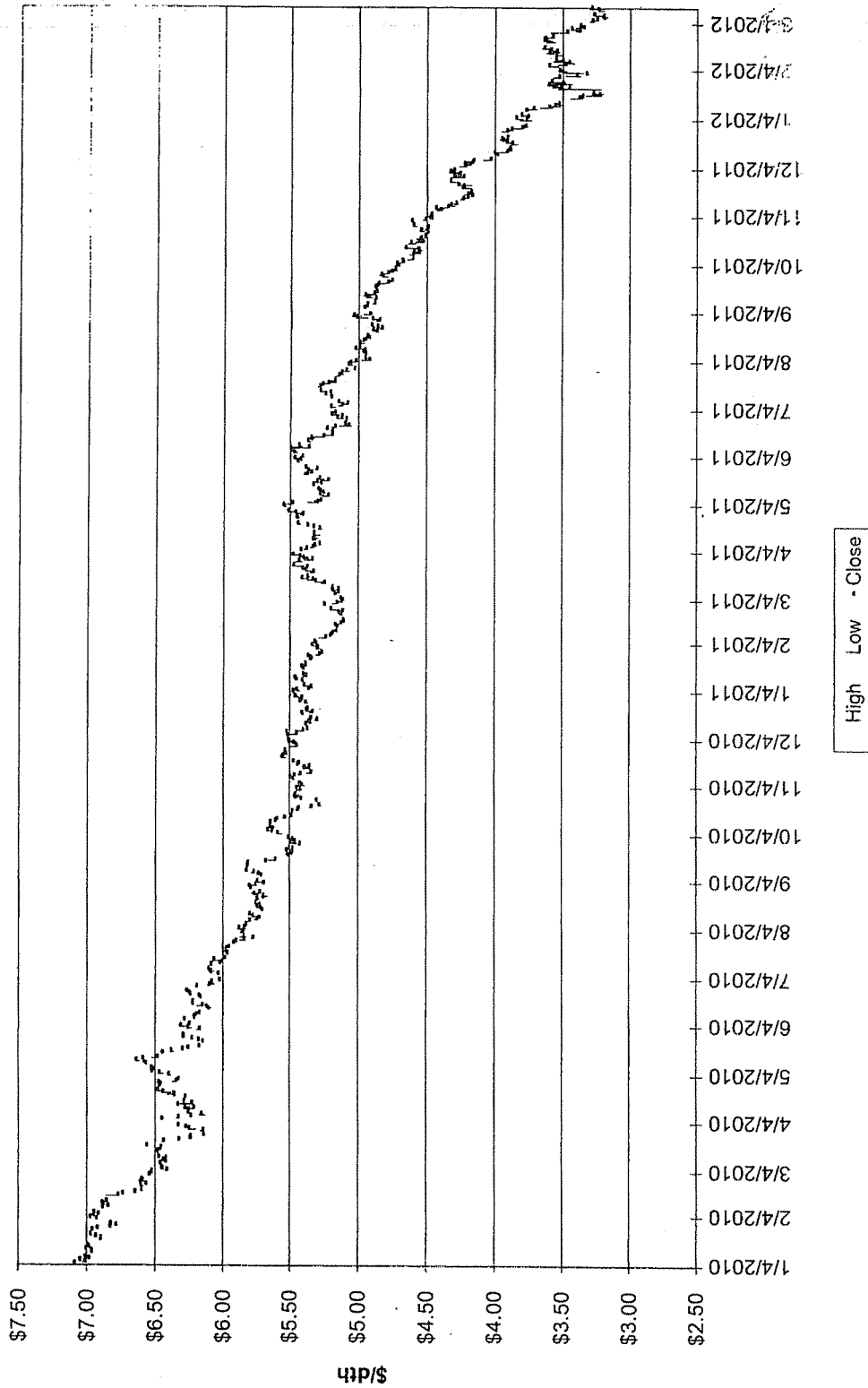
**Energy Information Administration**  
**Henry Hub Pricing**  
**Per MMBtu**  
**March 6, 2012 Release**

Jan-10	5.83	Jan-11	4.49	Jan-12	2.67	Jan-13	4.04
Feb-10	5.32	Feb-11	4.09	Feb-12	2.50	Feb-13	3.96
Mar-10	4.29	Mar-11	3.97	Mar-12	2.69	Mar-13	3.87
Apr-10	4.03	Apr-11	4.25	Apr-12	2.93	Apr-13	3.84
May-10	4.14	May-11	4.31	May-12	3.14	May-13	3.84
Jun-10	4.80	Jun-11	4.55	Jun-12	3.21	Jun-13	3.85
Jul-10	4.63	Jul-11	4.42	Jul-12	3.14	Jul-13	3.87
Aug-10	4.32	Aug-11	4.05	Aug-12	3.23	Aug-13	3.90
Sep-10	3.89	Sep-11	3.90	Sep-12	3.24	Sep-13	3.94
Oct-10	3.43	Oct-11	3.56	Oct-12	3.53	Oct-13	4.03
Nov-10	3.71	Nov-11	3.24	Nov-12	3.80	Nov-13	4.14
Dec-10	4.25	Dec-11	3.17	Dec-12	3.95	Dec-13	4.28
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]		

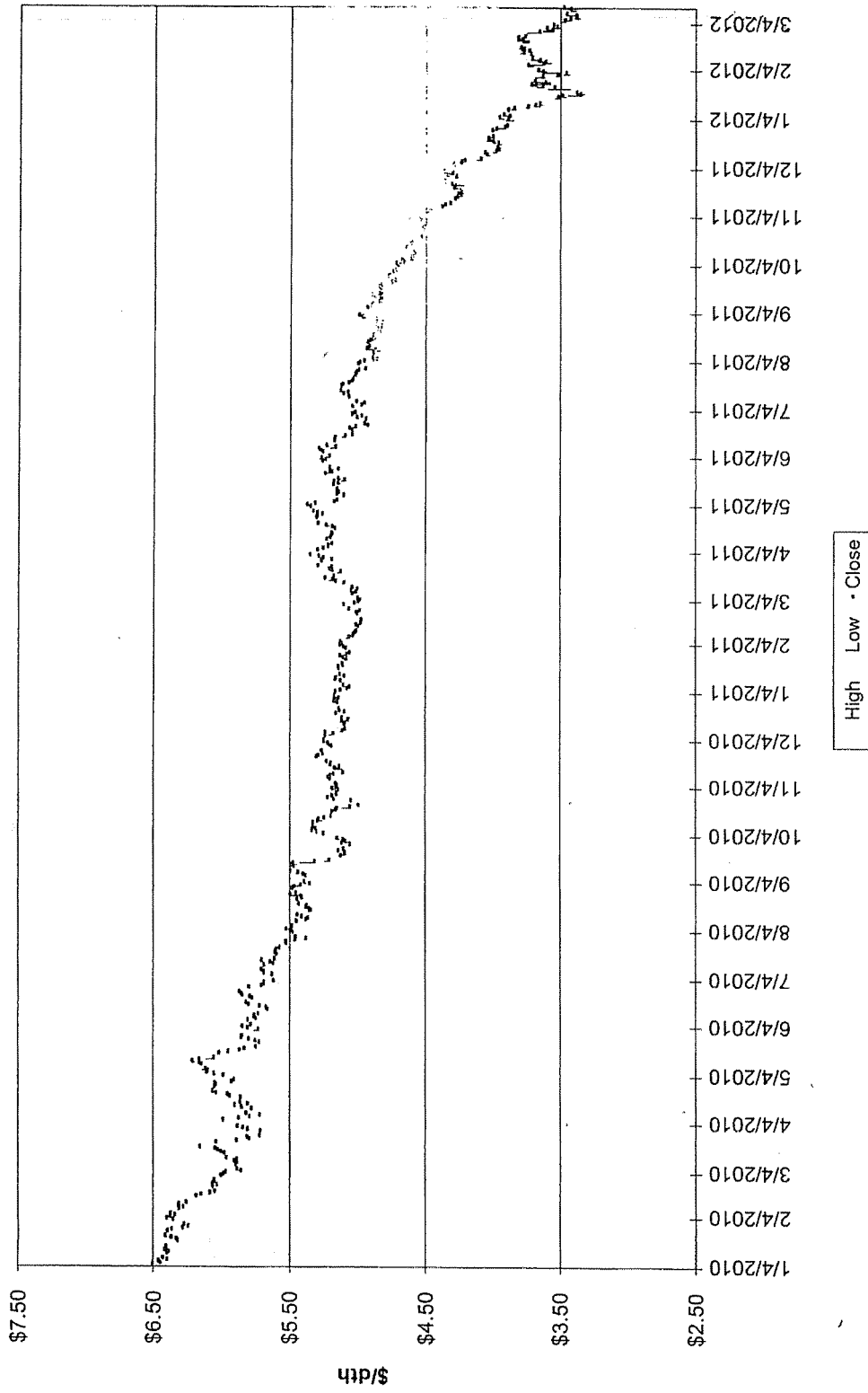
Summer Strip 2012



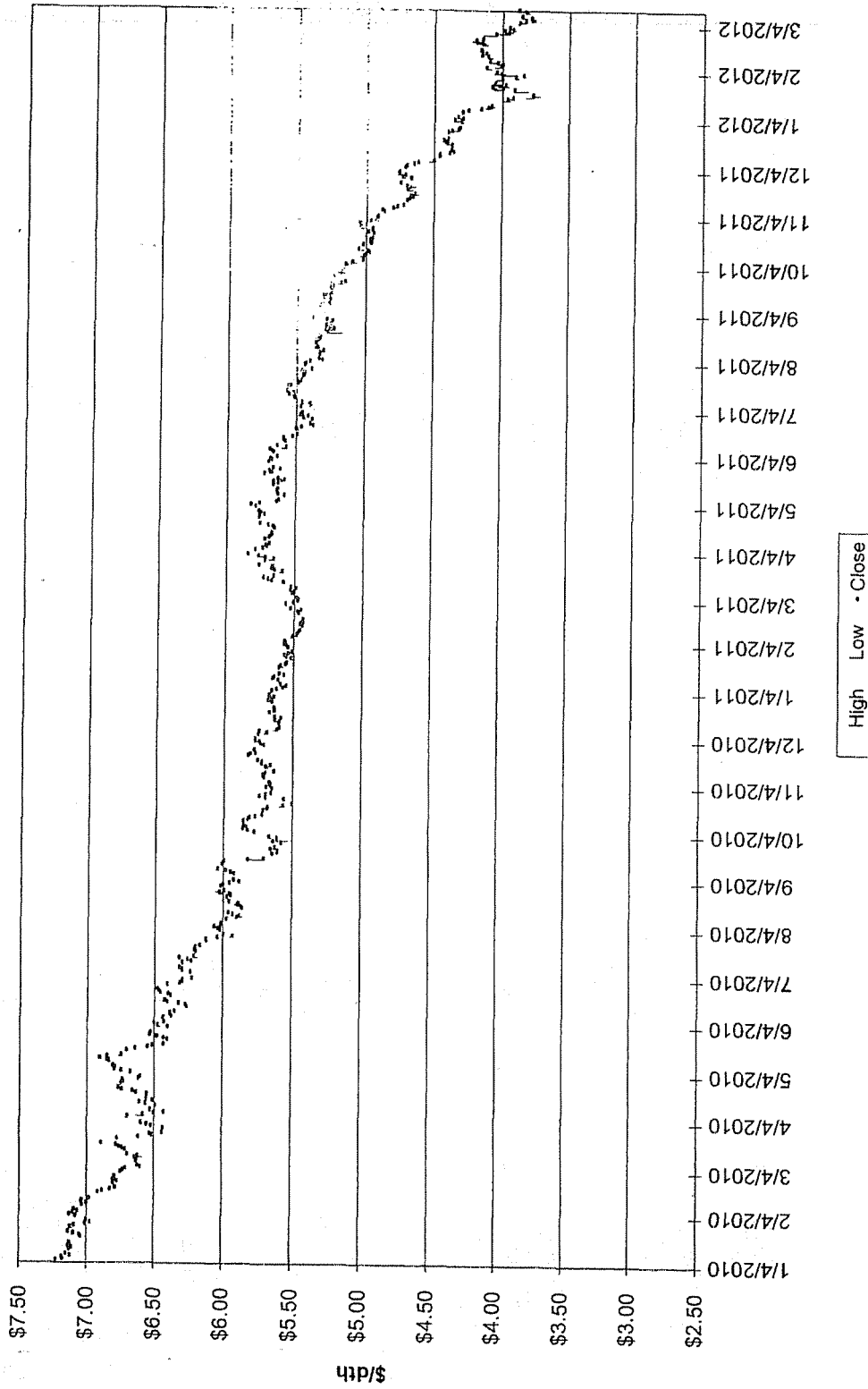
Winter Strip Nov12 - Mar13



Summer Strip 2013



Winter Strip Nov13 - Mar14





# Short-Term Energy Outlook

Release Date: March 6, 2012 | Next Release Date: April 10, 2012

## Natural Gas

### U.S. Natural Gas Consumption

**EIA expects that natural gas consumption will average 68.9 billion cubic feet per day (Bcf/d) in 2012, an increase of 2.1 Bcf/d (3.1 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 0.5 percent and 0.1 percent, respectively, in 2012, reflecting a downward revision in projected consumption from last month's Outlook.

**Projected consumption of natural gas in the electric power sector grows by close to 9 percent in 2012, primarily driven by the relative advantages of natural gas over coal for power generation in a growing number of economic dispatch decisions.** Consumption in the electric power sector peaks in the third quarter of 2012, when electricity demand for air conditioning is highest.

**Growth in total natural gas consumption continues into 2013, with forecast consumption averaging 69.3 Bcf/d.** Consumption in the residential and commercial sectors increases in 2013 because of the forecast return to near-normal temperatures next winter. The increase in consumption in these sectors more than offsets a decline in power sector natural gas burn stemming from the projected increase in natural gas prices relative to coal prices later this year and next.

### 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 and 2013, 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 fell to 691 as of March 2, 2012, 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. However, fewer horizontal natural gas wells, particularly in areas such as the Haynesville Shale, contribute to small short-term production declines through June 2012. These declines reverse later in the year as prices rise, wet natural gas production rises, and associated gas production from oil wells increases.

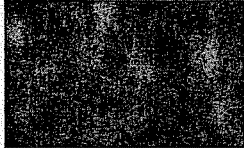
## Global Crude Oil Prices

**EIA's forecast of the WTI spot price is higher than last month's Outlook, averaging about \$106 per barrel in both 2012 and 2013, compared with \$100 and \$104 per barrel for 2012 and 2013, respectively, in the previous Outlook.** The projected WTI price discount to the average U.S. refiner acquisition cost of crude oil narrows over the forecast from about \$10 per barrel in the second quarter of 2012 to \$4 per barrel by the fourth quarter of 2013, as physical pipeline capacity constraints diminish. The projected average refiner acquisition cost (RAC) of crude oil averages \$115 per barrel in 2012 and \$110 per barrel in 2013.

**Duke Energy  
 Hedging Program  
 Remaining Base Not Yet Locked In  
 Winter 2011-12**

**Duke Energy Ohio**

Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Gulf South-DE Field Services  
 Col Gulf Mainline  
 Col Gulf Mainline  
 Tex Gas Zone 1

**Total  
 System Supply**

**Duke Energy Kentucky**

Previously Hedged



Col Gulf Mainline  
 Col Gulf Mainline  
 Col Gulf Mainline

**Total  
 System Supply**

**Duke Energy--Total**

Previously Hedged

**Total**

						Dth/Day		
November	December	January	February	March	Total			
						% System Supply		
[REDACTED]								
[REDACTED]								
[REDACTED]								

**Duke Energy Kentucky  
 Hedging Program for 2012/13  
 Cost Averaging with [REDACTED] @ Columbia Gulf Mainline**

	Total Amount	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	5 Month Strip	Total Cost	Locked in To Date
3-Jan									
4-Jan									
5-Jan									
6-Jan									
9-Jan									
10-Jan									
11-Jan									
12-Jan									
13-Jan									
17-Jan									
18-Jan									
19-Jan									
20-Jan									
23-Jan									
24-Jan									
25-Jan									
26-Jan									
27-Jan									
30-Jan									
31-Jan									
1-Feb									
2-Feb									
3-Feb									
6-Feb									
7-Feb									
8-Feb									
9-Feb									
10-Feb									
13-Feb									
14-Feb									
15-Feb									
16-Feb									
17-Feb									
21-Feb									
22-Feb									
23-Feb									
24-Feb									
27-Feb									
28-Feb									
29-Feb									
<b>Total</b>									

Basis to Columbia Gulf Mainline

Price to be paid for [REDACTED] dth/day delivered Nov. 1, 2012 to Mar. 31, 2013: [REDACTED]

Attachment B  
Cost Averaging Fixed Prices



**Duke Energy Kentucky  
 Hedging Program for 2012/13  
 Cost Averaging with [REDACTED] @ Columbia Gulf Mainline**

	Total Amount						5 Month Strip	Total Cost	Locked in To Date
		Nov-12	Dec-12	Jan-13	Feb-13	Mar-13			
3-Jan	0								
4-Jan	0								
5-Jan	0								
6-Jan	0								
9-Jan	0								
10-Jan	0								
11-Jan	0								
12-Jan	0								
13-Jan	0								
17-Jan	0								
18-Jan	0								
19-Jan	0								
20-Jan	0								
23-Jan	0								
24-Jan	0								
25-Jan	0								
26-Jan	0								
27-Jan	0								
30-Jan	0								
31-Jan	0								
1-Feb	0								
2-Feb	0								
3-Feb	0								
6-Feb	0								
7-Feb	0								
8-Feb	0								
9-Feb	0								
10-Feb	0								
13-Feb	0								
14-Feb	0								
15-Feb	0								
16-Feb	0								
17-Feb	0								
21-Feb	0								
22-Feb	0								
23-Feb	0								
24-Feb	0								
27-Feb	0								
28-Feb	0								
29-Feb	0								
<b>Total</b>									

Basis to Columbia Gulf Mainline

Price to be paid for [REDACTED] dth/day delivered Nov. 1, 2012 to Mar. 31, 2013: