

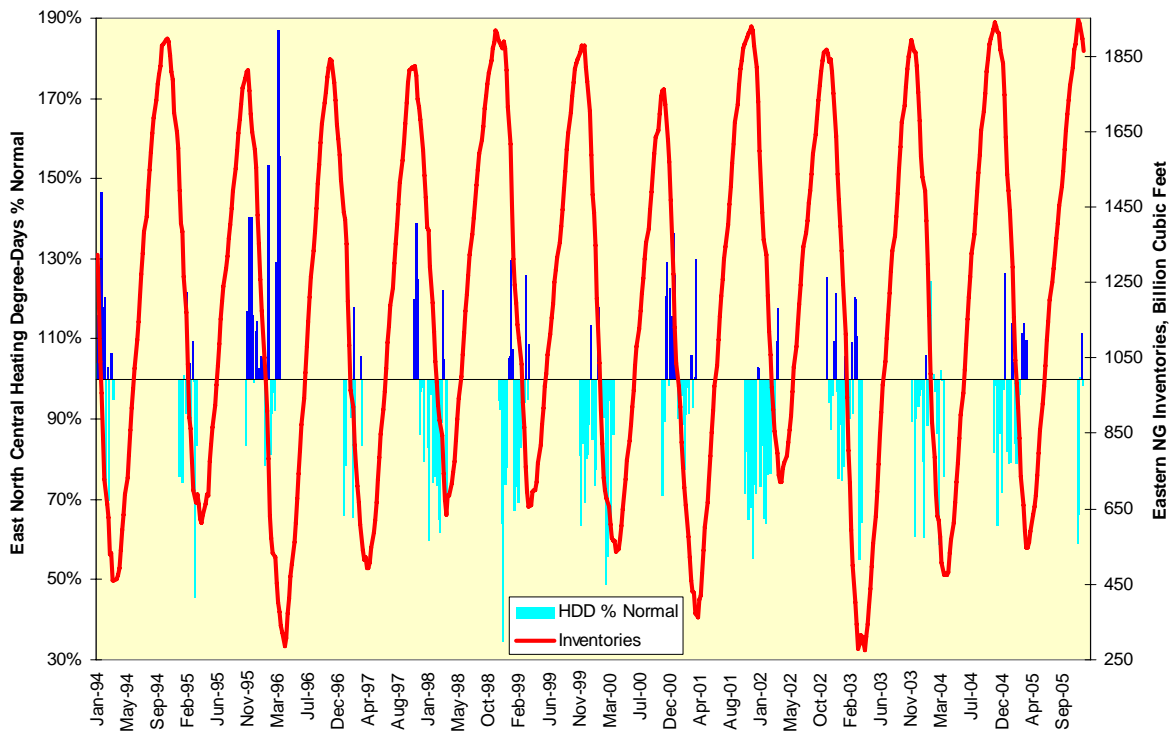
## Flame On, Natural Gas

Natural gas is having a Marvin Gaye moment: What's going on? Prompted by my own [Columnist Conversation](#) observation that for all the attention devoted to gold, natural gas and the already-unseasonable winter weather affect my life more directly, I set out to update a [January 2004](#) column on temperature-related trading in natural gas.

Life's full of surprises. The standard measure of heating demand is a degree-day (HDD), which is the maximum of the difference of [65 degrees Fahrenheit minus the temperature] and zero. For example, a 60-degree day is worth (65-60), or 5, HDD, while a 70-degree day is worth zero HDD. The National Oceanographic and Atmospheric Administration calculates these on a regional basis, and while they are always a week behind in their release, their data for the East North-Central region, where natural gas is the dominant form of space heating, do not show any great surge in cold weather for the period ending December 2, 2005. In fact, the abnormally warm November period, wherein HDD were 59% and 66.3% of normal for the first two weeks of the month, contributed to a climb in eastern natural gas inventories.

Yes, it is cold, but it is supposed to be cold in December - otherwise I would have to take the global warming crowd seriously - but it is not excessively cold. And inventory levels are just slightly below where they were a year ago, which is remarkable considering that 2.347 billion cubic feet of natural gas in the Gulf of Mexico are still shut-in from hurricane-related damage. That is 23.47% of the pre-hurricane production in the Gulf, a non-trivial total by any measure.

### Natural Gas Inventories And Cold Weather

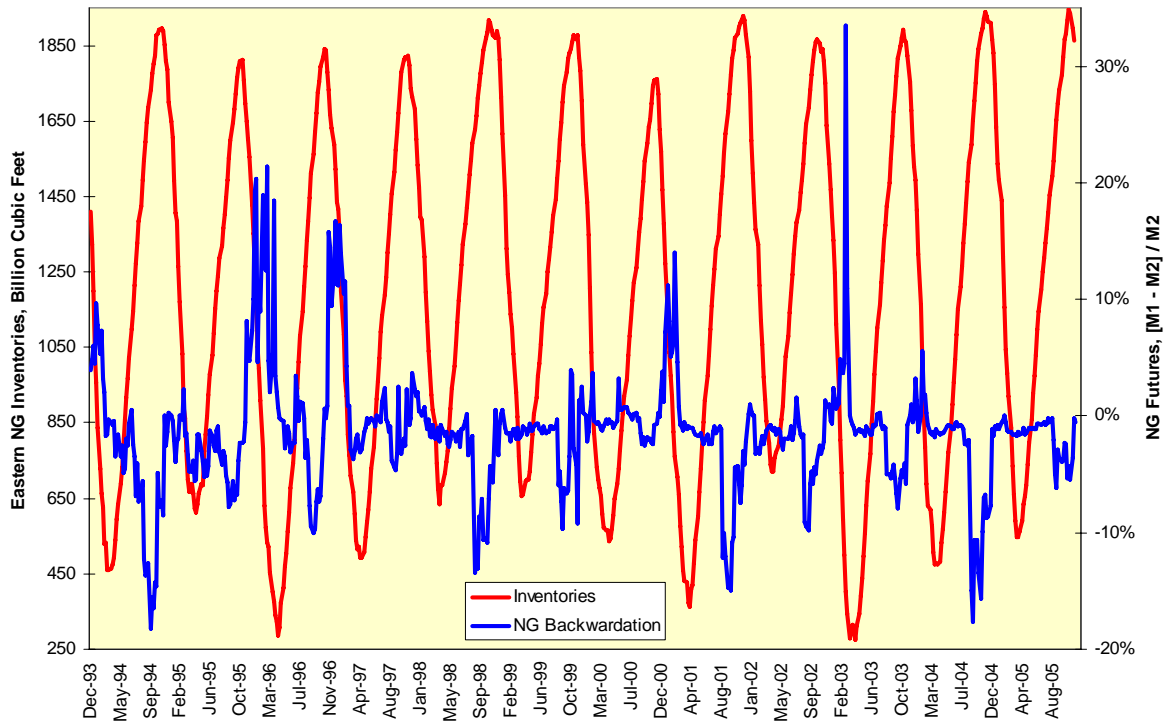


### Supply And Demand Risk

As significant as the hurricane-related production losses are, they have not produced an increase in backwardation in natural gas futures' forward curve. If pipelines and other direct buyers were falling all over themselves to buy more gas for immediate delivery, we should expect to see the January 2006 futures trade well over February. On December 9<sup>th</sup>, January settled under February, \$14.312 to \$14.391.

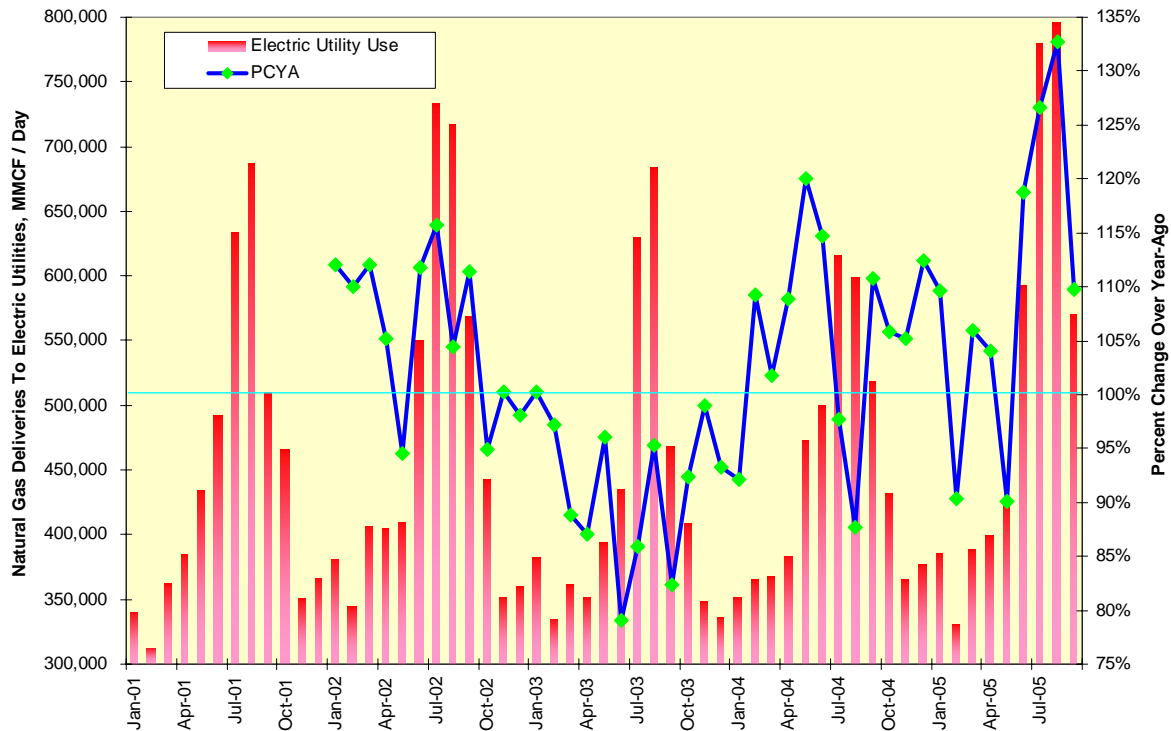
Previous late-winter drawdown cycles have resulted in significant backwardation spikes. If the cold weather persists and leads to a late-winter buying panic, the same advice given in 2004 but shifted forward one month, buy April 2006 futures and sell May, will obtain. On December 9<sup>th</sup>, April settled at \$11.061 and May settled at \$10.731.

## Natural Gas Inventories And Deliverability Pressure



We also need to remember the nature of natural gas demand has changed. The long period of low prices in the 1990s and restrictions on other types of electric utility generation made natural gas a preferred fuel for electric utilities seeking to meet their summer air conditioning demands. We had relatively cool summers in 2003 and 2004, but 2005 saw much higher natural gas demand by electric utilities. Any fuel buyer must plan on competing with the utilities for summer gas, and that raises the probability of tight supplies going forward into 2006.

## Growing Electric Utility Demand



Not only are natural gas' supply and demand risks high, so is its option volatility. Let's take a stock like Google, a highflier by all definitions. Its January \$410 calls, an at-the-money strike, settled at 33.149% volatility on December 9<sup>th</sup>. The February \$14.40 call for natural gas, also an ATM strike, settled at 79.637% volatility. The costs of buying option insurance in this market are extremely high. Whenever someone gasps at the cost of NG options, I ask in reply, "would you write one?" The answer, usually accompanied by a nervous laugh, is invariably no.

### Stock Market Response

Let's take a look at a table of industry group performances to the benchmarks of the large-cap S&P 500, the mid-cap S&P 400 and the small-cap S&P 600 as a function of natural gas prices. The positive numbers in black font at the bottom of the table are those groups benefiting from higher natural gas prices. They are, unsurprisingly, concentrated in the oil & gas-related sectors; more on that later.

The negative numbers in red font at the top of the table are those groups hurt by higher natural gas prices. Not only do they include such obvious victims as chemicals, but a very large smattering of consumer finance and consumer discretionary issues. Just as we can say with certainty that retailers such as Wal-Mart and Costco are hurt by higher gasoline prices, we can say with increasing certainty that the money now spent on home heating is coming right out of households' discretionary budgets. This is a macroeconomic impact, one that very well may support bonds at the expense of stocks as the winter progresses.

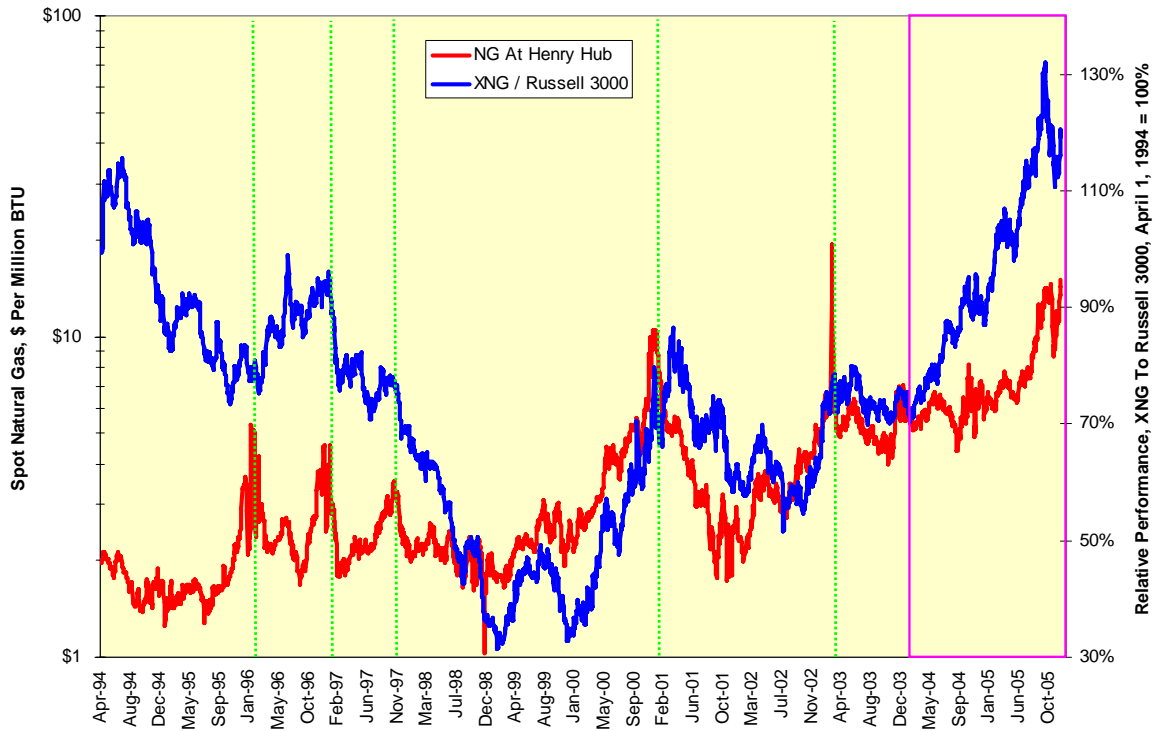
## Relative Industry Group Betas To Natural Gas

<u>S&amp;P 500</u>		<u>S&amp;P 400</u>		<u>S&amp;P 600</u>	
<u>Group</u>	<u>Beta</u>	<u>Group</u>	<u>Beta</u>	<u>Group</u>	<u>Beta</u>
PHOTO PRDCTS	(0.062)	AIRLINES	(0.118)	TOBACCO	(0.109)
GEN MERCH ST	(0.056)	REINSURNCE	(0.050)	COMMDT CHEM	(0.070)
AIRLINES	(0.049)	LEISURE FC	(0.050)	AIRLINES	(0.068)
DISTRIBUTORS	(0.042)	CNSMR FINANCE	(0.047)	HOTELS	(0.055)
DRUG RETAIL	(0.041)	PUBL&PRINT	(0.045)	HOME FRNSH	(0.049)
THFTS & MRTGE	(0.040)	RESTRNTS	(0.044)	MNGD HLTH	(0.048)
HYPR & SUPRCNTRS	(0.038)	CAS & GAMB	(0.043)	HOME ENTMT SFW	(0.047)
BDCST&CBL TV	(0.032)	TIRE&RUBBR	(0.041)	PCKGD GDS	(0.043)
HOME IMP RTL	(0.031)	TOBACCO	(0.040)	HLTH CARE DIST	(0.043)
DIV COMM SER	(0.029)	GEN MERCH	(0.039)	THFT & MRTG FIN	(0.039)
DATA PRCS & OTS	(0.026)	HHOLD PROD	(0.039)	INTRN TELPH	(0.036)
INDUS CONGL	(0.025)	SOFTDRNKS	(0.036)	FOOD DIST	(0.036)
BREWERS	(0.025)	WIRELESS TL	(0.035)	PROP & CASU	(0.036)
AIR FT&LOG	(0.024)	BDCST&CBL	(0.035)	REGNL BANKS	(0.032)
ENV SERV	(0.024)	MLTISECTOR	(0.034)	HLTH CARE SRVCS	(0.031)
INTGR TELCM	(0.024)	HOME FURNISHING	(0.033)	RESTAURANTS	(0.030)
DIV BANKS	(0.023)	HOME FURNISH	(0.031)	HLTH CARE FACIL	(0.028)
REGIONAL BANKS	(0.020)	COMM EQUIPMENT	(0.029)	AEROSP & DEF	(0.028)
DIV CHEM	(0.019)	REGIONAL BANKS	(0.029)	LEISURE PROD	(0.025)
PHARM	(0.018)	TRFT/MRTG FINCE	(0.029)	REIT	(0.024)
PROP&CASULT	(0.018)	PRP&CAS INS	(0.026)	HLTH CARE SUPP	(0.021)
PACKG FOODS	(0.016)	MLTILNE IN	(0.025)	DVSFD COMM SRC	(0.020)
SPECIALT CHM	(0.015)	HWARES&SP	(0.024)	SPEC CHEM	(0.017)
		AS MNGMT/CST BK	(0.023)		
		RESTRNTS	(0.023)		
		SPCL STOR	(0.022)		
		HLTHCR EQU	(0.021)		
		LIFE&HL IN	(0.019)		
		SPCL CHEM	(0.019)		
		IND MACH	(0.015)		
GAS UTIL	0.018	ELE CMP&EQ	0.020	GAS UTIL	0.017
ADVERTISING	0.023	GAS UTIL	0.030	AIRFRT&LOG	0.039
GOLD	0.082	MARINE	0.032	DIVSFD METL	0.102
DIV MTL&MIN	0.088	COAL & CONS FUEL	0.088	OIL&GAS EXPL	0.121
INTGR OIL&GS	0.096	OIL&GEQUI	0.141	OIL&GAS REF	0.139
OIL & GAS EQU	0.145	OIL&G DRIL	0.160	OIL&GAS PROD	0.169
OIL&GAS REF	0.177	OIL&G RFNG	0.162	OIL&GAS	0.172
OIL&GAS DRIL	0.183	OIL&G EXPL	0.171		
OIL&GAS EXPX	0.190				

### Natural Gas Stocks Take Off

Prior to February 2004, purchases of the stocks in the AMEX' natural gas index (XNG) made during a natural gas price spike (green vertical lines) invariably underperformed the broad Russell 3000 index. It's different this time: The relative performance of the XNG to the Russell 3000 began increasing and with some prominent exceptions such as October 2005, has remained regardless of the vagaries of natural gas prices.

## A Different Gas Stock Rally



The natural gas stock market senses a scarcity premium for natural gas and a huge need for investment. This is the same sense conveyed by gas' price, forward curve and volatility structures. The eventual result given the world's vast gas reserves will be lower prices, but between now and eventually there are a few bucks to be made.