



HORNSBY & COMPANY, INC.

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Energy Risk
Management Services

U.S. Natural Gas Perspectives Monthly Review and Outlook

Summary

Over the last month the prompt NYMEX natural gas contract has declined by roughly \$1.00 per mmBtu. Factors contributing to the decline have been falling oil prices, a lack of any sustainable heat waves in major regions where gas-fired electricity generation dominates, and most likely the liquidation of length by some hedge funds in line with the overall global liquidation of hedge fund assets in the energy equity and commodity space. Fundamental price weakness has derived from surging domestic production in the context of moderating economic activity which combined have led to current working storage levels that have narrowed the deficit to last year. Precluding what may have been even further price declines has been the fundamental and psychological impact of Gulf of Mexico hurricane activity which, as a result of Gustav, led to significant shut in production volumes, most of which were precautionary. As we issue this report the market is responding to the potential impact of Hurricane Ike as it barrels toward the Texas Coast.

From a fundamental standpoint, we have fine tuned our forecast Base Case natural gas balances, taking into account the estimated effect of Gustav and Ike on total U.S. dry gas production, and assuming there will be no further disruptions for the remainder of hurricane season, right or wrong. We have also revised up our forecast path of “normalized” domestic production, while also revising up modestly forecast natural gas demand in the industrial and electric utility sectors as a result of favorable relative pricing. The net effect is an increase in our pre-winter target working storage levels, but still well below an all-time record as occurred last year. As previously discussed, helping to offset surging domestic production has been a moderation in import levels, both pipeline and LNG. With regard to price, for 2009 we are looking for prompt NYMEX natural/Henry Hub to average about \$8.25 per mmBtu, a \$.25 per mmBtu reduction from our previous assessment.

+ U.S. natural gas consumption is expected to increase by 0.7%, or some 165 bcf next year.

+ Domestic dry gas production is forecast to gain by 3.0%, or about 615 bcf in 2009.

+ Our balances imply a net build in working storage next year of around 260 bcf.

Viewpoint

Since the publication of our last monthly report, the prompt NYMEX natural gas contract has declined by roughly \$1.00 per mmBtu. While it appeared that the contract would be able to find support at around \$8.00 per mmBtu, eventually a number of factors broke its back, but thus far \$7.00+ per mmBtu has proven to provide a pre-winter floor.

These factors contributing to the price decline have clearly included falling oil prices, with the prompt NYMEX crude oil contract declining by more than \$10.00 per barrel over the last month.

The lack of any severe and/or sustainable heat waves in any major region where gas-fired electricity generation dominates has no doubt disappointed some “seasonal bulls”.

The dominant fundamental factor, however, has been the incessant surge in domestic production in the context of moderating gas demand growth as the economy falters. The combination, along with the weather phenomenon, has led to a reduction in the year-over-year working storage deficit from the position of a few months ago.

We would also add what we believe to be the impact of length liquidation by some hedge funds in line with the overall global liquidation of hedge fund assets in the energy equity and commodity space.

This is despite the fact that the CFTC data continued to reveal all-time record net short futures-only positions in natural gas, revealing in turn the severe limitations of the data and the extent to which the CFTC has been able to monitor all energy derivative activity.

Precluding what may have been even further price weakness has been the combined fundamental/psychological impact of Gulf of Mexico hurricane activity which, as a result of Gustav, led to significant shut in production volumes, most of which were precautionary.

As we issue this report the market is responding to the potential impact of Hurricane Ike as it barrels toward the Texas Coast. The latest report from the Minerals

Management Service indicates that almost 7.0 MMcf/D of Gulf of Mexico natural gas production is offline.

From a fundamental standpoint, we have fine tuned our forecast Base Case natural gas balances, taking into account the estimated effect of Gustav and Ike on total U.S. dry gas production, and assuming, right or wrong, that there will be no further disruptions for the remainder of hurricane season.

We have also revised up our forecast path of “normalized” domestic production, while at the same time increasing natural gas demand in the industrial and electric utility sectors based on recent trends as a result of favorable pricing relative to alternative fuels.

The net effect is an increase in our pre-winter target working storage levels from last month’s assessment, but still well below another all-time record as many analysts are expecting. As discussed in previous reports, helping to offset surging domestic production has been a moderation in LNG import levels, as well as stagnant pipeline volumes from Canada.

In terms of price, for 2009 we now expect prompt NYMEX natural/Henry Hub to average about \$8.25 per mmBtu, a \$.25 per mmBtu reduction from our previous assessment. Since we retain our forecast WTI average of \$90.00 per barrel for next year, the implication is a modestly lower ratio of gas to oil prices than previously assumed.

Demand: Review and Outlook

Despite justified concerns about the state and fate of the U.S. economy, the most recent data from the Department of Energy reveal that while residential and commercial sector gas consumption lie right in line with our expectations, demand by the industrial and electric utility sectors is running modestly above.

This despite the fact that the latest data on *aggregate* manufacturing activity from the Federal Reserve Board have come in a bit weaker than our long-standing assumptions. Our customary table below illustrates the

manufacturing output gains in July versus July of last year for the eight largest industrial consumers of natural gas.

Relative to June's year-over year comparisons, July deteriorated significantly in basically all industries. Unfortunately, the latest data on industrial gas demand is for the month of June which may be revised, but nonetheless the data revealed a slight increase in gas demand by the industrial sector over the prior year.

**Eight Largest Industrial Consumers
Of Natural Gas
July Manufacturing Output**

Industry	YOY %Chg. Output
Chemicals	-0.8
Petroleum and Coal	+4.1
Primary Metals	-1.9
Paper	-2.5
Food	-1.2
Non-Metallic Mineral	-4.7
Fabricated Metal	-1.9
Transportation Equip.	-5.1

We believe that the weaker manufacturing output impact on gas demand has been partially offset by the substitution effect due to favorable pricing in select regions and industries, which we believe we have taken adequately into account for the months ahead.

For example, for 2009 we estimate that total U.S. manufacturing growth will recover to an average 2.0% rate next year, but because we believe that gas prices will rise relative to oil prices, industrial gas demand per unit of manufacturing output is expected to decline a bit from current levels.

Elsewhere, electric utility gas demand has also been a bit stronger than we have assumed, with preferential pricing also a factor along with underlying gains in gas-fired generating capacity.

Adding everything up and assuming normal weather for the fourth quarter and the

entirety of 2009, we are looking for total U.S. natural gas demand to gain by 4.0%, or some 930 bcf this year, an upward revision from last month's report by about 140 bcf.

For 2009, we anticipate a rise in U.S. natural gas consumption of 0.7%, or around 165 bcf, an upward revision in forecast growth by some 25 bcf. The moderation in growth for next year remains a function of our weather assumptions, the reduction in gas demand per unit of manufacturing output as discussed above, and an estimated slowdown in aggregate incremental gas demand by the electric utility sector.

**Supply:
Review and Outlook**

If we had to pinpoint one variable specific to the gas industry that has been most responsible for current gas market psychology it would no doubt be the incessant gains in domestic production.

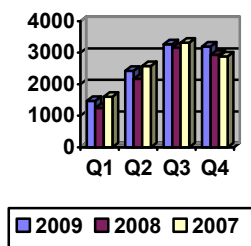
Witnessing the surge in domestic output from shale and other structures around the country the consensus believes there is no alternative but for output to overwhelm weakening natural gas demand.

We have previously conceded that our forecast rise in production could be too conservative, and as such in this report we have revised up our forecast path of production for the remainder of the year and through 2009.

For the month of September, however, we have adjusted production to account for the expected duration of offline output as a result of hurricanes Gustav and Ike.

While there may be more storms before the season is over, at this point we have not assumed any further production shut ins. We believe the net effect for the month of September will be total U.S. dry gas production about flat with the previous year.

**End-Quarter
Working Gas Storage Levels
(BCF)**



Helping to offset the underlying domestic production gains, however, has been a moderation in imports, both LNG and pipeline volumes from Canada, as well as higher exports to Mexico, as we also have previously discussed. Based on recent data, however, we have not amended our net import outlook in this report.

Therefore, putting together our latest outlook for supply and demand, the net amendments come about via the upward revision to production post September being only partially offset by our upward revision to demand.

Thus, relative to last month's report, we now anticipate a somewhat higher level of pre-winter working storage than previously assumed. We now target end-October working storage at 3.2+ tcf, versus our prior 3.1 tcf forecast. Nonetheless, our outlook still remains more constructive than many if not most analysts, with pre-winter storage still coming up short of another all-time record.

At year end our outlook implies working storage of about 2.9 tcf which, if reasonable, would put us in between end 2006 and end 2007 levels. For 2009, our balances imply a net build in working storage of 260 bcf, higher than last month's assessment by some 10 bcf.

Implications for Price

As we issue this report the NYMEX natural complex is attempting a rebound back toward \$8.00 per mmBtu, but no doubt may experience difficulty in sustaining current levels once the aftermath of Ike is assessed.

Looking at short-term price prospects, our models now "recalibrate" to a December

target, with our September assessment ending up too robust, despite crude oil prices weakening as expected from the July peak and our gas balances fairly close to the mark over summer. The ratio of natural gas to oil prices is simply unwilling to recover by any material magnitude based no doubt on concerns over robust domestic production, as discussed previously.

Henry Hub Price Outlook Average for Month of December 2008 (\$/mmBtu)

1990-2007 Relationships	\$3.80(E)
1990-1999 Relationships	\$2.00(E)
2000-2007 Relationships	\$6.15(E)

2000-2007 Relationships
Plus Oil Premium **\$7.80(E)(a)**

a) @ 275 cents per gallon distillate and \$100.00 per barrel WTI.

Our customary table laid out above reveals that we are assuming \$100.00 per barrel WTI for December, although as discussed in our other reports we believe WTI will eventually fall below \$100.00 in the first quarter of next year.

On this basis for December, however, and including in our model our current Base Case natural gas balances, we would suggest a December (basis January NYMEX) NYMEX/Henry Hub target of \$7.80 per mmBtu. This would compare to the January NYMEX contract currently trading at around \$8.25 per mmBtu.

Much will depend upon the course of crude oil prices, and we suspect that post hurricanes the market will test \$100.00 per barrel at least one more time. Global fundamentals continue to weaken, and some passive longs have gotten "burned" from the fall off the July peaks.

However, our U.S. refinery balances continue to suggest a progressive decline in crude oil stocks in the fourth quarter, which the neotrader may incorrectly interpret as a

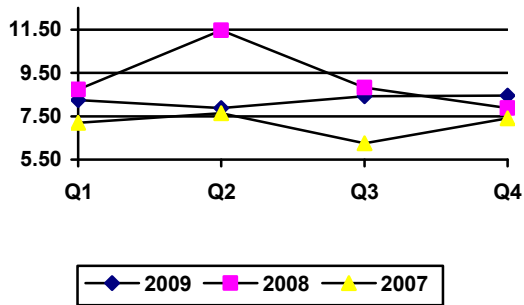
tightening global balance resulting from the recent OPEC “agreement”.

This interpretation should help provide some support for WTI at \$100.00 per barrel until the first quarter, when we envision WTI falling below \$90.00 per barrel.

If so, then our December natural target may end up reasonable, particularly if our gas balances are even remotely close to the mark. Our December natural target implies a ratio to WTI of some 46%, compared to the current prompt contract ratio of 44%, and thus we anticipate minimal improvement.

For 2009, we now forecast a prompt NYMEX/Henry Hub average of \$8.25 per mmBtu, marking a downward revision of \$.25 per mmBtu from last month while retaining our forecast WTI average of \$90.00 per barrel. We therefore now assume a gas to WTI ratio next year of 55%.

**Henry Hub Prices
2007-2009
(Dollars per MCF)**



September 12, 2008

U.S. Natural Gas Supply and Demand Balances
2008-2009
(Billion Cubic Feet)

	Q1	Q2(E)	Q3(E)	Q4(E)	2008(E)	%Chg 08-07	Q1(E)	Q2(E)	Q3(E)	Q4(E)	2009(E)	%Chg 09-08
Supply												
Total Dry Gas Production	5,080	5,122	5,132	5,205	20,539	6.5	5,232	5,276	5,286	5,361	21,155	3.0
Withdrawals From Storage	1,891	242	90	772	2,995	-9.8	1,723	225	241	632	2,821	-5.8
Supplemental Gaseous Fuels	11	14	15	13	54	-11.0	11	15	16	13	55	1.5
Imports	1,088	905	1,089	1,103	4,185	-9.1	1,102	910	1,093	1,108	4,214	0.7
Canada	1,009	800	968	994	3,772	-0.1	1,019	808	972	999	3,799	0.7
LNG	76	97	110	100	383		80	92	110	100	382	
Other	3	8	11	9	31		3	9	11	9	32	
Balancing Item	(36)	195	203	(200)	162		0	0	0	(125)	(125)	
Total Supply	8,034	6,478	6,529	6,893	27,935	3.5	8,069	6,426	6,637	6,989	28,120	0.7
Disposition												
Additions To Storage	255	1,173	1,074	551	3,053	-3.0	258	1,185	1,084	557	3,084	1.0
Exports	324	203	185	205	918	11.6	317	202	185	205	909	-0.9
Consumption	7,455	5,102	5,271	6,137	23,964	4.0	7,494	5,039	5,367	6,227	24,127	0.7
Lease And Plant Fuel	307	310	308	312	1,237	5.7	314	317	317	322	1,269	2.6
Pipeline and Distribution Use	201	138	164	172	675	8.3	165	166	169	177	677	0.3
Residential	2,355	777	350	1,421	4,904	3.8	2,382	696	354	1,436	4,867	-0.7
Commercial(a)	1,303	569	375	892	3,140	4.4	1,298	497	373	888	3,056	-2.7
Industrial	1,867	1,603	1,568	1,762	6,800	2.5	1,885	1,624	1,599	1,797	6,905	1.5
Electric Power	1,422	1,705	2,505	1,577	7,209	4.9	1,450	1,739	2,555	1,608	7,353	2.0
Total Disposition	8,034	6,478	6,529	6,893	27,935	3.5	8,069	6,426	6,637	6,989	28,120	0.7
Addendum:												
Net Storage Injections	(1,636)	931	984	(220)	58		(1,466)	959	843	(75)	262	
End Period Working Gas In Storage	1,247	2,171	3,155	2,934	2,934		1,469	2,428	3,271	3,197	3,197	
Henry Hub Price (Dollars Per mmBtu)	8.74	11.46	8.83	7.88	9.23	29.5	8.25	7.88	8.42	8.45	8.25	-10.6
Gas Wells Drilled					34,556	5.0					36,283	5.0
Total Discoveries(Bcf)					13,822	-6.7					14,513	5.0
Discoveries Per Well(Bcf)					0.40	-11.1					0.40	0.0
Total Revisions and Adjustments(Bcf)					4,000	0.0					4,000	0.0
Total Reserve Additions(Bcf)					17,822	-5.2					18,513	3.9
Reserve Replacement Ratio					87%						88%	
Total Recoverable Reserves (Bcf)					183,769	-1.5					181,127	-1.4
Reserve To Production Ratio(Years)					8.9						8.6	

Source: Historical Data, U.S. Department of Energy.
Information contained herein is believed to be reliable but its accuracy cannot be guaranteed. Past performance is not indicative of future results and the risk of loss is substantial in futures trading.
Note: May not sum to totals in all cases due to rounding.
(E) WHB Energy Research LLC estimates.
(a) Includes minor use as vehicle fuel.