



HORNSBY & COMPANY, INC.

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Energy Risk  
Management Services

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## U.S. Natural Gas Perspectives Monthly Review and Outlook

### Summary

Since our last monthly report the prompt NYMEX natural contract has declined by about 20 cents per mmBtu. Despite crude oil's relative stability and signs that the U.S. recession may be moderating, natural gas as of yet has shown no tangible signs of bottoming out. While crude oil due to its non-commercial component is willing to discount the prospects for economic recovery down the road, natural gas shows no inclination to do so, responding to current fundamentals, manifested by rising working storage levels relative to last year. Many analysts remain convinced that prompt NYMEX natural will fall to \$2.50 per mmBtu this summer, and of course this level is not beyond the realm of possibility.

However, we still believe that in the second half of the year the U.S. natural gas balance will improve, despite the prospect of higher LNG imports from current levels. As discussed in previous reports, we believe lower prices are beginning to take their toll on production rates, and we still expect for 2009 as a whole that U.S. dry gas production will fall modestly below last year. In addition, our long-standing Base Case has called for stability in the manufacturing sector much sooner than the consensus, which has generally not been expecting any signs of recovery until 2010. If we are closer to the mark and manufacturing activity begins to recover before year end, it will combine with lower production rates to reduce the year-over-year working storage "overage" that now exists. In addition, if we are correct the prompt WTI will have a "6 handle" before the end of the third quarter, we believe that NYMEX natural will finally yield, rise in absolute terms, and reduce the current discount to crude oil.

We have made a modest revision to our balances and now believe that the peak in working storage for this year will be a bit higher than previously thought. As such, we have revised down our expectations for the 2009 prompt NYMEX/Henry Hub average, now at about \$5.55 per mmBtu, a cut from last month by some 30 cents per mmBtu.

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+ U.S. natural gas consumption is expected to decline by 2.5%, or about 575 bcf this year.

+ Domestic dry gas production is forecast to fall by 1.2%, or some 240 bcf.

+ Our balances imply a net build in working storage for this year of around 185 bcf, larger than last month by 55 bcf.

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## Viewpoint

Since our last monthly report the prompt NYMEX natural contract has declined by about 20 cents per mmBtu, not settling above \$4.00 per mmBtu since March 25.

Despite crude oil remaining in a roughly \$48.00-\$53.00 per barrel range and emerging signs and commentary that the U.S. recession may be moderating, natural gas as of yet has shown no tangible or technical signs of bottoming out.

While crude oil, due to its intrinsic non-commercial component, is willing to discount the prospects for economic recovery down the road, natural gas has not shown any inclination to do so, concentrating on *current* fundamentals, which clearly remain quite weak as manifested by ever-rising working storage levels compared to the same points in 2008.

Many analysts remain convinced that prompt NYMEX natural will fall to \$2.50 per mmBtu this summer, and since we have witnessed gas approaching \$1.00 per mmBtu in our career, this level is not beyond the realm of possibility, particularly if, contrary to our expectations, prompt WTI reverses course and trades down to the lows of the first quarter.

However, we still believe that in the second half of 2009 the U.S. natural gas balance will improve from its current condition. This outlook includes a reasonable expectation of higher LNG imports.

As discussed in our previous reports, we believe lower prices are beginning to take their toll on production rates, with the impact due to accelerate. We still anticipate that for 2009 as a whole U.S. dry gas production will decline modestly below last year.

In addition, our long-standing Base Case has anticipated stability in the manufacturing sector in the second half of the year, substantially earlier than consensus expectations, which have generally assumed no improvement until 2010.

If we end up reasonably close to the mark and manufacturing activity begins to recover before year end, stable to recovering industrial gas demand will combine with lower domestic production and reduce the year-over-

year working storage “overage” that now exists.

In addition, if we are correct that prompt WTI will be trading in the \$60s per barrel before the end of the third quarter, we believe that NYMEX natural shorts will finally give in, firming prices and reducing the current discount to crude oil.

We have made a modest revision to our 2009 balances, now forecasting that the peak in working storage for this year will be a bit higher than previously anticipated.

As such, we have revised down our expectations for 2009 prompt NYMEX/Henry Hub. We now expect an average of about \$5.55 per mmBtu, a reduction from last month by some 30 cents per mmBtu.

## Demand: Review and Outlook

Following the incorporation of select revisions to last year’s numbers, the DOE estimates that 2008 U.S. natural gas demand rose by 0.8%, or some 185 bcf over 2007 with, as previously discussed, the bulk of gains coming earlier in the year. By the fourth quarter, demand had “flattened out” versus the prior year, adversely impacted by weaker industrial sector usage.

All we have thus far for 2009 are preliminary numbers for January, which indicate in the aggregate a demand decline of 0.7% versus January of 2008. Residential sector consumption was pegged at +6.7% reflecting colder weather, although the data would imply a slight decline in demand per heating degree day.

Industrial sector demand was estimated to have fallen by 12.3% versus January of 2008, reflecting a decline in aggregate manufacturing activity as reported by the Federal Reserve Board of 12.9%. Electric utility gas demand was off by 8.0%, largely reflecting an overall weaker economy.

More recent macro data is illustrated in our customary table below with the year-over-year change in output for the eight largest consumers of natural gas for the month of March. The FRB reported that the total

manufacturing index declined by 15.0% versus March of 2008.

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

<b>Industry</b>	<b>YOY %Chg. Output</b>
<b>Chemicals</b>	<b>-11.1</b>
<b>Petroleum and Coal</b>	<b>-4.0</b>
<b>Primary Metals</b>	<b>-43.2</b>
<b>Paper</b>	<b>-16.7</b>
<b>Food</b>	<b>-4.3</b>
<b>Non-Metallic Mineral</b>	<b>-21.1</b>
<b>Fabricated Metal</b>	<b>-19.1</b>
<b>Transportation Equip.</b>	<b>-21.3</b>

For our specific industries of interest, in general conditions worsened somewhat from the previous month in terms of year-over-year comparisons, consistent with other statistics and anecdotal evidence as we proceeded through the first quarter.

Recently, markets have been modestly heartened by evidence that perhaps the recession is beginning to moderate. Even first quarter GDP which came in worse than economists' expectations, revealed a gain in personal spending and a hefty reduction in inventories.

We are modest encouraged by all this, suggesting that perhaps our outlier economic view may not be so far out of the ballpark. We have assumed that manufacturing activity will begin to stabilize in the second half of the year, with our models incorporating a modest year-over-year gain in manufacturing output by the fourth quarter.

We assume normal summer and autumn weather, and little change in residential and commercial demand per heating degree day in the fourth quarter.

Putting all this together, our outlook implies that fourth quarter total U.S. gas demand will rise over the previous year by 1.8%, or about 110 bcf, with gains expected across most sectors. For 2009 as a whole,

however, we forecast that U.S. natural gas demand will decline by 2.5%, or some 575 bcf.

**Supply:  
Review and Outlook**

Although the highly preliminary DOE data reveal a continued healthy increase in domestic dry gas production versus the prior year, our updated assessment still suggests the gains will moderate over the next several months.

Our outlook implies that gas production will halt its rise over the comparable period in 2008 before the end of the second quarter. We may be premature in this regard, but rig activity and anecdotal evidence from a number of producers suggest the turning point should come over the next few months.

As such, for 2009 as a whole we are looking for domestic dry gas production to decline by 1.2%, or about 240 bcf.

Updated DOE import numbers reveal that Canadian exports have recently been running even below our estimates, but for the sake of conservatism we have left our estimates for the current quarter through year end unchanged from our last report.

With regard to LNG, imports have been running fairly close to our mark, but the bears are concerned about higher LNG imports later in the year, including the first cargoes from Sakhalin II.

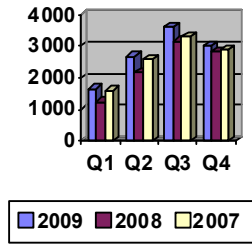
However, despite our expectations that domestic gas prices will rise, more attractive netbacks from other markets reducing spot imports into the United States should preclude LNG imports from reaching consensus expectations for the third and fourth quarters.

Putting our updated demand and supply assumptions together, it suggests that over the near term the year-over-year working storage "overage" will get worse before stabilizing. Our numbers suggest a peak at the end of May at around 525 bcf.

Thereafter, however, our balances imply a slow but progressive improvement by the fourth quarter due to our combination of lower domestic production and stabilizing

demand. At the end of the year, we expect working storage to total a shade over 3.0 tcf, which would imply the year-over-year storage “overage” falling to around 185 bcf, some 55 bcf higher than targeted in last month’s report.

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



**Implications for Price**

As previously discussed, NYMEX natural has yet to show any sign of bottoming. Periodic weak rallies are ultimately met with selling, almost irrespective of the level of crude oil prices. Natural is committed to trading on current fundamentals, unwilling to look down the road to begin discounting what “might be”.

It therefore boils down to the requirement to make a forecast and try and stick with it. Since natural shows no sign of recovering, the forecast path of least resistance would be to suggest further weakness lies ahead.

We do not wish to minimize the burden of current storage levels. Our customary table below reveals that on the basis of our balances only, taking the 1990-2008 relationships between storage and price would in fact yield a fair value for NYMEX natural in June close to \$2.50 per mmBtu, the target of several analysts at the present time.

We are compelled to retain our convictions, however, and hopefully they will end up closer to the mark than current consensus expectations. In terms of crude oil, as our table also shows incorporating our customary “oil premium” would yield a

calendar June NYMEX natural target of \$5.00 per mmBtu, reduced by some 40 cents from last month reflecting a modest upward revision to our storage path.

We have been fairly close to the mark thus far this year on crude oil prices, recognizing that financial as well as fundamental variables would continue to play a role. Our target for June is around \$55.00 per barrel, and we retain that view at this time.

**Henry Hub Price Outlook  
Average for Month of June 2009  
(\$/mmBtu)**

<b>1990-2008 Relationships</b>	<b>\$2.70(E)</b>
<b>1990-1999 Relationships</b>	<b>\$1.05(E)</b>
<b>2000-2008 Relationships</b>	<b>\$4.60(E)</b>

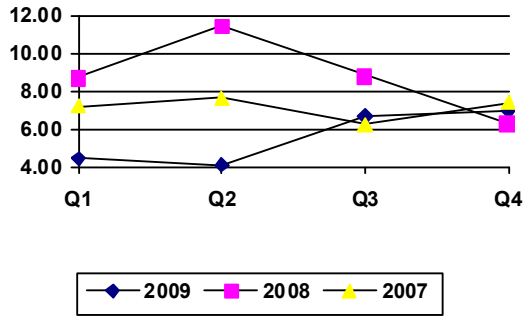
**2000-2008 Relationships  
Plus Oil Premium      \$5.00(E)(a)**

**a) @ 160 cents per gallon distillate and \$55.00 per barrel WTI.**

If we end up close to the mark and natural were to stay where it is, it would imply a NYMEX natural ratio to crude of only 37%. We believe this would be too much for the arbs to resist, and therefore in our view the odds still favor natural being higher by the end of the second quarter.

If we are correct and further gains in crude will occur in the third quarter *plus* the consensus begins to embrace our view of an improving economy and gas balance, it would not be unreasonable for prompt NYMEX natural to briefly hit \$7.00 per mmBtu or so before falling back once again.

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



As such, although we have been compelled to trim our forecast average for this year by 30 cents per mmBtu, we still expect natural to average an above-consensus level of about \$55.55 per mmBtu for 2009.

April 30, 2009

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

	Q1	Q2	Q3	Q4	2008	%Chg 08-07	Q1(E)	Q2(E)	Q3(E)	Q4(E)	2009(E)	%Chg 09-08
<b>Supply</b>												
Total Dry Gas Production	5,085	5,128	5,108	5,253	20,574	7.8	5,189	5,077	4,973	5,095	20,333	-1.2
Withdrawals From Storage	1,891	242	277	957	3,367	1.3	1,442	168	376	1,210	3,196	-5.1
Supplemental Gaseous Fuels	11	14	14	16	56	-11.2	15	15	14	16	60	8.5
Imports	1,096	902	959	1,006	3,962	-13.9	1,060	886	942	998	3,886	-1.9
Canada	1,017	798	846	905	3,567	-5.6	975	797	845	904	3,522	-1.2
LNG	76	97	98	81	352		76	79	86	85	326	
Other	3	7	14	19	43		9	9	11	9	38	
Balancing Item	(33)	94	(29)	(443)	(411)		(32)	(50)	0	(485)	(567)	
<b>Total Supply</b>	<b>8,050</b>	<b>6,380</b>	<b>6,329</b>	<b>6,789</b>	<b>27,547</b>	<b>2.1</b>	<b>7,675</b>	<b>6,095</b>	<b>6,306</b>	<b>6,835</b>	<b>26,909</b>	<b>-2.3</b>
<b>Disposition</b>												
Additions To Storage	255	1,173	1,270	638	3,336	6.5	268	1,185	1,283	644	3,380	1.3
Exports	324	215	193	274	1,005	22.2	308	202	185	205	901	-10.4
Consumption	7,471	4,992	4,866	5,877	23,206	0.8	7,098	4,708	4,838	5,985	22,629	-2.5
Lease And Plant Fuel	318	321	319	328	1,286	7.3	315	305	298	306	1,224	-4.8
Pipeline and Distribution Use	202	136	132	159	629	1.3	180	160	159	168	667	6.1
Residential	2,350	761	345	1,408	4,864	3.1	2,336	681	348	1,422	4,787	-1.6
Commercial(a)	1,301	567	382	872	3,122	3.4	1,289	495	380	868	3,032	-2.9
Industrial	1,879	1,606	1,538	1,628	6,651	0.4	1,616	1,498	1,512	1,676	6,302	-5.2
Electric Power	1,421	1,601	2,150	1,482	6,654	-2.7	1,361	1,569	2,141	1,545	6,616	-0.6
<b>Total Disposition</b>	<b>8,050</b>	<b>6,380</b>	<b>6,329</b>	<b>6,789</b>	<b>27,547</b>	<b>2.1</b>	<b>7,675</b>	<b>6,095</b>	<b>6,306</b>	<b>6,835</b>	<b>26,909</b>	<b>-2.3</b>
<b>Addendum:</b>												
Net Storage Injections	(1,636)	931	993	(319)	(31)		(1,175)	1,017	906	(565)	183	
End Period Working Gas In Storage	1,247	2,171	3,163	2,840	<b>2,840</b>		1,665	2,682	3,588	3,023	<b>3,023</b>	
<b>Henry Hub Price (Dollars Per mmBtu)</b>	<b>8.74</b>	<b>11.46</b>	<b>8.86</b>	<b>6.32</b>	<b>8.85</b>	<b>24.2</b>	<b>4.48</b>	<b>4.11</b>	<b>6.68</b>	<b>6.95</b>	<b>5.56</b>	<b>-37.2</b>
Gas Wells Drilled					33,733	2.5					21,926	-35.0
Total Discoveries(Bcf)					14,168	-4.3					8,551	-39.6
Discoveries Per Well(Bcf)					0.42	-6.7					0.39	-7.1
Total Revisions and Adjustments(Bcf)					4,000	0.0					4,000	0.0
Total Reserve Additions(Bcf)					18,168	-3.4					12,551	-30.9
<b>Reserve Replacement Ratio</b>					88%						62%	
Total Recoverable Reserves (Bcf)					184,242	-1.3					176,460	-4.2
<b>Reserve To Production Ratio(Years)</b>					9.0						8.7	

Source: Historical Data, U.S. Department of Energy.

Note: May not sum to totals in all cases due to rounding.

(E) WHB Energy Research LLC estimates.

(a) 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. Hornsby & Company, Inc. and W.H. Brown may, from time to time, have positions in the futures market relative to these recommendations.