

“Oh, seasons change with scenery,
Weaving time in a tapestry...”
“A Hazy Shade of Winter”, Simon and Garfunkel

CONCLUSION

United States natural gas inventory days coverage probably will be quite low at the end of the 2013-14 winter draw season. The NYMEX natural gas complex includes not only the nearest futures continuation benchmark, but also actual calendar months and actual seasonal (summer; winter) and calendar year strips. These various marketplaces do not necessarily all travel in the same fashion. Yet assuming normal weather for the balance of this winter, the NYMEX natural gas complex “in general” probably will continue its major bull move.

Given the expected low days coverage in US natural gas inventories by end March 2014, it would be unsurprising if the NYMEX nearest futures continuation contract significantly challenged major resistance around 6.10 (recall the January 2010 pinnacle). However, as winter ends and the nearest futures natural gas contract becomes a springtime one (such as April 2014 or May 2014), sustained moves in the front month contract over 6.10 will be difficult (at least in the near term). The supply/demand situation for the actual March 2014 gas contract (the current nearest futures) is not quite the same as that for the May 2014 one (when inventories are building). If colder than normal weather occurs during the balance of this February and March, a spike above the 610 summit (even if it does not last very long) is probable.

Admittedly, the NYMEX natural gas complex is vulnerable to a rather significant price decline from recent tops. Suppose weather for the balance of this winter season is warmer than normal; that may help to inspire a price drop. Keep in mind the substantial net noncommercial long position in natural gas at present. All else equal, liquidation of a substantial part of that net length would be a bearish consideration.

However, even with normal weather, interim price declines may occur. Although the current inventory situation in US natural gas displays rather low days coverage relative to consumption, the shortage will become less severe during calendar 2014 as a whole due to a year-on-year rise in production and fall in demand.

Though the April through October 2014 build season probably will reduce the existing significant days coverage shortfall, it will not eliminate it. Since days coverage for the next several months (through the 2014 build season at least) probably will remain somewhat below normal, this will tend to support prices in the NYMEX natural gas complex in general.

END OF WINTER

In “The Big Heat”, Debby Marsh declares: “The main thing is to have the money. I’ve been rich and I’ve been poor. Believe me, rich is better.” (Fritz Lang, director)

Winter 2013-14's sustained cold dramatically slashed US working natural gas inventories. As of 2/7/14, total working gas inventory of 1686bcf dropped 33.9pc year-on-year; it tumbled 27.2pc versus the five year average.

Further detailed historical analysis of natural gas inventories enables audiences to better ascertain how tight America's near term supply/demand situation has become. Although arithmetical (bcf) levels are important, review from the days coverage perspective offers more enlightenment. Let's focus on stocks at end March, roughly the close of winter draw season.

In the following table for US end March working gas inventories, the indicated "year" for a given March derives from the calendar year of the preceding calendar October. Thus the 2473bcf (that in actual calendar March 2012) noted for the 2011 "year" is from the October 2011 to March 2012 winter draw season. This table extends through winter 2013-14 (includes the 2013 year) by averaging in the EIA's 1331bcf inventory estimate for March 2014 (EIA's February 2014 Short-Term Energy Outlook, "STEO", Table 5a; 2/11/14, next release 3/11/14).

Based upon the EIA's 1331bcf inventory prediction, end March 2014 days coverage will equal about 18.7 days relative to full calendar year 2013 demand of 71.19bcf/day.

	Long Run (1990-2013)		Long Run (1990-2013)	
	End Calendar Month	End Calendar Month		
	Arithmetic (Bcf)	Days Coverage		
	<u>Average</u>	<u>Average</u>		
<u>March</u>	1357	22.1		
	<u>Season Highs (Year)</u>		<u>Season Lows (Year)</u>	
	<u>(Bcf)</u>	<u>Days Cover</u>	<u>(Bcf)</u>	<u>Days Cover</u>
<u>March</u>	2473 (2011)	37.1 (2011)	730 (2002)	11.6 (2002)
	1692 (2005)	28.1 (2005)	742 (2000)	11.6 (2000)

Some statisticians would label the 1723bcf inventory for 2012 as high. Yet this represented only 24.7 days coverage - a modest 2.6 days above the long run average, whereas 2005's was six days above that average. Compare 2012's 69.7bcf/day consumption with calendar year 2005's 60.3bcf/d.

Nowadays, however, for calendar March (and for any other calendar month), the eight year span from 2006 to 2013 probably better shows the "normal" (average, typical, reasonable, prudent) level of days coverage than the long run 1990-2013 vista. The average level of natural gas industry stock holding probably shifted upwards in recent years. One factor influencing this change likely has been alternative "investment" in commodities, which reduces natural gas "free supply". This reduction in free supply probably can have especially significant consequences in low inventory situations at the end of draw season. See previous essays such as "US Natural Gas - a Winter's Tale" (1/12/14), "US Natural Gas Inventory: the Producing Region Drawing Board" (12/16/13), and "US Natural Gas: Drawing Pictures" (11/25/13) on this topic (as well as for additional natural gas supply/demand analysis).

March

Medium Run (2006-2013)

End Calendar Month

Days Cover Average

25.5 days (3.4 days more than the 1990-2013 time span)

In any event, although much depends on weather for the balance of this winter, suppose the EIA's end March 2014 prediction for gas stocks occurs. Then end March 2014 supplies of 18.7 days coverage rest about 3.4 days under the 22.1 days end March 1990-2013 average. From this long run view, stocks then will be fairly tight.

Yet they tumble a substantial 6.8 days beneath the 2006-13 average for end March (25.5 less 18.7 days). Assuming the "desired" level of stock holding has climbed in the past several years, prospective end March 2014 US inventories will be very tight (even if they are not dangerously low). This is a bullish scenario, even though much of winter already has departed.

Some may elect to employ full calendar year 2014 consumption rather than that for 2013 to estimate end March 2014 gas days coverage and evaluate gas sufficiency. However, 1331bcf divided by forecast 2014 demand of 70.24bcf/day gives 18.9 days coverage. This edges up only slightly versus the 18.7 day total calculated relative to calendar year 2013 demand.

Stocks may become much tighter in some regions than others, as well as at some locations within regions.

What is the average days coverage decline during winter draw season from end October to end March from 1990-2013 (including EIA's bcf forecast for end winter season 2013-14)? Roughly 31.7 days. Average days coverage decline for the medium run period of 2006-13 is 31.3 days, little different from that over the long run. If the EIA's prediction for end March 2014 inventories occurs, then inventories during this season will decline 34.9 days (53.6 days at end October less end March's 18.7 days), about 3.2 days more than usual.

Over the 1990-2013 period, what were the largest days coverage cut from end October through end March? Recall 1992's 39.7 days, 37.8 days in 2002, 36.8 days in 1995, and 36.3 days in 2007. The smallest winter stock draw was 2011's 19.9 days.

End stock levels at end March 2014 of course may change significantly relative to EIA (or other) forecasts due to weather and other variables.

It nevertheless also pays to look at average inventory declines from end January to end March. This offers an alternative- and more bullish- estimate for the ultimate end March 2014 days coverage. From 1990-2013, average days cover declines from 32.9 days at end January to 25.1 days at end February, falling to 22.1 days by end March. Thus stocks decline around an average of 10.8 days.

US end January 2014 stocks were 1923bcf, or about 27.0 days cover. Subtract 10.8 days from this, so end March will have 16.2 days cover. This is 2.5 days less than the 18.7 days calculated using the EIA's end 1Q14 arithmetic estimate. The 16.2 days total drops 5.9 days beneath the long run end March total of 22.1 days. It collapses 9.3 days under 2006-13's 25.5 average, a very bullish scenario if it develops.

What might arithmetical inventory be at end March 2014 at 16.2 days coverage? If March 2014 working gas inventory divided by 71.19bcf/day of consumption equals 16.2 days, then March 2014 gas inventory will be around 1153bcf. The EIA's current estimate of 1331bcf at end March 2014 will be the lowest arithmetical level for end March since the 1266bcf for the 2007 "year" (which represented 20.0 days coverage). The 1153bcf would be the lowest since 2003's 1058bcf (17.3 days cover).

Another viewpoint hints that the EIA's forecast for end March 2014 may understate the probable inventory tightness. Burrow further into the EIA's arithmetic estimates, focusing on its conjecture for the draw from end calendar February to end calendar March 2014. The EIA has 1435bcf at end February and 1331bcf at end March, expecting a modest 104bcf stock draw.

However, the long run arithmetic draw (1990-2013; incorporating the EIA's bcf estimate for the 2013 "year" February and March points) from end February to end March is about 182bcf (1539 less 1357bcf). For the 2006-2013 vista, the average draw is 146bcf. The long run draw average exceeds the EIA's current year estimate by 78bcf, the 2006-13 one by 42bcf. Therefore the EIA's predicted draw from end February 2014 to end March 2014 appears fairly conservative in bcf terms relative to historical averages. The average of 78 and 42bcf is about 60bcf. Suppose the 1331bcf outcome is reduced by 60bcf, leaving end March 2014 stocks at 1271bcf. That represents about 17.9 days coverage.

Admittedly, much time remains between now and end March. However, remember that in recent years (review the 2006-12 era), the bcf draw has been quite variable from end February to end March. The peak inventory reduction was 379bcf (winter 2012-13). Winter 2011-12 even saw a build of 24bcf (winter 2011-12). So price forecasts should be made cautiously.

In natural gas, sometimes key highs and lows in price occur alongside notable levels in the net noncommercial position.

The CFTC's Commitments of Traders for 2/11/14 indicates a substantial net noncommercial long natural gas position. For the benchmark NYMEX and ICE contracts (futures and options combined) plus the NYMEX European look-alike options contract, the total net noncommercial long (NCL) position is about 297,000 contracts, or 7.1 percent of total open interest.

Though the current net NCL level retreats slightly from 310m on 1/28/14, it represents a massive increase from the net noncommercial short position (NCS) of about 5,000 contracts on 11/5/13 (and about 27m NCS on 11/19/13); recall the key NYMEX (nearest futures) low at 3.379 on 11/5/13. Recent net NCL levels lurk beneath the 367m net NCL pinnacle reached 4/30/13 (7.6pc of total open interest; plateau percentage was 7.8pc on 5/28). This net NCL summit occurred alongside the interim top in NYMEX natural gas (nearest futures continuation) at 4.444 on 5/1/13.

END OF BUILD SEASON 2014

In the movie "Heat", Neil McCauley states: "He knew the risks. He didn't have to be there. It rains...you get wet." (Michael Mann, director)

Assume normal weather for the balance of winter and the next several months. All else equal, because the current days coverage situation displays very low inventory, days coverage for the next few months probably will remain somewhat below normal.

However, the supply/demand situation for calendar 2014 arguably will become less tight after winter 2013-14 ends. Take the EIA forecasts (STEO Table 5a) as the guideline. Total US natural gas consumption drops 1.3 percent in calendar 2014 relative to calendar 2013 (71.2bcf/day dips to just over 70.2bcf/d. Within the electric power sector, demand in calendar 2014 falls about 1.3pc to 22.0bcf/d. In contrast, calendar 2014 total marketed natural gas production grows 2.2pc year-on-year (about 71.8bcf/day in 2014 versus 2013's 70.2bcf/d). Total dry gas production rises from about 65.7bcf/day to nearly 67.2bcf over that period, a two percent expansion. US electricity demand grows only about one percent in 2014 relative to 2013.

Everyone knows that much can happen between now and when the natural gas build season ends, as well as in the following months. Weather, production, demand (watch for coal switching), and other factors may shift, perhaps substantially, the end October inventory situation.

Anyway, what will the inventory situation probably be at end October 2014? The EIA predicts 3670bcf (February STEO). Relative to full year 2014 calendar demand of 70.24bcf/day, this represents about 52.2 days of coverage. Let's place the preliminary forecast for end October 2014 in historical context in the same fashion as occurred above for March 2014, with particular emphasis on the days coverage variable.

	Long Run (1990-2013)		Long Run (1990-2013)	
	End Calendar Month	End Calendar Month		
	Arithmetic (Bcf)	Days Coverage		
	<u>Average</u>	<u>Average</u>		
<u>October</u>	3305	53.8		
	<u>Season Highs (Year)</u>		<u>Season Lows (Year)</u>	
	<u>(Bcf)</u>	<u>Days Cover</u>	<u>(Bcf)</u>	<u>Days Cover</u>
<u>October</u>	3929 (2012)	66.0 (1990)	2732 (2000)	42.9 (2000)
	3851 (2010)	60.7 (2009)	2810 (1996)	45.5 (1996)
<u>October</u>	Medium Run (2006-2013)			
	End Calendar Month			
	<u>Days Cover Average</u>			
	56.7 days (2.9 days more than the 1990-2013 time span)			

Thus October 2014's 52.2 days of inventory will be about 1.6 days under the long run 1990-2013 average of 53.8 days. This suggests a slightly bullish marketplace situation. However, the eight year medium run period of 2006-13 probably is the better time span to select for analytical purposes. Based upon that perspective, days coverage at end October will be about 4.5 days below "normal". Even if NYMEX natural gas prices decline "a fair amount" relative to highs achieved in the long run bull move (based upon the NYMEX nearest futures continuation benchmark) that began in April 2012 and accelerated in winter 2013-14, they probably will not collapse. The current tight days coverage situation probably has raised price floors for a while.

For the NYMEX natural gas nearest futures continuation contract, notable resistance exists at about 5.70 to 6.10. The 2/5/14 high was 5.737; three times 4/19/12's major low at 1.902 is about 5.70. The major high on 1/7/10 was 6.108; six times the all-time low on 1/24/92 is 6.12. If prices decline, watch around 5.00 to 5.20 (see the 2010 and 2011 highs). Monitor also the 5/1/13 top at 4.444. Support around 3.95 also is rather strong (3.933 high 11/23/12, 3.953 low take-off point 1/10/14). Significant support exists around 3.40 (11/5/13 low 3.379), but it probably would take a notable shift in the days coverage situation relative to generate a sustained fall to that level. Under that, watch about 3.00 to 3.15.

For the NYMEX natural gas summer 2014 calendar strip, watch the 11/23/12 top at 4.258 to the spring 2013 highs (5/1/13 at 4.308 and 5/28/13's 4.334). Substantial support for the summer strip exists at about 3.50 to 3.60 (11/5/14 bottom 3.543; 4/23/12 low 3.584), as well as around 3.83 to 3.90 (3.828 was the 1/2/13 low, 3.875 the 2/15/13 trough, and 3.891 the 1/10/14 bottom).

Watch NYMEX intramarket price spreads alongside movements in NYMEX nearest futures continuation and other actual contract months (and calendar strips).

What if NYMEX nearest futures spike higher? Watch 6.70 to 7.00. A ten percent move over 6.10 is 6.71; a 100pc spike from the 11/5/13 low at 3.379 is 6.758. Half the 7/20/08 high around 13.69 is 6.85.

See the attached charts for NYMEX natural gas nearest futures continuation, the NYMEX gas summer 2014 calendar strip, and the NYMEX winter 2014-2015 gas calendar strip.

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