

“While the earth remaineth, seedtime and harvest, and cold and heat, and summer and winter, and day and night shall not cease.” The Book of Genesis, Chapter 8, verse 22 (King James Version)

CONCLUSION

Assume normal weather for the balance of the United States natural gas 2014 stock build season and the following 2014-15 winter draw period. Then the NYMEX natural gas complex in general probably will trade in a sideways trend. The broad range is roughly 5.00/5.20 to 3.38/3.55 (NYMEX nearest futures continuation contract).

Unless the upcoming winter is much warmer than normal (or fears grow that it will be), or unless gas production spikes more than most prophets predict, then prices for NYMEX nearest futures probably will not test major support around 3.00/3.13 during the next several months. Recall the 3.05 low on 1/2/13 (and the gap relative to the 3.046 high on 9/26/12) as well as 2/15/13's 3.125 low and 8/8/13's 3.129 bottom. Given the low days coverage inventory situation, the NYMEX nearest futures continuation contract probably will challenge the 5.00/5.20 range during this upcoming draw season if the winter is significantly colder than normal (or concerns increase that it will be) or if production gains turn out to be notably less than the EIA's current forecast.

Since very important gas marketplace bottoms generally do not occur in late July, and as the current build season apparently will add a record amount of net supplies to United States working gas inventory, natural gas in the very near term probably will travel a bit (though not a lot) beneath 7/29/14's low around 3.72. The withering 42.7 percent bear march from 2/24/14's 6.493 summit, although substantial, is not as extensive as several past ones. A five percent move under the 3.72 depth gives about 3.54; important support rests around 3.38 (11/5/13 low).

However, the NYMEX natural gas marketplace has achieved quite a few significant bottoms in late calendar August and calendar September. Although history of course does not necessarily repeat itself, look for a key trough around then. Moreover, despite the big jump in United States natural gas production in calendar 2014, with a further moderate increase expected in 2015, natural gas days coverage at the end of October 2014 will be significantly below average. Even by end March 2015, inventory days coverage will be below average (normal, typical, desired, reasonable, prudent) levels, though less so than at end October. And though much can happen between now and October 2015, days coverage then arguably will remain under average levels.

SUPPLY/DEMAND: TAKING STOCK

US natural gas inventory at the end of the 2013-14 winter draw season was very low from the arithmetical perspective (857bcf) as well as from the more important days coverage vantage point. However, the April/October 2014 gas stock build season has diminished worries about regarding running out of natural gas in winter 2014-15. Energy Information Administration stargazers predict a record overall injection of about 2600bcf (Short-Term Energy Outlook/“STEO”, p5 and Table 5a; 8/12/14, next release 9/9/14).

The EIA's August STEO (Table 5a) underlines that US natural gas production increases sharply in calendar 2014 and 2015, and much more than consumption. Total marketed production leaps about 5.3bcf/day from calendar 2013 to calendar 2015 (70.2bcf/d to about 75.5bcf/d), whereas demand motors up only about 1.6bcf/day (just over 71.3bcf/d to almost 73.0bcf/d).

Dig into some details. Calendar 2014 total marketed production blossoms about 3.7bcf/day year-on-year versus 2013 (73.9bcf/day less 70.2bcf/d; 5.3 percent; total dry gas production rises 3.2bcf/d in calendar 2014 to 69.8bcf/d). Fourth quarter 2014 production of 75.2bcf/d exceeds 4Q13's by about 3.7bcf/d. First quarter 2015 output is 75.5bcf/d versus 1Q14's 72.1bcf/day. Calendar year 2015 production of around 75.5bcf grows almost 1.6bcf/d (2.1pc) relative to 2014.

The EIA indicates calendar year 2014 consumption rises only around 1.2bcf/day to 72.6bcf/d (1.7 percent) relative to the prior year. Calendar year 2015 demand of 73.0bcf/d edges up merely .4bcf (only .6pc) relative to calendar 2014. The main reason for the modest calendar 2015 demand increase relates to the first quarter. Due to the frigid winter, first quarter 2014 demand exploded to over 94.7bcf/day; the EIA envisages much smaller 1Q15 demand than that, only 89.9bcf/d.

The August STEO substantially revised upward 2014 and 2015 output levels relative to its July STEO forecast. The August STEO raised total marketed production for 2014 by about .8bcf/day and pushed 2015's total up by almost 1.5bcf/day. The August STEO elevated its estimate of calendar 2014 consumption by only .2bcf/day relative to its July report. However, it significantly boosted its 2015 conjecture, by nearly .8bcf/d.

Nevertheless, although the output versus consumption relationship for 2014 and 2015 is bearish, it still confronts a quite bullish inventory picture for the end of build season 2014. Keep in mind the very depressed stocks at end winter 2013-14. In addition, at the end of winter 2014-15 draw season, and even at the close of build season 2015, inventories in days coverage terms probably will remain somewhat below average.

For the week ending 8/8/14, US working gas in underground storage (lower 48 states) was 2467bcf, down 530bcf and 17.7 percent from the prior year week.

END OF BUILD SEASON 2014 NATURAL GAS INVENTORIES

“To every thing there is a season, and a time to every purpose under the heaven.” Ecclesiastes, Chapter 3, verse 1 (King James Version)

Detailed historical analysis of working natural gas inventories enables audiences to better ascertain the degree of tightness in America's overall supply/demand situation. Although arithmetical (bcf) levels are important, review from the days coverage perspective offers greater insight.

Relative to calendar year 2014's nearly 72.6bcf/day of demand, STEO's anticipated 3463bcf gas inventory at end October represents about 47.7 days of coverage. Let's review the 3463bcf stocks and the 47.7 day days coverage level for end October 2014 in historical context. Focus especially 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 47.7 days of inventory will rest 6.1 days under the long run 1990-2013 average of 53.8 days. This is a bullish marketplace factor.

Nowadays, for calendar October (and for all other calendar months), the eight year medium run span from 2006 to 2013 better shows the normal (average) level of days coverage than the long run 1990-2013 vista. Why? The average level of natural gas industry stock holding probably shifted upwards in recent years. One likely variable influencing this boost has been alternative "investment" in commodities, which reduces natural gas "free supply". This reduction in free supply probably can have particularly significant consequences in low inventory situations around the finish of the winter 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.

Based upon the 2006-13 perspective, days coverage at end October 2014 will be 9.0 days beneath average (56.7-47.7 days), an even more bullish viewpoint.

OVER THE HORIZON: WINTER 2014-15

The Duke of Gloucester declares in Shakespeare's Henry VI, Part II (Act II, Scene 4):
 "Thus sometimes hath the brightest day a cloud;
 And after summer evermore succeeds
 Barren winter, with his wrathful ripping cold:
 So cares and joys abound, as seasons fleet."

In the following discussion regarding and table for US end March working gas inventories, the indicated "year" for a given March derives from the calendar year of the preceding October. Thus the 2473bcf (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).

The average draw from 1990 through 2013 is 1967bcf, or 32.0 days. The days coverage draw from 2006-2013 is about the same, 32.1 days (the average bcf draw over that vista is 2102bcf).

Winter 2013-14's sustained cold devoured US working natural gas inventories. Stocks fell from 3816bbcf at end October 2013 to 857bcf at end March 2014, a 2959bcf and 41.5 days coverage draw. This surpassed the 2002 year's prior record by over 570bcf. The spectacular 41.5 days coverage drawdown likewise soared over 2002's plateau of 37.8 days and 1992's 39.7 day pinnacle (and 2007's 36.3 day total). Compare the meager 1331bcf and 19.8 day draws of the 2011 year.

	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>	1337	21.8

	<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>March</u>	2473 (2011)	37.1 (2011)	730 (2002)	11.6 (2002)
	1692 (2005)	28.1 (2005)	742 (2000)	11.6 (2000)
			857 (2013)	12.0 (2013)
			758 (1995)	12.5 (1995)

Some statisticians would label the 1723bcf end March inventory for the 2012 year as very high. Yet this represented only 24.7 days coverage- a modest 2.9 days above the long run average, whereas 2005's leaped 6.3 days above that average. Compare calendar year 2012's 69.8bcf/day consumption with 2005's 60.3bcf/d.

<u>March</u>	Medium Run (2006-2013)
	End Calendar Month
	<u>Days Cover Average</u>
	24.6 days (2.8 days more than 1990-2013's time span)

End March 2014's 12.0 days of coverage collapsed almost ten days under the 21.8 days end March 1990-2013 average and 12.6 days (24.6 less 12.0) beneath the eight year 2006-13 average.

What will inventories be at end March 2015? Of course much depends on whether the winter is about average, or warmer or colder than normal. The August 2014 STEO proclaimed March 2015 stocks will be 1515bcf. Relative to calendar 2014 demand of about 72.6bcf/day, that will equal about 20.9 days coverage. So end 1Q15 inventories fall about 3.7 days under 2006-2013's 24.6 day average (24.6 less 20.9), though only about one day under the 1990-13 long run average.

Therefore relative to the 2006-13 average, the 3.7 day end March 2015 days coverage shortfall will be considerably less than end March 2014's 12.6 days. But keep in mind that such end March 2015 days coverage nevertheless will represent a modest deficit relative to average.

How do these potential below average days coverage levels for end October 2014 and end March 2015 compare? Use the 2006-13 vista. Whereas end October 2014's guideline of 47.7 days coverage tumbles 9.0 days under its 56.7 day end October average, end March 2015's 20.9 days coverage drops 3.7 days beneath end March's 24.6 day normal level. Thus from this vantage point, although inventories are moderately tight at end March 2015, they become considerably less so than relative to the end of build season 2014.

What creates this less perilous inventory situation for March 2015? One key factor derives from more modest year-on-year consumption increases in comparison with production jumps.

Suppose the decline in days coverage from end October 2014 to end March 2015 is 26.8 days (47.7 less 20.9). This falls over five days short of the roughly 32.0 day average cut in coverage from end October to end March (the days coverage reduction is about the same for both the 1990-2013 and 2006-2013 spans).

Let's look at inventory draws from another standpoint. Suppose the 32.0 day average historical days coverage draw occurs over the winter 2014-15 season. Then end March 2015 inventories will be rather low, at 15.7 days (47.7 less 32.0). Alternatively, the average arithmetical draw for October through March for the 2006-present period is 2102bcf. Subtract that from October 2014's anticipated 3463bcf. That leaves end March 2015 inventories at about 1361bcf, or about 18.8 days of coverage relative to full year calendar 2014 consumption. The sustained substantial production boosts due to the shale revolution probably makes these average stock draws less likely in the current (2014-15 at least) environment. But one should keep such statistical drawdown history in mind.

END BUILD SEASON 2015

Listen to Antonio Vivaldi's violin concertos, "The Four Seasons".

The EIA forecasts that working natural gas inventories will be 3695bcf at end October 2015 (STEO, Table 5a). Relative to calendar 2015 demand of about 73.0bcf/day, days coverage at the end of the 2015 build season will be about 50.6 days. That days coverage level will tend to support prices, for it slides beneath the 2006-13 end October average of 56.7 days, as well as 1990-2013's 53.8 days.

SOME FURTHER SUPPLY/DEMAND CONSIDERATIONS

Take a look at "The Four Seasons" by the painter Nicolas Poussin.

Will increased switching from coal to natural gas occur if gas prices sustain retreats significantly below 3.75, or only if they travel fairly close to 3.00? What gas price (use NYMEX as a benchmark, with basis relationships in mind) will likely encourage drillers in the Marcellus region (or other areas) to slow or stop new drilling projects?

According to the EIA, electric power sector natural gas demand falls about .5bcf year-on-year to 21.8bcf in calendar 2014 (STEO, Table 5a). However, retirements of coal power plants rise in 2015 due to the implementation of Mercury and Air Toxics Standards. The EIA weathervane asserts that calendar year 2015 consumption in the electric power arena will march slightly higher (.9bcf/day) versus calendar 2014.

Watch the consequences of the President's plan, announced in June 2014, to employ Environmental Protection Agency rules to slash carbon emissions from power stations by thirty percent by 2030 relative to 2005 levels.

US electricity demand expands only 1.0pc in 2014 versus 2013. Calendar 2015 consumption is about flat relative to 2014 (Table 7a).

Monitor Canadian natural gas production, inventories, and exports. Watch US gas export levels to Mexico.

To what extent and in what locations will environmental concerns regarding fracking (water supplies; earthquakes) reduce natural gas drilling and output? The highest New York State court ruled that NY towns can use zoning to prohibit fracking (NYTimes, 7/1/14, pA16).

To what extent will American liquefied natural gas exports fortify prices? Torrid talk revolves around the LNG export issue. US LNG export potential is a notable long run supply/demand consideration, but any such exports will occur only in the relatively distant future. US exports will not emerge in the balance of calendar 2014 or early in calendar 2015. Only in 4Q15 is the first of the new facilities to liquefy gas produced in the lower 48 states for exports expected to come partially on line.

Monitor NYMEX intramarket price spreads alongside movements in NYMEX nearest futures continuation and other actual contract months (and calendar strips), as well as electricity and coal price levels and trends. Also, keep an eye on natural gas basis relationships since inventories in a given region (or an area within a region) may be tighter than elsewhere.

NONCOMMERCIALS

What does the CFTC's Commitments of Traders for natural gas display regarding the positions of noncommercial adventurers? Review the benchmark NYMEX and ICE contracts (futures and options combined) plus the NYMEX European look-alike options contract. In the natural gas complex, sometimes key highs and lows in price occur alongside notable levels in the net noncommercial position.

On 2/18/14, the net noncommercial long ("NCL") position peaked at about 328,000 contracts, or 7.7 percent of total open interest (the percentage of total open interest attained its 8.4pc high the following week). This net NCL summit roughly coincided with the NYMEX natural gas (nearest futures continuation) pinnacle on 2/24/14 at 6.493. The substantial liquidation of this large net noncommercial long position in natural gas helped to propel prices sharply lower in recent months. As of the most recent week, 8/12/14, the net noncommercial position was short ("NCS") about 8,000 contracts (.2pc of total open interest). This was the first net NCS position since November 2013 (the net NCS peaked at only 27m contracts, not long after the important low at 3.379 on 11/5/13).

The lofty net NCL levels of February 2014 resided beneath the 367m net NCL ceiling established 4/30/13 (7.6pc of total open interest; plateau percentage 5/28/13's 7.8pc). This net NCL top occurred alongside the key interim top in NYMEX natural gas (nearest futures continuation) at 4.444 on 5/1/13.

KEY MONTHLY TURNS

In stargazing at upcoming months, what does history reveal regarding prior appearances of very important (and often major) highs and lows in the NYMEX nearest futures continuation contract?

**Several very important natural gas lows appeared in late August and calendar September. Recall 8/27/98 at 1.61, 9/26/01 at 1.76, 9/22/03 at 4.39, 9/16/04 (final bottom) at 4.52, 9/27/06 at 4.05, and 9/4/09's 2.41. In the current context, keep in mind the interim low of 8/29/12 at 2.58. With the exception of a top almost 20 years ago (9/23/92 at 2.79), significant summits have not occurred in this calendar period window. The 8/8/13 low around 3.13 was an important interim low (matched 2/15/13's 3.13 level and approached 1/2/13's 3.05), but it was not a major bottom.

**October- Key October highs are 10/28/97 at 3.85, 10/28/99 at 3.28, and 10/28/04 at 9.20. Major lows generally have not occurred in calendar October. However, see 10/27/10's interim low at 3.21.

**November- one key low, that of 11/24/99 (2.08; part of a double bottom with 1/15/00's 2.13); highs 11/26/90 (at 2.65), 11/5/91 (at 2.14), and 11/30/06 (9.05), with a relatively recent interim crest 11/23/12 at 3.93. The 11/5/13 depth around 338 was an important take-off point within the long run bull move, but it was not a major low.

**December- no noteworthy lows; important tops 12/21/95 (at 3.72), 12/20/96 (4.60), 12/27/00 (10.10), 12/13/05 (15.78; all-time high).

**January- significantly, there have been four key bottoms in calendar January. The two highs that also occurred in January point out the potential for trend change during that month. Major and record low 1/24/92 (1.02), 1/13/95 (1.25), 1/15/00 (2.13; see November), 1/28/02 (1.85; preceded by the 9/26/01 low at 1.76); tops 1/9/04 (7.63) and 1/7/10 (6.11). Keep in mind the interim lows in early January 2013 (1/2/13's 3.05 and 1/9/13's 3.09).

**February- troughs at 2/24/97 (1.68), 2/26/99 (1.63); summits 2/2/94 (2.69), 2/25/03 (11.90), and 2/24/14 (6.49). Minor low in bull advance to peaks in spring 2013 reached on 2/15/13 at 3.13.

Suppose the 2014-15 winter is warmer than normal and that prices continue to head lower after August/September. Then watch for a low in calendar January or February. This would be about a one year diagonal time move from the February 2014 peak.

**March- no noteworthy lows or highs.

**April- major bottom 4/19/12 at 1.90. From the time perspective, the key double top of 4/18/13 at 4.43 and 5/1/13 at 4.44 averages out to a late April pinnacle.

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