



2006 NG Price Crash Aftermath

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<http://www.ck-wong.ca/Energy/2006%20ng%20price%20crash%20aftermath%2020070824.pdf>

Introduction

To understand what happened in history is difficult. There must be facts to analyst but facts are usually concealed for many reason. In 2006, the natural gas went down to as low as south of US\$4.00. Many have been blaming on Armaranth Hedge Fund which dumped its NG assets to bail out. Some also complained that Goldman Sachs adjusted its energy index that triggered the avalanche. Perhaps this is a chicken and egg issue but who is the chicken and who is the egg.

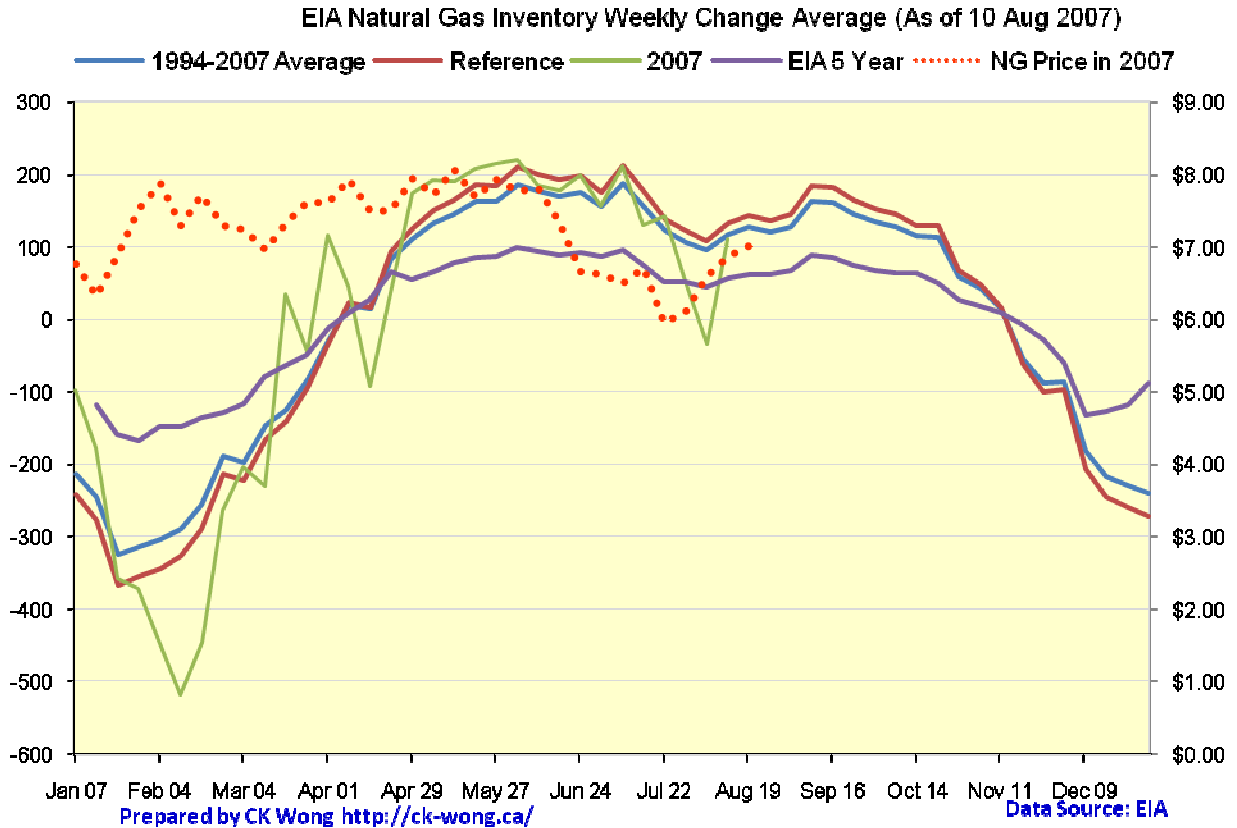
Note: This version includes updated chart and editing updates.

Premise

To analyst what could happen, we need to establish the fact that natural gas was in normal supply rate in 2006. If there was surplus supply then the scenario would be completely understandable. To do this, we cannot rely on EIA's published statistic only. Its standard reference model is the 5 year inventory level which does not really provide much of insight. So the following model has been constructed.

1. Rather than 5 year, the EIA data from 1994 to 2007 are used.
2. The weekly change is computed as a reference model to identify what would be the norm of change.
3. The baseline model is enhanced by adding the increase in demand for 2007 rather than reflecting the requirement of mid-point year 2001.
4. By the information from EIA, the increase in demand from 1985 to 2005 (EIA Energy Review 2006) is 30% or 1.5% per year. Taking into the account of American's compounded increase in demand, 2.0% is used for the adjustment for the reference model.

The following model has been constructed and compared with the EIA 5 year average reference model.

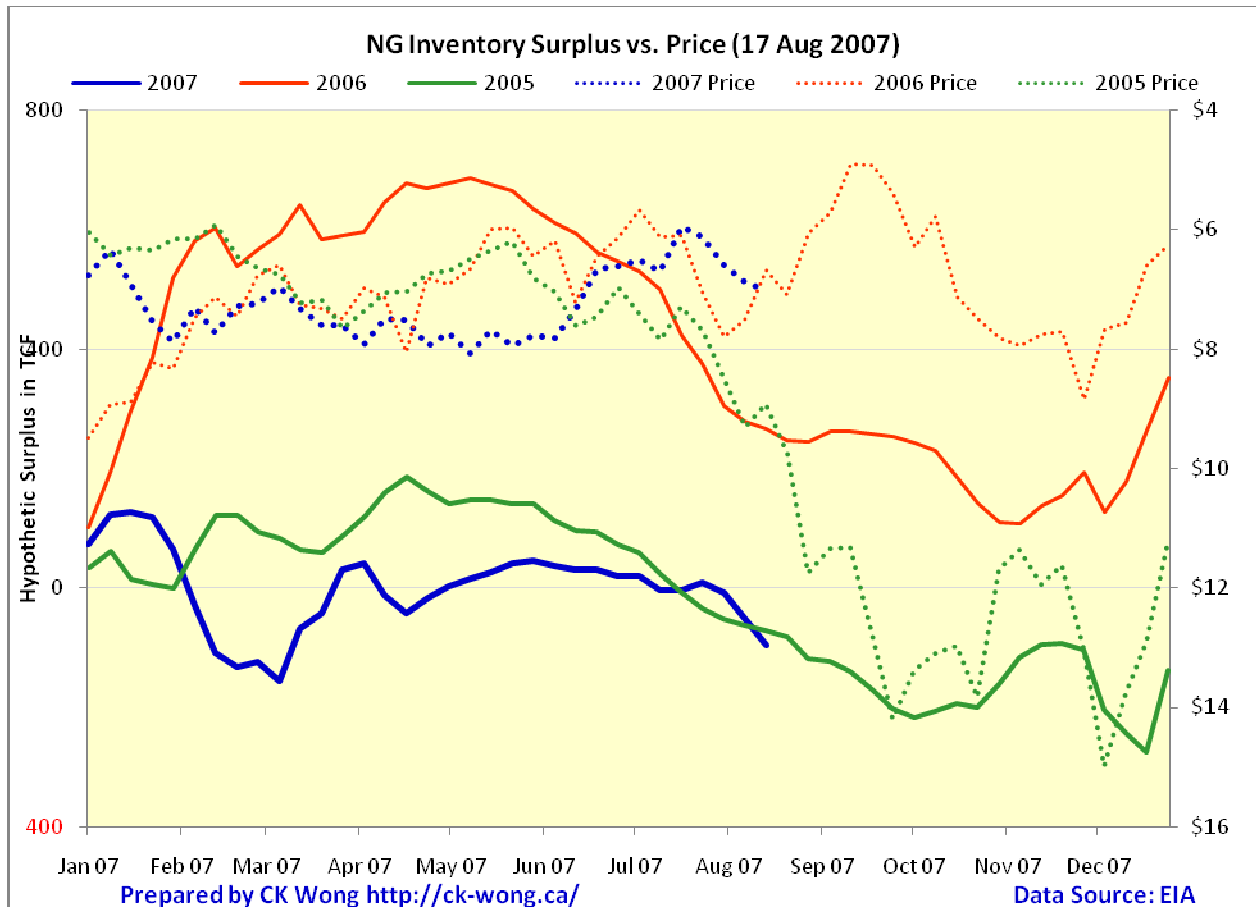


The Green line is the current year statistics which has shown a very good co-relationship with the reference model which is the Burgundy line.

Litmus Test

To analysis the event of 2006 we have to test the reference model with other year. To compare the weekly change with the reference model does not provide a meaningful analysis because if the model is good, it should able to identify any surplus inventory or deficit inventory. The balance could only be told from the accumulated changes. The following chart shows the accumulated inventory since the beginning of the year by summing the changes.

In the following chart, the price of NG is included but watch out the price is in reverse order to show the co-relationship because low inventory means tighter supply that would pushes up the price.



In the year of 2005, there were some surplus inventory at the beginning of the year. As it moved to the hurricane season, the inventory was hit hard and down sharply; the price was jumped sharply. So far so good for the model.

In 2006, the red line has abnormal high value which signifies a very significant surplus in inventory. The price is also significantly stayed lower. The price shown is the end of week price so the inter-week low was not show.

Forecast

In 2007, the inventory stays low and we are approaching the inventory built-up months for the winter, the NG price may be staging a recovery.

Conclusion

This analysis may exonerate Armarnth but we have to learn from this lesson that market is a sequence of random events with some trends we could only either observe it afterward or looking at the future with a very small window.

Reference

[1] <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>