RBAC Inc.

Energy Industry Forecasting Systems

How to Knock a Curve Ball Out of the Park
Positioning your feet in the Natural Gas Market

James Brooks, RBAC, Inc., May 5, 2015

Baseball is considered one of America's greatest pastimes. It is a game of both skill and strategy and frankly it is just fun to play. The game is a feature of many classic movies with an abundance of "life lessons" and allegories. You may recall, Clint Eastwood in a movie called "Trouble with the Curve". The premise of the film involved a competition of methodologies between two major league scouts. The first, being an older very experiences scout, knows the game inside and out and bases all his decisions on his observations and gut instincts. The second, younger more tech savvy scout, bases all his decisions on raw data and statistics. Who was right? In the movie of course the main character played by Clint Eastwood got it right. However, in the real world one has to have a feel for the game and consider all data available and all possible scenarios to make the right call.

In June 2014 crude oil prices were hovering over $100 bbl. and since that time those prices have dropped to around $50 bbl. This is one example of a recent industry curve ball we have been thrown. So... how can we position ourselves to handle a curve and knock it out of the park?

First, let me pose some questions to you. What would you have said if a colleague stood up on stage in June 2014 and told you oil was going to be $50 bbl. in January 2015? Would you have laughed it off or would you have put yourself in the right batting stance to profit from the opportunities such changes represent?

No one has a crystal ball, nevertheless we are expected to prepare for and profit from a wide range of possibilities. So, how can we position ourselves to handle these curves?

A sophisticated approach to market fundamentals analysis is the best solution to predicting forward conditions as well as responding to radical scenarios or even "black swan events.   With robust tools that measure market behaviors and documentable information this does not need to be either hard to understand or time consuming. It can open up unforeseen opportunity and mitigate risk.

The natural gas industry demands greater details in a market forecast to handle the curves. Between pipeline reversals, repurposing, and shifting global demand profiles there has never been a greater need for transparency and detailed analysis. Government policies can miss economic or social benefits when they are based on outdated or incomplete information or are not backed up by complete data.   Companies are looking for ways to maximize their opportunities and minimize their risks, while government agencies are looking for insight to help shape energy policy. You can accomplish this by using the right tools to run as many "what if" scenarios as it takes to give you the insight needed to take advantage of any opportunities presented even in a low price environment.

Building up your fundamentals analysis capabilities is the only way to position your stance to succeed in any market environment.

How to Knock a Curve Ball Out of the Park

In October 2013, KAPSARC[1] held a workshop in Washington, DC attended by leading international energy economic modeling and policy experts. This workshop addressed the need to match evolving policy imperatives with new and improved modeling approaches. In the Workshop Policy Brief the writer stated:

> *"Advances in computational power have increased the breadth and depth of policy makers' desire for quantitative analysis as they seek evaluations from energy policy modelers and their tools. To meet these increased demands, larger and more complicated models ensued that require a clear design architecture that permits flexibility and the decentralization or modularity of components to meet these new and changing demands."*

Using tools to produce risk assessment, market evaluation or forecasts, whether produced internally or externally, has to meet certain requirements to "play ball".

The following are a list of some of the vital requirements for any tool used in producing risk assessment, market evaluation or forecasting services whether produced internally or through your consulting company:

- **Transparency:** There should be no hidden data in the model so that your understanding of the results is complete.

- **Robust Structure and Speed:** Spreadsheets are no longer adequate for the complexity of markets going forward. A model must be able to produce results quickly so that assumptions can be tested and new scenarios can be run in rapid sequence.

- **Calibration and Backcasting**: The ability to calibrate a model ensures the results are based on real market conditions based on known facts in history, not the assertions or opinions no matter how well informed. Nonetheless, proprietary knowledge of your experts applied to the modeling process will greatly enhance its value and effectiveness.

- **Currency and Timeliness:** Data and infrastructure must be up to date and provision for future projects ensures that forward views reflect future changes in flows and capacity.

- **Periodicity:** Supply and demand dynamics are too fluid to work in annual timeframes. Monthly timeframes measure seasonality, infrastructure outages, and constraints in transportation or storage properly.

A good hitter visualizes in his mind the different pitches he might see coming and how he will attack them. In the same way, an analyst can visualize a multitude of possible future scenarios if he has the reliable predictive tools to do so.

RBAC has been the leader in building the fundamental analysis tools used by the energy industry and related government agencies for nearly two decades. The GPCM® Natural Gas Market Forecasting System™ is the most widely used tool of its kind in its markets. RBAC other products include the GPCM Daily™ Gas Model, GPCM Viewpoints®, NGL-NA™ Model, Global Gas Market Model (G2M2™) and a power model interface (GPCM-PMI™) for power demand modeling that integrates with Natural Gas and other fuels. (http://www.rbac.com)

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[1] KAPSARC Energy Modeling Workshop - Policy Brief.pdf