

#### **Executive Summary**

Energy Solutions, Inc. offers unbiased, educational publications on natural gas prices and price trends. These publications provide straightforward and timely information regarding the natural gas industry and serve to assist businesses in making more informed natural gas purchasing decisions. Our clients include businesses that consume natural gas; companies that are involved in the merchandising, production and delivery process; and investment firms, which may be recommending the buying or selling of natural gas-related funds.

*Natural Gas Buying Guide* is dedicated to buyers who want to manage and control their cost of natural gas for their company and are seeking some guidance in how to best accomplish this task. *Natural Gas Buying Guide* offers a three-step approach to help companies improve their profitability by providing buyers with (1) an interpretation of market data to improve a natural gas buyer's understanding of current and future natural gas market conditions, (2) a timeline of anticipated natural gas price movements resulting from changing perceptions of natural gas market conditions, and (3) articulated natural gas purchasing recommendations that can be tailored to meet a company's specific objectives and goals.

Unfortunately, there is not a one-size-fits-all type of plan because the way in which a company views its cost of natural gas is usually related to its past experiences and what was or was not viewed as successful. Some companies compare the cost of natural gas today to what they paid historically and those criteria may become the premise for making a natural gas purchasing decision. Some companies have a strict budget, so purchasing decisions are closely linked to natural gas price levels. Some companies use a myriad of criteria that, if developed correctly, will provide guidance in the natural gas purchasing process, but if developed or written ineffectively, will cause a buyer to become paralyzed in its decision-making.

*Natural Gas Buying Guide* helps companies understand the value and importance of a disciplined natural gas purchasing strategy and the numerous benefits it can provide. By following the three-step approach in *Natural Gas Buying Guide*, companies will enjoy a more streamlined natural gas purchasing process, improved price stability, and a reduction in natural gas budget variances. *Natural Gas Price Guide* also helps companies become better positioned to endure natural gas price rallies caused by unforeseen events.

When natural gas prices are rallying, as was the case in 2005 and 2008, natural gas purchasing becomes an urgency because of heightened risk that skyrocketing natural gas prices will severely damage a company's profitability. This is referred to as panic buying. History shows that panic buying is rarely reflected on as a positive decision for a company's bottom line. If anything, it is usually a decision that in hindsight is more easily criticized because panic buying would have been avoided if there had been a disciplined natural gas purchasing strategy in place.

Alternatively, when natural gas prices are at historically lower price levels, one would think natural gas purchasing decisions would be easier, but that isn't necessarily the case. When there is an overwhelming amount of data that points to weaker prices, and there seems to be little justification for a price move higher, the urgency to complete future or forward natural gas purchases is reduced. In fact, many times buyers postpone natural gas purchasing decisions and become increasingly reluctant to secure a future fixed price for their natural gas because there are no indicators that natural gas prices are going to rally. This is referred to as buying paralysis. History shows that buying paralysis rarely results in the buyer reentering the natural gas market at the right time. Instead, buying paralysis usually results in panic buying after natural gas prices have advanced beyond a certain price comfort point.

#### **Executive Summary (cont.)**

Prolific shale production has been a game-changing event for the natural gas industry. While slower than 2011 growth, U.S. natural gas production levels are still projected to rise on average 1.6 Bcf/day in 2012. This growth is expected to occur despite a lower price environment for natural gas and a reduction in the active number of drilling rigs searching for natural gas.

Natural gas producers have continued their search for natural gas because improved drilling rig efficiencies and lower operating costs have reduced production expenses. On the other side of the equation, higher production yields, combined with the cost benefits of the sale of natural gas liquids (NGLs), which are produced in conjunction with natural gas, have supplemented producer revenues. Together, these factors have reduced the break-even price point for natural gas, allowing producers to accept a much lower price for their natural gas while retaining desired profit margins.

Today's natural gas market is substantially different from the one that existed in 2005 when Hurricane Katrina caused prices to skyrocket or in 2008 when soaring crude oil prices coerced natural gas prices to double-digit figures. However, the responsibilities of a natural gas buyer have not changed as he/she must still decide when to buy, how much to buy and how far into the future to buy.

To arrive at those answers, a natural gas buyer needs to possess adequate information about natural gas market conditions, evaluate how that information will impact its company's overall objectives and goals, and convert those results into an action plan. This takes time. As companies have streamlined operations to be more cost effective, in many cases, it means the natural gas buyer may not have adequate time to do all this research. So, Energy Solutions, Inc. has done it for you in *Natural Gas Buying Guide*.

*Natural Gas Buying Guide* emphasizes the importance of being prepared for historical natural gas price trends. History supports Seasonality and Time Cycle Analysis, which conclude that there are seasonal timeframes in which natural gas price rallies and price declines tend to occur. *Natural Gas Buying Guide* identifies those seasonal timeframes and provides buyers with the necessary tools and advice to adequately understand and prepare for these anticipated price moves. This preparation helps buyers avoid the pitfalls of panic buying or buying paralysis.

Based on the analysis of current and future natural gas market conditions, as well as the timing of price trends resulting from Seasonality and Time Cycle Analysis, *Natural Gas Buying Guide* concludes:

- The seasonal third-quarter or late-fall 2011 price decline has arrived. Absent a recession, it is difficult to imagine that market data could get much more bearish. In fact, current data recently caused the twelve-month natural gas NYMEX strip to reach a nine-year low. With back-to-back triple-digit storage injections in October, storage inventories are on pace to rival last year's record levels, and production levels are still rising. This market data is already incorporated into natural gas NYMEX prices.
- Natural gas prices are expected to stage a pre-winter rally. History shows that upon completion of the seasonal third-quarter or late-fall 2011 price decline, natural gas prices will rally on the arrival of winter weather as noncommercial traders look to an increase in heating demand as a short-term profit-making opportunity. This pre-winter rally is expected to move the front-month natural gas NYMEX price to the upper -\$4s with the potential to reach the low-\$5s if winter starts out colder than average.

#### **Executive Summary (cont.)**

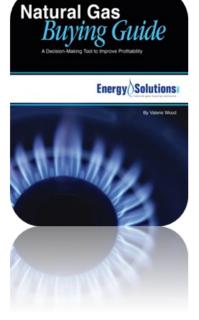
- Price weakness will resurface in the first quarter of 2012. This conclusion is premised on seasonal price weakness, sluggish economic recovery, and ongoing growth in natural gas production levels. The extent of price weakness, however, will be directly linked to the severity of winter weather. Initial forecasts point toward a winter with below-average temperatures at the start, and above-average temperatures at the end.
- The second half of 2012 will mark a turning point for natural gas prices. Production declines are expected to surface in the later part of 2012 creating the foundation from which natural gas prices will be able to move into a higher trading range on a sustainable basis. In addition, new rules from the Environmental Protection Agency are expected to force the replacement of several large coal-fired electric generating facilities, causing an increased reliance on natural gas-fired electric generation facilities. Consistent data supporting production declines and demand increases are expected to surface by either late 2012 or early 2013, prompting a change in the outlook for supply and demand. This will cause perceptions of the future to change. The anticipation of a tightening supply/demand balance will begin to move natural gas prices higher, initiating a transition from a current price range of \$3.50-\$4.50 per MMBtu to a price range of \$4.50 -\$6.50 per MMBtu. This transition to a higher price range will be confirmed when trading activity by the noncommercial sector reflects an ongoing liquidation of its extreme net-short positions.

The above conclusions are just a few of the reasons why *Natural Gas Buying Guide* emphasizes the importance of a company to develop and implement a natural gas risk management plan that contains a proactive, disciplined natural gas purchasing strategy. To assist companies with this task, *Natural Gas Buying Guide* identifies four timeframes over the next twelve months, referred to as Decision Timeframes, in which buyers are encouraged to evaluate and consider natural gas purchases for 2012, 2013, and 2014. There is even the potential to consider natural gas purchases for 2015 and 2016 for low-risk buyers.

These Decision Timeframes provide the foundation around which a company can build its own risk management plan, or in the alternative, a company can choose from one of the three risk tolerance buying models that have been included in *Natural Gas Buying Guide*. Low-risk, medium-risk, and high-risk tolerance buying models have been provided. Each of these models are developed on the premise that buyers of similar risk tolerance will take a similar approach to natural gas purchasing. Therefore, these risk tolerance buying models should be viewed as a foundation or template from which a company can further develop or tailor the construction of its own natural gas risk management plan and natural gas purchasing strategy to better meet its individual objectives and goals.

*Natural Gas Buying Guide* provides natural gas purchasing recommendations for each of the risk tolerance buying models. These purchasing recommendations identify potential volumes of natural gas to be secured under a fixed price, the purchasing timeframes, why a purchase may be recommended, and in some cases, a recommended or anticipated purchase price range.

*Natural Gas Buying Guide* will simplify the natural gas purchasing process for buyers by providing a predefined calendar of Decision Timeframes. Most buyers don't have the time or resources to monitor natural gas prices each and every day. Yet, there is a concern that if they don't, they will miss a potential buying opportunity, which is a time when natural gas prices are falling or showing price weakness. Energy Solutions, Inc., through this guide and ongoing education, alleviates that concern. By targeting specific Decision Timeframes for natural gas purchases, which are supported by historical price trends, natural gas buyers can focus on other responsibilities more easily and focus on natural gas purchasing decisions when the time is right.



*Natural Gas Buying Guide* was published on October 27, 2011. This 38-page analysis offers businesses a straightforward and comprehensive approach to the acquisition of natural gas supplies to ensure price stability, budget projection, and profitability.

With *Natural Gas Buying Guide*, businesses are better prepared to act when prices move in their favor. Energy Solutions, Inc. is not a buyer or seller of natural gas, so our advice and recommendations are unbiased. We sort through the "noise" in the natural gas industry and bring the pertinent information to your attention to save you both time and money. We help you protect your bottom line and gain a competitive edge by being ready — ready to make decisions, ready to implement plans, and ready to support and explain the actions taken. The time to develop a natural gas risk management plan and proactive purchasing strategy is when prices are low, not high. That's today!

Formed in 1996, Energy Solutions, Inc. is independently owned. With combined experience of more than 50 years in the natural gas industry, our team focuses on helping businesses better understand the natural gas industry in order to improve their competitive edge.

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