HENRY HUB NATURAL GAS PRICE FORECAST TO 2014

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Section **Page**

INTRODUCTION

This topic report assesses the price for natural gas over the 2007 – 2014 time period. Ziff Energy uses fundamental analysis of major drivers to assess future price implications. Appendix A provides a complete description of the gas price model approach.

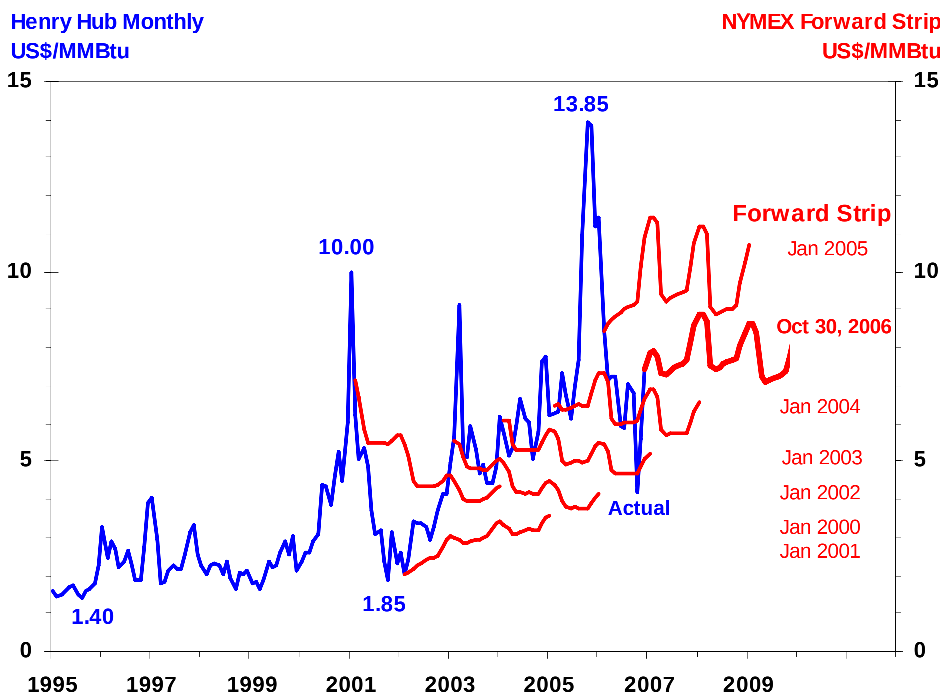
Ziff Energy will provide an outlook for gas price basis differentials in our November topic report for: AECO, Dawn, Chicago, Transco 6, Opal, and other trading hubs.

When undertaking gas price forecasts, some assume that the NYMEX Forward Strip may provide insight to its settlement prices for buyers and sellers. But two challenges with this approach arise:

- **lack** of **significant liquidity** after a short period
- **significant divergence from actual prices** as they materialise.

Figure 1 provides an overview of historical Henry Hub gas pricing and the historical NYMEX Forward strips. In Ziff Energy's opinion, it is clear that using NYMEX forward curves to predict future gas prices is not helpful. For example, examining the forward strip in early January for the past half dozen years shows that buyers and sellers typically include a winter/summer seasonality adjustment. However, the forecast direction of the price (high or low) and the actual value is rarely equal to the forward strip.

Figure 1
Weakness of the NYMEX Forward Strip



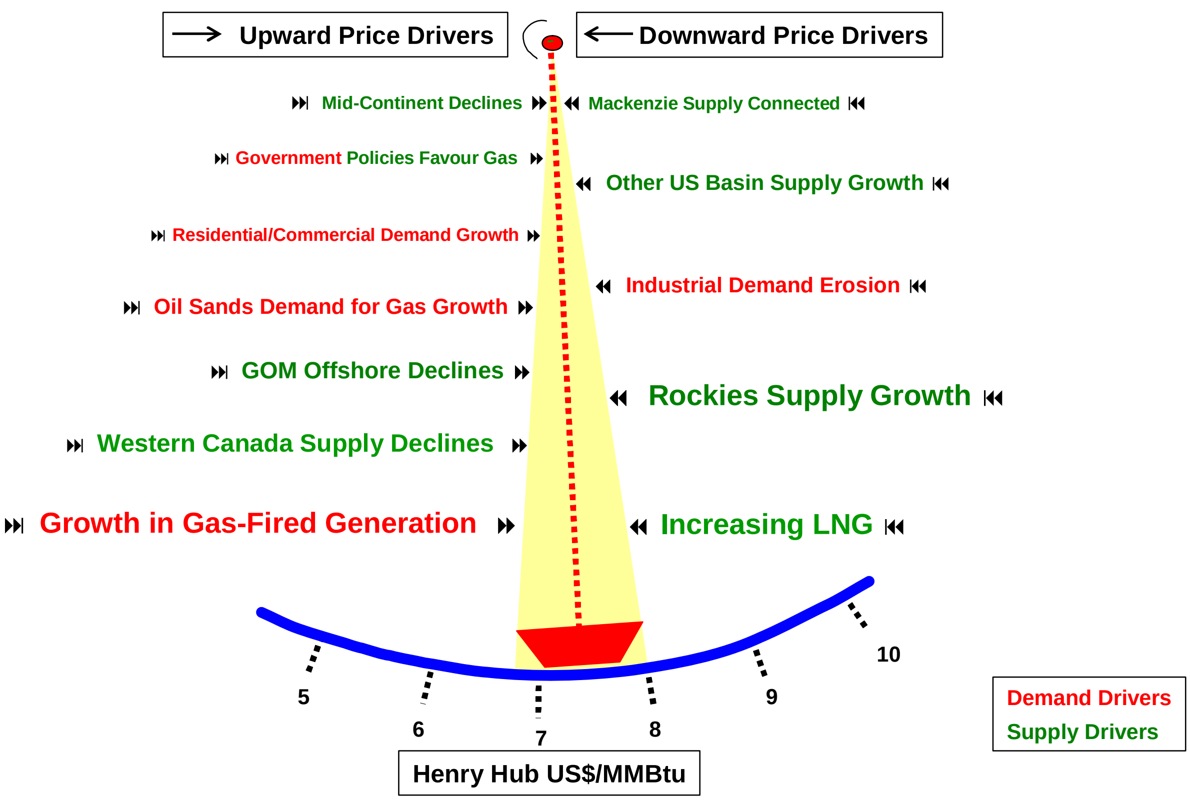
Historical Henry Hub Gas Daily Monthly Price Guide
Historical Strip From the 5th Last Business Day in January

NATURAL GAS PRICE INFLUENCES

The gas price influences that Ziff Energy considers are both gas supply price drivers (increase or decrease supply) and gas demand price drivers (increase or decrease demand). In some cases, a price driver can have both a supply and a demand influence. Ziff Energy considered over a dozen primary supply and demand price drivers that influence natural gas prices[1]. It is not Ziff Energy's intention to produce an exhaustive list of supply and demand price drivers, rather to list those drivers that Ziff Energy believes have a *meaningful influence* on the gas price during this outlook period.

Figure 2 indicates that Ziff Energy's long term natural gas pricing outlook between 2007 and 2014 will vary between **US$6.80 – US$8.00/MMBtu.** The supply and demand drivers are shown along with their directional influence on the forecast gas price. The size of the font used for each driver reflects its relative influence on the gas price; larger font has more impact.

Figure 2
2007-2014 Gas Price Influences

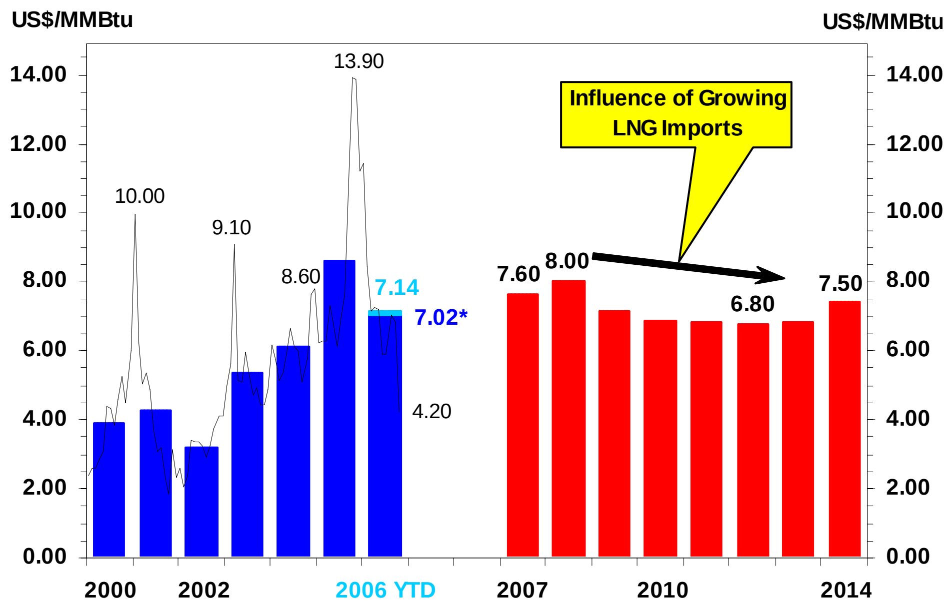


1 Ziff Energy believes that the 4.4 Bcf/d of gas supply from Alaska can be connected after 2015, thus it is not an influence in this time period

Henry Hub Gas Price Outlook

Figure 3 provides Ziff Energy's natural gas price forecast **(in nominal[2] dollars)** at Henry Hub[3] for the period 2007-2014. Ziff Energy's fundamental analysis (completed in October 2005) forecasted a 2006 average price of US$7.02/MMBtu even though gas prices 12 months ago were double. The year to date 2006 price is US$7.14/MMBtu.

Figure 3
Henry Hub Gas Price Forecast



* Oct 2005 Forecast for 2006 US$7.02/MMBtu vs. Actual of US$7.14/MMBtu
Nominal US$ means 2.2% inflation

Assumptions for 2007-2014

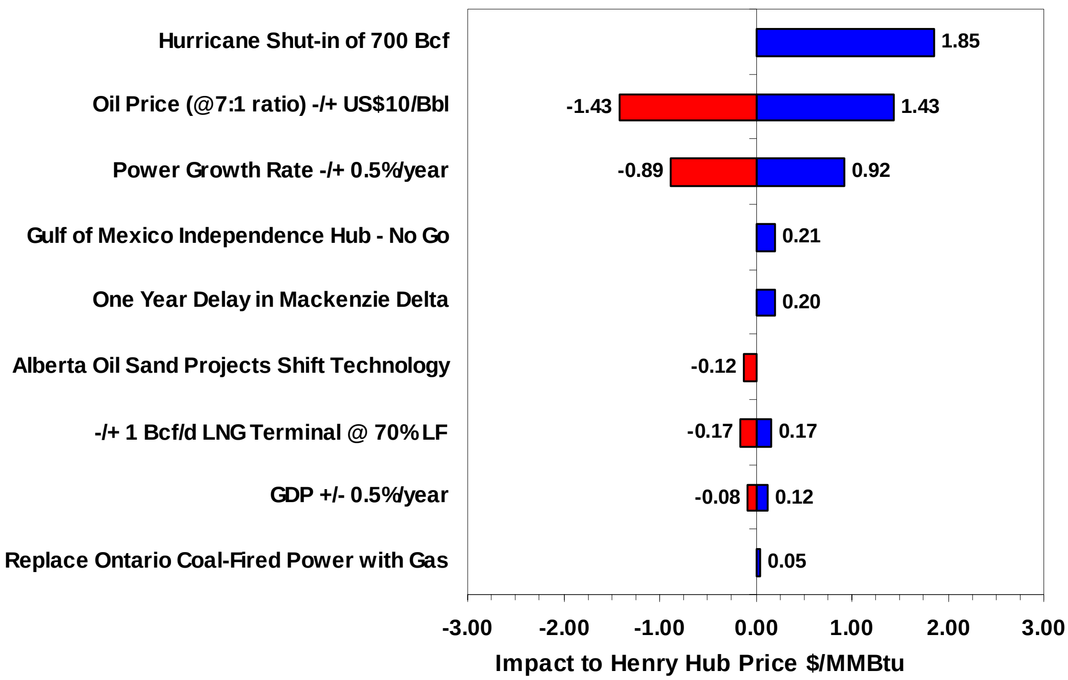
- major expansions occur at two of the five[4] existing LNG terminals
- LNG grows to 13.3 Bcf/d by 2014, up from 1.8 Bcf/d anticipated in 2006. The number of LNG regasification plants depends on the size (0.5 to 1.5+ Bcf/d) and the operating load factor of the facilities; Ziff Energy expects 5-10 new plants will be sited throughout North America
- gas for gas-fired electricity generation grows at a vigorous pace of 5.1%/year
- gas demand for the Alberta Oil Sands continues to increase, although with potential for alternatives in the latter part of the period
- industrial gas demand shrinks 0.1%/year.

[2] Appendix C provides economic assumptions
[3] Appendix B provides a year by year tabulation of the gas price outlook at Henry Hub
[4] Everett is not forecast to expand; terminal expansions expected by 2008 – Cove Point (0.8 Bcf/d) operated by Dominion, and 2010 – Elba Island (0.9 Bcf/d) operated by the Southern LNG division of El Paso Corporation. Excelerate's Gulf Gateway has a capacity of 500 MMcf/d, however, until more Regas ships are brought online, they can not maintain high load factors year round

GAS PRICE SENSITIVITIES AND ASSUMPTIONS

Figure 4 presents the impact of a sample of various drivers on expected average Henry Hub gas pricing. The sensitivity is for 2014 gas price year or first full forecasted year for pinpoint projects such as Gulf of Mexico Independence Hub (2008) or Canadian Mackenzie Delta (2013). Some drivers such as weather, (a hurricane[5]) may have a major short term impact on gas price, which may cause an upward impact on gas price, such as disruption of gas supply and oil supply, both of which can significantly influence gas prices.

Figure 4
Sensitivities of Gas Pricing Drivers



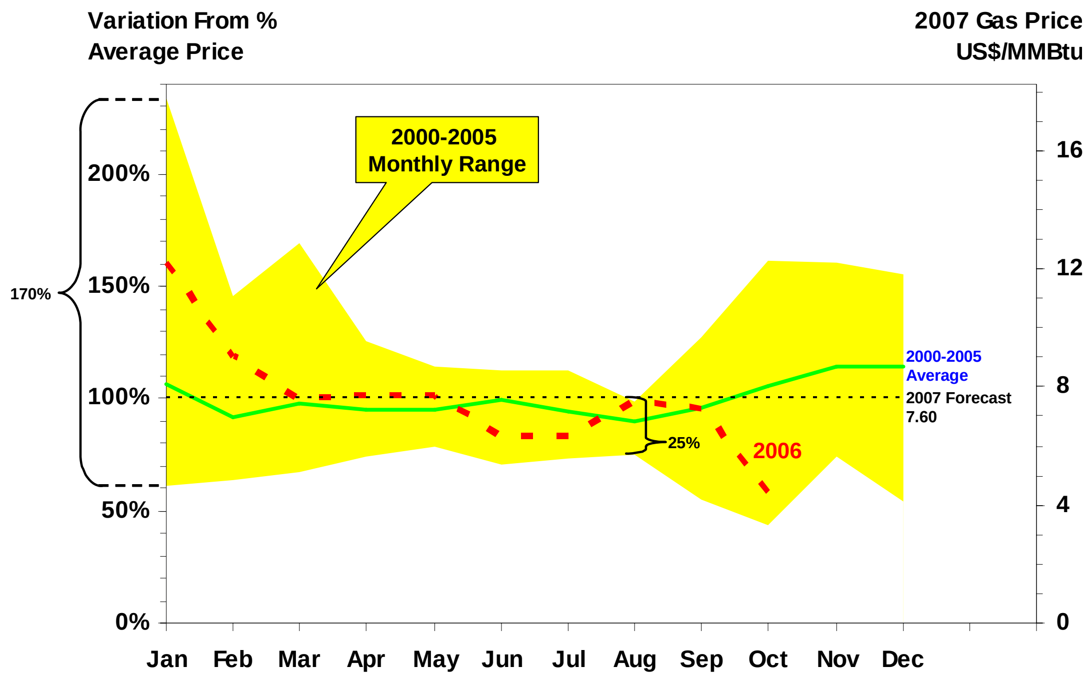
[5] illustrates the effect of shut-in gas production over a 3 month period, whereas on an average annualised period, the increase in gas price would be US$0.45/MMBtu. Ziff Energy's model does not include the effects of market psychology, emotion, or perception. Generally, commodity prices may initially illicit an emotional response to catastrophic events which would over/under value true gas prices

Monthly Gas Price Analysis

While the Ziff Energy gas price model forecasts annual natural gas prices, it is useful to examine the variability of gas prices throughout a typical year on a monthly basis. Figure 5 shows the average monthly gas prices since 2000. Analysis indicates that:

- January monthly gas price is typically 7% higher than the average annual gas price
- average monthly gas prices are typically the lowest during August at 90% of the annual average
- monthly volatility ranges (yellow area) are: 170% in January (highest) and 25% in August (lowest).

Figure 5
Henry Hub Monthly Volatility



Supply Price Drivers and Assumptions

Increasing LNG

- LNG imports will increase to 9.8 Bcf/d by 2010 (5 times the 1.8 Bcf/d in 2006)
- initial development of new regas facilities will tend to be in the Gulf Coast region (offsetting declines in domestic gas supplies), and Eastern Canada/Mexico (siting new regasification terminals is much less challenging than on the U.S. East and West Coasts)
- at least 5 of over 50 proposed new receiving terminals are expected to be operational by 2010.

Gulf of Mexico Onshore and Offshore Shelf Declines

- current decline rate in the Federal offshore is 9.1%/year; with a total decline of 5.1 Bcf/d since 2000
- in 2001, Gulf of Mexico[6] represented a quarter (13.9 Bcf/d) of North American gas production, yet by 2010, gas production will fall to half (7.1 Bcf/d). A combination of steep gas production declines, high maturity in the conventional Shelf, physical damage to producing areas, and periodic disruptions in drilling activity due to hurricanes are the major reasons for the decline
- closer examination of the three offshore producing areas: Shelf, Deep Shelf, and Deepwater indicate that while some near term growth will occur in the Deepwater, the overall decline (9%/yr) in gas production is due principally to the Shelf and Deep Shelf.

Western Canada Gas Supply Declines

- gas production peaked at 17 Bcf/d in 2001 and is forecast to decline to 14 Bcf/d by 2014, despite record levels of gas well completions in the past couple years
- Coalbed Methane and Tight Gas will grow to 27% of production by 2014, partially offsetting the decline of conventional gas (down 32% by 2014)
- 60% of Western Canada's ultimate gas potential (335 Tcf, discovered and undiscovered) will be produced by the end of 2014, up from 45% in 2005
- over **2.5 Bcf/d** (annual average) of new gas supply is needed each year to replace natural gas production declines
- Western Canada has remaining proven gas reserves of 50 Tcf (8 years proven reserve life index), and undiscovered, conventional potential gas resource of 95 Tcf.

Delays in Connecting Northern Gas Supply

- 1 Bcf/d of production is expected from the Canadian Mackenzie Delta (and other Northern locations (Coleville Lake) that can access the Mackenzie Valley Pipeline) by November 2012. This could be delayed further
- gas production from Alaska will be staged in over two years: 1.1 Bcf/d in Nov. 2015; 2.2 Bcf/d in Nov. 2016; 4.4 Bcf/d in Nov. 2017
- industry expectations for Alaska gas supply has slipped 9 years (from 2007 to post 2015) over a 4½ year time period (November 2001 to May 2006). With state elections on November 7, 2006, further delays should be expected.

[6] MMS Gulf of Mexico Federal Offshore historical gas production data is used in this topic report, which is the same as EIA marketed production data; EIA and U.S. Potential Gas Agency use 600 feet to separate Shelf from Deepwater; Ziff Energy and MMS use 1,000 feet; Deep Shelf is defined as well depths greater than 15,000 feet, in water depths up to 656 feet; Ultra-Deep is defined as water depths greater than 5,000 feet (1,525 m)

Rockies Gas Supply Growth

- subtle trap and unconventional exploration has growth potential due to technological advances over the last two decades, whereas conventional trap exploration is mature (less growth opportunities). Gas supply should grow 2.6%/year to 13.9 Bcf/d in 2014
- unconventional gas: Tight Basin-center Gas/CBM may be up to 85% of new gas supply
- CBM production in the San Juan basin (the 'power-house' of North American CBM developments) is mature, having been flat to declining since 1999. Uinta/Piceance, Powder River, and Green River basins will lead the growing Tight Gas/CBM production
- access to certain lands remains the most significant issue for rate of future growth
- the region is a focus for many environmental groups
- over half the potential resource may be off-limits.

Other US Basin Gas Supply Growth

- led by Barnett shale development, northeast Texas gas production has grown 16.5%/year since 2000, although this growth is expect to moderate to 2.4%/year going forward
- other U.S. basins: Appalachia, California, Michigan, and Illinois are often overlooked; however, only a quarter of the gas resource has been produced, providing the opportunity to grow gas production
- location is typically close to gas markets and ensures a premium price to Henry Hub
- production grows 1.5%/year to 11.1 Bcf/d by 2014, up from 9.7 Bcf/d in 2005.

East Coast Canada Gas Supply Growth

- less drilling success offshore Eastern Canada is raising doubts about the timing of incremental East Coast gas supplies. Additional compression may help maintain deliverability in the short term
- Jean d'Arc Basin (Hibernia, Terra Nova, and Whiterose) as CNG possible in 2015
- Panuke gas production is delayed, likely to 2009[7] and will likely dovetail into the declining Sable Island production, vs. increasing total gas production.

Mid-Continent/Permian Gas Supply

- almost 70% of the Mid-Continent resource has been produced and gas production is declining 0.2%/year over the outlook period
- Permian gas supplies continue to hold steady throughout the forecast period. Ziff Energy believes 2014 gas production will be similar to 2005 production which was similar to 1990 levels.

[7] on June 30, 2006 EnCana announced that Board approval would not occur until late 2007

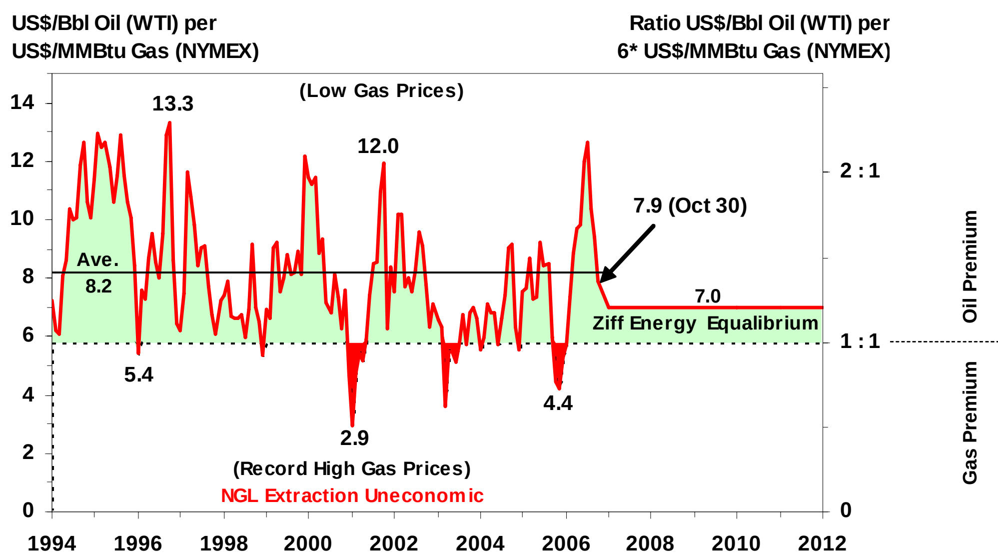
Demand Price Drivers and Assumptions

While the historical average crude oil to natural gas equilibrium ratio[8] has averaged 8.2, Ziff Energy believes a lower value is appropriate for the future. Our oil price is US$47/Bbl to US$56/Bbl over the forecast period. Economies such as China are operating on more of a cost basis for crude oil (about 50% of demand is met by Chinese supply, 10-15% of demand is controlled by Chinese companies extracting foreign sources) and therefore have a competitive advantage to European and North American oil consumers who operate at the marginal world price.

Oil Price

- Figure 6 shows summer oil prices displayed a "geopolitical[9]" premium, trading twice parity level
- changes in the oil price can act as both an upward gas price driver (increasing oil price) and a downward gas price driver (decreasing oil price)
- consumers that can switch[10] to an alternative fuel (No. 2, No. 6, distillate, and oil) will determine their fuel choice on a monthly basis, or even shorter term (based on energy prices, environmental restrictions, energy availability, and energy transportation arrangements)
- during periods when natural gas prices result in a crude oil to natural gas ratio less than 7, industrial and power plants with dual fuel capability and no environmental restrictions generally switch to oil.

Figure 6
Uncertain Future of High Oil Prices



8 US$/Bbl (NYMEX West Texas Intermediate Monthly Price)/ US$/MMBtu (NYMEX Henry Hub Gas Monthly Price)
9 North Korea and Iran nuclear tensions, continuing war in Iraq, Venezuela policies, and Nigerian supply disruptions
10 switchability implies end users prefer short term contracts with flexibility on the actual quantity of fuel requirements

Growth in Gas-Fired Power Generation

- Ziff Energy is forecasting gas demand for the power sector to grow 5.9%/year through 2014
- power requirements for North America will continue to *grow with economic growth*
- incremental power demand during the 2007 to 2014 period is sourced primarily from the underutilized stock of new gas generation (increasing load factors), as lead times to construct alternative power space(s) sources (‘greenfield’ coal [5^+ years] and expand/construct nuclear [10^+ years] plants) are very long
- limited ‘brownfield’ expansion (coal) will occur; however, will face increasing railway rates and transport bottlenecks. Coal mine development of new of coal-fired power will overcome rail issues; however, the coal-fired power industry is still facing increasing cost uncertainty of NOx and SOx permits going forward
- more efficient gas turbine power generators will replace less efficient gas-fired units, dampening total natural gas use.

Industrial Gas Demand Erosion Continues

- industrial gas demand is the *most gas price sensitive demand* when compared to residential, commercial, or gas for power generation sectors
- industrial gas consumption is influenced by the oil/gas price ratio. North America gas industrials benefit when this ratio is high (over 8), as North American petrochemicals tend to use natural gas as a feedstock, whereas European competitors tend to use oil. High pricing in 2005 due to hurricanes damaged North American industrial gas consumption, which is down by about 5 Bcf/d in the 2000-2005 time span
- the high gas price environment, combined with increased gas requirements for power generation, will lead to industrial gas demand of 17.7 Bcf/d in 2008
- with the near term growth of LNG supply, reductions in gas consumption in the power generation sector, and the potential for the Canadian Mackenzie Delta to flow by November 2012[11], industrial gas consumption begins to recover early in the next decade recovering to 2005 levels by 2014.

Alberta Oil Sands Expansion Continues

- gas supply requirements for Alberta Oil Sands will increase to 1.6 Bcf/d by the time the Canadian Mackenzie Delta starts, and to 1.9 in 2014 (3^+ times the 0.6 Bcf/d in 2006)
- alternative methods to gas are being considered: using bitumen by-products as fuel (MSAR and Nexen/OPTI OrCrude processes), or which extract bitumen without steam (Vapex and THAI processes); however, natural gas is still required for current In Situ operations and upgrading bitumen to synthetic crude.

[11] test volumes of gas flowed through the 1.3 Bcf/d Alliance Pipeline in Western Canada 6 months prior the official start-up

Government Policies Influence Gas Demand

- government policies tend to reduce gas supply by maintaining moratoriums in the U.S. Rockies and offshore Florida/California. After a major Canadian governmental review in 2005, the offshore Canadian West Coast may become open for gas exploration after 2015
- government policies influence gas demand[12] and environmental legislation will likely target competitive fuels to natural gas, thereby increasing gas demand albeit more likely to find consensus at state or provincial levels. For example, the Government of Ontario is planning to phase out coal power generation over the next several years in favour of natural gas
- U.S. local, state, and U.S. federal agencies will be challenged to create workable industry policies and procedures that implement the new U.S. Energy Policy Act of 2005
- the signing of the California Global Warming Solutions Act (AB32) on Sept. 27, 2006 calls for a 25% reduction in California's industrial greenhouse gas emissions by 2020 with energy from renewable sources (geothermal, wind, and solar) targeted to increase from 10.7% in 2005 to 20% by 2010.

Residential and Commercial Gas Demand Growth

- moderate economic growth throughout the period is expected, with housing growth continuing to push residential gas demand
- while forecast residential gas customer count increases by about 1.0%/year, usage per gas customer is decreasing by 0.6%/year as consumers become more energy efficient and respond to increasing commodity cost
- average commercial gas demand will grow by 1.3%/year over the forecast period.

[12] although Canadian Kyoto participation has yet to be renounced, recent Government proposals would likely push the 2012 target for reduced greenhouse gas emissions levels further out

APPENDIX A – ZIFF ENERGY GAS PRICING APPROACH

Ziff Energy's long-term Excel-based Gas Pricing Model is based on projected changes to gas supply and gas demand fundamentals. The model examines drivers that influence both the short and long-term supply and demand assumptions and provides a financial assessment of the impact of each of those drivers. Each supply and demand driver is assessed independently for each year of the forecast, and the model indicates the relative significance of each driver regarding its impact on gas price. The sum of all the individual assessments (plus an assessment of an industrial demand adjustment to support either an increase or decrease in industrial demand) for each year in the forecast determines the change from the prior year's gas price.

The gas pricing model provides annual average natural gas prices for Henry Hub. It does not consider daily nor monthly volatility, which would be expected during the term. Normal temperatures are assumed throughout the forecast period. Gas storage can influence intra-seasonal gas price swings, particularly from traders' reactions to weekly reports. There may be some adjustment in the short-term to reflect storage inventories at April 1 (demand issue regarding injections) and November 1 (supply issue regarding withdrawals) of each year. Ziff Energy estimates the impact of changes in supply or demand components to be equal to a fixed price per 365 Bcf per year or per one Bcf of daily deliverability.

The Henry Hub gas price is considered the benchmark for North American gas prices. All forecast gas prices are in constant current year (2006) U.S. dollars. The constant dollar price forecast is converted to nominal dollars by applying a 2.2% inflation factor.

In our next topic report, Ziff Energy will show that gas prices at the other locations are determined by estimating the basis differential between Henry Hub and the desired pricing location. For those locations that are not considered "liquid", the differential is calculated as the differential at the closest "liquid" trading hub plus transportation costs plus fuel to deliver the gas to the requested location.

The oil price has traditionally acted as a gas pricing cap, as oil is a competitive fuel for natural gas in certain market segments. The Ziff Energy gas pricing model assumes that an oil/gas relationship will continue, although the ratio will vary depending on the absolute price of oil and the gas supply/demand relationship at the time. The model does not address "perception" or "emotion" or the potential influence of speculators which can have a dramatic impact on short-term gas pricing.

By providing Ziff Energy's perspectives on the drivers that influence gas price and the degree to which such drivers impact gas prices, clients gain a better understanding on the differences between Ziff Energy's pricing outlook and the gas prices which actually occur over the forecast period.

APPENDIX B – HENRY HUB NATURAL GAS PRICE FORECAST

Table B1 provides the annual nominal gas price forecasts for Henry Hub from 2007 to 2014.

Table B1
Gas Price Forecast, US$/MMBtu

Calendar Year	Henry Hub
2007	7.64
2008	8.01
2009	7.17
2010	6.87
2011	6.84
2012	6.76
2013	6.80
2014	7.43

APPENDIX C – ECONOMIC ASSUMPTIONS

Energy Intensity

Since the 1973 oil embargo, the ratio of energy consumption per dollar of Gross Domestic Product (GDP) decreased to 9.4 in 2003, down half since 1973 (17.4). Notwithstanding the increasing energy efficiency in the North American economy, Ziff Energy believes higher gas and energy prices will dampen economic growth.

Demand Response

Overall, the electrical power sector growth is similar to GDP growth, while residential and commercial sectors are more inelastic. Industrial gas demand erodes with higher gas prices and benefits from lower gas prices until spark-spreads give gas-fired generation a competitive advantage over coal-fired dispatching.

Inflation

New Federal Reserve Chairman Ben S. Bernanke has stated a preference for optimal long-run inflation rate of 2-2.5%[13] and stated at his conformation hearings (November 15, 2005) that “a step toward greater transparency to state explicitly the numerical inflation rate or range of inflation rates it considers to be consistent with the goal of long-term price stability, a practice currently employed by many of the world's central banks”. Canadian monetary has an inflation control target range of 1-3% for the overall consumer price index (with the midpoint being 2%/year). Ziff Energy used ***2.2% inflation*** to escalate constant 2006 dollars into nominal (inflated) dollars.

[13] at the 28th Annual Policy Conference: Inflation Targeting: Prospects and Problems, Oct 17, 2003