



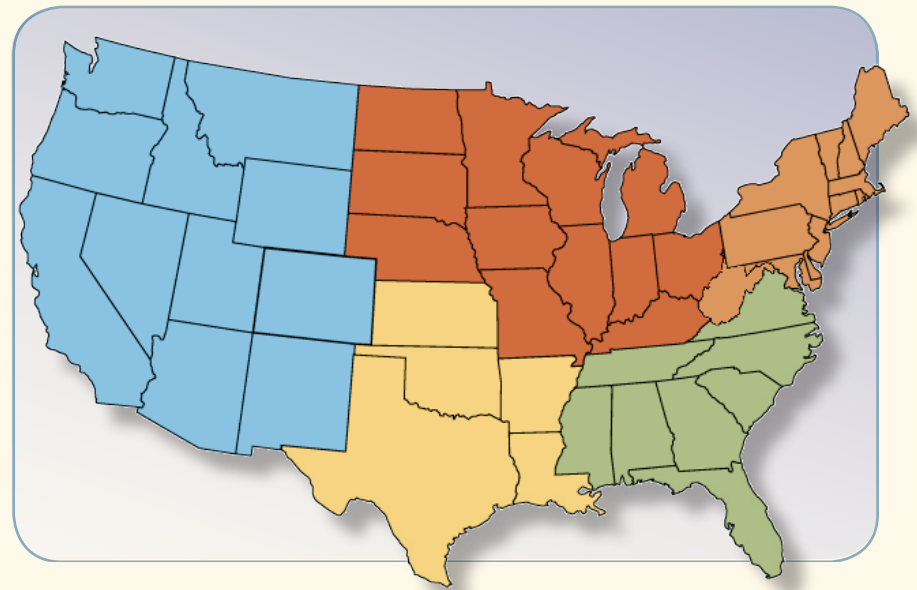
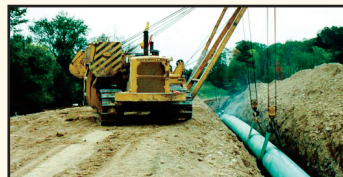
# Natural Gas Market Summary

## AN ANNOTATED BIBLIOGRAPHY 2005-06

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**WEST**   **MIDWEST**   **SOUTH CENTRAL**   **SOUTHEAST**   **NORTHEAST**

Natural gas prices in the United States at the end of 2006 remained only slightly above levels experienced over the past few years. Prices remained at these levels despite major disruptions to natural gas markets, including devastation of production from hurricanes and strong summer demands caused by a decade of investment in gas-fired electric generation combined with warmer-than-normal summer temperatures.



For easy comparison, the graph below shows a long-term view of next-day spot natural gas prices as traded at Henry Hub, La., on the Intercontinental Exchange. The narrow price peak in February 2003 occurred because of a late-season cold front when storage was low, and the more extended peaks in late 2005 occurred during and after hurricanes Katrina and Rita.

### Spot Henry Hub Gas Prices 2001-2006



Derived from ICE data.

During summer 2005, natural gas prices began to rise with oil prices and with increased demand for natural gas for electric generation. The disruptions to Gulf Coast production due to hurricanes Katrina, in late August, and Rita, in late September, forced up prices to very high levels for short periods. High prices in August-September did not reach the peak of February 2003, but lasted longer.

With record warm weather starting in the latter half of December 2005 and continuing through much of February 2006, prices began to sag through the first part of 2006, reaching lows in early October and then rising in a traditional pattern with the onset of winter.

A short-lived peak occurred in early August 2006 during one of several widespread summer heat waves characterized by significant increases in natural gas use in electric generation.

The most recent low price was for natural gas delivered in early October 2006, when prices at Henry Hub fell to \$3.66/MMBtu. That brief drop brought prices to their lowest level in four years.

The most significant single factor in 2006 natural gas prices was extremely high storage levels, which in late 2006 remained well above those of the past decade. Although inventories reached 3,452 Bcf in late October 2006, they did not quite surpass their all-time high of 3,472 Bcf at the end of November 1990 [ [National Storage Figure](#) ].

The high late-2006 level of storage began with low withdrawals in the winter of 2005-06 caused by record mild weather. This early-2006 surplus was sustained despite a summer when natural gas was used in unprecedented amounts to generate electricity during several geographically dispersed heat waves. In fact, the Energy Information Administration's report of 870.3 Bcf of gas burned to generate electricity in the United States in July 2006 was the highest monthly delivery for that use over the past five years. As a result of these heat waves, the National Oceanic and Atmospheric Administration reported that July 2006 was the 2<sup>nd</sup> warmest since 1895, while August 2006 was the 11<sup>th</sup> warmest. The resulting use of natural gas to generate electricity resulted in a dip in injections in July and August 2006 – reflecting two weeks of rare summer withdrawals to meet electric generation demands.

One factor in the increased use of natural gas in electric generation in 2006 was its price attractiveness versus competing fuels. Gas is not



generally competitive with coal, but became competitive with certain oil products in March 2006. At the end of 2006, gas remained competitive with residual fuel oil in New York, though that relationship is expected to change [ [New York Gas and Oil Figure](#) ]. Weather is likely to be the most important determinant in this price relationship.

### **Material Presented by Commission Staff Regarding 2005-06 Natural Gas Prices**

Nearly a dozen staff presentations and analyses on natural gas and related energy market prices began soon after Hurricane Rita in late September 2005. Summaries and links to agendas, presentation materials, scripts and transcripts are presented below.

#### **Conference on the State of Natural Gas Infrastructure (October 12, 2005)**

**Links:**

[Agenda](#)

[Presentation](#)

[Slides](#)

[Transcript](#)

[Associated Paper](#)

In a presentation and paper, staff summarized how natural gas and electric prices had risen over the summer leading up to spikes from hurricanes Katrina and Rita. The paper and presentation developed the themes of rising oil prices and a tightening balance of supply and demand due to the hot summer, declining gas production trends and the hurricanes themselves.

#### **Commission meeting (October 20, 2005)**

**Links:**

[Agenda](#)

[Slides](#)

[Transcript](#)

Staff presented its Winter Energy Market Assessment 2005-06, which underscored concerns about declining supply by highlighting the reduction in surplus storage over the prior summer and about international competition for LNG in the tighter post-hurricane period.

#### **Commission meeting (November 17, 2005)**

**Links:**

[Agenda](#)

[Presentation](#)

[Slides](#)

[Transcript](#)

Beginning with this monthly Commission meeting, staff made five regular updates to the Commission on natural gas market and infrastructure conditions. This presentation updated the Commission on then-declining prices due to mild weather in early November 2005 and reviewed Gulf production recovery statistics and storage inventory balances.

#### **High Natural Gas Prices: The Basics (December 8, 2005)**

**Link:**

[Document](#)

In response to inquiries by natural gas customers about natural gas prices



and market conditions after the hurricanes, staff developed and published a pamphlet designed to summarize natural gas issues in a context that was more accessible to those with less experience in energy markets. This first edition of High Natural Gas Prices: The Basics focused on prices and market conditions, discussed Commission actions, and considered the likely prices through the winter and effects on customer bills.

### Commission meeting (December 15, 2006)

#### Links:

[Agenda](#)

[Presentation](#)

[Transcript](#)

In the second regular update at a monthly Commission meeting, staff focused on rising prices due to early December 2005 cold weather, with prices reaching highs similar to those immediately following Hurricane Rita. Staff also discussed geographic variations in prices, provided updates on recovery of Gulf production, storage inventory balances, imports and drilling activity, and analyzed futures prices.

### Commission meeting (January 19, 2006)

#### Links:

[Agenda](#)

[Presentation](#)

[Slides](#)

[Transcript](#)

In the third regular update at a monthly Commission meeting, staff focused on again-falling prices due to extremely warm weather from

mid-December through the presentation date. Staff reviewed storage inventory balances, provided an update on recovery of Gulf production, and reviewed liquefied natural gas (LNG) import activity. In addition, staff discussed natural gas price behavior vis-à-vis oil, demonstrated recovery in production, and considered the diverse geographic effects on price of hurricane damage.

### The Basics (February 1, 2006)

#### Link:

[Document](#)

Because of the late-2005, early-2006 price collapse due to warm weather, staff updated The Basics to reflect market conditions.

### Commission meeting (February 16, 2006)

#### Links:

[Agenda](#)

[Presentation](#)

[Transcript](#)

In staff's fourth regular update at a monthly Commission meeting, staff emphasized that price drops resulting from record mild January weather had returned prices to mid-summer 2005 levels. Staff also began to discuss the factors likely to influence natural gas markets through 2006, considering possible supply and demand responses to the volatile price history, prevailing oil prices and anticipation of summer demand and supply factors. Staff also reviewed import trends.



### Commission meeting (March 16, 2006)

#### Links:

[Agenda](#)

[Presentation](#)

[Transcript](#)

In its last regular update at a monthly Commission meeting, staff pointed out that prices had dropped back to the previous year's levels from their hurricane and winter highs, and had actually begun to fall below competing oil product prices. Staff reviewed storage inventories (which had risen above five-year ranges at that point), updated Gulf production recovery information, reviewed drilling activity and examined futures prices. Staff featured an in-depth discussion of storage activity in the United States.

### Commission meeting (June 15, 2006)

#### Links:

[Agenda](#)

[Presentation](#)

[Transcript](#)

At the June 2006 Commission meeting, staff reviewed U.S. storage activity in the context of the Commission's action that day to adopt rules intended to mitigate natural gas price volatility by encouraging the development of new natural gas storage capacity. Staff's review of storage included discussions of types of storage, capacity, recent additions, and geographic locations of potential storage facilities. Staff also provided a short discussion of LNG and its effects on U.S. storage activity. In the presentation, staff identified and described then-high summer/winter price differentials and this market signal's likely incentive effect on storage investment. Staff noted the very high spring 2006 storage inventories.

### Commission meeting (October 19, 2006)

#### Links:

[Agenda](#)

[Presentation](#)

[Transcript](#)

At the October 2006 Commission meeting, staff presented its annual Winter 2006-07 Energy Market Assessment, designed to point out market trends and identify areas of possible concern. The presentation reviewed national natural gas price patterns over the previous six years, identified record storage inventory levels at the end of the summer, updated information on gas prices vis-à-vis oil products, and considered futures prices. Staff also reviewed infrastructure activity.

### Updated Natural Gas Price Information

This summary is part of the Federal Energy Regulatory Commission's Market Oversight Web site. We encourage you to stay up-to-date on natural gas market developments through our regularly updated national and regional summaries, where you can access the [Natural Gas Market Overview](#). We also encourage [Feedback](#) on this and other market information offerings.

