

**WHOLESALE NATURAL GAS MARKET ASSESSMENT**  
**November 1, 2002**

by

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*Predicting is pretty risky business, especially about the future*

*Mark Twain*

**Outlook for Wholesale Natural Gas Prices**

This is the Office of Technical and Regulatory Analysis' (OTRA) November 2002 assessment of wholesale natural gas supply and prices.<sup>1</sup> Current wholesale prices for November are in the \$4.00-\$4.40 per million Btu (or approximate dekatherm) range, which is considerably more than the falling market of one year ago (<\$2.75/mmBtu). Current wholesale prices' strength relative to last year is reflected in the commodity component for the current Washington Gas Light Co. (WGL) retail tariff price. Those wholesale prices, when combined with storage and peaking gas charges, already result in higher prices this Fall as compared to those experienced last year.<sup>2</sup> We do not expect these prices to back down later on as had earlier been forecast, due to the early onset of colder than normal weather. If a normal winter (and continuing forecast updates are beginning to suggest that) occurs, we would then expect some strengthening (increase) of prices late in the Fall if the economy continues to recover, albeit slowly. Futures prices for December 2002–February 2003 currently range from \$4.15-4.40/mmBtu based upon a normal winter. We are not sanguine about any lowering of prices at this juncture given the emerging weather prospects. This price level is a change in the forecast from last month and reflects the continued volatility in the natural gas wholesale market. A number of factors contribute to this outlook, as are briefly described below.

**Storage**

The current outlook today reflects the latest weekly Energy Information Administration (EIA) Storage Report that demonstrates a continued healthy storage situation nationwide and for the East region. More specifically, the East consuming region's actual levels in storage continue to be almost even with last year but still ahead of the five-year average [1,867 billion cubic feet (Bcf) vs. the 1,870 Bcf for one year ago,

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<sup>1</sup> Forecasting or projecting future conditions is a perilous task at best so these comments are subject to change... in the future. In general, future change conditions include increased hurricane activity in the Gulf of Mexico, or a warmer than normal or colder than normal winter, or an unexpected change in economic activity.

<sup>2</sup> Washington Gas Light Co.'s (WGL) Purchased Gas Charge (PGC) is still at 62.63 cents/therm (or \$6.263/mmBtu) of which 55.53 cents/therm is the commodity/demand/peaking/storage carrying cost charges, with the balance in various Actual Cost Adjustment components. Alternative suppliers' newer fixed price offers should appropriately reflect the PGC benchmark over 12 months, with anticipated price changes as well, especially since their 12-month offers must also account for next winter's unknowns.

and about 1,829 Bcf for the five-year average as of late October]. Also, there is still a healthy advantage over the five-year average in the producing region.

## **Weather**

Weather variations always have an effect on natural gas price formation. Those effects have taken their toll on natural gas production recently, as the two storms that hit the Gulf of Mexico kept 88 Bcf from reaching market. The markets reacted with their usual volatility during those events. However, the hurricane season appears subdued after those events although we are not finished officially until November 30. As the reader may recall from earlier editions, hurricanes are of interest in this assessment since if they intrude into Gulf of Mexico waters, which is a source for up to 25 percent of our natural gas supply, any supply disruptions will tend to send the markets into an often volatile, but bullish mode (prices rise). Aside from the short-term supply shortfall (which can be made up temporarily from production area storage), any lag in downstream or market storage injection can be made up later in normal times, unless severe damage has occurred to the production facilities.

The weather concerns now turn to the heating season. The early season cold snap across the nation has generally led to a strengthening of prices in both the spot and futures markets. Whether this is a real precursor to the average winter weather is still to be determined. It is not unusual to see a cold early heating season turn to average or mild weather in later heating months.

## **Economic Conditions**

National economic factors also contribute to the formation of wholesale natural gas prices. The economic data continue to suggest an agonizingly slow, if uneven recovery. This conclusion is based upon a variety of economic indicators used to assess the current and future health of the economy. Recent reports clearly demonstrate: (1) a consumer slowdown in purchasing, which may inhibit growth somewhat (67 per cent of Gross National Product growth is typically driven by consumers), (2) up ticks in unemployment again, as well as (3) another dip in industrial production. Profits continue to be scarce as reflected in the continued stock market situation, although a recent rally may have indicated a bottom formed there finally.

The expectations of a gradually strengthening economic recovery in the second half of this year have not materialized. Consequently, the expected strengthening of natural gas demand has not occurred. We now believe that the recovery definitely will be stretched out over a longer period than earlier expected. Solid growth may not appear until the first quarter of 2003. That slowly emerging strength may finally influence wholesale prices early in the Spring. In sum, the national economic picture continues to be cautiously positive. The emerging macroeconomic picture continues to demonstrate a slow and uneven recovery, whose upward movement is much slower than expected.

## **Production and Drilling**

Prices in the most recent month have rallied into the \$4/mmBtu range as November started. That price support and the related futures prices of well into the low 4-dollar range is good for future gas supply. The industry benchmark for committing drilling rigs appears to have been supported for some time now.<sup>3</sup> With prices having strengthened consistently above the \$3.25 level (as measured by the 18 month strip), there certainly appears to be a consistent incentive to engage in new drilling, especially for non-marginal supplies of new gas, since active rig counts have improved for four months in a row.<sup>4</sup> That price firming process, and concomitant increase in drilling, will need to be sustained for a long period of time for more drilling to occur and in order to ensure that new supply reaches the market.

Complicating this situation is a drop-off in production reported for the first and second quarters of 2002, and continuing through the third quarter. Many forecasters have suggested this drop off may pre-sage a significant price run-up later this year and well into 2003, particularly if normal winter weather returns.<sup>5</sup> The supply drop-off appears to be as much as 6-7 percent, according to various analysts. In fact some analysts are suggesting this supply shortfall augurs \$4-4.50/mmBtu gas by next March, no matter what the weather and state of the economy. Normally, we would see a decline in prices then, after winter's demand for heating.

Overall, the supply situation for this winter looks adequate in spite of the drilling woes. On October 1, 2002, the American Gas Association (AGA) assured the nation that taken together, supply fundamentals, including reserves, storage, imports and pipeline capacity, "look solid" and will be "adequate to meet customers' needs" this winter.<sup>6</sup>

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<sup>3</sup>An industry benchmark for drilling expansion is the 18-month futures' strip at or above \$3.25/mmBtu. Currently, the 18 month strip, which is the simple average of those 18 months of prices, is about \$4.007/mmBtu, which is a very slight decline from last month.

<sup>4</sup>The recent Baker Hughes Rotary Drilling Rig Count has rebounded from the spring low of 650 rigs to 710 rigs looking for natural gas in late October. This represents the first down tick in five months, with the number of rigs still down 19% from one year ago.

<sup>5</sup>Some pundits were calling for price run-ups into the \$5/mmBtu range next year, while other suggests that in spite of the drilling and production slowdown, increased deepwater Gulf Of Mexico production as well as liquefied natural gas (LNG) imports will take up the supply slack and mitigate any price run-up tendencies.

<sup>6</sup>AGA's press release of October 1, 2002 which stated further:

"AGA's report on *Natural Gas Supply Fundamentals for Winter 2002-2003* tracks trends in key supply factors between 1990 and today. Its key findings include:

The amount of **total natural gas resources** in the U.S. is even more vast today – at more than 1,100 trillion cubic feet – than it was in 1990 (1,002 Tcf) despite the fact that more than 200 Tcf have been produced during the last 12 years. Improved technology has helped geologists identify additional resources.

Approximately **3.1 Tcf of natural gas will be held in underground storage** at the traditional Nov. 1 start of the winter heating season – a healthy 5.2 percent higher than the five-year average for that time, AGA projects. Approximately 20 percent of the natural gas used during winter comes from underground storage. **Imports of natural gas from Canada** have more than doubled during the last decade -- from 1.4 Tcf in 1990 to an estimated 3.6 Tcf. Canadian natural gas now accounts for about 15 percent of total U.S. natural gas consumption."

## **National Security**

Although we have not changed our assessment herein, we repeat it again given the continuing nature of the terrorist problem. We see no clear danger to the supply of natural gas, in spite of the state of war the United States continues to be under. Most of the U.S. supply is secure, in that it is either domestically produced or imported from Canada. Less than one percent is in the form of liquefied natural gas (LNG) that is imported from overseas into the east coast, although that share will likely grow slowly in coming years.<sup>7</sup> Further, transportation infrastructure security has been tightened. Given the current national readiness, OTRA does not foresee any significant fallout from any possible terrorist action.

## **The Future**

The winter 2002-2003 continues to shape up as more expensive (price-wise) than last winter, but given the storage situation, perhaps not as severe as suggested earlier in the year. As discussed above, we expect prices to be relatively stable. While we are finally comfortable with what will likely be this winter's prices, much could happen in the interim (e.g. a colder early heating season although the economy will likely still be soft). Although we already see over \$4 gas in the futures market as discussed above, this is now being driven by cooler early Fall weather issues and the demand inherent for heating. A synthesis of all of these inputs yields, in OTRA's view, the strong likelihood that retail prices this coming winter will be higher than those experienced this past winter. A good storage situation, especially with regard to injections with less expensive priced gas, must be balanced against higher spot gas price expectations this winter, which means higher commodity gas prices at the burner-tip than last year, everything else equal. The good news is that prices should be nowhere near where they were two winter's ago, unless we get into a 100 year cold winter, and that is unlikely at this time.

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**America's interstate pipelines** are capable of carrying more natural gas than they did in 1990. Expansion of pipelines nationwide will continue beyond 2002, to accommodate increased demand for natural gas, AGA said.

<sup>7</sup> More and more plans are being revealed by various large industrial organizations to build an increasing LNG infrastructure that will allow for increased imports. Most of these incremental imports will originate from Latin American countries (e.g. Trinidad, Venezuela, and Bolivia).

## Wholesale Natural Gas Price/Supply Assessment Information

Current for November 1, 2002

### Price Information

<u>Twelve Month NYMEX Strip Components</u>	<u>Henry Hub Spot Market Price</u>
11-01-02 - \$/million Btu	11-01-02 - \$/million Btu

for cents/therm, divide price numbers by 10

<u>Current Month</u>	<u>Previous Month</u>	<u>Current Only Available</u>
Dec. 02 4.156	Dec. 02 4.247	4.38
Jan. 03 4.256	Jan. 03 4.33	
Feb. 03 4.171	Feb. 03 4.222	
Mar. 03 4.056	Mar. 03 4.053	
Apr. 03 3.898	Apr. 03 3.87	
May 03 3.853	May 03 3.83	
Jun 03 3.871	Jun 03 3.848	
Jul. 03 3.901	Jul 03 3.87	
Aug. 03 3.916	Aug 03 3.885	
Sept. 03 3.898	Sept 03 3.88	
Oct. 03 3.906	Oct 03 3.89	
Nov. 03 4.084		

Note: For a WGL citygate price (retail), add about \$1/million Btu (or 10 cents/therm) for pipeline transportation.

Current month's range suggests future Purchased Gas Charges (PGC) of about 65 cents/therm.

### Energy Information Administration Storage Information

The Energy Information Administration (EIA) continues to report healthy storage levels.<sup>1</sup> The recent week's injection was 11 Bcf. Storage levels (now around 3.172 trillion cubic feet [Tcf] nation wide) are more than adequate compared to historical benchmarks (e.g. 5 year average at 2.983 Tcf). Eastern region working gas storage is at a similar level for the same period a year ago, and well over the five-year average.

### Weather Forecast

1. Current for next few days to one week:

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<sup>1</sup> The EIA has taken over the former responsibilities of the American Gas Association for natural gas storage reporting effective early May, 2002.

<http://www.cnn.com/Weather/>

2. National Oceanic and Atmospheric Administration Forecast for the Winter:

<http://www.noaaneews.noaa.gov/>

3. U.S. Weather Service Atlantic Hurricane and Storm Reports

<http://www.nhc.noaa.gov/>