PARKS PATON HOEPFL & BROWN

ENERGY INVESTMENT BANKING, LP

MUSINGS FROM THE OIL PATCH

March 7, 2006

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Note: *Musings from the Oil Patch reflects an eclectic collection of stories and analyses dealing with issues and developments within the energy industry that I feel have potentially significant implications for executives operating oilfield service companies. The newsletter currently anticipates a semi-monthly publishing schedule, but periodically the event and news flow may dictate a more frequent schedule. As always, I welcome your comments and observations.* Allen Brooks

The Pain of Gasoline Prices

On February 22, the U.S. Labor Department released the January consumer price index that showed a 0.7% increase from the prior month. That increase was 0.2 percentage points ahead of the consensus estimate. Investors, however, continue to be more focused on the core inflation rate, which was up 0.2%, but in line with the consensus view. The core rate measures inflation without including the impact of the highly volatile food and fuel components, or as some say, all the things we buy every week.

There is evidence that inflation is accelerating at earlier stages of production

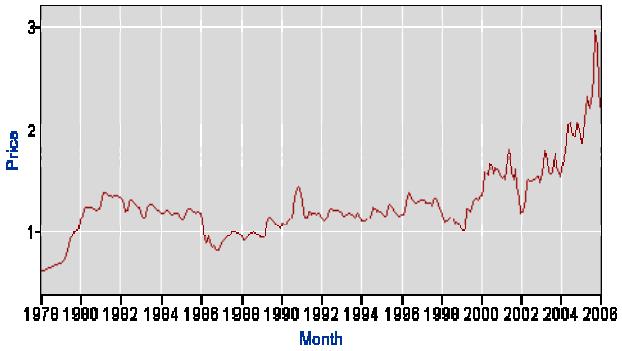
Inflation in the core measure appears to be growing, as there is more evidence of greater price increases at earlier stages of production. The core intermediate goods index rose by 1.0% in January, bringing its annual rate of increase over the last quarter to 7.9%, up from a 4.8% rate of increase over the last year. The core crude goods index fell by 0.1% in January, but it still showed a 17.7% annual rate of inflation over the last quarter, compared to 6.0% over the past year. Clearly, there is evidence that inflation is accelerating at earlier stages of production.

The overall inflation rate was driven up by higher energy prices that increased 5.0% in January for its first advance since September, and accounted for almost 70% of the overall index gain. The food component gained 0.5%, but everything else, excluding fuel and food, only advanced 0.2%. The transportation component within the overall consumer price index advanced 1.8%, driven by gasoline that was up 6.4%, after having fallen for each of the past three months. Gasoline, alone, accounted for almost 90% of the increase in the transportation component.

In light of the importance that gasoline played in last month's CPI, we thought it might be interesting to see what had happened to

gasoline prices over a much longer time period. On the Bureau of Labor Statistics, an arm of the Department of Labor, web site is posted the index of the average price of all gasoline in U.S. cities since 1978. We plotted the index through last month's figure and observed several interesting trends.

Exhibit 1. The Average Price for All Gasoline in U.S. Cities



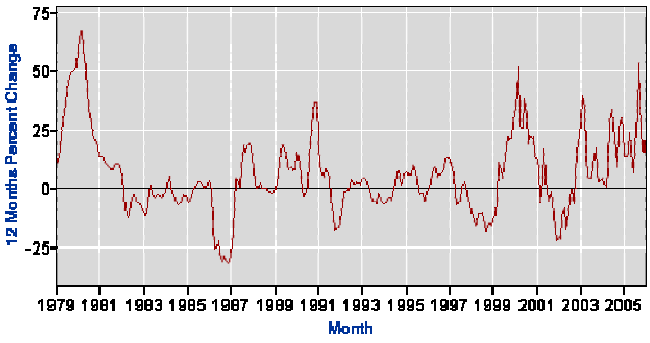
Source: Bureau of Labor Statistics, PPHB

It was interesting to reflect back on the late 1970s when oil prices spiked, following the 1973 energy crisis, and caused gasoline prices to follow suit. At that time, gasoline prices were only in the low to mid 60¢ per gallon range. The jump in oil prices at the end of the '70s due to the Iranian hostage situation and the loss of Iran's oil from the world market helped to drive gasoline prices above the dollar per gallon level.

From the low 60s¢ range in the early 1970s, gasoline prices stayed mostly around $1.00 to $1.50 until this decade

As Exhibit 1 shows graphically, that from the low 60s¢ range in the early 1970s, gasoline prices stayed mostly around $1.00 to $1.50 until this decade. Since then, gasoline prices have been a topic of interest to citizens since they have climbed rather steadily, with the exception of 2001, toward $3 per gallon. The rise in gasoline prices has been occasioned by the increase in crude oil prices, but also by the impact of clean air legislation that forced the petroleum industry

Exhibit 2. Percent Change in U.S. Cities' Gasoline Price



Source: Bureau of Labor Statistics, PPHB

to introduce fuel additives to reduce vehicle emissions. These additives and various blending formulae have inflated the cost of automobile fuels. Additionally, the lack of meaningful growth in refining capacity has further contributed to the gasoline market tightness.

The most telling analysis of the gasoline market is contained in Exhibit 2, where we show the annual percentage change in the average city gasoline price. What you see is a very benign rate of increase until 2000 and then both a greater rate of change, and a much more volatile pattern in monthly changes. Until the United States gains more refining capacity and fuel standards become more uniform both within the U.S. and globally, we expect to see continued gasoline price volatility. The advent of the new energy legislation mandating the increased use of ethanol in this country's gasoline fuel supply will make the coming driving season challenging. We already know that there is insufficient capacity to produce ethanol to meet all the demand, and because this country's gasoline emissions standards are stricter than those in Europe, a traditional source of gasoline imports, the United States will be scrambling to secure sufficient fuel supplies. Spot gasoline shortages in markets such as the Mid-Atlantic states, and in cities such as Dallas and Houston, does not bode well for stable gasoline prices this summer. That has to be a bad omen for inflation.

The new energy legislation mandating the increased use of ethanol in this country's gasoline fuel supply will make the coming driving season challenging

Despite these prospects for higher inflation, recent research by Thomson Financial suggests that energy is not taking a greater proportion of consumer income even though energy prices are up substantially over the past two years. Thomson Financial studied consumer spending on energy going back to 1959, and concluded that U.S. consumers in 2005 spent an average of 5.67% of their personal income on energy products. That was less than the historical average of 5.78%. They acknowledge that rising incomes has a lot to do with this trend, but they also believe that the shift in the U.S. economy from manufacturing to services also plays a large role and possible some energy conservation. We would point out, however, that the latest figure on energy spending is 5.81%, which is slightly above the historical average.

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Saudi Oil Facility Attack Marks New Stage of Terrorism

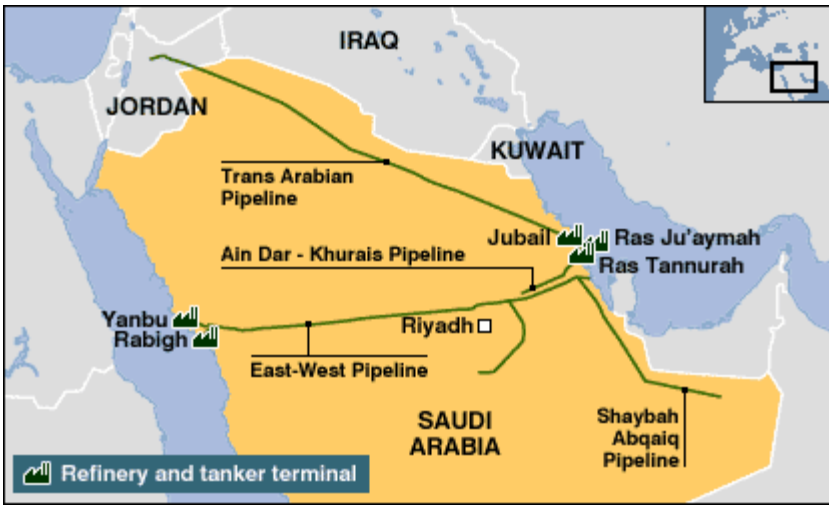
A week ago last Friday, members of al Qaeda attempted to drive several vehicles packed with explosives into Saudi Arabia's Abqaiq oil processing facility in an attack designed to disrupt the world's oil flow. The attack was unsuccessful as armed guards, defending the facility, killed the terrorists and caused the vehicles to explode before they breeched the protective barriers surrounding the facility. The Abqaiq facility processes roughly 6-7 million barrels per day (b/d) of Saudi oil to eliminate gas, sulfur, water and other impurities before they are shipped to world markets.

Armed guards, defending the facility, killed the terrorists and caused the vehicles to explode

The initial reports of the attempted attack broke about an hour

before the stock market opened on Wall Street. The impact of the reports caused the price of oil futures to jump by 4.5%, reaching a high of $63.25. Eventually oil prices eased, closing the day only up $2.37 per barrel, or up 4%, at $62.91 on the New York Mercantile Exchange. The soaring oil price produced a mix reaction on Wall Street as the Dow Jones Industrial Average fell by 7.37 points, but both the NASDAQ composite and the S&P 500 indices gained on the day.

Exhibit 3. Saudi Arabia Oil Infrastructure



Source: Rigzone.com

What was most interesting was the coverage of the attack by the print media

What was most interesting was the coverage of the attack by the print media. On Saturday morning, the three newspapers I read provided an interesting perspective. The *Houston Chronicle* and *The Wall Street Journal* both used the Saudi oil facility attack as their lead story, meaning that it was in the right-most column on the front page of the paper. *The New York Times* failed to put the story on its front page. In fact, their story was positioned in the bottom half of page A7. We also thought the headlines of the respective news stories provided an interesting contrast, too.

Houston Chronicle: **SAUDIS FOIL ATTACK ON OIL PLANT**
Would-be suicide bombers killed by guards;
Al-Qaeda says it's behind plot

The Wall Street Journal: **Thwarted Attack At Saudi Facility Stirs Energy Fears**
Officials Worry Terrorists Are Targeting Oil System;
Crude Futures Jump 4%

The New York Times: **Suicide Bombers Fail to Enter Saudi Oil Plant**

We are not sure what to make of *The New York Times* coverage

decision, but it is clear that energy, and international energy news, is of significant importance to newspaper readers in Houston, the capital of the international oil industry. *The Wall Street Journal* coverage was predictable from a business newspaper as it focused on the economic implication of the attack.

This was the first attack targeting the Saudi oil infrastructure

As pointed out by the media, this was the first attack targeting the Saudi oil infrastructure. Previous oil-related attacks were directed against workers and western oil companies, i.e., soft targets. Since 2002, Osama Bin Laden and his deputy, Ayman al-Zawahiri, have called for OPEC's Arab members to reduce the supply of oil to the West and thus push oil prices up in order to fight the "crusaders." This effort has been quite successful in Iraq where terrorists have been able to reduce the flow of oil from that country.

On May 1,2004, seven people (two Americans, two Britons, an Australian, a Canadian and a Saudi) were killed in a rampage at an oil company's offices in Yanbu, the Red Sea port-city that is a significant oil center in Saudi Arabia. This attack followed stepped-up attacks by terrorists in Riyadh and killings of terrorists by Saudi security forces.

Bib Laden urged Persian Gulf militants to "stop the biggest theft in history as the West has been buying oil at a cheap price."

In an audio recording on December 15, 2004, Bin Laden attacked the Saudi government for being "agents of infidels" as well as driving the kingdom's population to poverty, while helping enrich the U.S.-led, "anti-Muslin" West. He said that "oil prices should be at least $100 a barrel." He called upon Persian Gulf militants to exert themselves to prevent the West from getting Arab oil by attacking oil facilities all over the region and to "stop the biggest theft in history as the West has been buying oil at a cheap price." The immediate reaction in the markets was a jump in oil futures prices, but people questioned whether terrorists could successfully carry out Bin Laden's call.

Was this merely an attempt to find out just how secure Saudi's oil infrastructure defenses truly are?

On December 7, 2005, Al-Jazeera, the Arab TV and radio station, aired a videotape of Ayman al-Zawahiri in which he appeared to call on mujahideen to concentrate their attacks on Muslims' "stolen oil." His call was designed to help deny the benefits of oil exports, "because most of the revenues of this oil go to the enemies of Islam." So now we have had the first attack on Saudi's oil industry, although it seems like it was not well planned. Could this be a diversionary attack designed to shift Saudi security focus away from the main attack target? Or, was this merely an attempt to find out just how secure Saudi's oil infrastructure defenses truly are?

The Abqaiq oil treatment facility occupies about one square mile of ground and is designed with a capacity to treat 13 million b/d of crude oil before being loaded on tankers at the Ras Tanura oil export terminal. Abqaiq has the ability to shift its operations around within the facility, which enables it to continue to operate even if damage was inflicted on some facilities. The plant is surrounded by three security fences and guards and is patrolled 24/7 by security vehicles and helicopters.

Saudi Arabia remains the only meaningful cushion of spare global oil production capacity to help offset supply disruptions elsewhere in the world

Saudi Arabia has substantial redundancy at its oil production facilities and has two export terminals in the Persian Gulf and one on the Red Sea. These multiple and duplicate facilities make it difficult to significantly disrupt oil production operations. That will not provide the market much comfort if more direct attacks on Saudi Arabia's oil infrastructure occur. Saudi Arabia remains the only meaningful cushion of spare global oil production capacity to help offset supply disruptions elsewhere in the world.

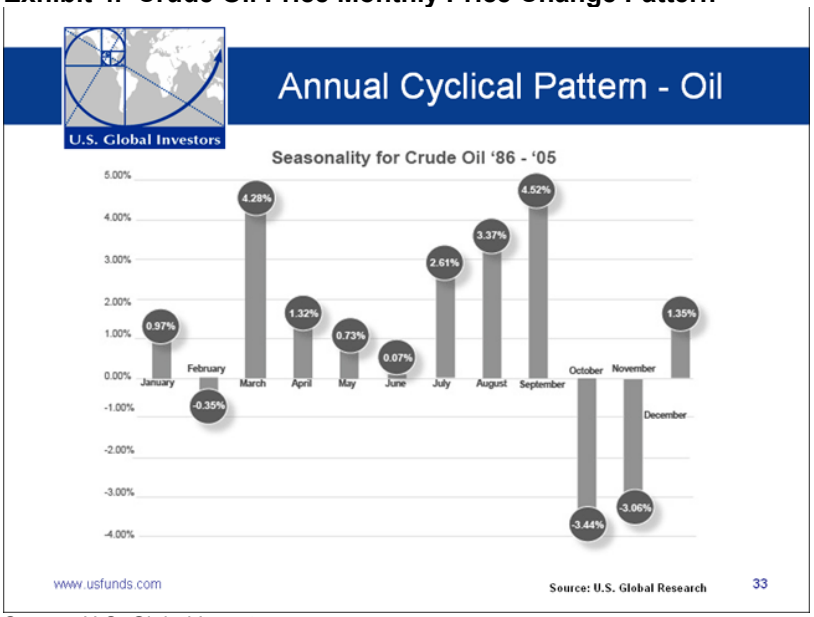
Are Oil and Gas Prices Merely Following Seasonal Patterns?

Oil prices have climbed on the back of geopolitical developments while natural gas prices collapsed in the absence of demand

Many of us watch with amazement the volatility of oil and gas prices, especially as oil prices climb on the back of geopolitical developments while natural gas prices collapse in the absence of demand. In January, oil prices jumped 11.1% from $61.06 per barrel to $67.86, but gas prices fell 17% from $11.23 per Mcf to $9.32. February saw oil prices, despite a failed terrorist attack on Saudi Arabian oil facilities, fall 9.5% to $61.41 while gas prices accelerated their slide to $6.79, or a drop of 27.1%.

In light of the ups and downs in oil and gas pricing, we were fascinated by the following two charts (Exhibits 4 and 5) from a recent webcast by U.S. Global Investors on the "January Effect" in the stock market. The January Effect refers to the tendency for stock prices during the month, and even in the very early days of the month, to predict the market's performance for the entire year. As part of the presentation, the portfolio managers presented charts showing the price movement of various commodities. These two charts, showing crude oil and natural gas monthly price changes

Exhibit 4. Crude Oil Price Monthly Price Change Pattern



Source: U.S. Global Investors

over the 1986 through 2005 period, suggest that the 2006 price performance is not really outside of the historic pattern. That conclusion, however, doesn't dissuade us from focusing on the daily and weekly movement of oil and gas prices in light of geopolitical and fundamental industry trends. What the charts should do is cause us to step back and understand that there are patterns of price changes that govern trends and movements within broader price movements and they should not disturb us.

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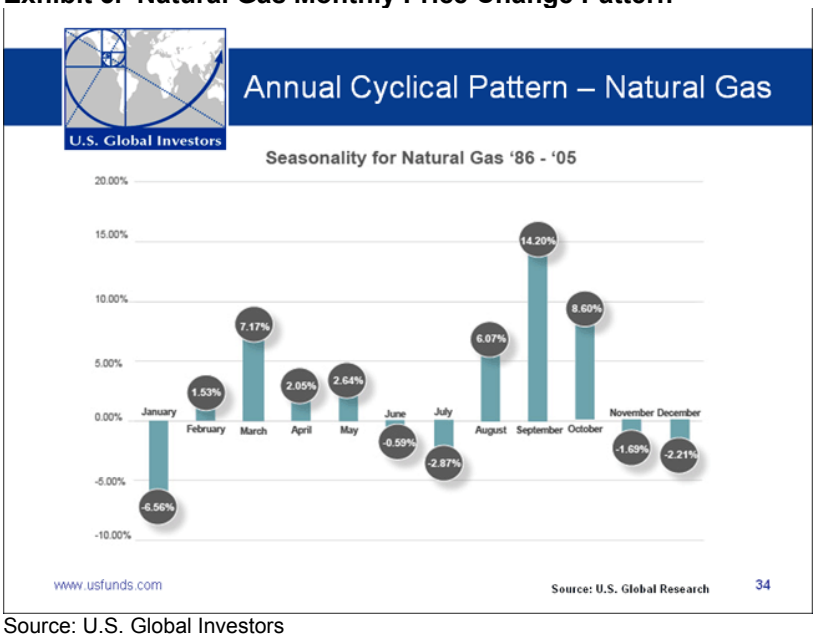
Exhibit 5. Natural Gas Monthly Price Change Pattern



Source: U.S. Global Investors

Are Gasoline Taxes the Ticket to Conservation?

Average gasoline pump prices have fallen below the level they were at prior to Hurricane Katrina

Average gasoline pump prices have fallen below the level they were at prior to Hurricane Katrina. In early August 2005, the average price of all gasoline grades and for all formulations was $2.335 per gallon. The price ramped up immediately after Katrina to $3.117 before falling below $3.000 per gallon in mid-September. The latest data from the Energy Information Agency (EIA) shows the average gasoline price to be $2.298 per gallon. The primary reason for the drop in gasoline prices has been the decline in crude oil prices from $70 at the time of Katrina to closer to $60 per barrel even in the face of heightened geopolitical tensions. Seasonally, gasoline demand is lower, but that is traditional during the winter months.

The growth in transportation related demand is largely considered to be the culprit for energy demand growth. President Bush's call for the United States to curb its addiction to oil in his January State of the Union address has sent politicians and economists scurrying for solutions. On February 16, *The New York Times* carried a column authored by Robert H. Frank, an economist at the Johnson School

of Management at Cornell University, entitled: A Way to Cut Fuel Consumption That Everyone Loves, Except Politicians.

We are not sure whether this was the title that Mr. Frank selected or the idea of the editors of *The New York Times*. We are guessing the latter since a more recent article (February 28, 2006) reporting on the results of an opinion poll about gasoline tax increases carried the following title: Americans Are Cautiously Open to Gas Tax Rise, Poll Shows. What the poll showed is that Americans are opposed to an increase in the gasoline tax by 85% to 12%. However, if the tax increase would enable the United States either to reduce its dependence on foreign oil or to cut down on energy consumption and reduce global warming, then by margins of 55% to 37% and 59% to 34%, respectively, Americans would support an increase.

Americans are opposed to an increase in the gasoline tax by 85% to 12%

What struck us as most interesting were the poll results with respect to other uses of the increased tax revenue. If the additional income was used to help fight terrorism, then 24% of respondents would be in favor of higher gasoline taxes. Likewise, if the tax hike was offset by reduced income taxes or payroll taxes, then 28% would be in favor. These results suggest to us that the greater percentage of respondents favoring higher gasoline taxes were addressing more idealistic issues. Who isn't in favor of lowering our foreign oil dependency or improving the environment?

The greater percentage of respondents favoring higher gasoline taxes were addressing more idealistic issues

In the poll results' article, the writers make the point that many mainstream economists believe that raising gasoline prices while reducing income taxes is the most efficient way to reduce gasoline consumption. The writers interviewed Severin Borenstein, director of an energy institute at the University of California, Berkeley, who suggested that the tax hike might need to be as high as $1 per gallon, up from the current $0.184, phased in over five years, to have an impact on consumption habits. He calculates that a 10% increase in the price of gasoline reduces consumption by 6% to 8% "over the long run."

A 10% increase in the price of gasoline reduces consumption by 6% to 8% "over the long run"

Mr. Borenstein recognizes that the gasoline tax is regressive, meaning that it hurts low-income more than high-income citizens. He would offset the tax hike by lowering income taxes in a way that would "make most middle and lower income people better off." Therein lays one of the major problems with a gasoline tax hike. How do you mitigate the regressive nature of the tax for low-income taxpayers? These people pay little or no income taxes. What they do pay, however, is the payroll tax. Adjusting the payroll tax as the mechanism to refund the gasoline tax and alter consumer habits was the thrust of Mr. Frank's article.

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Mr. Frank's argument is that the average family of four consumes 2,000 gallons of gasoline a year, and after a $2-per-gallon tax hike, they would have to pay an additional $4,000 per year in gasoline expenses. However, his representative family, with two earners, would receive $4,000 in annual payroll tax refunds, so they would be no worse off after the tax hike assuming all other families continued

to buy as much gasoline as before.

This is where Mr. Frank's theoretical argument begins to break down when confronted with reality. He writes: "From the experience of the 1970's, we know that consumers respond to higher gasoline prices not just by buying more efficient cars, but also by taking fewer trips, forming carpools and moving closer to work." He says that if families overall bought half as much gasoline as before, the rebate would be only $1,000 per wage earner. Thus his representative two-earner family could not buy just as much gasoline as before unless it spent $2,000 less on everything else. Mr. Frank's belief that consumers would rush out to buy hybrid cars or 30-mile-per-gallon Ford Focuses, or move to the city in the face of higher gasoline taxes is highly speculative. Maybe over the long-term those shifts would occur, but the latest data from the National Highway Traffic Safety Administration points to a major hurdle. In 1977, half the cars on the road survived until they were 10.5 years old. In 1990, half the cars put into service lasted 12.5 years. And the 2001 data showed that the average life was up to 13 years. Moreover, the driving miles you could expect from a car have increased from 107,000 miles in 1977 to 152,000 miles in 2001. Additionally, between 1994 and 2004, the median age of passenger cars has increased from 7.5 years to 8.9 years. The stock of automobiles does not turn over as much in the real world as in the theoretical world of economists. Just as cars are lasting longer, people don't up and move overnight to cut their commuting costs.

Between 1994 and 2004, the median age of passenger cars has increased from 7.5 years to 8.9 years

Columnist Thomas Friedman of *The New York Times* weighed in with a column last Wednesday discussing the poll results. He believes that "many Americans now understand that the Energy Question is the big strategic issue of our time, overtaking 9/11 and the war on terrorism." We are not so sure about this observation, since a few weeks ago the American public seemed to say that wiretapping possible al Qaeda conversations with U.S. residents was preferable to insure against another potential 9/11 attack. The week before last, the public, or at least the Washington media, was totally absorbed with Vice President Dick Chaney's shooting skills, and last week it was the Dubai port controversy.

Columnist Thomas Friedman believes that "many Americans now understand that the Energy Question is the big strategic issue of our time, overtaking 9/11 and the war on terrorism"

In Friedman's analysis, he seizes on the more favorable poll response to the two questions that frame an increased Federal gasoline tax in the context of either reducing our dependency on foreign oil or reducing global warming, as opposed to the question of merely raising the gasoline tax. However, we found two other survey questions not commented on by either the polling results' article or Mr. Friedman's column quite interesting. One question posed that if cutting down on energy consumption and reducing global warming were the goal, should we require the manufacture of more efficient automobiles or increase the Federal gasoline tax? The tax hike lost 87% to 8%. Another question asked what if the tax hike was $2.00 per gallon, would you favor the increase? Seventeen percent were favorably disposed while 80% were opposed.

To us it looks like the public wants some action to improve our energy independence and reduce global warming, but mandating more efficient automobiles seems to be favored over merely raising gasoline taxes. Maybe that's because people fear what would actually happen to the additional revenue flowing into the government's coffers and the additional bureaucracy that would be created by the various schemes politicians would develop to try to offset the economic pain of such a sharply higher gas tax.

The energy expended in moving goods around this country could be a bigger target of conservation, but it is receiving very little attention

At the end of the day, we need more efficient automobiles because this country is not about to end its love-affair with cars, especially given the greater expanse of the United States compared to most of the rest of the world. Maybe we should have more mass transit, but the time and cost of designing and constructing it would minimize its impact on energy demand in the foreseeable future. I suspect that the energy expended in moving goods around this country could be a bigger target of conservation, but it is receiving very little attention. Lastly, I think the public is really saying to let the free market work rather than create bureaucracies that ultimately will consume more tax dollars to implement these socially driven policies.

Nuclear Energy Gets Another Look

Nuclear power supplies about 16% of the globe's total annual electricity output and 34% of the European Union's needs

The push to increase global energy supplies is causing a number of countries, including the United States, to re-examine the potential of nuclear power to play a greater role in our energy supply equation. Currently, according to *Uraniumletter International*, nuclear power supplies about 16% of the globe's total annual electricity output and 34% of the European Union's needs, and energy demand is increasing. Nuclear power provides 78% of France's electricity, 56% in Belgium, close to 50% in Sweden, 40% in both South Korea and Switzerland, 25% in Japan and 20% in the United States. With growing concern about energy security, especially after this winter's gas supply disruption of Russian gas supplies in Europe, nuclear power is getting another look.

The IAEA projects that 130 new nuclear power plants will be built over the next 15 years

Worldwide, nearly 80% of the 441 commercial nuclear reactors currently in operation are more than 15 years old. To maintain, let alone grow, nuclear power's position in the overall energy mix, new reactors will have to replace decommissioned ones along with adding new units. The International Atomic Energy Agency (IAEA) projects that 130 new nuclear power plants will be built over the next 15 years.

Two-thirds of those surveyed said that they would find it acceptable if a new reactor was built at an existing site

Attitudes toward building new nuclear power plants appear to be changing. In the United States, a recent survey shows that 70% of 1,000 American's surveyed were in favor of nuclear energy. Two-thirds of those surveyed said that they would find it acceptable if a new reactor was built at an existing site. In a separate survey of people living within a 10-mile radius of 64 nuclear power plants, over 80% favored nuclear energy and 76% said it was acceptable if a new reactor was built at an existing site.

The optimism about nuclear power rests on the continuation of several recent trends in the energy market. First is the belief that the cost of competing fuels will continue to rise. Second is the expectation that government controls on carbon emissions will tighten. Third is the assumption that methods of lowering carbon emissions from other fuel sources, like coal, will not become widespread.

While nuclear power plants are more costly to build; once built they generate energy steadily, cheaply and without emitting greenhouse gases

While nuclear power plants are more costly to build than either gas or coal plants, and they take several years longer to construct, once built they generate energy steadily, cheaply and without emitting greenhouse gases. Nuclear power's cost advantage was demonstrated in a report prepared by the World Nuclear Association. It showed the cost per kilowatt-hour (kWh) for various fuels based on the interest rate assumed for the financing of the power plant. At 10% annual interest, nuclear costs 4.0¢ per kWh compared to coal at 4.7¢ and natural gas at 5.1¢. When the interest cost dropped to 5%, the cost spread in favor of nuclear improved as its cost per kWh declined to 2.6¢ compared to coal at 3.7¢ and natural gas at 4.3¢. When one starts to compare the cost of nuclear power against power generated by natural gas at $5 per Mcf, the cost differential is small, but the gap widens significantly when gas is at $14 per Mcf, as it was last summer.

Exhibit 6. Global Uranium Reserves

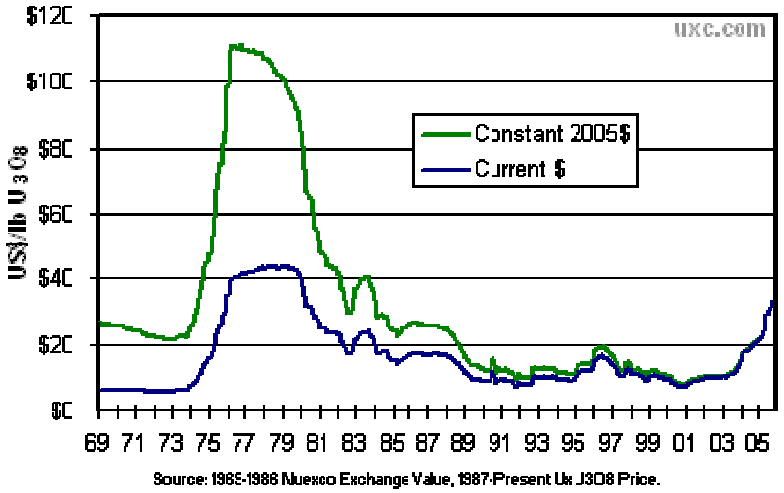
	mm Pds U308		mm Pds U308
Australia	2576.3	Uzbekistan	368.0
Kazakhstan	2119.9	United States	276.0
Canada	1104.1	Mongolia	276.0
South Africa	736.1	Ukraine	184.0
Nambia	552.1	Niger	184.0
Brazil	368.0	Others	552.1
Russia	368.0		

Source: World Nuclear Association, PPHB

Known conventional resources of uranium will last only 85 years

One of the more interesting challenges for nuclear power, like that of other fuels, may be the supply of its raw material. Based on an assessment by the IAEA, known conventional resources of uranium will last only 85 years for the most common type of reactors based at 2002 rates of use and slightly longer for other types of reactors. Global uranium reserves are estimated at 9,201 million pounds of U308. This analysis suggests that the cost of uranium will continue to rise, much as it has over the past two years.

Exhibit 7. Uranium Fuel Price History



Source: Ux Consulting Company, LLC

China is planning to build 32 new plants by 2015

The projected growth in new nuclear power plants will come from a number of countries led by China, which is planning to build 32 new plants by 2015. Another eight would be built by 2020 in order for China to increase its nuclear power generation capacity to 40 million kilowatts, or 4% of its total by 2020. China hopes to launch research projects that will create "third-generation" nuclear technologies by 2012 and build a prototype fast breeder reactor by 2020.

Russia is also ramping up its plans to add new nuclear facilities. At the present time, it has five plants under construction due to be on line in 2010. A further five plants are under construction to replace aging plants. It is planning to build 19 new plants by 2020. This construction activity will boost Russia's electric power generation from nuclear power from 20.8 Gigawatts (Gw) to 50 Gw by 2020.

India, which just signed an agreement on nuclear power with the United States, is looking to generate 40,000 Megawatts (MW) of electricity with nuclear power in the next 10 years, compared to current production of a mere 3,120 MW. India also wants to step up mining uranium ore at four mines, including the existing Jaduguda mine in Jharkland.

In the United States, the 2005 Energy bill provided $3.1 billion of tax credits, along with liability protection and compensation for legislative delays for the nuclear power industry

In the United States, the 2005 Energy bill provided $3.1 billion of tax credits, along with liability protection and compensation for legislative delays for the nuclear power industry. On December 30, 2005, the Nuclear Regulatory Commission (NRC) certified the design of a new reactor – the 1,000-MW Westinghouse advanced passive reactor. With these initiatives, the U.S. electricity industry is stepping up with plans to build more nuclear power plants. Seven U.S. power-plant operators are preparing combined construction and operating license requests to the NRC that could restart construction in the next five years.

Most of the new nuclear reactor designs are third-generation pressurized-water reactors, although companies in China, France, and South Africa are looking to build a fourth-generation design called a gas-pebble-bed reactor. The new reactors are supposed to be inexpensive to build, more powerful and safer. These new plants can be operated for up to 60 years, according to nuclear power trade groups.

The future for nuclear power looks bright

The future for nuclear power looks bright. While there are concerns about the supply of uranium, the lack of economic stimulus from higher ore prices in past years has inhibited exploration activity that will likely uncover additional resources. As uranium fuel becomes more readily available and new nuclear power plant technologies are developed, the inherent economic and environmental advantages of nuclear power should drive growth for this fuel segment.

Weather Forecast a Negative for Commodity Prices

The forecast by geographic region has negative implications for energy prices

WSI Corporation, a private weather forecasting firm, issued its seasonal forecast for the three month period March through May on February 21. The forecast calls for cooler-than-normal temperatures for the northeastern states and warmer-than-normal elsewhere, compared to the normal 30-year average temperature range. If one looks at the forecast by geographic region for each month, one sees how it has negative implications for energy prices.

In March, all regions except for the Northwest and Southwest should be warmer than normal. There are several states within the Northeast, Southeast and South Central regions that may not be warmer than normal, but they are the exception. As a result of the general warmer temperatures, expectations are that natural gas storage inventories will end the winter season at 1.5 trillion cubic feet (Tcf) or higher. That magnitude of end-of-heating-season inventories will weigh heavily on spring and summer natural gas prices that have already been sliced in half over the past five months.

Exhibit 8. WSI Regional Weather Forecast for Spring

2006	March	April	May
Northeast	Warmer than normal, except NH/ME	Warmer than normal, except ME	Cooler than normal
Southeast	Warmer than normal, especially GA/SC/NC	Wamer than normal	Warmer than normal, especially AL/MS
N Central	Warmer than normal	Cooler than normal	Warmer than normal, esspecially IA/NE
S Central	Warmer than normal, especially OK/KS	Warmer than normal, expecially TX/OK	Warmer than normal
Northwest	Cooler than normal	Cooler than normal	Cooler than normal
Southwest	Cooler than normal	Cooler than normal	Warmer than normal, especially AZ/NM

Source: WSI Corporation, PPHB

Expectations are that April will also see generally warmer-than-normal temperatures across the country, which will eliminate most of the chance that gas storage inventories might have a late season drawdown. In May, however, the forecast calls for warmer-than-normal temperatures in the Southeast, Southwest and South Central regions that should generate gas demand associated with increased air conditioning load, but that is likely to be offset by cooler temperatures in the Northeast and Northwest. The relative strength of demand in the southern states will determine whether there will be any lift to natural gas prices later in the spring.

If the WSI forecast comes true, there is likely more downside to natural gas prices over the next few months, with the potential for some seasonal strengthening during the summer

One climate development that WSI is worried about is the continuing drought in the South Central and Southwest regions that may result in an early start to summer temperatures throughout most of the central part of the country. This could result in significant air conditioning load on electric generation capacity and help gas prices during the summer. If the WSI forecast comes true, there is likely more downside to natural gas prices over the next few months, with the potential for some seasonal strengthening during the summer.

Maneuvering in the Dark to Impact Energy Developments

There has been extensive discussion about the scruples of politicians who insert earmarks (special items that benefit specific projects, groups or companies) into legislation without the benefit of public disclosure or political debate. The earmark issue has become largely associated with the Washington scandal about lobbyists' tactics for dealing with congressional members in order to secure these special benefits for the lobbyists' clients. The debate surfaced last summer following the passage of the energy and transportation bills. Both bills were highly contentious and were the product of Congressional committees negotiating compromises between the provisions of the respective Senate- and House-passed bills that contained billions of dollars designated as earmarks. The infamous $450 million "bridge to nowhere" in Alaska and a sop to corn farmers by increasing the ethanol in gasoline requirements were buried in these bills.

Two stealth earmark efforts are impacting high profile proposed energy projects in New England

However, we have witnessed the use of these stealth earmark tactics in other situations where their use can derail unpopular energy projects that are moving forward within proper legal procedures. Two such efforts are impacting high profile proposed energy projects in New England – a wind farm off Cape Cod and an LNG receiving terminal in Rhode Island. In the first case, friends and family of politicians, who live on prime coastal property, are working to sabotage a proposed wind farm for generating electricity off Cape Cod, Massachusetts. The opposition recently received help from Rep. Don Young (R.-Alaska), who heads the House Committee on Transportation and Infrastructure and is the House Chair of the Coast Guard Conference Committee. He has offered an amendment to the Coast Guard reauthorization bill, now being considered by a closed-door Senate-House conference committee.

Rep. Young's amendment would prohibit wind turbines within one and a half miles of shipping and ferry lanes.

Rep. Young's amendment would strip the authority from the Coast Guard to review any offshore wind project closer than one and a half miles by banning them outright

In a letter to his colleagues, Rep. Young cites a British study that finds wind turbines a threat to safe navigation, but he fails to mention that the study is predicated on a much smaller buffer. The UK approach calls for a buffer of 500 meters, about one-third of a nautical mile, but also leaves it up to the UK Coast Guard to evaluate each project beyond 500 meters on a case-by-case basis. Rep. Young's amendment would strip the authority from the Coast Guard to review any offshore wind project closer than one and a half miles by banning them outright.

The Cape Cod project has the support of residents of Cape Cod and the Islands of Martha's Vineyard and Nantucket as reflected in statewide polls with favorable margins of 3-1 to 6-1. Many environmental groups including Greenpeace, Sierra Club, and the Natural Resource Defense Council, and many industry and energy groups support the project. However, strong political figures are opposed. Among those who have been strong opponents include Sen. Ted Kennedy (D. –Massachusetts) who might be able to see the turbines on the horizon from his family's Hyannisport compound, and Sen. John Warner (R. –Virginia), whose daughters have summer homes in Osterville, a Cape Cod community. Sen. Warner, in 2004, tried to get an amendment inserted into a Defense appropriations bill that would have put a moratorium on the wind farm project, and with Sen. Lamar Alexander (R. –Tennessee), a Nantucket property owner, tried to have the Cape Cod project exempted from receiving a crucial federal tax subsidy for wind farm projects.

One night last year, Rep. James McGovern (D. –Massachusetts) slipped language into the transportation bill that restricts any federal money from being used to dismantle the old Brightman Street Bridge

In Fall River, Massachusetts, Weaver's Cove Energy Corp., a joint venture between Amerada Hess (HES-NYSE) and private energy shipping firm, Poten & Partners, had received approval from the Federal Energy Regulatory Commission (FERC) to expand a former oil tank storage facility into an LNG receiving and regassification terminal. Residents and local and state officials have been opposed to the terminal for safety reasons, but they had been unsuccessful in fighting the approval process. Then one night last year, Rep. James McGovern (D. –Massachusetts) slipped language into the transportation bill that restricts any federal money from being used to dismantle the old Brightman Street Bridge over the Taunton River, and actually requires that the bridge be preserved for pedestrians and bikers. This bridge is being replaced by another bridge with a wider opening for ship passage, and that would not present a navigation hazard for the large LNG carriers delivering their cargos to the proposed Weaver's Cove terminal. The continued existence of the old Brightman Street bridge would prevent the movement of these large LNG carriers to the terminal. As the locals celebrated their victory, the company announced that it would use mini LNG carriers to import the liquid gas. These mini LNG carriers hold about 55,000 cubic meters rather than the 145,000 cubic meters of LNG the larger ones carry. Of course, the use of the mini LNG carriers

will entail two to three times the number of shipments of the larger vessels. There will be as many as three vessels arriving every week. If one believes accident risk is related to frequency of trips, then the use of more small carriers implies a greater risk for the region than that suggested by the original plan.

NIMBY will have won the battle, but lost the war

New England projects that offer the prospect of helping to minimize the possible regional energy shortfalls projected continue to battle the not-in-my-back-yard (NIMBY) objections of residents. At some point, these or other invasive energy projects will need to be built, in order for the region's future power needs to be met. As long as earmarks, sleight of hand and/or dark of night political tactics are allowed to continue to derail new energy projects, New England's economic growth may be limited by a severe lack of power. Based on current social and political attitudes in the region, it will only be when a power crisis surfaces that positive action occurs. By then it may be too late. NIMBY will have won the battle, but lost the war.

Implications of Possible U.S. Dust Bowl

The Dust Bowl region includes some of the most important oil producing areas in the country, and important agricultural land

AccuWeather.com meteorologists are warning that oceanic conditions similar to those that triggered the "Dust Bowl" drought in the United States in the 1930s appear to be in place. To many people, this potential is more academic since the bulk of the U.S. population lives along the East, West and Gulf coasts. Thus, what happens in the central/southwest portion of the country is of less interest to them. That attitude could prove shortsighted as the Dust Bowl region includes some of the most important oil producing areas in the country, and important agricultural land.

The Dust Bowl lasted from 1931 to 1939 and was a catastrophic blow to the U.S. economy that was struggling under the weight of the Great Depression. The Dust Bowl was marked by the worst drought in U.S. history that initially struck a wide swath of the Great Plains, but eventually covered more than 75% of the country. Solar radiation heated up the parched land and caused temperatures to rise to record-breaking levels. The summer of 1936 was the hottest one ever recorded across much of the Midwest and East.

Exhibit 9. Dust Bowl

Source: AccuWeather.com

The low-level jet stream, a fast-moving current of winds close to the Earth's surface, travels east to west across the Atlantic Ocean, and then typically curves northward as it crosses the Gulf of Mexico, bringing moisture to the Great Plains. Abnormally warm sea-surface temperatures have caused this low-level jet stream to continue westward and to weaken, which is preventing much-needed moisture from reaching the region. Moreover, the jet stream shift is allowing a southerly flow from Mexico to bring much drier air northward into the Plains.

Exhibit 10. Normal Summer Weather

Source: AccuWeather.com

Exhibit 11. This Summer's Weather?

Source: AccuWeather.com

There is a possible analog between the Dust Bowl era of the 1930s and the recent amount of hurricane activity

There are two potential issues that may evolve from these Dust Bowl conditions. First, there is a possible analog between the Dust Bowl era of the 1930s and the recent amount of hurricane activity. According to AccuWeather.com's forecaster, Joe Bastardi, "For example, the record-shattering 2005 hurricane season was the first to eclipse 1933 in number of tropical cyclones, and that may only have been because we didn't have satellites in the 1930s to identify the major storms that failed to reach the U.S. coast."

Hurricanes are fed by warm waters. This year's warm Atlantic waters, which are now setting up a possible major drought in the U.S., played a significant role in the development of the damaging 2005 hurricane season. On the other hand, the Pacific Ocean hurricane season was historically tame because it has been relatively cool in that body of water, another prerequisite for the return of a Dust Bowl-like drought. With these conditions

developing, we could be looking at another very active hurricane season in 2006. One potential offset for the energy industry, however, is that in the year following strong storm activity in the Gulf of Mexico, the active hurricanes largely target the East Coast.

We have recently heard of several rigs being shut down in Oklahoma due to a lack of water for drilling

The other consideration is the impact of a Dust Bowl drought on the water supply in the region. The extended drought that has existed in this region is shrinking the water aquifers that are the source of water not only to support the population, but also the agriculture and oil and gas drilling activity in the region. We have recently heard of several rigs being shut down in Oklahoma due to a lack of water for drilling. At the present time, there are 933 land drilling rigs operating in Oklahoma, New Mexico and Texas, accounting for almost 65% of the total rig fleet working nationwide. As the rig count has recovered over the past few years, the importance of this region for the oil and gas industry cannot be underestimated. If water shortages grow, it could become a significant inhibitor for oilfield activity growth – more than the impact from a possible shortage of people. Will this become a significant issue? We don't know, but we do believe it is an issue that needs to be watched.

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