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ENERGY INVESTMENT BANKING, LP

MUSINGS FROM THE OIL PATCH

May 30, 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

Let the Hurricane Season Begin

Last Monday, the National Oceanic and Atmospheric Administration (NOAA) released its forecast for the 2006 hurricane season that starts June 1. Like all the other weather forecasting groups, NOAA has characterized the upcoming season as "a very active hurricane season." But just like everyone else, NOAA doesn't expect this season to be as bad as last year's that saw 28 named storms, of which 15 were hurricanes and seven were major (Category 3 or better) storms. Four of the major storms hit the United States with hurricanes Katrina and Rita causing extensive devastation along the upper Gulf Coast region and to the offshore oil and gas producing infrastructure.

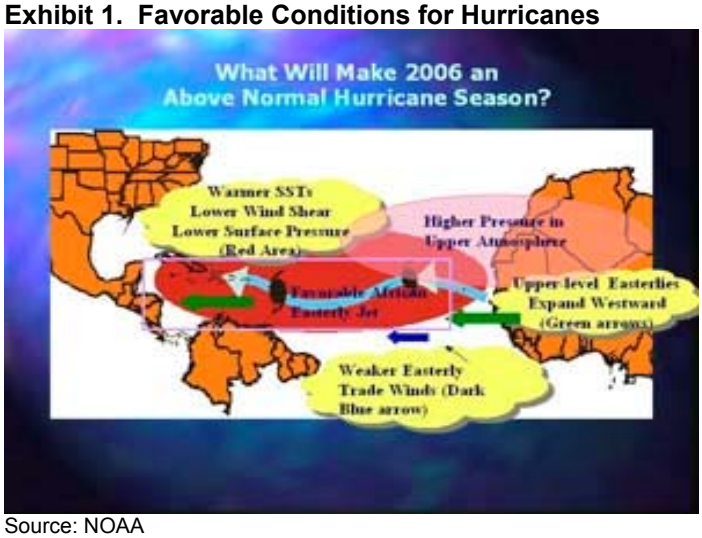
NOAA's forecast calls for 13-16 named storms, 8-10 hurricanes and 4-6 major storms

This year's NOAA forecast calls for 13-16 named storms, 8-10 hurricanes and 4-6 major storms. That compares to an average hurricane season with 11 named storms, six hurricanes and two major storms. As Conrad C. Lautenbacher, Undersecretary of Commerce of Oceans and Atmosphere and NOAA Administrator said, "Although NOAA is not forecasting a repeat of last year's season, the potential for hurricanes striking the U.S. is high." The combination of warm waters in the Atlantic Ocean and lower wind shear, coupled with the absence of any El Niño or La Niña effect and weaker easterly trade winds, are providing ripe conditions for the formation of tropical storms.

The warm water phenomenon reflects the impact of the multi-decadal cycle that has been in place since 1995. Since then, nine of the 11 hurricane seasons have experienced above normal activity. The two below normal years, 1997 and 2002, were marked by strong El Niño trends. While all the forecasting services are calling for a very active season this summer, the critical issue remains where the storms land. In that regard, the work of Dr. William Gray

at Colorado State University is highly interesting. He calls for the Texas coast to be the most highly exposed region early in the hurricane season, shifting to the middle part of the East Coast later in the season.

Exhibit 1. Favorable Conditions for Hurricanes



Source: NOAA

According to Bastardi, "The 2006 season will be a creeping threat"

The mid-May hurricane forecast released by AccuWeather.com's Chief Forecaster, Joe Bastardi, echoes the NOAA conclusions. AccuWeather.com foresees six storms hitting the United States – five likely to be hurricanes with three being major hurricanes. According to Bastardi, "The 2006 season will be a creeping threat. Early in the season – June and July – the Texas Gulf Coast faces the highest likelihood of a hurricane strike, possibly putting Gulf energy production in the line of fire. As early as July, and through much of the rest of the season, the highest level of risk shifts to the Carolinas. From mid-August into early October, the window is open for hurricane strikes to spread northward to the more densely populated Northeast coast. At the very end of the season, southern Florida also faces significant hurricane risk."

Exhibit 2. AccuWeather Assessment of Landfall Risk

CLICK FOR LARGER VIEW

Source: AccuWeather.com

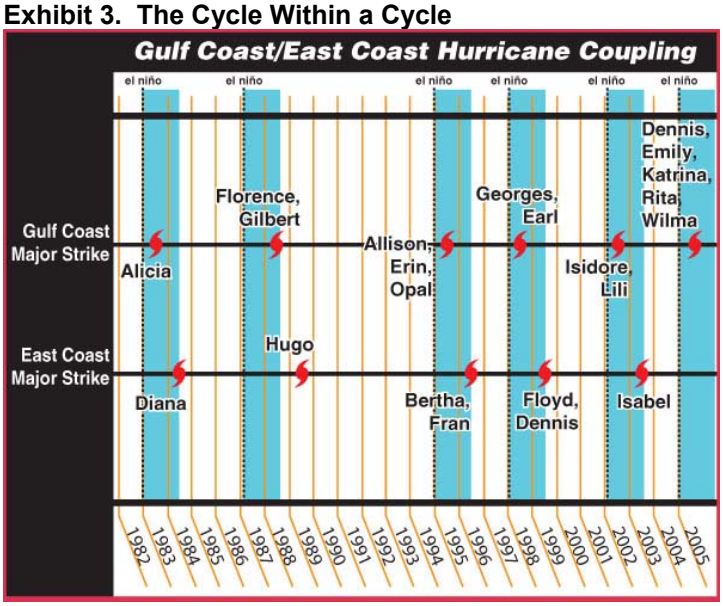
Bastardi, born in Providence, Rhode Island into a meteorologist's family and educated at Penn State, is the lead forecaster for severe weather at AccuWeather. In our experience of watching and reading Bastardi, we have found him to be quite accurate and, importantly, early in his calls. Bastardi is highly focused on the shifting landfall exposure for hurricanes as this season unfolds, and in particular the potential exposure of the Northeast. As he has pointed out, the last hurricane to strike New England was Bob in 1991, some 15 years ago, but weather conditions are becoming more favorable for increased storm activity in the Northeast.

Weather conditions are becoming more favorable for increased storm activity in the Northeast

The buildup of heat and dryness this summer across the middle of the U.S. is a pattern similar to the conditions experienced in the 1930s and during several years in the 1940s and 1950s. According to Bastardi, the climate cycle of the 1930s to 1950s was characterized by hot, dry summers over the central Plains that then expanded toward the Great Lakes and Northeast as the summer progressed. The current hotter weather pattern is similar to the analog years of 1938, 1944, 1954, 1955, 1991 and 1999. In 1954, a year in which three hurricanes hit the Northeast, across the midsection of the nation, April was very warm with a turn to colder weather in May followed by the return of warmth for June. This weather pattern appears to be holding this year as Bastardi points to Kansas City, which were 7.7 degrees above normal in April and 1.5 degrees below normal for the first half of May.

The climate cycle of the 1930s to 1950s was characterized by hot, dry summers over the central Plains that then expanded toward the Great Lakes and Northeast as the summer progressed

Exhibit 3. The Cycle Within a Cycle

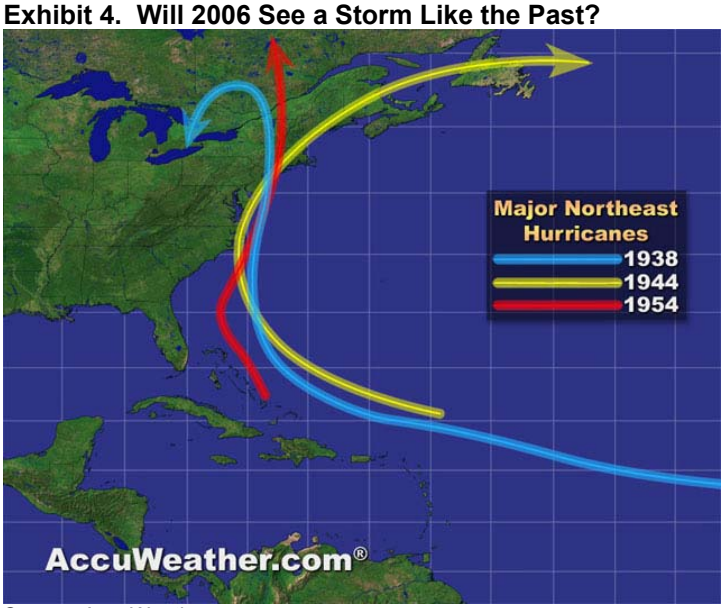


Source: AccuWeather.com

Bastardi notes that there also appears to be a cycle within a cycle. He points to the pattern of major Gulf of Mexico tropical storm activity followed by a swing toward East Coast activity associated with a cooling Pacific Ocean. This hurricane tandem is evident in

the analysis of storm activity for 1995 and 1996, 1998 and 1999, and then 2002 and 2003. The point he is making is that the volume of Gulf of Mexico hurricane activity in 2005, coupled with a cooling of Pacific Ocean waters currently underway, could signify stronger East Coast activity this hurricane season.

Exhibit 4. Will 2006 See a Storm Like the Past?



Source: AccuWeather.com

A combination of climate trends will contribute to an increasing threat of a hurricane of the magnitude experienced in 1938, 1944 and 1954, or perhaps even stronger

As Bastardi points out, the combination of the current decadal cycle, the influence of the cycle within the cycle, and significantly warmer-than-normal northwestern Atlantic waters, will contribute to an increasing threat of a hurricane of the magnitude experienced in 1938, 1944 and 1954, or perhaps even stronger. Thus, while the current cycle has spared the Northeast so far, we are entering a stage where one or two major Northeast hurricanes are of great concern within the next 10 years and, this year, the ingredients for such storms look ominous.

For those of us who experienced Katrina and/or Rita and the evacuation challenges for the population, one has to wonder what will happen in the Northeast if a Category 4 or 5 hurricane threatens. If one looks at a map of the region from New Jersey to Boston, you see that there are not many large cities inland that could absorb the hundreds of thousands of evacuees as Houston, Dallas and San Antonio did. Additionally, there is no major road system to move millions of people away from the coast.

As I sat at Newark airport Sunday a week ago, I watched a TV story on hurricane preparedness in the New York City region. There was an interview with a family living near JFK Airport. Their house is one block from the Atlantic Ocean and a block from Jamaica Bay. The homeowner was saying that he was considering buying hurricane supplies – extra water, canned food, etc. I was struck by the

realization that here was a family (husband, wife and three young children) living in a house on a flat strip of land situated between two bodies of water that was preparing to ride out a storm. I wondered why they weren't figuring out what to take, where to go and when to leave their home. They reminded me of the fools who plan hurricane parties on the beach.

If a Category 4 or 5 hurricane were to hit along the coast from northern New Jersey northward toward Cape Cod, including Long Island, it could make a huge area of the country look like the Mississippi coast after Katrina

If a Category 4 or 5 hurricane were to hit along the coast from northern New Jersey northward toward Cape Cod, including Long Island, it could make a huge area of the country look like the Mississippi coast after Katrina. The resulting damage and loss of life would probably well exceed last year's storm impact. While the economic impact would be devastating, the energy impact would be perverse. The loss of energy demand without any disruption in supply could result in a short-term glut of fuel that might drive petroleum prices down. Do you think the Congress will be stepping in to help offset oil company losses?

Weakening Natural Gas Market

Natural gas prices continue under pressure due to the warm winter and spring that have cut demand plus what appears to be a growing gas supply. Last week, the government reported that injections into storage were 83 billion cubic feet (Bcf) of gas, taking total supplies up to 2.163 trillion cubic feet (Tcf), or the highest level ever at this time of year. Compared to last year, there is now 484 Bcf of additional storage, 29% higher, while storage is 716 Bcf, or 49.5%, above the 5-year average. Some analysts are now saying that the market is caught between a forecast for a warmer June nationwide and growing storage volumes. In their view, the only way out of the growing glut is to curtail some transportation and production. That appears to be happening in some basins, especially with gas prices at a 15-month low and down over 40% since the end of last year.

The only way out of the growing glut is for curtailment of some transportation and production

The view of Cambridge Energy Research Associates (CERA) is that North America has sufficient gas in storage to offset a hurricane season like last year. They point out that with a normal summer, we would still have 493 Bcf more in storage by the end of October than at the same time last year as we start the heating season. The total gas supply lost due to Gulf Coast storms during last year's injection season was 458 Bcf. Thus, even with a repeat of last year's storm impact (something not predicted by forecasters), the nation would still have about a 36 Bcf storage surplus.

There are three new LNG liquefaction plants that will be increasing the supply of gas in the Atlantic basin

In addition to the large volume of gas storage, there are three new LNG liquefaction plants that will be increasing the supply of gas in the Atlantic basin. Trinidad's Atlantic LNG Train 4, Nigeria LNG Train 4 and Egypt's Idku 2 are about to start producing LNG and together will provide about 1.7 Bcf per day of incremental LNG supply for the Atlantic Basin in the second and third quarters of 2006. While not all this gas will come to the United States, European and Asian gas demand also declines during the summer.

As a result, CERA believes that the importation of LNG into the U.S. will average 2.5 Bcf per day for April through October, or 0.8 Bcf per day above last year.

The big question is how low might prices have to fall to convince coal-fired electricity generators to switch to gas-fired power

The big question is how low might prices have to fall to convince coal-fired electricity generators to switch to gas-fired power. The switch-over price appears to be about $5.00 per million Btu's to get power plant buyers interested, which would suggest more downward pressure on gas prices. CERA says that it expects to see gas prices cheap enough before the end of the year that would displace coal-fired power generation capacity. The current Henry Hub spot price as of last Friday morning was $5.86 per mcf. At the same time, the Chicago Citygate spot price was $5.71, while the New York Citygate spot price was $6.42. The spot price for gas at the California border was $4.87.

The risk in the market is that our industrial manufacturing base could be destroyed by a lack of gas supply

The challenge for the North American gas market is how, and if, gas prices rebound. CERA is forecasting that the compound annual growth rate in total gas demand for 2006-2012 will be 2.4%. That growth will be driven by 5.5% average annual growth for power generation, while annual residential, commercial and industrial demand growth will average 1.4%, 1.7% and 1.3%, respectively. They believe the risk in the market is that our industrial manufacturing base could be destroyed by a lack of gas supply. While this appears to be a strange conclusion in light of current low gas prices, CERA points to the fact that gas demand for power generation has increased 26% since 1998 while there has been a 10% decrease in industrial gas demand. The latter falloff has occurred principally in the food processing and pulp and paper industries. Without this decline, the U.S. would already have become mired in a serious gas supply situation.

On the supply side, for a number of years the U.S. has balanced its gas supply shortage with increased imports from Canada. However, the growing output from Canada's oil sands production requires increasing volumes of local gas to manufacture the synthetic oil and that growth may limit future gas exports to the United States. Some of the U.S. supply shortage may be satisfied with increased LNG imports and domestic supply coming from the strong drilling activity. Unless more supply is added, however, we will need to drive industrial gas demand out of the market according to CERA.

Will current natural gas prices curtail the strong increase in domestic drilling activity?

Will current natural gas prices curtail the strong increase in domestic drilling activity? Based on comments from energy executives speaking at a Wall Street sponsored energy conference last week, there should be no impact. The companies expect to continue drilling through the current gas price weakness. The companies expect that lower gas prices will cause service costs to fall helping protect their margins. Unfortunately, drilling through the price weakness is the typical response of industry executives until they see that future conditions will not support the economics of their drilling prospects. When, and if, that happens, look out.

New England Wind Saga Continues

Sen. Ted Kennedy (D-Massachusetts) is dropping his insistence that the governor of Massachusetts be given veto power over the project

The battle over the Cape Wind project in Nantucket Sound continues with two new twists. First, the *Boston Globe* web site is reporting that Sen. Ted Kennedy (D-Massachusetts) is dropping his insistence that the governor of Massachusetts be given veto power over the project. That power was included in an amendment to the Coast Guard appropriations bill in the joint House-Senate committee negotiating the final provisions of the bill. Kennedy had solicited the help of Sen. Ted Stevens (R-Alaska) to get an amendment to the bill that did not require any notification or vote, which would give either the commandant of the Coast Guard or the Massachusetts governor the ability to veto the bill. As news of this amendment leaked out, Congressional uproar ensued. The objections were so strong, including a threat by President Bush to veto the non-controversial spending bill, that it has been delayed in the negotiating committee for over a month. The Coast Guard has already indicated in its review of the project that it has no objections.

A new wind farm project has been proposed in Buzzards Bay

The second twist is that a new wind farm project has been proposed for Buzzards Bay off Massachusetts. People are already speculating about the potential for rich owners of summer homes in the region to object and start a not-in-my-back-yard (NIMBY) campaign to derail the project. The editorial page of the *Providence Journal* raised the issue of whether it would take over five years and 17 regulatory reviews to get the Buzzards Bay project approved, as it has for the Cape Wind project. The editors made the point that it was unfortunate that they couldn't harness all the hot air from the hypocrisy of the wind farm debate. For a region of the country that is facing power shortages and suffering from pollution emissions by hydrocarbon-burning power plants, plus has experienced a serious oil spill off its coast, the prospect of clean, environmentally friendly and low-cost power would seem to be welcomed. Never let us underestimate the power of selfishness.

Energy Stocks: 12 Days in May

If we consider the last 12 days of energy stock trading, the air battle for France may have been equally as emotionally damaging, but less entertaining that the coup movie

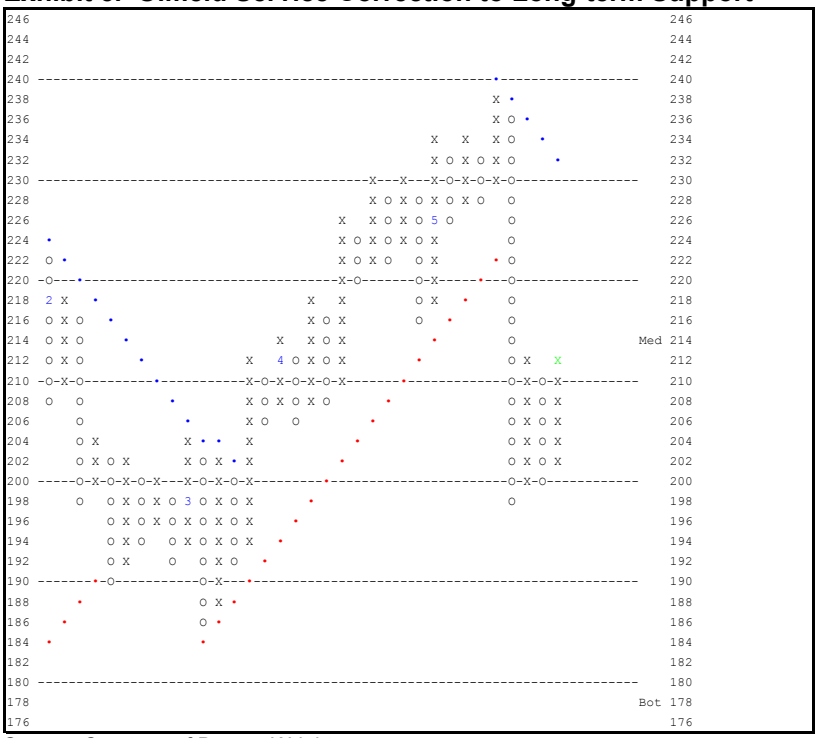
There is an investment rule that investors should sell their stocks in May and then stay away. In 1964, there was a movie directed by John Frankheimer and staring Burt Lancaster, Kirk Douglas, Fredric Marsh and Ava Gardner called Seven Days in May about the potential overthrow of the U.S. government by a general who feared a sneak attack because of the president's desire to sign a disarmament treaty with the Russians. Recently there was a book by authors Brian Cull, Bruce Lander and Heinrich Weiss called Twelve Days, The Air Battle for France and Low Countries, 10-21 May, 1940. If we consider the last 12 days of energy stock trading, the air battle for France may have been equally as emotionally damaging, but less entertaining than the coup movie.

On May 10, the Philadelphia Oil Service Index (OSX) closed at a

The oilfield service companies had just completed reporting extraordinarily strong first quarter earnings and managements spoke glowingly about future business trends

peak of 235.34 after an extended run since the beginning of the year. The oilfield service companies had just completed reporting extraordinarily strong first quarter earnings and managements spoke glowingly about future business trends. The Offshore Technology Conference held the first week of May in Houston was marked by equal bullish comments. On May 11, the OSX opened up, hitting an interim high of 238.82, for another 1.5% gain. However, the index closed the day at 230.78, marking a loss of 1.9% for the day. That decline marked the start of one of the more brutal corrections for energy stocks and commodities experienced in many years. For the next eight trading days, the stocks corrected (collapsed seemed more apt) with the OSX falling to an intraday low of 197.99 on May 22. This level was about where the 200-day moving average was for the index, often a support point in the stock market and, as shown by the Dorsey Wright point and figure chart, about where substantial strength (resistance) existed to the left of the chart.

Exhibit 5. Oilfield Service Correction to Long-term Support



Source: Courtesy of Dorsey Wright

The OSX correction was exactly 10% - a normal correction in a bull market

The next several days marked significant volatility. From the low of May 22, the index intraday low bounced up 7.78 points (+3.9%) the next day, only to be followed by a 7.25 point drop (-3.5%) the following day. Since that re-test of the index low, we have seen the stocks climb back to close at 211.90 on May 26, the Friday before the three-day Memorial Day holiday weekend. From the May 10 peak to the Friday close, the OSX correction was exactly 10% - a normal correction in a bull market. This does not mean that we are out of the rough patch for energy stocks or commodities for that

matter, but the correction so far, as brutal as it has been/felt, has not altered the market leadership nature of energy, commodity and material stocks.

Crude oil prices peaked on April 21, some three weeks ahead of the peak in other commodity prices

While we focused on the oilfield service stocks, the recent price correction we described impacted most commodity markets – copper, gold, silver, aluminum and palladium, for example. What it didn't accurately describe is the oil market. Crude oil prices peaked on April 21, some three weeks ahead of the peak in other commodity prices. Oil was close to its recent high on May 11, and it has experienced some of the same volatility as the other commodities, but its correction was only about 4.4% versus 10% for the OSX and gold. Interestingly, copper prices, after a sharp correction, are now only off 0.4%.

The issue for commodities is that their underlying fundamentals remain strong and their outlook appears positive because they have suffered from an extended period of underinvestment in new mines and infrastructure just as oil and gas have experienced. High prices are the vehicle for getting more investment to develop new commodity and energy resources that will either lower future prices, or at least produce greater future supplies.

Urban Wood: The New Fuel Source

The switch in fuel will enable the company to displace an estimated 65% of its natural gas consumption

In Seattle, Washington, the 113-year old Seattle Steam Co., which provides heating and hot water to hotels and businesses in the city, is turning to an old fuel source to fire its boilers. The company plans to replace one of its five natural gas-fired boilers with a new boiler burning recovered "urban wood;" a blend of old shipping pallets, packing materials, stumps and tree trimmings. Seattle Steam operates 18 miles of pipeline in the city's downtown business district delivering steam heat to 175 customers. The switch in fuel will enable the company to displace an estimated 65% of its natural gas consumption.

According to Steve Gent, chief executive of the family-owned company, "We're one of the largest customers of natural gas in the state of Washington. But the price is too volatile and it's too expensive. This will help to reduce costs for us and our customers." This fuel switch is not unique. In St. Paul, Minnesota, District Energy St. Paul, which delivers hot water to most of the buildings in the central business district, has reduced its use of coal by 60% by installing a heat and power boiler fueled by wood waste.

The Seattle project has already received a municipal use permit and is expecting a construction permit from the Puget Sound Clean Air Agency soon. Boiler construction could start in May and be completed in February 2007. The project cost is estimated at $18 million. The boiler will need 200 tons of wood a day to be collected, sorted and delivered as small wood chips by Ranier Wood Recyclers of Kent, Washington. Burning wood chips in steam boilers does

produce carbon gas linked to global warming, but Gent said the net effect is minimal because the life cycle of trees absorbs and stores carbon dioxide from the atmosphere. In addition, the new boiler will ensure more complete combustion of the wood than available in a conventional fireplace.

Traditional fuel costs will remain high and thus strain company profits

While these are unique moves, they reflect a growing acceptance of the belief that traditional fuel costs will remain high and thus strain company profits. Finding creative solutions to offset this margin squeeze will become commonplace in coming years and it will have some impact, although likely only marginal, on oil, gas and coal consumption growth.

Democrats and Energy: The Party of Ideas?

Democrats have become a party with lots of ideas on how to solve our energy crisis

The Democratic Party has been accused of being the party of 'No', in contrast to the supposedly idea-ladened Republican Party. Lately the Democrats have become a party with lots of ideas on how to solve our energy crisis. They started coming up with ideas when gasoline prices started climbing. Windfall profits taxes, breaking up the big oil companies, granting federal gasoline tax holidays and even changing established general accounting rules and applying them selectively against oil companies in order to boost their profits so more taxes can be extracted were just some of their ideas. On the other hand, Congressional Republicans came up with probably the most lame-brained idea – the $100 fuel tax refund.

Obama believes that it is time for "innovation and sacrifice" from the people who can make a difference in this issue

Starting a few weeks ago, leading Democrats stepped forward with plans to solve our energy/gasoline crisis. First out of the chute was Senator Barack Obama (D-Illinois) who offered his ideas in a op-ed article published in *The Houston Chronicle*. He tried to take the high road by suggesting that his ideas were designed to provide a long-term solution to the problem rather than the politically motivated solutions usually put forth whenever gasoline prices jumped up. Obama believes that it is time for "innovation and sacrifice" from the people who can make a difference in this issue – the auto industry, the oil industry and the federal government.

The federal government should pick up part of the tab for retiree health care costs in exchange for the auto companies investing in more fuel-efficient cars

Obama believes that we need to start producing cars that use less oil. That means raising the corporate average fuel economy (CAFÉ) standards by three percent a year over the next 12 years that would take passenger cars and light trucks to averages of 40.5 and 32.6 miles per gallon, respectively, by 2020. Automobile executives have said that the transition to more fuel efficient vehicles will be costly, so Obama suggests the federal government should make a deal with the auto companies to ease the cost. He believes the deal that should be made is for the federal government to pick up part of the tab for retiree health care costs in exchange for the auto companies investing in more fuel-efficient cars.

Secondly, Obama believes we need to wean the nation off oil entirely. He wants government to do more than just talk about the

benefits of biofuels, but to take concrete steps to accelerate its use. According to Obama, there are many existing vehicles with flexible-fuel tanks necessary for them to run on E85, a blend of 85% ethanol and 15% gasoline. However, there are many additional cars that can burn E85 fuel but lack the proper fuel tanks. He wants the government to cover the cost of installing these specialized fuel tanks at a roughly $100 per car cost. Obama also believes it is time for the government to act to get E85 pumps installed at service stations. There are 681 stations out of the 170,000 fueling stations in the country with E85 pumps. He said that if the oil companies committed merely one percent of their first quarter profits to this effort, about 7,000 stations could be equipped with E85 pumps.

It is time for the government to act to get E85 pumps installed at service stations

Lastly, Obama would have the federal government provide loan guarantees and venture capital to those entrepreneurs with the best plans to develop and sell biofuels. To help facilitate this effort, the government should create a market for renewable fuels by ramping up the renewable fuel standard and creating an alternative diesel standard that would blend 65 billion gallons of renewable fuels into the petroleum supply each year. Under the 2005 Energy Act, the ethanol production target calls for output of 7.5 billion gallons by 2012. It is interesting to note that Illinois is the number two state in both the production and use of ethanol.

Sen. Reid introduced a bill that would cut domestic oil consumption to 12 million barrels a day in 2020 from about 20 million barrels

While Obama was the first out with a plan, Senator Harry Reid (D-Nevada) was next representing the Democratic Party. With nine other senators, Reid introduced a bill that would cut domestic oil consumption to 12 million barrels a day in 2020 from about 20 million barrels. While this represents a 40% reduction, if one assumes that the domestic demand grows at an average of 1% per year, it represents a 52% reduction from what future demand would likely be without conservation. According to Reid, “We need lower gas prices and energy independence.” We are not sure how you get less consumption with lower gasoline prices.

The Democratic plan would expand the use of alternative fuels for vehicles, require federally-owned vehicles to use them, ensure that more service stations sell alternative fuels, revoke subsidies for oil companies, increase subsidies for renewable fuels and restore aid for low income Americans struggling to pay energy bills.

The Reid and Obama initiatives pale in comparison to New York’s Senator Hillary Clinton’s proposal

The Reid and Obama initiatives pale in comparison to New York’s Senator Hillary Clinton’s (D-NY) proposal unveiled in a speech at the National Press Club on May 23. Clinton believes that Americans are “feeling the effects of runaway oil prices and the failure of our energy policies.” After making a number of comments about past energy policy initiatives and the tendency for forgetting these initiatives once gasoline prices fall, she believes that today’s situation puts the country, our military and economic wellbeing at great risk.

According to Clinton, “It will take a well-funded, comprehensive approach with staying power. Government has to change basically our do-nothing policies. Businesses have to be part of the solution,

not the problem, and provide accessibility, efficiency and innovation. And we as citizens have to do much more to reduce our dependence on oil and begin to conserve and demonstrate more energy efficiency." She cites the progress certain foreign countries have made by following these guidelines: Denmark now gets 20% of its electric power from wind; Brazil powers 40% of its cars with ethanol; and Britain's switch to clean energy technologies has created hundreds of thousands of jobs, has generated strong GDP growth and has enabled it to meet its Kyoto targets to reduce greenhouse gases ahead of schedule.

Clinton says that the United States solved its last energy crisis in the 1970s with conservation

Clinton says that the United States solved its last energy crisis in the 1970s with conservation. She points out that between 1977 and 1985, the U.S. economy grew 3% per year while our oil use dropped by 2% a year. This was all achieved by increasing the energy efficiency of our vehicles, appliances and businesses. While partially true, Clinton ignores the impact on our energy consumption of a 20% prime rate and the significant recession engineered by Paul Volker, head of the Federal Reserve to break the back of inflation.

Senator Clinton believes that with "innovation and efficiency" we can develop a plan to cut our dependence on foreign oil by at least 50% by 2025, or a reduction of almost 8 million barrels per day (b/d). The plan requires that the U.S. converts its liquid fuel base from oil to biomass, which would save almost 4 million b/d. The country needs to shift its reliance on high-carbon electricity sources to low-carbon ones such as solar, wind and carbon sequestration. Lastly, America needs to improve its overall energy efficiency that would save an additional 4 million b/d.

The wind potential of Texas, Kansas and North Dakota is equal to more than half of the electricity we consume today

According to scientists, says Clinton, the wind potential of Texas, Kansas and North Dakota is equal to more than half of the electricity we consume today. She points out that California could meet half its power needs from solar power. She says that wind power is not only the fastest growing source of power, but in certain conditions is now competitive with coal. Clinton would do well to convince Sen. Ted Kennedy (D-Massachusetts) to support the Cape Wind wind farm project off Cape Cod, but like him, she only points out the benefits of projects that are a long way from New York.

The effort would be funded by a two-year profits tax on the oil industry

To achieve her plan, Clinton is introducing legislation that would create a strategic energy fund that would represent a serious commitment from the federal government to prioritize advanced energy and a commitment from our oil companies to reinvest their unanticipated profits into our shared energy future. The idea is that the effort would be funded by a two-year profits tax on the oil industry who she believes is basking in a windfall of profits from high oil prices that they did not plan for, or have any influence in making happen.

In order to finance the fund, over the next two years Clinton would allow the biggest oil companies to keep profits equal to the average

of their profit for the 2000 to 2004 time period plus 10%. All remaining profits would go to the fund. The plan would ex-post facto increase the 2005 taxes of these oil companies. It is also interesting that the plan taxes the oil companies for 2005 and 2006 – one year marked by extraordinary profits and already in the books, and a year that has started off with strong profit performance. But the plan avoids the risk that oil company profits might not be strong in 2007 if either the U.S. or the world slips into a recession. With this slight of hand, the Clinton plan is almost assured of securing its planned $50 billion in funds. The tactics for funding the Clinton plan are little different than Hugo Chavez's treatment of foreign oil companies operating in Venezuela.

Clinton would allow the oil companies to avoid paying into the fund if they elected to invest in biofuels, renewable fuels, or new, clean refining capacity

To offset that charge, Clinton would allow the oil companies to avoid paying into the fund if they elected to invest in biofuels, renewable fuels, or new, clean refining capacity. She doesn't say how much they need to be investing to avoid the tax. Additionally, Clinton's plan alters the traditional governmental approach for encouraging socially directed investment through tax incentives. Here we have a plan that has negative incentives. Clinton also proposes an overhaul of our energy taxes by extending for 10 years our production tax credit, doubling consumer tax breaks for buying hybrids, clean diesel and other advanced vehicles, providing new tax incentives for fleet owners to buy more efficient vehicles, speed the development of cellulosic ethanol by investing $1 billion from the energy fund and with loan guarantees for the first billion gallons of fuel, providing independent gas station owners with a 50% tax credit for new ethanol pumps and extending and expanding the tax incentives for homeowners and business to make efficiency investments.

Clinton's plan is loaded with specifics, at least as laid out in her speech. By 2010, the federal government would be required to buy the most efficient cars manufactured, establishing a 60,000-vehicle annual demand. By 2013, 10% of federal electricity purchases would be from renewable sources. By 2020, we would reduce federal oil consumption by 40%. By 2020, we would get 20% of our electricity from renewables. We would require big oil companies to install ethanol pumps at all their service stations. We would develop plug-in technology for hybrids so people could refuel their cars at home. Clinton would also create a 'fee-bate' to be paid to consumers trading in less efficient automobiles for more efficient ones.

Clinton would work with foreign consumers such as China and India to get them to establish large strategic oil reserves

There were a number of other ideas for reducing our energy dependency. These include tying increased CAFÉ standards to auto company relief on health care costs, increasing the Strategic Petroleum Reserve to a 90-day supply while providing mandates and incentives to get distributors to create an equal amount of reserves for gasoline, heating oil and jet fuel. (We wonder what Clinton has in mind for natural gas storage.) She would also work with foreign consumers such as China and India to get them to establish large strategic oil reserves to reduce the chance that a

supply disruption could create a market panic sending global oil prices up sharply.

According to Clinton, nuclear is a fuel source that needs increased study before we use more of it

Clinton mentions nuclear as meeting her requirement for a lower cost and environmentally friendly source of power, but she is concerned about its safety. According to Clinton, nuclear is a fuel source that needs increased study before we use more of it. The same is said for clean coal technologies.

The Clinton solution to our energy situation requires a bigger government and bureaucrats determining prices, costs and investment, rather than allowing free markets to work

Senator Clinton remarked to reporters that her speech was probably more 'wonkish' than they were anticipating. But she felt that they were owed a detailed plan. She has clearly seized the ideas of Senators Obama and Reid and added to them. The scope and detail of her plan reminds one of the national health insurance plan Sen. Clinton was responsible for developing as First Lady during the first year of President Bill Clinton's time in office. While embellishing on the energy plans of others, the Clinton solution to our energy situation requires a bigger government and bureaucrats determining prices, costs and investment, rather than allowing free markets to work. This sounds more like the failed policies of the 1970s than any new ideas.

Energy Market Insights

We recently attended the IHS 2006 Energy User Forum where we heard a number of speakers discuss current and projected energy market trends. The conference, sponsored by HIS, Inc., which owns CERA, Petroleum Intelligence, Dwight's and other energy information firms, was a three day, two track conference. We attended most of the two days of the conference that focused on strategic considerations. There were a number of interesting presentations with some interesting data points and projections.

Some of the points that we found interesting were:

1. Natural gas prices will fall low enough before the end of 2006 to cause coal-fired electric power generation plants to switch to gas.

2. Even with the strong surge in natural gas drilling in the United States, we will wind up with another drop in supply.

3. Today, in order to start a new oil project that was economic (met the oil company's minimum rate of return threshold) at $22 per barrel now needs a $35 price. This is a 65% increase in the past three to four years.

4. Since 1983, water depth for new exploration has increased at a 6% per year compound annual rate and is projected to continue at this rate through the end of the decade.

5. The Minerals Management Service will need to revamp deepwater lease terms if it wishes to get more drilled as oil

companies are viewing these projects as part of a global portfolio. Since 50% of all deepwater Gulf of Mexico leases are held by only five oil companies, and 57% are held by eight companies, drilling can be limited by weaker competitive returns in the Gulf compared to other projects.

6. LNG will knock $2-$3 off the price of natural gas and send it below the marginal cost of drilling in the United States. This price erosion may have already impacted the market. At $6 per Mcf, we can develop a lot of stranded gas in the world.

7. Rising costs are eroding economics of a number of oil and gas prospects. Costs are accelerating (the CERA capital index has climbed 18% over the past six months) so projects are rapidly moving off the table. There needs to be more innovation in the drilling process to reduce costs and boost returns.

Collectively, these four countries have lost almost 2.2 million b/d of production compared to what was expected

CERA speakers talked about the "slow motion supply shock" that has hit the industry. By that they mean the impact of supply losses from Iraq, Venezuela, Nigeria and the United States. Collectively, these four countries have lost almost 2.2 million b/d of production compared to what was expected. Taken with the current estimate of surplus global production capacity of 1-1.5 million b/d, the lost production would take global supply above the magical 2 million b/d surplus capacity threshold that triggers global oil price moves. If this supply were available, oil prices would be lower than they are currently.

Investors recognize that global oil prices are influenced by fear of further supply disruptions such as Iran. At current production levels, Iran out-produces the available global surplus oil production capacity – irrespective of the fact that most of this surplus oil is heavy and sour that global refiners shun. Without Iran we have a supply crisis.

While we have heard many of the data points and observations about energy markets before, the conference provided a good opportunity to see them presented in new and different ways. As the conference addressed virtually every oil and gas topic, we will be integrating much of this information in future commentaries on the appropriate topic.

Nabors 101 – The Missing Chapter

Nabors' 2005 annual report, management selected a theme of making the report seem like a basic text book for how to make money in the drilling business

In the Nabors Industries 2005 annual report, management selected a theme of making the report seem like a basic text book for how to make money in the drilling business. The subtitle for the report is titled 'Reflection and Direction' and there are four chapters - Acquire and Consolidate; Upgrade and Redeploy; Realize the Leverage; and Entering the New Era. With its recent financing, Nabors should have included another chapter entitled - Creating Value Through Innovative Financing.

On May 18, Nabors Industries Ltd. ("Nabors") priced an offering by its wholly-owned subsidiary, Nabors Industries Inc., of $2.5 billion principal amount of senior exchangeable notes due 2011 under a Rule 144A offering to qualified institutional buyers. The notes bear interest at a rate of 0.94% per year. The notes are fully and unconditionally guaranteed by the subsidiary's parent.

The conversion price represents about a 30% premium

The notes will be exchangeable into Nabors' common shares under certain circumstances at an initial conversion rate of 21.8221 shares per $1,000 principal amount of notes, which is equal to a conversion price of approximately $45.83 per share. The conversion price represents about a 30% premium to the last price of Nabors' stock prior to the transaction. Holders who exchange their notes will be paid in cash up to the principal amount with any excess paid in common shares.

Nabors's subsidiary used $1.035 billion of proceeds to simultaneously purchase 29.4 million shares, about 9% of its total outstanding shares, at a price of $35.25. These shares represent a large portion of the shares sold short by the institutional buyers (largely hedge funds) who bought the notes and who are interested in locking in the interest spread.

Nabors entered into a transaction in which they bought a call on shares at the 30% conversion premium and sold a call at a 55% conversion premium

In order to offset investor concerns about the impact of potential dilution from the transaction, Nabors entered into a transaction in which they bought a call on shares at the 30% conversion premium and sold a call at a 55% conversion premium. The details of the transaction involved Nabors buying a convertible note hedge, which is basically a call option in which a counterparty (an investment bank) agrees to deliver to Nabors a number of shares equal to what Nabors would be obligated to issue upon conversion of the notes. Nabors also sold warrants for the total number of shares that could be converted at the desired premium price, approximately $55 per share, thus raising the effective premium for the transaction from 30% to 55%.

The bottom line is that it should be accretive to Nabors earnings in 2006 and 2007

While Wall Street seemed confused by the financial engineering of this transaction, the bottom line is that it should be accretive to Nabors earnings in 2006 and 2007. More importantly, according to one analyst, Nabors' stock will have to trade up to $120 per share before the dilution from the convertible notes would equal the number of shares the company immediately repurchased. The interesting thing is that Nabors still has about $1.3 billion of cash remaining from the deal that it can use to finance operations, make acquisitions or repurchase additional shares.

This is not the first time that Nabors has led the oilfield service industry in a creative financial transaction that has enabled management to increase shareholder value

This is not the first time that Nabors has led the oilfield service industry in a creative financial transaction that has enabled management to increase shareholder value. In 2001 and 2003, Nabors was able to sell $1.2 billion of zero coupon convertible senior debentures and $700 million of zero coupon senior exchangeable notes, respectively, at terms that were extraordinarily favorable to the company. The cash, which sat on the balance sheet at a

positive income spread gave Nabors the ability to act quickly on acquisitions that competitors could not because they needed to raise the necessary financing.

We certainly expect other companies to undertake transactions similar to the one Nabors just completed

These debt issues were pioneering financial transactions for the industry at the time, but were shortly copied by other oilfield service companies. We certainly expect other companies to undertake transactions similar to the one Nabors just completed. If a company can effect a significant reduction of its outstanding share count, while protecting current shareholders against future dilution until the current stock price has doubled, tripled or quadrupled, why not do it. Look for more convertible deals with call spreads.

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