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ASPO USA PEAK OIL REVIEW

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Association for the Study of Peak Oil & Gas USA

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1. Oil and the Global Economy

Crude prices in NY and London continued to fall last week. In both markets oil is down about $8 a barrel since mid-February with NY futures closing a $90.68 on Friday and Brent futures closing at $110.40. The fall was precipitated by a litany of concerns over the course of the global economy – manufacturing slowing in China; unemployment rising in Europe; the Italian political situation; personal income dropping in the US; the beginning of the $85 billion sequester; the dollar strengthening against the euro; US oil production climbing to 7.12 million b/d; and crude inventories up another million barrels. Optimism about prospects for the resurrected nuclear talks with Iran contributed to the decline.

The EIA, however, reported that global oil and other liquids output during January and February was down 600,000 b/d as compared to last year. When this is combined with a 700,000 b/d increase in global demand the result has been an average drop of 1.3 million b/d in global inventories during the last two months. The Administration says that Iranian output is down 600,000 b/d from early last year. Non-OPEC production, even with increases in US production, is seen as steady in the last two months. The drop of 900,000 b/d in OPEC production in the last year was largely due to the decline of 800,000 b/d in Saudi production and the embargo on Iran. There were minor gains in Libyan and Iraqi production and a 300,000 b/d increase in OPEC NGL production.

Shell will postpone drilling off Alaska this summer as its two Arctic-capable rigs will be in Korea for repairs. Shell's $4 billion drilling campaign in the region has been beset with numerous problems but is likely to continue after the rigs are repaired.

US natural gas prices climbed last week, at one point hitting $3.55 per million, but fell back on Friday to close at $3.45 on forecasts of warmer weather in March.

2. Middle East

Iran: Yet another round of nuclear talks between Tehran and the six world powers took place last week. The six offered to start relaxing the sanctions if the Iranians halted production of 20 percent enriched uranium and exported what they have produced for safekeeping in another country. Although the Iranian delegates talked of progress and a "turning point" after the meeting, Russian sources were pessimistic. The meeting will resume in early April. With Presidential elections coming up in June, many observers believe it will be impossible for Tehran to make such an important decision until many domestic political issues are settled.

Israeli Prime Minister Netanyahu continues to insist that the negotiations are simply a prolonged stalling tactic leaving Iran free to make progress on its nuclear weapons programs. The issue is expected to be the center of

talks when President Obama visits Israel later this month. US Secretary of State Kerry spoke of "terrible consequences" if the talks did not make progress in coming months. Tehran's announcement over the weekend that it is manufacturing 3,000 new-generation uranium enrichment centrifuges is not helping the situation.

In the meantime, the effects of the sanctions continue to be felt in Iran. Inflation continues to push up prices and the middle class is being squeezed badly. US lawmakers introduced a bill to further tighten sanctions on Tehran; however, at this point it is difficult to see what additional restrictions could have a significant impact.

Some observers believe that the sanctions already in place and the 1 million b/d drop in Tehran's oil production will have a long term effect on the country's oil industry. Iran is losing market share to Iraq which is already producing more oil than Iran and could double its production by the end of the decade. Tehran's aging oil fields are suffering from a lack of investment, technology and international partnerships. The major western oil companies such as Total, Shell, and Statoil have already pulled out and it now appears that Asian oil companies from Malaysia, India, Japan and even China are losing interest in doing business with Tehran. All this suggests that the nuclear dispute and sanctions may inflict long-term damage to Iran's oil industry and its reservoirs even if there is an amicable settlement to the situation.

Tehran seems to be pressing ahead on plans to build a natural gas pipeline to Pakistan and eventually India. The Iranians are reported to be loaning $500 million to the cash-strapped Pakistanis to speed the project which is optimistically expected to be completed within two years.

Iraq: There seems to be little progress in settling on a new national budget. A key issue is how much Baghdad should pay foreign oil companies for their drilling in Kurdistan. The Kurds say the companies should receive $3.6 billion while the government is insisting on $1.5 billion. Extremist Sunni factions continue to set off bombs targeting Shiites on a regular basis. A reaction to these attacks seems be coming from a new Shiite militant group, the "Mukhtar Army" which was formed with the help of Iran and has begun sending flyers to Sunni households warning them to leave Baghdad or suffer "great agony."

Shiite Prime Minister al-Maliki has begun saying that a Sunni victory in Syria, which seems increasing more likely, will lead to a sectarian war in Iraq, a civil war in Lebanon, and a division of Jordan. The Prime Minister has been careful not to provoke Sunni demonstrators who have been demanding that he step down. Last week, Iraq's Sunni Finance Minister Issawa, who was a key figure in maintaining the relations between Sunni and Shiite members of the government, resigned. The move will further isolate the Prime Minister, who is perceived by Sunnis as discriminating against them and other minorities.

Iraq is a resilient nation that has suffered much in recent decades; however, it faces many serious problems ranging from global warming which is drying up its water supplies to Arab Spring which has triggered off passions across the region.

In an interesting development, Baghdad has announced that it plans to build an $18 billion dollar oil pipeline that would allow it to export its oil via the Jordanian port of Aqaba on the Red Sea. If such a pipeline were built it would partially mitigate the consequences should Tehran ever carry out its threat to block the Straits of Hormuz.

Syria: The seesaw battle for Aleppo and Damascus continued last week with both sides in the civil war claiming progress. On Sunday, the rebels said they have captured the police academy complex near Aleppo after days of heavy fighting with hundreds of casualties on both sides. The Assad government, under pressure from Moscow, says it is ready to talk to the rebels, but it appears too late to talk about anything other than Assad's departure or the surrender of Damascus. As the military situation on the ground continues to shift slowly in favor of rebel forces, the government has resorted to firing large, inaccurate rockets at rebel-held cities. This tactic which is wiping out blocks of homes and killing dozens of innocent civilians will only exacerbate the situation and reduce the likelihood of meaningful talks.

Of more importance to the outcome of the conflict was last week's announcements that increased outside aid has and will be coming to the rebels. It seems that the Saudis have been financing the delivery of surplus Croatian arms to the rebels in the southern part of the country who are seen as being less radical that groups in the northern parts of the country.

The US announced that it will be delivering $60 million in non-lethal military aid to the rebel forces and UK, which has not ruled out supplying weapons, says it will help the rebel forces too. These announcements brought a swift retort from Tehran, which has much to lose politically in the outcome of the civil war.

While Syrian oil exports never amounted to much, the sectarian passions arising from the prolonged bloodshed, the destruction of much of Syria's infrastructure, and the millions of refugees sheltering inside and outside of Syria are likely to have a major impact on the region for years to come.

3. US Gasoline Prices

Despite the $8 a barrel drop in oil prices in the past two weeks and the accompanying 20 cent a gallon drop in NY futures prices, nationwide gasoline prices have only fallen some three cents a gallon since peaking at $3.78 last week. The message in all this is that higher gasoline prices are coming earlier this year even before the more expensive summer blends of gasoline go on the market. Unless there are unusually large price declines before the year is out, the early start suggests the US motorists' gasoline bill for the year may exceed half a triillion dollars for the first time.

Some of this early surge was due to higher international crude prices brought on by increased demand in Asia; drops in OPEC production that was not matched by corresponding increases in US crude production; and an unusual number of refinery shutdowns, mostly for maintenance in the US and abroad. Moreover gasoline exports in the last few months have been unusually high with nearly 600,000 b/d going to foreign customers mostly in Latin America.

The EIA and API weighed in with comments on the high gasoline prices. As could be expected, the API said the high prices were due to constraints on drilling in the US and stressed the importance of approving the Keystone pipeline. The EAI noted that at least 15 cents of the higher gasoline prices were due to the increase in the cost of imported crude that took place in the first month of the year.

Most observers expect that the price of gasoline will drop in the next few weeks as refineries return from maintenance and the cost of imported crude drops. The EIA expects gasoline to average around $3.55 a gallon this year, but notes that there could be a second price spike in few months when the summer driving season begins.

The issue of just how much damage is being done to the US economy is still a matter of debate. Everybody including Fed Chairman Bernanke seems to agree that in the short run high gasoline prices are sopping up a lot of discretionary dollars that are not going to expand the economy. There is also agreement that those with lower incomes and longer commutes are being hurt. The notion that serious long-term economic damage will not be caused by high gasoline prices is based on the idea that prices will go down shortly, free up discretionary dollars, and the increasing sales of higher mileage cars. Nowhere in these discussions does one ever see the notion that oil prices have been increasing at 7 percent a year for the last 8 or 9 years and are likely to continue to do so.

4. The Keystone Decision

Last week the US State Department released the long-awaited draft environmental impact statement on the Keystone XL pipeline which suggested the pipeline would have little impact on climate change as Canada would develop the Alberta Sands anyway and sell the oil in Asia. The draft also noted that the US really does not need the pipeline as there other ways such as railroads and better utilization of existing pipelines to move oil from Western Canada and the Bakken Shale to US refineries.

The draft came as a disappointment to the environmental movement who see rejection of the pipeline as a major signal to the world, particularly the Chinese, that the US is serious about halting carbon emissions and is willing to take politically tough decisions to back up this decision. Beijing seems to have been badly shaken by dangerously polluted air that settled on the capitol during January and may be coming to the realization that ignoring the environment while striving for high economic growth rates may not be the optimal policy.

The administration is unlikely to make a decision on pipeline until midsummer. The best summary seems to be that either approval or disapproval of the project is unlikely to have much impact on either the climate or the US's energy situation, but as a symbol of Washington's commitment to fighting climate change the decision will carry a powerful message that will reverberate for years.

Quotes of the week

- "The current American economy is built on two largely unspoken and unrecognized assumptions about oil that were made many decades ago. First, we assumed we could have all the oil we wanted. Continuously rising consumption for 100 years reinforced that idea. Second, we assumed that oil prices would be relatively low ($20 per barrel) and stable. Neither one of those assumptions is true anymore."

  - Dr. Bruce E. Dale

- "We are not making a negative call on crude-oil prices. We are simply suggesting that recent advances in supply, multiple pressures curtailing demand and a flagging global economy provide us enough cover to maintain a reasonable supply-and-demand balance, thereby avoiding supply-shortage-related price spikes... Thus, we bid farewell to the days of Peak Oil."

  - Boston Company Asset Management

The Briefs (clips from recent Peak Oil News dailies are indicated by date and item #)

- Time is running out to avert a third summer of **drought** in much of the High Plains, West and Southwest, federal officials warned. Without repeated, significant bouts of heavy snow and rain in the remaining days of winter, a large part of the country will face serious water supply shortages this spring and summer, when temperatures are hotter and average precipitation is normally low. (2/25, #16)
- Hundreds of farmers in central **Iran** have clashed with police during a protest this week against the government's decision to divert water from the area to another province. (3/2, #5)
- **Mexican** President **Nieto** is gaining support from his party to end a 75-year-old state monopoly in the oil industry. The ruling Institutional Revolutionary Party will decide at its national assembly whether to drop its opposition to constitutional changes. (2/28, #15) (3/2, #11)
- Mexico's **PEMEX** plans to invest a record $25.3 billion this year, of which the lion's share will go into upstream activities as the company works to maintain or raise oil and gas output. (3/1, #16)
- The U.S. might consider exporting light, sweet crude to Mexico in a swap for heavy crude, **Adam Sieminski**, administrator of the US Energy Information Administration, said at a conference in Houston. Mexico produces mostly heavy crude while its refineries are set up to run light, sweet oil, Sieminski said. Many US Gulf Coast refiners are configured to run heavy crude while the US is boosting production of light, sweet oil. (3/2, #12)

- Production from the **Barnett shale** play in Texas won't last forever but there's enough gas there to last for a couple decades, a Texas study said. (3/2, #21)
- **Cnooc,** China's largest offshore oil and natural gas producer, was barred from controlling Gulf of Mexico oilfields under US terms for its $15.1 billion takeover of Nexen Inc. The state-owned Chinese oil explorer surrendered operating control of those assets to quell U.S. national security concerns. (3/2, #22, #23)
- According to a new study, median-income families in only one major US city can afford the typical new vehicle which cost $30,550 in 2012 and is heading up again as makers curb the incentives that helped make their products more affordable during the recession. (3/2, #25)
- **Chesapeake Energy** Chief Executive Aubrey McClendon is leaving the company within a month, but the natural-gas producer is continuing to feel the effects of his controversial tenure. The Oklahoma City-based company disclosed in a regulatory filing that the US Securities and Exchange Commission is investigating a perk that allowed Mr. McClendon to invest in wells the company drilled. (3/2, #28)
- A subsidiary of China Petrochemical Corp. said it is spending $1 billion to buy half of rival Chesapeake Energy Corp.'s oil and gas acreage in **Oklahoma**. (2/26, #16)
- Shell said **solar could eclipse oil** to become the dominant energy source by 2060. As part of its "New Lens Scenarios" forecast, Shell predicts that in the meantime, natural gas in 2030 "becomes the largest global primary energy source, ending a 70-year reign for oil." (3/2, #32)
- Brazil's **Petrobras**, said domestic oil output fell in January, breaking a string of three consecutive months of increasing production, as maintenance shutdowns and platform troubles undercut crude output. Domestic crude oil output fell 3.3 percent to 1.965 million barrels per day, down from 2.032 million barrels a day in December. (3/1, #14)
- **Brazil's** consumption of gasoline and diesel soared in 2012 despite sluggish economic growth, an ominous sign for a country that is importing ever-increasing amounts of fuel to meet local demand. Gasoline consumption increased 11.9% in 2012 from 2011. (3/1, #15)
- A new Greenpeace report suggests that US **coal** producers have missed a window of opportunity to export coal to China which accounts for 47 percent of global coal consumption. But the Greenpeace report, called "The Myth of China's Endless Coal Demand: A missing market for US Exports," cites factors likely to contribute to a drop in China's coal needs, including government policies aimed at reducing pollution, slowing economic growth and increased use of renewable energy. (3/1, #19)
- The boom in **shale-oil production** lifted US crude output by 14.6 percent last year to a 17-year high, data released by the federal Energy Information Administration show. Total US crude production totaled 6.474 million barrels a day, up 826,000 barrels a day from 2011. In volume terms, the gain was biggest on record on EIA data beginning in 1900. The percentage rise was the biggest since 1940. (2/28, #21)
- **US crude oil imports** fell 5 percent in 2012 to a 15-year low of 8.492 million barrels a day. The drop of 443,000 barrels a day was the biggest since 2009 and put imports at more than 16%, or 1.6 million b/d, below the peak hit in 2005. (2/28, #22)
- **US oil demand** dropped 2.1 percent to a 16-year low of 18.555 million barrels a day last year. Demand for all major petroleum products was lower, led by a near 400,000-barrels-a-day decline in gasoline demand. (2/28, #23)

- **US natural gas consumption** rose 4.4 percent in 2012, to 25.5 trillion cubic feet, the highest level on records beginning in 1949, EIA said. The rise came as natural gas delivered to power-generators jumped 20.6 percent to 9.1 trillion cubic feet, a record high on EIA data beginning in 1997. (3/1, #22)
- A proposed requirement that **US nuclear-power plants** add $20 million devices to prevent radiation leaks, one of the costliest recommendations stemming from meltdowns in Japan two years ago, has attracted a flurry of last-minute lobbying. The nuclear industry opposes the rule, which would require almost a third of the nation's reactors to install a special filter on vents designed to prevent an explosive buildup of gases. (3/1, #26)
- Barge traffic along the **Mississippi River** between St. Louis and Cairo, Illinois, returned to normal with the completion of rock removal work and rising water levels. (3/1, #29)
- The **air quality in Beijing** and nearby regions hit dangerous levels again on Thursday, Beijing's environmental authorities said. Calm winds, temperature inversion, pollutants transformed from eastern and southern regions and dust from Inner Mongolia are behind the hazardous air pollution in Beijing, Tianjin, Hebei and east China's Bohai Bay. (2/28, #16)
- **Japan** is bracing itself for a new danger from China - toxic smog. Under guidelines issued on Wednesday, Japanese authorities will urge residents to stay indoors if the level of toxic smog spreading to Japan from China exceeds twice the allowable limit set by the central government. (2/28, #17)
- Japan will begin restarting its **idled nuclear plants** once new safety guidelines are in place later this year, Prime Minister Abe said, moving to ensure a stable energy supply despite public safety concerns after the Fukushima disaster. (2/28, #19)
- On the first day of testimony in the **BP** Gulf of Mexico oil spill trial, BP's top executive for North American operations at the time of the disaster acknowledged that a well explosion had been identified as a risk before it happened. (2/27, #18)
- BP's push to maximize profits and cut costs at the Macondo well was a "**root cause**" of the explosion that led to the 2010 Gulf of Mexico oil spill. BP executives pressured supervisors of the Deepwater Horizon rig to speed up drilling operations and hold down expenses as part of a corporate culture that put profit ahead of safety, a retired engineering professor from the University of California, told the judge who is hearing claims over the spill. (2/27, #19) (2/28, #31)
- **California** is trying to avoid an electricity crisis that could stem from its growing reliance on wind and solar power. Regulators and energy companies met, hoping to hash out a solution to the peculiar stresses placed on the state's network by sharp increases in power production from renewable sources which fluctuates wildly. (2/28, #33)
- California is excited over its rich oil and gas underground but the state is debating whether large scale of "fracking" will be allowed. **California's Monterey Shale**, which runs from Los Angeles to San Francisco, is thought to contain more oil than North Dakota's Bakken and Texas's Eagle Ford, both having created thousands of jobs and boosted US oil production to the highest rate in over a decade. (2/28, #34)
- Coal-fired power generation in the US is on the road to elimination, and should be replaced with natural gas-fired plants and renewable power, New York Mayor **Michael Bloomberg** said Wednesday. "Even though the coal industry doesn't totally know it yet, or is ready to admit it, its day is done. (2/28, #35)
- **Gazprom** aims to sign a contract to deliver natural gas to China National Petroleum Corp. by the end of 2013, the Russian gas company said following talks between the chief executives. Gazprom is seeking

to boost supplies to Asia amid falling demand and regulatory pressure in Europe. (2/25, #14) (2/28, #40)

- **India's** electricity shortage may worsen over the next several years as increasing demand due to the country's fast economic growth will outpace additions in generation capacity, the government's economic survey showed. (2/27, #12)
- **India's** oil product sales increased 7.8 percent year on year in January, led by higher consumption of gasoil and gasoline. (2/27, #13)
- **Chevron Corp**. reaped the most among the five largest oil companies drilling on US deep water leases that mistakenly omitted drilling-fee provisions, according to a report produced by a Democratic lawmaker. Chevron avoided $1.49 billion in royalties, out of $2.62 billion that the companies would have paid for the right to produce oil and gas in federal waters. (2/27, #20)
- **France** moved this week to accelerate the development of its marine renewable energy sector, hoping to tap the promising potential of its tidal basins. (2/27, #24)
- Wind has overtaken nuclear as an electricity source in **China**. In 2012, wind farms generated 2 percent more electricity than nuclear power plants did, a gap that will likely widen dramatically over the next few years as wind surges ahead. (2/27, #25)
- **Algeria** resumed some operations at the In Amenas natural-gas complex more than a month after militants killed 38 workers during an attack on the facility near the border with Libya. (2/25, #8)
- NET Mexico Pipeline reported it plans to build a 124-mile, 42-in. **natural gas pipeline** system that will deliver Eagle Ford shale gas to the Texas-Mexico border. (2/25, #17)
- The **US rig count** declined by four to 1,757 this week, according to data from Baker Hughes Inc. Oil rigs increased by four to 1,333. (3/2, #29)