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ASPO USA PEAK OIL REVIEW
Association for the Study of Peak Oil & Gas USA

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1. Oil and the Global Economy

After falling some $8 a barrel during February, oil prices recovered a bit last week with NY futures up about $2 a barrel to close at $91.95 and London up less than a dollar to close at $110.82. Fundamentals remained weak with US crude stocks up another 3.8 million barrels, but traders were optimistic that the US economy will improve. The $85 billion federal sequester, which seems likely to cause considerable economic damage, was thought to have contributed to higher prices early in the week, but seems to have been forgotten by Friday with the markets more interested in a minor bump in the jobs numbers. Oil prices failed to keep up with surging equity prices last week. However, part of this was due to a stronger dollar which normally suppresses oil prices.

An oil leak led to a 5-day closure of the North Sea Brent pipeline shutting in 100,000 b/d of production last week. The pipeline was at least partially working by Friday. Tanker trackers expect that OPEC will increase shipments by about 420,000 b/d during March as more refineries come off maintenance and demand increases.

An 8 cent a gallon jump in gasoline futures on Friday helped support oil prices. NY gasoline futures closed the week at $3.20 a gallon which is only about 15 cents below the highs reached in mid-February. It is hard to see what is forcing up gasoline futures. Refineries are coming back from maintenance; stocks in the NY region have returned to normal after last fall's hurricane; and high prices are likely tamping domestic demand. Exports of gasoline and diesel, however, have been strong in recent months and may be contributing to higher prices. If gasoline does not fall soon, it looks as if the US will set a record for the cost of gasoline consumed.

For those interested in longer term forecasts, the OECD suggested last week that oil prices could rise to between $150 and $270 a barrel by 2020 as demand from India, China, and other growing economies outruns supply. This is expected to happen despite new streams of tight oil coming to market.

Natural gas prices climbed last week to settle on Friday at a 2013 high of $3.62 per million BTUs. Prices have gained about 50 cents per million in the last two months as the northern US experienced colder weather and draws from natural gas reserves were bigger than expected. The increased use of gas as a fuel for power stations in the last year has contributed to demand, but prices are now getting into the range where coal becomes a more economical option for some utilities.

Despite the rather significant drop in rigs drilling for gas in the past six months, Barclay's Research points out that there is a large backlog of wells in the Marcellus Shale that have already been drilled but have not yet been brought into production. Barclay's believes that there could be anywhere from a few hundred to nearly

1500 wells awaiting completion. If this is true, production from the Marcellus could continue to grow in 2013 and even into 2014 with output continuing to increase despite less drilling.

2. Middle East

Iraq: The confrontations between Baghdad and the Kurds and the Sunnis continued to worsen last week. The Shiite-controlled Parliament in Baghdad voted to give the Kurds only $650 million for the oil shipped through the Baghdad-controlled northern pipeline during the last three years as opposed to the $3.5 billion the Kurds claim they are owed. Some of the money is owed to the foreign oil companies which actually produced the oil exported via the northern pipeline from Kurdish-controlled territory.

In another provocative move, Baghdad has established a second military headquarters in a province controlled by the Kurds close to the Syrian border. This move violates a treaty between Erbil and Baghdad governing the deployment of military forces in the region. The Kurds believe the move was a result of Iranian pressure to increase its control over a border crossing into Syria which Tehran wants to use to supply Assad's forces.

Baghdad's confrontation with Sunni demonstrators which has been going on for three months also worsened last week. The Sunni Deputy Prime Minister in Baghdad's coalition government resigned last week over the killing of a Sunni protestor by government security forces two weeks ago. This is the second Sunni minister to resign from the coalition government in recent days suggesting that the "coalition" is becoming more of a fiction. A Sunni protest organizer and spokesman for the movement was assassinated over the weekend. In addition, Baghdad surrounded the main rallying point for the Sunni protests with security forces saying the area had become a haven for "terrorists"—which is fast becoming the term for anybody you don't like.

The Syrian uprising spilled over into Iraq when a convoy of buses returning back to Syria Syrian government troops that had fled from the insurgents into Iraq was ambushed. Forty-eight Syrians and eight Iraqi soldiers who were escorting the convoy died in the ambush. Baghdad blamed the attack on Sunni groups from both sides of the border affiliated with Al Qaeda. This attack may be an early indication of the Syrian uprising spilling into Iraq.

Iran: It was a quiet week with the nuclear confrontation confined mostly to rhetoric. Iranian Prime Minister Ahmadinejad traveled to Caracas for the Chavez funeral. Iran's Parliament passed a temporary budget amid the revenue uncertainties brought on by the sanctions. Tehran is saying that at the recent talks the world powers offered to lift some of the sanctions in return for Iran's limiting enriched uranium production.

The Israelis are saying that time is running out and that the "redline" is near. Washington too is warning that its patience will not last forever as Tehran continues to enrich uranium.

It looks as if India is about to halt all Iranian crude imports due to the inability to get insurance on the cargoes.

Egypt: The Supreme Court cancelled the parliamentary elections that were due to begin on April 22nd, thus increasing and prolonging the political turmoil. As the general chaos in the country grows, talk of takeover by a generally reluctant Army continues to grow.

The aftermath of the February 2012 soccer riots in which 74 people were killed continues to grow in Port Said. While 21 civilians involved in the killings were sentenced to death, seven of nine police officers similarly charged were acquitted. These verdicts have led to a week of rioting in Port Said that drove police from the streets and forced the army to step in to maintain security. At one point, rioting mobs tried to block the Suez Canal by setting boats adrift in the waterway and attempting unsuccessfully to cross the canal to disrupt commercial operations on the other bank.

With the hated police forces not showing up for work, the Army may eventually be forced to take over more security functions. It certainly appears that the country is descending into chaos with militias popping up to carry out police functions. Foreign exchange is rapidly running out and with it, hopes of importing enough food and fuel to keep the country moving.

The efforts to block the canal this week as a means of depriving the government of its main source of revenue is but a hint of what may come if the situation continues to deteriorate.

3. China

The opening of the National People's Congress, China's rubber-stamp legislature, is providing clues that the new administration is serious about undertaking reforms that may change the country dramatically. It is widely believed in China that the massive, self-regulating bureaucracies that have grown up in the last 30 years have resulted in growing social, economic, and environmental problems that could threaten the Communist Party's grip on power.

The key number affecting China's demand for oil is the projected growth rate. For years Beijing has been projecting that its GDP would expand at 8 percent a year and usually exceeded this number, sometimes by a wide margin. Last year it reduced its projection to 7.5 percent and says it expanded by 7.8 percent. For 2013, the growth rate was again set at 7.5 percent but was accompanied by warnings that given the state of the global economy, this number may be hard to achieve.

From the perspective of peak oil, just what China will do about its rapidly deteriorating climate and the need for a massive switch to cleaner forms of energy is most interesting. Last week current Premier Wen Jiabao called for action to alleviate pollution which was the highest-level acknowledgement to date that the country has unprecedented problems with its air and water quality.

All this sets up the country for a gigantic power struggle. For the last 30 years, economic growth has been based largely on 10 percent annual increases in coal consumption which now has annual consumption approaching 3.5 billion tons a year. Slowing or even reducing this rate of coal consumption is bound to have major implications for the growth rates that most governmental officials and industrial leaders have been wedded to for all their careers.

Last week, the government announced a fresh slate of impressive targets for the development of clean energy. The plan calls for the installation of 21 gigawatts of hydro power, 3.2 gigawatts of nuclear, 10 gigawatts of solar, and 18 gigawatts of wind this year. The targets are impressive for nuclear and solar which increased by less than one gigawatt last year and represent an increase for hydro and wind of 10 and 17 percent respectively over 2012 increases.

Beijing has long maintained that improving its energy consumption per unit of GDP is the key to solving the emissions problem. At the Congress, the government announced that they lowered energy consumption per unit of GDP last year by 3.6 percent and set a goal of 3.7 percent this year. In 2011, however, widespread drought cut hydropower production so much that the improvement was only 2 percent.

Other parts of the new plan involve faster resetting of retail oil product prices to keep them in line with the costs of world crude and efforts to improve the quality of oil products to improve emissions. A pilot cap and trade plan and a major increase in coal and petroleum strategic reserves were also announced.

It seems clear that Beijing is now acknowledging that it has a problem and is making efforts to clean up its air and water and understands the dangers of CO_2 emissions. Whether its new emphasis will be enough to counter the 3.5 billion tons of coal that it is burning each year and whether this can be reduced and still maintain current growth rates remains to be seen.

Venezuela

Conventional wisdom holds that Hugo Chavez's handpicked successor will win the sympathy vote to become Venezuela's new President. Beyond that, however, little seems certain. In his 14 years of rule Chavez ran Venezuela's oil company into the ground by dispensing its revenues not only to the country's poor but to his fellow leftist leaders around the world. As the leading America baiter, Chavez made many friends ranging from Tehran to Beijing. As oil production fell and foreign oil companies were nationalized out of the country, Venezuela became heavily dependent on China for investment which was paid back with some 500,000 b/d in exports to Beijing.

The new government will be faced with serious problems ranging from unsustainable inflation rates to rampant crime and with an oil industry and national infrastructure that continue to deteriorate from neglect. How fast and in what direction this will change is the key issue. The likely successor, Nicolas Maduro, is widely perceived as not having the charisma or the political skills to hold together the coalition that kept Chavez in power and popular. One possibility is that the deteriorating economy leads to political unrest, further deterioration of oil production, and even a military takeover as has happened so many times in the past.

Some observers believe that Maduro will be forced to reverse the policies that drove out the foreign oil companies and bring back the expertise to exploit the heavy oil deposits thereby reviving the oil industry. Countries such as Cuba and China which have heavily invested in Venezuela or were dependent on Chavez's largess are clearly worried about what will happen with the new government. Cuba could lose the $3-4 billion subsidy and China could lose the moneys it has invested in recent years to get at Venezuela's oil and further their political interests in the region.

For the next few months it is all up in the air.

Quotes of the week

- "...every time we think we're starting to run out of it, new technologies arise that find us more. The widely circulated fears of a few years ago that we were approaching "peak oil" have turned out to be completely wrong."

  \- Vince Beiser

- "For the first time, all ASPO-USA video content will be presented in one location, PeakOil.TV. This includes years of video content from past ASPO-USA conferences, a testament to all who study the trends, analyze the data, and speak courageously on our collective energy challenges."

  \- Ray Long, ASPO-USA Associate Director

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

- **Canadian glaciers** that are the world's third biggest store of ice after Antarctica and Greenland seem headed for an irreversible melt that will push up sea levels, scientists said. About 20% of the ice in glaciers, on islands such as Ellesmere or Devon off northern Canada, could vanish by the end of the 21st century in a melt that would add 3.5 cm (1.4 inch) to global sea levels. (3/9, #5)
- A new deal by **Gazprom** to market Israeli liquefied natural gas puts Moscow firmly in the east Mediterranean energy sector. The 20-year LNG contract between Gazprom and Trading Switzerland and Levant LNG Marketing also provides a major boost for Russia's drive to rebuild its influence in the Middle East. (3/9, #9)

- **Libyan natural gas** imports to Italy are gradually restarting a week after being suspended. Last Saturday, Greenstream's exports were suspended as a precaution after Libyan militants clashed near a hydrocarbon facility that belongs to Eni and the Libyan national oil company. (3/9, #10)
- Thousands of people rallied in a **Tokyo** park, demanding an end to atomic power and expressing alarm over the government's eagerness to restart the reactors. (3/9, #15)
- **Tokyo Electric Power** is struggling to stop groundwater flooding into damaged reactors at its wrecked Fukushima plant. It may take four years to fix the groundwater problem, delaying the removal of the melted uranium fuel. (3/9, #16)
- **Oil and gas rigs** in the US fell for a third straight week to the lowest level since January after producers moved equipment out of gas plays. The gas count declined by 13 to 407, the fewest since May 1999. (3/9, #17)
- BNSF, the largest railroad in the United States, plans to test running its locomotives on **liquefied natural gas**. (3/9, #23)
- **Global temperatures** are warmer than at any time in at least 4,000 years, and over the coming decades are likely to surpass levels not seen on the planet since before the last ice age. (3/8, #7)
- **India's coal imports** in February totaled 12.6 million mt, down 11.3% from 14.2 million mt. (3/8, #15)
- **PJM Interconnection** has more than $5 billion in grid improvements on tap largely because of massive power plant retirements, fuel-switching to cheaper natural gas and finding renewable resources to meet state requirements for lower-emission generation. (3/8, #16)
- The Pew Charitable Trust said the US **solar energy equipment sector** has a $913 trade surplus with China. Pew said clean energy forms an extensive part of the lucrative trade relationship between China and the United States. (3/8, #18)
- Researchers from the US and China have determined that a **duckweed bio-refinery** producing a range of gasoline, diesel and kerosene products can be economically competitive with petroleum-based processes, even in some cases without environmental legislation that penalizes greenhouse gas emissions. (3/8, #20)
- Landlocked **South Sudan** is building a $40 million-$50 million, 100 kilometer road into Ethiopia to get its crude oil exports to ports on the Djibouti coast. The road will end South Sudan's dependence on pipelines owned by its former civil-war enemy Sudan. (3/7, #12)
- Beijingers who plan to buy **electric cars** won't have to compete for a license plates due to a series of preferential policies for new energy vehicles that will be rolled out soon. (3/7, #24)
- The two biggest providers of **electric car charging stations** in the U.S. are teaming up so that drivers will more easily be able to find their combined 15,000 locations, and recharge by swiping a single card. The companies, ChargePoint and ECOtality, operate networks that handle about 90% of public car charging in the country. (3/7, #33)
- The Egyptian government said it was committed to a project that would extend an **oil pipeline** from Iraq through Jordan at the cost of $17 billion. Egyptian Prime Minister Hesham Kandil met with Iraqi Prime Minister Nouri al-Maliki in Baghdad this week with both sides saying economic and trade measures were top priorities for their partnership. (3/6, #11)
- **India's power generation** will remain heavily dependent on coal for the next two decades despite ambitious plans to increase production of hydro-based, nuclear, wind and solar energy sources. The

Indian government projects 52% of India's total power generation in 2030-2031 will come from coal-fired plants, only marginally lower than the 57% level now. (3/6, #19)

- A **Transocean** supervisor on the Deepwater Horizon oil rig that blew up in the Gulf of Mexico in 2010 testified that a worker misinterpreted a key test before the incident. (3/6, #25)
- Consumers in southern California will get electricity from the first **solar power facility** to come on stream in the region since 2006. NRG Energy started commercial operations at its Borrego I photovoltaic facility in California. The facility, with a 26-megawatt capacity, will provide enough solar power to meet the annual energy needs of around 9,000 households. (3/6, #26)
- A new study has found that from 1970-2010, an increase in **vehicle distance travelled** in the US, coupled with a decrease in the number of occupants in the vehicles, combined to undercut the impact of advances in vehicle fuel economy during that period. (3/6, #30)
- The **US and Saudi Arabia** are approaching Russia as the world's leading oil producer, with production rising 12 percent in the U.S. and 5.9 percent in Saudi Arabia last year. The US production spurt is 10 times Russia's 1.2 percent growth rate. (3/5, #32)
- US energy explorer Apache Corp. said recent success in **Egypt** gave it the confidence to plan for more than 200 wells there this year. (3/5, #11)
- Mexico's President **Pena Nieto** won support from his party to advance with his growth plan that includes ending a 75-year-old state monopoly on the oil industry. (3/4, #15)
- **China** has overtaken the US as the world's largest net oil importer, a once-in-a-generation shift that will shake up the geopolitics of natural resources. The US has been the world's largest net oil importer since the mid-1970s. (3/4, #17)
- **China National Petroleum** will spend $2.4 billion to upgrade the quality of fuel it refines. (3/4, #20)
- **Ireland** has earmarked $45 million in seed capital for a new energy efficiency fund meant to help cut the nation's energy consumption by 20 percent. (3/4, #26)