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1. Oil and the Global Economy

Oil prices climbed circa \$9 a barrel in NY and \$7 a barrel in London during the last two weeks largely due to the unrest in Egypt. New York futures rose to a 14 month high on Friday of \$103.22 and London settled at \$107.72 leaving the WTI-Brent spread at \$4.50, the narrowest in two and half years. A better-than-expected US payroll number last week has Wall Street talking about increased demand for oil in the months ahead.

Gasoline futures followed crude up, increasing from a low of \$2.68 a gallon the week before last to close at nearly \$2.90 on Friday. Retail gasoline prices have been falling across the US as more refineries came back into production, but unless there is a change in the Middle East situation, gasoline prices are likely to increase in the next few weeks.

The weekly US stocks report showed the crude inventory falling by 10.3 million barrels vs. expectations of a 2.5 million barrel decline. US refining the week before last was at the highest rate since last August. Gasoline and distillate stocks also dropped substantially due to the summer driving season and increased exports of diesel.

From the oil markets' perspective most concerns about the Egyptian situation focus on the Suez Canal and parallel pipeline which move about 2.5 million b/d from Middle Eastern oil fields to Europe and the US. Last week a surge in shipments through the canal was attributed to slowdowns and high prices for Russian crude shipments to Europe. For now the canal is functioning normally with the Egyptian Army in charge of its security, but Egyptian society is coming apart with no end in sight.

While the Portuguese government seems about to collapse, a victim of more austerity than the people can stand, there are indications that Europe's long economic decline may be stabilizing.

The economic numbers from Beijing still do not look good and some are wondering if the EU and rest of the world for that matter can recover amidst declining economic growth in China.

Natural gas futures fell 7 cents on Friday to \$3.61 on forecasts of milder weather for the next four weeks in the Midwest, Mid-Atlantic, and Southeast.

2. The Middle East & North Africa

Concerns are rising across the region over the increasing enmity between Sunnis and Shiites in those countries where they coexist in substantial numbers. Even in countries with a small Shiite minority, passions have reached the point where people are being exiled and have been killed solely because of their religious heritage. The Gulf Arab states have decided to retaliate against Hezbollah's intervention in Syria by deporting

Lebanese Shiites living in their countries. Although the expulsions are supposed to be against Hezbollah supporters, in practice any Lebanese Shiite appears to be vulnerable.

Egypt: The ouster of the Islamic government in Cairo has brought a new and dangerous element into the deteriorating Middle Eastern situation. The Arab world is split over the ouster with reactions ranging from jubilation in Damascus as Morsi had been supporting the Sunni rebels to great concern as to what will happen to the Arab world's largest nation. Pro-Morsi riots broke out in the immediate aftermath of the ouster with dozens killed and 1000 injured over the weekend as the Army carried out arrests of many leading Islamists. The Army has named an interim President, but it is doubtful that he can form any kind of effective government in the near future.

The change in government does nothing to help the dire state of Egypt's economy which is nearly out of money, food, and oil. The IMF's \$5 billion loan which was supposed to bring some respite is likely to be delayed until the political situation clarifies. Tourism in Egypt is nearly dead as governments are warning their citizens to stay away. Foreigners living in Egypt are scrambling to get out and diplomatic missions are reducing their staffs.

The Suez Canal/pipeline, which is guarded by the army and transports some 2.5 million barrels of oil per day, seems safe for now, but the Egyptian army is already fighting with militant Islamists in the Sinai. Ships transiting the canal are an attractive target for militants seeking to weaken the new government by blocking the canal and depriving Cairo of a major source of revenue.

BP has already pulled some staff from Egypt, but most drilling by foreign oil companies is taking place at remote sites largely unaffected by the turmoil in the cities. For now, Egypt appears to be facing a protracted period of turmoil that could easily slip into a civil war with many hardships for its 85 million people. The long-term effects of this unrest on the region are unknown, but are unlikely to be good for oil exports. Over the weekend the natural gas pipeline supplying Jordan was blown up once again, denying the kingdom a key source of energy in the midst of the Syrian refugee crisis.

Syria: Government forces continue to make progress in driving rebel forces out of parts of Homs. This is largely accomplished by blowing the targeted neighborhoods to rubble with artillery fire and aerial bombardment until the rebels withdraw. More modern weapons are making their way to the rebel forces, but not yet in sufficient quantities to overcome the government's advantage in armor, heavy artillery, and airpower.

Opposition to Hezbollah's intervention is growing among Lebanese Shiites as an increasing number of what the Israelis call "operatives" are being killed in the Syrian fighting. Hezbollah leaders believe they need a friendly government in Syria to maintain supply lines to Iran, but the mothers of the dead fighters do not necessarily appreciate this subtlety and the need to kill fellow Muslims.

The opposition Syrian National Council has elected a new leader, a former Syrian political prisoner who is close to the Saudis, to act as the face of the rebellion in political dealings with the outside world. In the meantime there are increasing reports of clashes between fundamentalist rebel groups in Syria who seek to, impose Islamic law on "liberated" areas, and more moderate groups.

The food and refugee crisis is becoming more serious as the civil war drags on. The UN says that four million Syrians are no longer able produce or buy enough food and that seeds for next year's crop are in short supply. The UN has launched an appeal for \$40 million to feed Syrian refugees, but so far has only received \$3 million. Unless the UN receives enough money by next month, there will not be time to distribute seeds and fertilizer to farmers in time for the October planting. Syria's neighbors, who are already hosting some 1.7 million or more refugees, are reaching the point where they can no longer handle the refugee flood and are starting to close their borders. Only Lebanon, which really does not control its borders, continues to accept refugees although it already has over half a million.

Iraq: The daily bombings continued last week with another 100 or so killed at scattered locations around the country. A disturbing number of suicide bombings are taking place in mosques during mourning services for the recently killed or during Friday prayers. The UN says that 761 were killed in June which is well below the peak of the violence in 2005 when 3000+ a month were being killed. Some are noting that with many militant Shiite youth going off to fight for the Assad government in Syria, most of the damage is being inflicted by Sunni bombers against Shiites.

Iraq's oil exports fell for the third consecutive month to 2.32 million b/d, largely due to intermittent attacks on the northern export pipeline to Turkey. This is the lowest level since March 2012 and is 155,000 b/d lower than in May.

There is still no progress in the political disputes between Baghdad and the Sunnis or between Baghdad and the Kurds. Kurdistan's ruling coalition has postponed elections and granted a two-year extension to the term of President Barzani. The move is seen as a setback to efforts to turn the region towards more democratic government with elected leaders.

Israel: Plans to export only 40 percent of its prospective natural gas production from offshore fields is sparking a debate in the country. The decision to keep most of the gas for domestic power production is seen as a disincentive to foreign companies to invest in production facilities as they see more profit in selling the gas abroad. The discovery of some 30 trillion cubic feet of gas – much more than expected – is seen as transforming Israel into a more prosperous state. Some see Israel's relative isolation in the Middle East, however, as a barrier to natural gas sales to Muslim countries.

Saudi Arabia: Concerns are rising over the annual "summer surge" in Saudi diesel consumption to counter the effects of hot weather and to ensure a healthy electricity supply during Ramadan. The Saudis are believed to have imported 9.5 million barrels of diesel last month up from 7.5 million in May. In the next few years Riyadh will open three large new refineries which should reduce diesel imports but will also increase domestic crude consumption substantially. Citibank and Chatham House have noted that with demand for electricity in Saudi Arabia increasing by 7-10 percent annually, in 20 years the Saudis will be consuming all their domestic oil production.

Saudi reliance on immigrant workers for more than half of their workforce is coming to an end. Worried about unemployment of Saudi nationals leading to unrest, the government is pressuring up to half the foreigners to leave so that jobs are available for the 12 percent of Saudi nationals who are unemployed. Saudi Arabia is the world's third biggest provider of worker remittances, sending out nearly \$30 billion a year. Over \$14 billion of this has been going to Egypt where it represents 6 percent of the battered economy's GDP.

Saudi Aramco plans to develop two less productive areas of major oil fields, Khurais and Shaybah, in an effort to increase the output capacity of these fields by 550,000 b/d by 2017. The Saudis have been producing oil at record rates in the last two years to compensate for the reduction in exports from Libya and Iran which has been putting a strain on the giant Ghawar field. The Saudis say there are no plans to increase output capacity beyond the current 12.5 million b/d.

3. Quote of the week

- "It is perhaps wise to exercise a degree of caution over longer-term shale oil forecasts... partly because of the steepness of decline rates for shale oil wells, a lot of the very big productivity gains have already been made, and finally, skepticism around some of the more ambitious projections of US shale output due to the existence of numerous logistical barriers."

- Kevin Norrish, Barclays Bank

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

- **Natural gas** exporters plan to defend linking the prices they charge to the price of oil even after the courts have ruled they are overcharging their customers. The exporters claim the 40 year old system is fair and transparent, while consumers say it keeps prices well above those that would be established by supply and demand. (7/1 #4)
- Russian President Putin is urging natural gas exporters to join in an effort to keep natural gas prices tied to oil. (7/2 #5)
- Eurozone unemployment hit a record high in May, but consumer prices rose 1.6 percent in June holding off deflation. Increases in food, alcohol, and tobacco were responsible for the higher prices. The 1.2 percent rate of inflation is below the ECB's target of 2 percent suggesting that deflation is still a possibility in Europe. (7/1 #9)
- Interest in drilling off **Ireland's** coast is increasing. An Australian company and Exxon have started drilling in the Porcupine Basin. So far there have been no estimates as to the potential of the region. (7/1 #10)
- The possibility that there is 700 million barrels of tight oil underneath the high-rent suburban counties of **Surrey and Sussex** south of London has the area worried that the frackers may be coming soon. The government is planning to give tax breaks to shale oil developers. (7/1 #12)
- Limited production from **Kazakhstan's** giant (40 billion barrel) and troubled Kashagan oil field has started. Production was to start in 2005 but has been delayed by difficulty of the project and massive overruns which have pushed development costs from \$10 to \$40 billion. (7/2 #18)
- **South Sudan** resumed crude exports through Sudan for the first time in 18 months. The first consignment left Port Sudan last week. Some 7 million barrels are already in storage at the port waiting to be shipped. (7/2 #19)
- Large banks are reluctant to lend money in **North Dakota** for other than oil projects. The real estate market is too hot right now with housing prices too high to be sustainable. Many new workers are coming to the state without families due to the remoteness and cold weather in the region. Previous oil booms in the state have left localities saddled with unaffordable debts. (7/2 #27)
- The decline in **US oil imports** is forcing down shipping rates. US oil imports by ship are expected to fall by 11 percent to 5.4 million b/d this year. One million barrel Suezmaxes are now leasing for \$10,600 a day – the lowest since at least 1991. Shipments of West African crude to North America will average 700,000 b/d this year, a 30 percent drop in the last three years. (7/2 #28)
- Claims resulting from the **Deepwater Horizon** disaster in 2010 could seriously impact BP's earnings by the end of the year. BP, which so far has paid out \$18.7 billion of the \$20 billion trust fund established to pay victims of the spill, will soon be paying claims out of profits. The company has asked courts to step in to stop what it considers excessive payouts. (7/2 #30)
- Barclays Bank is beginning to question the optimism surrounding the **"shale" oil boom**. Noting the steepness of the decline rate of fracked wells; that a lot of big productivity gains have already been made; and the numerous logistical barriers to continued growth; the bank says "it is perhaps wise to exercise a degree of caution over longer-term shale oil forecasts." (7/2 #32)
- Islamabad expects that the 683 mile pipeline from offshore Iranian gas fields to **Pakistan** will be completed by 2014. When and if completed, the pipeline is expected to supply 750 million cubic feet of gas a day which would be enough to generate 5,000 megawatts of power. (7/3 #7)

- China has expressed interest in investing in an oil refinery and an export pipeline for **Uganda**. The two projects would cost an estimated \$6 billion. Last month Uganda awarded a Chinese firm the contract for building a dam on the Nile and is talking about expanding the contract to cover a 600 megawatt power plant. (7/3 #9)
- The members of **Petrocaribe** which was Hugo Chavez's program for making gifts of oil to friendly states around the Caribbean are wondering what will happen under the Maduro government. Venezuela supplied more than 100,000 b/d of oil to each of the Petrocaribe members at favorable terms in 2012. (7/3 #10)
- **US** car and truck sales rose at the fastest rate in five years last month led by a surge in demand for pickup trucks. Automakers sold 1.4 million vehicles in June, 9.2 percent more than last year and 7.8 million in the first six months of the year. Auto executives are optimistic that the expansion will continue. (7/3 #15)
- **Sinopec** closed a deal to take an equity share in 1 million acres of oil and gas leases in Oklahoma. (7/3 #16)
- **Venezuela's** PDVSA and Russia's Rosneft have signed an agreement to cooperate in the exploration and development of tracks off Venezuela's coast. The agreement covers projects in several parts of the country as well as LNG exports and domestic natural gas sales. (7/4 #16)
- **Chesapeake Energy** will sell assets in the Eagle Ford and Haynesville shales to a subsidiary of EXCO resources for \$1 billion. The sale is the latest of many Chesapeake has made this year in an effort to reduce its long-term debt. (7/4 #18)
- **Shell** announced that its Vicksburg deepwater well in the Gulf has struck 500 feet of oil pay after being drilled to a depth of 26,385 feet. The discovery adds an additional 100 million barrels of oil equivalent to the 500 million already found at the nearby Appomattox site. (7/4 #19)
- The **US rig count** rose by nine last week: gas drilling rigs grew by five and the rest were drilling for "miscellaneous." The total count remained unchanged in the 2nd quarter after five straight declines. (7/4 #20)
- **US truckers** are complaining that federal regulations have reduced their driving time from 82 to 70 hours a week. Last year 3,887 were killed in large truck accidents. (7/4 #21)
- JGX Oil & Gas says it has started Europe's largest fracking operation in the **Ukraine**. The frack will take place in nine stages and take about 40 days – injecting 1.5 million gallons of fluid underground. (7/4 #6)
- **Pakistan's** Prime Minister visited China last week in hopes of attracting the investment needed to revitalize the countries faltering energy sector. China is more interested in Pakistan's relationship to the Muslim Uighur rebellion in western China which borders on Pakistan. (7/5 #6)
- Shell reported the largest oil spill in **Nigeria** of the year last week. Most of these spills are caused by thieves tapping into unguarded sections of the pipelines. Nigeria's government forbids Shell from calling these incidents anything more than "spills" and they are usually reported long after the fact or as a "Force Majure" which closed the pipeline. (7/5 #8)
- Tullow reports a new discovery of oil in Northern **Kenya**, raising hopes that large amounts of oil will be found in the country (7/5 #9)
- In October **Brazil** will auction off offshore blocs containing about two-thirds of its proven oil reserves. The government hopes that all the world's major oil companies will bid and inject massive amounts of cash into Brazil's sluggish economy. (7/5 #10)

- Over half of **China's** population now lives in urban areas, although 200 million of the new urbanites do not have permanent city residency permits. Not having a permanent permit bans people from fully receiving the social benefits available to permanent residents. (7/5 #11)
- The EU's energy chief says that Europe will always need more natural gas so that the Nabucco pipeline which lost out to the rival TAP line last week is not dead. (7/5 #13)
- Statoil's project to build a 12 MW string of floating windmills off the coast of **Maine** has been put on indefinite hold. (7/6 #19)

5. Commentary: Randy Udall – A Comet Passes

By Sally Odland, Steve Andrews, and John Theobald

- *There are only two ways to live your life. One is as though nothing is a miracle. The other is as if everything is.*

– Albert Einstein

Last week our universe was rent asunder by the untimely death of our great friend, colleague and mentor, Randy Udall. The passing of this lanky, unprepossessing comet of a man with his wide-ranging intellect, uncompromising honesty and stiletto wit leaves a wide vacuum in its wake.

We knew Randy primarily through his crusade to bring honest discussion of America's energy predicament into public dialog and policy. Randy started tracking and writing about world oil and gas depletion in the 1990's. He co-founded the US chapter of the Association for the Study of Peak Oil in 2005 and spearheaded five highly touted and provocative energy conferences, creating for a few years the ultimate big tent for international energy thinkers. He was famed for his poetic speeches, wicked humor and accessible metaphor. And also for his insistence on speaking truth to power, no matter its rank.

Randy was a formidable autodidact. When he designed and built his passive solar house by hand, he taught himself plumbing. Auto mechanics? No problem. In his two decades working with CORE—his Colorado energy efficiency group—and ASPO-USA, he taught himself the math and technologies of renewable energy and fossil fuels along with a fair bit of geology. He learned by seeking out smart doers and leaders to probe them with questions that could vault him up the learning curves.

Randy was a contrarian thinker. He worked problems from all angles, refusing to succumb to groupthink and revisiting old assumptions whenever new information came to light. Because of this uncompromising truth-seeking and refusal to toe a party line, he held the respect of many people and groups that would not normally sit in the same room much less at the same table. On any given day, his inbox might field emails from climate scientists, exploration geologists, energy historians, economists, utility operators, environmental groups, and—maybe his favorite—the people actually steering the drilling rigs.

He admired the immense brainpower and ingenuity of petroleum geologists and engineers to find and develop fossil fuels, and he understood exactly how much we rely on them to support the American Dream. All the while, he looked for concrete ways to move houses off energy 'life support', individuals to a lower carbon budget and his country towards renewable energy flows.

There was always solid research behind Randy's picturesque quips. When he threw out one-liners like "Oil shale has less energy content than pig manure," you could be sure he had calculated the per-ton BTUs of both. If he noted that "Energy extraction is now the dominant land use in America", you knew he had run down comparative numbers on acres leased for drilling versus agricultural acreage.

Always present in the moment and engaged with his audiences, Randy connected the abstract world of energy use to ordinary people's lives. He avoided graphs to tell the story, preferring visceral and iconic analogies. To

illustrate the power needed to fuel our electricity appetite, for example, he would show a slide of nude Lance Armstrong on bike, share data from a personal correspondence with Armstrong's trainer, then inform us all that the most powerful man on earth can't generate enough juice to run our hair dryers. A presentation to hundreds of professionals in Boston might divert into a technical discussion of CO2 emissions. The same presentation to a group of college students at UC Davis would morph into an analysis of the energy demands of their campus.

Unlike many pundits, partisans, educators and activists, Randy never punctuated his public conversations and presentations with moral judgments. He refused to jettison facts or objectivity on behalf of a moral crusade. As Garrett Hardin has said, "the tender flower of objectivity is easily crushed by what is taken to be the necessity of the moment." While Randy made damning comments like "Time may be our most precious resource . . . D.C. is fiddling that away while the petroleum burns" and "Without a scorecard, our policy responses are liable to stay stuck on stupid," he did not characterize the American life style as evil. Instead he dubbed us "the Oil Tribe" and made people aware of what that actually meant.

"So much for peak oil' is a popular meme right now" he would say. "But there's a difference between reporting and quoting. All this talk about Saudi America is misleading boosterism. "

"This notion that 'it's morning in America' is simply hype. The pore throats in shale rocks are 20,000 times smaller than a human hair. On these rocks, we've bet our energy future."

"Eventually, the politics of energy has to surrender to the physics of energy."

Randy never played off the Udall family name. Virtually without ego, he shunned all self-promotion. With his eloquence and charisma, people thought him a natural for politics and urged him to run for office to further his message. But, in fact, he had no taste for that. He exercised his public persona at great personal cost and would retreat for long stints to the wilderness to recharge his spirit and soul.

Randy died like he lived, questing nature's energy flows, in the Wind River Mountains he so loved. Death snuck up and felled him on the trail. It is not hard to imagine Randy, led by his boundless curiosity, walking through the portal separating his last worldly step from the universal energy.

We loved Randy like oxygen and will miss him desperately. His was a light the rest of us could navigate by. What a privilege to have been hitched to his star for the ride.

Sally Odland is a former oil geologist who works at Columbia University. Steve Andrews is a retired energy consultant from Colorado. John Theobald teaches at the University of California, Davis. Each of them volunteered for years alongside Randy Udall with ASPO-USA.