Energy Action for a Healthy Economy and a Clean Environment

Peak Oil Review

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1. Oil and the Global Economy

Oil prices moved up steadily last week on the strength of optimism over the state of the US economy, the prospects for a Greek bailout, and the Iran confrontation. NY oil hit $104 a barrel in post-settlement trading Friday, up nearly $8 a barrel from early February. In London oil hit a high of $120.70 on Friday before settling at $119.58, the highest close since last June.

While US gasoline futures traded in a range just over $3 a gallon last week, retail prices continued to steadily creep higher. While the national average is currently $3.52 a gallon, an unusually large spread in retail prices between the mountain and coastal states has opened up with cities in California and the Northeast pushing or above $4 a gallon while some cities in the mountain states are selling for less than $3. If this spring's price run-up looks anything like 2008, the arithmetic says we could see a national average of $4.70 a gallon by the 4th of July with some cities along the coasts 40 or 50 cents a gallon higher. This seems unlikely to happen as high prices will curtail driving. Gasoline consumption in the US so far this year is down by 5 percent (MasterCard) to 7 percent (EIA) over last winter. The big unknown is just how the closure of so many refineries that supply the East Coast will affect prices this year.

The 50 cent a gallon price increase since mid-December is starting to show up in US inflation figures. This is turn is raising concerns as to whether the on-going "economic recovery" will be jeopardized. Should the high prices continue beyond the spring, the Federal Reserve may be forced to decide between stimulating the economy and fighting inflation.

Natural gas prices climbed a bit last week as news that Encana, another major producer, was curtailing production rather than continue to sell gas below cost and a larger than expected drawdown of inventories. The weekly drilling rig count shows rigs drilling for natural gas fell by 25 the week before last while those drilling for oil increased by 18. Analysts are suggesting that some utilities may be switching from coal to natural gas in order to take advantage of the unusually low prices.

2. The Iranian Confrontation

There were numerous twists and turns in the nuclear standoff that kept oil traders nervous all week and contributed to the steadily increasing price of crude. The week started with Tehran announcing that it was imposing an embargo on oil shipments to six European countries. Upon further inquiry it turned out that the decision to start the embargo was on hold, once again demonstrating the disorganization that has overtaken Iranian policymaking. On Wednesday the Iranians announced with much fanfare that their nuclear program was making great strides as they now had many more centrifuges in operation and could make their own nuclear fuel rods. This was dismissed as nothing new by Western governments and was intended for domestic consumption in the face of rising economic hardships.

This news was followed by unsuccessful attempts, apparently by Iranian agents, to assassinate Israeli diplomats in India, Georgia, and Thailand in retaliation for the purported Israeli involvement in the assassination of several Iranian nuclear scientists. The attack in New Delhi, which seriously wounded the wife of an Israeli diplomat, did little to endear Tehran to the Indians who are one of the few countries that still wants to buy Iranian oil. Adding in the deteriorating situation in Syria, in which Tehran seems to be deeply involved, and you can see it was not a good week for the Iranians.

Despite the widespread skepticism that sanctions could ever bring about a change in Iranian behavior, the skeptics apparently did not fully appreciate the economic pressure that the US, EU, and the rest of the OECD could bring upon a country if they really tried. Despite the reluctance of China and India to support the more extreme sanctions, a stream of reports suggests that the Iranian economy is suffering far more than is generally realized. Many major shipping companies will no longer visit Iranian ports for fear of running afoul of sanction rules that would prevent their ships from visiting US or EU ports.

Another development in the offing is a plan to ban Iranian banks from using the international system for electronic banking known as SWIFT. Should this sanction go into effect, Iranian financial institutions would no longer be able to transfer funds electronically and would in essence be blocked from much of their foreign trade.

Given the mounting economic and political problems, it came as no surprise when Tehran announced late last week that it was ready to resume negotiations over its nuclear program. While Western diplomats were skeptical that the announcement was a diplomatic breakthrough, the Iranians did drop previously unacceptable conditions for talks and declare they were ready to start at the "earliest possibility." Many noted that this could be another effort to stall for time or to delay even harsher restrictions; others noted that in reality the Iranians had little choice but to negotiate or face such economic hardships that the regime would be in jeopardy.

The week's events were topped by Tehran's announcement on Sunday that it would no longer sell oil to France or Britain. This move is largely meaningless as the UK stopped importing Iranian oil in September and France, which had been importing 75,000 b/d of Iranian crude in the third quarter of 2011, halted nearly all imports in December.

Tehran has clearly backed itself into a corner. If present trends continue, the country seems on course to have serious economic problems by summer. The Iranian military undoubtedly will have great troubles opening the doors to its secret nuclear programs to international inspectors so there is likely to be prolonged debate in Tehran over what concessions the country can make to ease the sanctions. It seems too early to call last week a turning point in the confrontation, but movement, for good or bad, is clearly taking place.

3. The Greek Bailout

From a peak oil perspective, the EU's lumbering sovereign debt crisis seems rather tame in comparison to the Middle East where mobs rule the streets, assassins stalk, and governments threaten Armageddon. The problem here is the fear that a cascade of defaults by countries and financial institutions will trigger a global depression that in turn will lead to a substantial reduction in the demand for oil.

A week ago, Greece's parliament agreed to the austerity program that should trigger a $170 billion bailout from the EU. The problem is that the parliamentary vote was accompanied by much turmoil in the streets, leading most to believe there is little chance that the Greeks can or will live up to their pledge of austerity. Recent polls show that 60 percent of the Greeks believe they will go bankrupt anyway so why agree to the EU's austerity demands. On the eve of the crucial Eurozone meeting to decide on the bailout, crowds were still demonstrating against the agreement in front of the Greek parliament.

All week, market sentiment swung back and forth between hopes that a bailout will be successful and concerns that it will not take place. Currently the balance of sentiment seems to favor the idea that a bailout, perhaps a partial one, will be agreed to on Monday and the problem will be pushed further down the road.

The good news of the week was that China seems to be coming around to the idea that a global depression would be bad for exports so that Beijng might be willing to spend some of their massive financial reserves helping Europe out of its problems. On the downside, the EU's economy continues to slow and Moody's announced that it is planning to cut the credit ratings of 114 European financial institutions. Increasing world oil prices and the up-coming sanction of Iranian oil imports are certainly not helping the problem. It seems likely, however, that some sort of bailout will take place during the Eurozone finance ministers meeting on Monday to forestall a Greek default on March 20th. The twists and turns of this situation are likely to have a continuing impact on oil prices for the foreseeable future.

Quote of the week

- "... there is good reason to be skeptical that the world's oil production can be forever buoyed by new technology... oil production from existing areas like the North Sea or Alaska declines steadily, meaning the industry must run just to stand still."

-- James Harren, Wall Street Journal

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

- **Saudi Aramco** plans to re-open the kingdom's oldest oil field and produce there for the first time in 30 years as the company boosts output of heavy crude. (2/18, #11)
- **South Sudan's** 3-week-old shutdown of its oil industry in a dispute over oil revenues with the state's former leaders in Khartoum is likely to drag on and push up global oil prices. (2/18, #4, #5)
- In May, **Iraq** is expected to offer a dozen oil and natural gas blocks up for auction in its fourth licensing round. **Exxon Mobil** is prohibited from taking part, however, because it has contracts with the semiautonomous Kurdistan Regional Government. (2/17, #8) (2/18, #10)
- **Coal India**, the world's biggest producer of the commodity, may revive plans to import the fuel to comply with Prime Minister Singh's order to increase supplies to utilities and avoid paying penalties. (2/18, #15)
- A bill that would require approval of TransCanada's **Keystone** pipeline project passed the US House of Representatives by a vote of 237-187. (2/18, #17)
- **Shell's** plans to drill exploration wells in Alaska's Chukchi Sea this summer advanced when the US Interior Department approved the company's oil spill response plan. While Shell must still file individual permits for the six wells it proposes to drill over the next two years, approval of the response plan is a major step. (2/18, #18, #19)
- The government of **Venezuela's** Hugo Chavez is emerging as a supplier of diesel to Syria, potentially undermining Western sanctions and helping the Syrian government fuel its military in the middle of a bloody crackdown on civilian protests. (2/17, #11)
- **China** faces worsening water shortages, a government official warned. The country's water shortages, along with serious river pollution and a deteriorating aquatic ecosystem, pose a growing threat to economic and social development. (2/17, #12)
- **India's** Reliance Industries estimates that natural gas output at its east coast block would fall over the next two financial years due to reservoir complexity, a natural decline in reserves and delays in developing satellite fields. (2/17, #14)
- **ConocoPhillips** agreed to sell its assets in Vietnam to French oil and natural-gas company Perenco SA for $1.29 billion. Conoco is amid a three-year effort aimed at improving its balance sheet and making itself more attractive to investors. (2/17, #15)

- As many of the world's biggest energy companies vie for shale-gas assets, a top executive at Russia's OAO **Gazprom** said it doesn't plan to join the frenzy. (2/17, #23)
- The International Energy Agency lowered its estimate of **Saudi Arabia's** productive capacity from 12 million b/d to 11.88 million b/d in its latest February report. Aramco estimates it could produce as much as 12.5 million b/d. (2/16, #13)
- A Japanese power utility has begun using Russia's **ESPO crude** as direct-burning fuel for power generation in at least one of its oil-fired plants, as part of efforts to diversify its feedstock. (2/16, #19)
- **US lawmakers** hosted meetings with senior executives of firms potentially interested in purchasing the three northeast refineries that are scheduled to close. (2/16, #22)
- Secretary of the Interior Ken Salazar told the House Natural Resources Committee that regulations covering **hydraulic fracturing** on federal lands are necessary, and will be developed after full consultations with state and Indian tribal governments. (2/16, #23, #24)
- Canada's **Talisman Energy** is making even heavier cuts to its rig count in Pennsylvania's Marcellus Shale natural gas play and will not increase drilling until gas prices return to $4/Mcf. (2/16, #25)
- Italian oil and gas group **Eni** said it had made a new giant offshore natural gas discovery in Mozambique with a potential capacity of 212.5 billion cubic metres . (2/15, #15)
- With just three years to go before **Belgium** is due to begin phasing out nuclear power, the country is still grappling with basic questions about its plans, including whether the 2015 deadline has to be adjusted to ensure electricity supplies remain reliable. (2/15, #21)
- A.P. Moeller Maersk, the world's biggest container ship owner, is leading its industry in developing **biofuels** made from organic waste that could cut its carbon emissions and reduce a $6 billion-a-year fuel bill. (2/15, #22)
- A study conducted for the National Wildlife Foundation and the Southern Environmental Law Center concluded that using **wood** for large-scale power plants could lead to higher levels of atmospheric carbon for the next half century. (2/15, #23)
- The Scottish government announced it gave approval to its first commercial **wave power array**, which could deliver power to more than 1,000 homes. (2/15, #25)
- The estimated resources of Israel's Dolphin offshore gas field have been sharply reduced, according to a statement by the Israeli partners in the license. (2/14, #9)
- University of California, Berkeley, chemists are reimagining **catalysts** in ways that could have a profound impact on the chemical industry as well as on the growing market for hydrogen fuel cell vehicles. (2/14, #21)
- **Iraq**, seeking to maximize crude oil exports, opened the first of four planned offshore mooring facilities in the Persian Gulf and intends by March to add 200,000 barrels a day to its capacity for loading tankers there. (2/13, #9)
- A **gasoline shortage in Egypt** has led to long queues at fuel stations and raised suspicions among drivers that it may be a prelude to a cut in subsidies, despite official reassurances that there is no plan to hike prices. (2/13, #10)
- The number of **rigs** drilling for natural gas in the United States fell last week to the lowest level in 28 months as producers continued a rapid cut in activity in the face of ultra-low prices. The gas rig count fell for the fifth straight week, by 25 to 720, completing the biggest two-week drop in three months. (2/13, #24)

Commentary: Of Coal Stoves and Vicious Circles

(Note: Commentaries do not necessarily represent the position of ASPO-USA.)

By Sharon Astyk

In 2007-8, when oil prices shot up to $148 barrel, and most of the rest of the US struggled to get to work the question of what to do was at the center of discussion where I live in rural upstate NY. While the vast majority of US households are heated by natural gas or coal fired electricity, heating oil is the main source of winter heat in most of upstate NY and a good portion of New England – no natural gas pipelines were ever run in many areas. While nationally the percentage of people using heating oil is only about 8%, it is nearly half in northern New England and in rural parts of New York. 3 out of 4 people use fuel oil for heat near me.

That spring and early summer 2008, when most people had forgotten winter, how to stay warm was the single biggest discussion point all over my region. Not only are we more dependent on fuel oil than anyone else in the US, but our housing stock is older, and often poorly insulated, and, of course, it gets cold. Governors in New England states declared states of emergency over the summer, and heating subsidy programs were deluged.

There was already an extant "heat or eat" crisis among the poor, where already struggling families skip meals because an ever larger percentage of their income goes to heating, and the emergent dual and inter-related specter of freezing and starving felt very real. Fortunately or unfortunately (and probably both) the price of oil crashed in the fall of 2008, before the heating season, and most people were able to keep warm.

But what's most interesting about this brush with crisis is that two solutions for rural dwellers outside the gas lines emerged - and both of them are vicious circles, in that the consequences may be worse than the original problem. The first is the classic woodstove, a common sight in rural parts of the Northeast. Almost everyone out here has one, at least for backup or supplemental heat - and it makes a lot of sense. The Northeast is heavily forested, and wood doesn’t have to be transported long distances. You can generally take a cord a year off per acre without doing any noticeable harm to the forest. Not only is a fire a cozy and wonderful thing, but power outages are common in cold places that get heavy ice and snow accumulation. Most rural dwellers who rely mostly on wood heat are comfortable with localized heating – you spend your time in the warm spaces and sleep in cold rooms, cozy under wool and down.

The key to all these woodstoves is that they operate as secondary heat sources for the most part, or as primary sources for people who are accustomed to limited heating. Replacing wood heat with oil and natural gas has permitted the great Eastern Forests to be one of the single largest unified biomes in the world. That forest makes corridors that allow moose to travel from Maine to Boston or coyotes from the Adirondacks to New York City.

All that forestation is a product primarily of fossil fuel usage – during past centuries when people relied heavily on wood in this area, most of the land was open. Vastly more people, not accustomed to limited heating, but trained to expect a uniformly warm house using wood is a recipe for the loss of a great deal of forest.

The other alternative that emerged was coal. When the fear of cold began to pervade households, stores hung out banners that read "we sell coal!" and local dealers began advertising the merits of coal stoves. They were many virtues in some senses - coal stoves are cheaper than wood stoves, and for people without woodlots, coal is often cheaper than wood. It gives out more heat, and can be stored more easily than wood. The coal stove offered more than even the woodstove - a reliable and cheap source of heat to replace oil, assurance that you would not freeze.

Why not simply re-insulate, and do with less heat? For most people, particularly in older housing stock, re-insulation is a vastly more expensive project than replacing one winter's heating fuel with a cheaper one. The people most worried about this are the ones who always struggle to pay the heating bills. Investing money in reinsulation projects *and* in heating fuel isn't possible, and they can’t go the winter without heat. Some may have qualified for subsidized insulation programs through state subsidies or limited assistance low income energy programs (LHEAP), but the demand for those exceeded the supply.

The logical outcome of an oil crisis in the Northeast *ought* to have been the use of less fuel and fewer emissions. And in some ways, it almost certainly would have been. Middle class households and some businesses would have turned down the thermostat. Some people who had used oil rather than natural gas from habit rather than lack of gas lines converted. Some people with the money who had been saying they really should insulate did so.

On the other hand, some people who might have insulated didn't - because they had to use that money to buy a wood or coal stove and install it. Other people converted to electric space heaters - that mostly use coal-fired electricity. Other folk had already committed to their old method of heating at high locked-in rates and couldn't afford to go back and insulate because the money was already gone.

Oil prices fell fast enough that, in the end, it is hard to tell what the longer term effects would be - but I saw enough of them to believe that in a world of consistently high oil prices - and the economic costs of those prices, we'd see a higher rate of emissions from winter heating, not lower, along with much greater deforestation. Millions of personal coal and wood stoves are a potential ecological disaster - and yet they are the logical outcome of individual choices and enormous pressures that make adaptation difficult.

I've often heard people wonder with Jared Diamond, what the last person, cutting down the last tree on Easter Island thought. My guess is this - "I have no choice." The reality of vicious circles is this - once you are in one, it is very hard to get out. The infrastructure to get you out may not exist - or if it does, you can no more get ahold of it than you can fly.

Our challenge, then, in facing a world of complex and intersecting disasters is measured not in "how well we avoid inconvenience or difficulty" but in "finding solutions that don't make things worse." This is difficult, because essentially it requires that we ask people to choose between two short term solutions - the first offers less inconvenience, less immediate struggle, and seems more like what's gone before. This is the coal stove solution. The second seems harder, and may seem to have a higher initial investment. It is more radically different, and thus seems speculative. Its advantage is that it offers long term solutions - that is, you get less upfront, but more in the long term.

The long term solutions that work are the ones that are low enough in cost to be viable for most people, offer enough longevity for a people of declining wealth to pass down something to their children and grandchildren, and don't make things worse. They are mostly powered by human beings, by renewable energy, and most of them require collective self-regulation and a degree of willingness to defer wants.

There are ways out of the vicious circle. They involve hardship for people already facing unaccustomed hardship, and they involve radical changes in narrative - because the first myth of hardship is that the end is always just around the corner. Convincing people it may go on awhile is perhaps the hardest part. Convincing modern Americans that they will have to endure austerity measures - that they may have to go back to older ways - won't be easy. Other battles may not even be possible.

Interim choices have consequences. Sometime they make it easier for us to transition - sometimes they make it possible for us to smooth over our shift. The Prius may make it easier to get to work until we can car share or arrange public transport. At the same time the costs of paying for the transitional solution and its consequences can leave us vulnerable when even the transitional options fail, can preclude a truly long term answer.

Moving sooner to the longer term and more complex solutions - a smaller, more efficient radiant heat source with high mass, better insulation, a different relationship to heating, a change in the culture - is hard. It requires that you let go of the dream of normalcy. It requires that you fight off the overwhelming gravity of the vicious circle, and that will be one of our pre-eminent challenges.

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