



Drumbeat: March 19, 2009

Posted by [Gail the Actuary](#) on March 19, 2009 - 8:59am

Topic: [Miscellaneous](#)

[The peak oil crisis: government in the transition](#) (Tom Whipple)

From a peak oil perspective, the notion of returning to days of vibrant economic growth is simply not in the cards. Economic growth takes oil; world production has already started to drop; and there will be much competition for that which is left. While gasoline is currently cheap, three to five years from now it won't be, as a combination of slowly increasing rates of oil depletion and lack of investment in new production will lead to shortages and growth-stifling prices.

At some point, the federal government which, through inertia and good lobbying, tends to fund all sorts of relics from bygone eras - space travel, submarine fleets, jet fighters, and a world-wide military presence -- will have to rethink what it is doing. There clearly are vast amounts of "government" expenditures which can be cut before we get to elementary teachers, sanitation departments, and public health.

If the past year is any example, the next few decades will be ones of extreme hardship. Governmental priorities are already [moving] from nice-to-do to can't-survive-without. The relationship among and services provided by the various levels of government will change - perhaps radically. For the coming fiscal year we seem to have a new paradigm under which the federal government borrows and sends enough money to lower levels of government to keep them functioning. If the borrow-without-much-taxing model is to continue to work, then some flavor of continuing federal support for local services will have to continue.

[Steven Chu's Energy Miscalculations](#) (Dave Cohen)

Chu's optimistic calculations also explain his curious lack of knowledge and concern about the oil (and natural gas) markets. As the nation's chief energy scientist, he looks only at the very long term. He does not concern himself with what may happen 5, 10 or even 15 years from now. Chu wants to sponsor nifty, cutting-edge science. He does not want to engage in the thankless, difficult work of finding practical ways to reduce America's oil consumption.

Recently Chu hired Matt Rodgers of McKinsey & Company to expedite distribution of DOE funding of R&D and renewable energy projects (Wall Street Journal, March 9, 2009). McKinsey & Company is perhaps the most important consulting firm you never heard of. Rodgers gave his take on peak oil in Will Oil Demand Peak Before Supply

Does? His disjointed analysis contains gems like this one:

... oil will remain the world's primary transportation fuel for some time. Clearly, we aren't moving to a hydrogen economy quickly, and **renewables are not on a path to replace oil in the next 50 years.**

Nonetheless, **underlying trends suggest that we could hit peak demand for oil well before we hit peak supply.** Going forward, **there are significant opportunities to generate positive economic returns from improved energy efficiency**—higher fuel economy can have a greater impact on global demand than any other single factor. Oil substitutes are being adopted as blending components much more rapidly than as replacement fuels. The use of e10 (gasoline with 10 percent ethanol) across the system has had far more impact than the limited use of e85 (gasoline with 85 percent ethanol). [emphasis added]

[Genji and the printing press](#) (John Michael Greer)

All this bears directly on the predicament of industrial society. Our age will certainly leave its share of legacies to the far future, but most of those are the opposite of helpful. (I am thinking especially of the nuclear waste we are heaping up in “temporary” storage facilities, which will likely be lethally radioactive dead zones surrounded by cow skulls on sticks 25,000 years from now.) Of our positive achievements, on the other hand, the ones most likely to reach our descendants 5000 years from now are the ones written in books.

Thus I'd like to suggest that books, and the technologies that produce and preserve them, might well deserve a place well up on the list of useful things that need to be preserved through the long decline ahead of us. I wish it made sense to count on public libraries, but those venerable institutions have gotten the short end of the stick now for decades, and the dire fiscal straits faced by most state and local governments in the US now do not bode well for their survival. (The county next to the one where I live, for example, has already shuttered its entire library system, and handwaving has replaced any meaningful plan to reopen it.) Like so many other things of value, book technology may have to be saved by individuals and local voluntary groups, using their own time and limited resources.

It might come down to copying books with pen and ink onto handmade paper, but there may well be another viable option. Letterpress technology is simple enough to make and maintain – the presses that sparked a communications revolution in Europe in the fourteenth century were built entirely with hand tools – and brings with it the power to produce a thousand copies of a book in the time a good scribe would need to produce one. With printing presses, something like the book culture of colonial America – with local bookstores, libraries open to anyone willing to pay a modest subscription, and private book collections – comes within reach, at least in regions that maintain some level of stability and public order. This may not seem like much in an age of internet

downloads, but it beats the stuffing out of Dark Age Europe, when most people could count on living out their lives without turning the pages of a book.

[RELOCALIZING VERMONT: Cooking with the Sun](#)

I got a new toy yesterday--the beginnings of a parabolic cooker. I've been looking for a satellite dish on Washington County Freecycle, an email listing of things people want to give away or acquire for free, and one finally appeared. The former Wild Blue dish is about 1/3 m2 in area (average 27" in diameter), and it can really concentrate the sun. A couple friends showed up yesterday afternoon, just as I was about to cover the surface with self-adhesive aluminized mylar I'd bought at the ReStore. Six hands made the job of applying it (rather) evenly much easier!

This baby can cook! Even at 5:45 pm, a sheet of newspaper held in the focal point ignites within about five seconds (photos below the fold).

[Oil, Water Are Volatile Mix in West](#)

Energy Firms Buying River Rights Add to Competition for Scarce Resource

Industry representatives said they have substantial holdings of water rights for future use in producing oil from shale, though they could not confirm the precise numbers in the report.

Before any move into full-scale oil shale production, the energy industry plans a close study of water issues, including the impact its operations would have on ranchers, farmers and communities that all rely on the same limited sources of water, said Richard Ranger, a senior policy adviser for the American Petroleum Institute. "It's among the most important questions to be examined," he said.

Bitter fights over water are a recurring feature of life in the arid West, from Colorado to California, and energy companies are just the latest in a long list of users vying for the resource.

[Lighting: A brilliant new approach](#)

"INCANDESCENT" might well describe the rage of those who prefer traditional light bulbs to their low-energy alternatives. This week, the European Commission formally adopted new regulations that will phase such bulbs out in Europe by 2012. America will do so by 2014. Some countries, such as Australia, Brazil and Switzerland, have got rid of them already. When a voluntary agreement came into force in Britain, at the start of the year, people rushed out to buy the last 100-watt light bulbs. Next to go are lower-wattage bulbs.

...LED costs will need to come down.

Manufacturing efficiencies, as always, will help. But the biggest cost reduction will come from breakthroughs like that recently made by the Centre for Gallium Nitride at Cambridge University, England. Gallium nitride is a semiconductor used to create bright-blue LEDs. These can be made to emit white light by coating the device with a phosphor compound that absorbs part of the blue light and re-emits it as yellow. When combined with the rest of the blue this forms a cool, white light. Most of the white LEDs now on the market are based on gallium nitride.

At present these LEDs are made in machines similar to those used to make silicon chips, by depositing layers of gallium nitride on sapphire-based wafers. Sapphire is robust enough to withstand a process that first heats it to 1,000°C and then cools it to room temperature without causing cracks and other defects. It is, however, quite expensive. What Colin Humphreys and his colleagues at Cambridge have come up with is a reliable way to deposit gallium nitride on much cheaper silicon wafers, which they estimate could cut production costs to a tenth of what they are at the moment.

[Nuclear Power: The critical issue of safety](#)

Yet public fears about the safety of nuclear power could still derail its revival, at least in richer, democratic nations. In many countries, majorities oppose building new reactors. People fear nuclear accidents, terrorist attacks, the long-term risks of storing radioactive waste and of nuclear fuel being diverted to build weapons (see article). So far, no country has succeeded in building a permanent geological repository for high-level nuclear waste, and only Finland has secured public acceptance for a site.

Concern about climate change has softened opposition a little. According to a poll by the European Commission last year, 44% of people in the European Union now broadly support nuclear energy, up from 37% in 2005; and 45% oppose it, down from 55%. However, in 2007, when the pollsters posed a more detailed question that explained the environmental benefits and safety risks of nuclear power, 61% said its share of the energy market should be cut. In America, too, says Eugene Rosa of Washington State University, everything depends on the question. About 80% of Americans say they think nuclear power will be “an important future source of energy”. But when a Gallup survey in 2007 asked whether people were in favour of expanding the use of nuclear energy, 50% were in favour and 46% were still against.

[Oil still king, but players think green](#)

Even the environmentalists who addressed the final day of an Opec seminar acknowledged oil was a fuel for the future, with oil, gas and coal expected to account for around 80% of the world's energy until 2030.

"Fighting climate change cannot realistically mean fighting oil. Fighting climate change means fighting emissions," Yvo de Boer, head of the United Nations climate change secretariat, told the conference.

A \$100 barrel price drop from a record hit last year has hurt oil producers, but is a bigger threat to those generating environmentally-friendly fuels, which are considered commercially viable as alternatives to expensive oil.

"Low oil prices are the enemies to research into alternative sources," Reuters quoted Eni chief executive Paolo Scaroni telling the conference.

['Miracle' saved Balkans from blackout during gas crisis](#)

Against all odds, South Eastern Europe's electricity grid was able to withstand soaring consumption during the January gas crisis between Russia and Ukraine. Collapse in any of the countries would have triggered a long-lasting regional blackout, experts told EurActiv. . .

"The difficult situation with the grids at that moment in fact benefited from the economic slowdown, due to the global crisis. Consumption was therefore not so high as to threaten the stability of the interconnected systems in Europe. Moreover, the gas crisis took place during a period of winter holidays, with less activity in the economy and production," Cretu explained.

[Angolan oil production capacity reaches 2.1M bpd](#)

Angola's oil production capacity has topped 2 million barrels per day, according to the country's top oil official, though the country is respecting OPEC-mandated reduction quotas set earlier this year.

Oil Minister Jose Maria Botelho de Vasconcelos said earlier this week at a meeting in Vienna of the Organization of Petroleum Exporting Countries that Angola is capable of producing 2.1 million bpd, the highest rate ever for the country's fledgling oil industry.

However, output was intentionally scaled back to 1.656 million bpd to meet the OPEC reduction requirements aimed at raising flagging oil prices worldwide, said Vasconcelos, who is also the acting OPEC president.

[Madagascar Oil Continues Strong in Aftermath of Coup](#)

While the company head declined to comment on the political environment in the country, Madagascar oil is proceeding as planned with its onshore heavy oil projects.

['Industry needs \\$60 oil'](#)

Oil prices should not drop under \$60 a barrel if investment is to be maintained, Eni boss

Paolo Scaroni said today.

Similarly prices should not be above \$75 if economic growth is to be sustained, he told an Opec energy conference.

"In my view calculating a reasonable number is a balancing act," Reuters quoted him as saying.

"Go too low and you get declining investment plus a lot of waste," he added. "Go too high and what you get is a declining economy."

[World faces 'perfect storm' of problems by 2030](#)

Food, water and energy shortages will unleash public unrest and international conflict, Professor John Beddington will tell a conference tomorrow.

A "perfect storm" of food shortages, scarce water and insufficient energy resources threaten to unleash public unrest, cross-border conflicts and mass migration as people flee from the worst-affected regions, the UK government's chief scientist will warn tomorrow. In a major speech to environmental groups and politicians, Professor John Beddington, who took up the position of chief scientific adviser last year, will say that the world is heading for major upheavals which are due to come to a head in 2030. He will tell the government's Sustainable Development UK conference in Westminster that the growing population and success in alleviating poverty in developing countries will trigger a surge in demand for food, water and energy over the next two decades, at a time when governments must also make major progress in combating climate change.

"We head into a perfect storm in 2030, because all of these things are operating on the same time frame," Beddington told the Guardian. "If we don't address this, we can expect major destabilisation, an increase in rioting and potentially significant problems with international migration, as people move out to avoid food and water shortages," he added. Food prices for major crops such as wheat and maize have recently settled after a sharp rise last year when production failed to keep up with demand. But according to Beddington, global food reserves are so low – at 14% of annual consumption – a major drought or flood could see prices rapidly escalate again. The majority of the food reserve is grain that is in transit between shipping ports, he said.

"Our food reserves are at a 50-year low, but by 2030 we need to be producing 50% more food. At the same time, we will need 50% more energy, and 30% more fresh water. "There are dramatic problems out there, particularly with water and food, but energy also, and they are all intimately connected," Beddington said. "You can't think about dealing with one without considering the others. We must deal with all of these together."

[UPDATE 1-UK's South Hook LNG needs several startup cargoes](#)

Several cargoes of liquefied natural gas are needed to prepare Britain's South Hook LNG

terminal for commercial use, with the first due to arrive on Friday, a spokeswoman for the facility said.

'Several LNG cargoes will be required during the final commissioning process and once cool-down begins South Hook will require a continuous supply of LNG,' the spokeswoman said.

'Once the cool down process of commissioning begins, natural gas will begin to flow into the national transmission system within a matter of weeks.'

She declined to say how many commissioning cargoes of the super-cooled gas had been booked, or how long it would take, but South Hook in south Wales should enter commercial operations shortly after completing commissioning.

[Electric car closer to market](#) (video)

Aptera is promising its first electric vehicle sale in California by the end of 2009.

[Oil above \\$50](#)

Crude prices rocket higher on government program to buy up its own debt. Oil touches \$50 for first time since January.

"It's a combination of a drop in the U.S. dollar and the Fed's move that has pushed up oil prices," said David Moore, a commodity strategist at the Commonwealth Bank of Australia.

"But I suspect more of it is probably on hopes that U.S. policy stimulus would help turn the economy around, or at least stabilize it.

['Spend now - or face catastrophe'](#)

Action is needed now to prevent a possible "catastrophic" energy supply crunch , Saudi Arabian Oil Minister Ali Naimi warned today.

"In years to come, if traditional energy supplies should prove inadequate because capital expenditure was curtailed due to unsustainable prices, unreliable indication of future demand or hopes for a substitute that oil cannot deliver, such a supply crunch would be catastrophic," Reuters quoted Naimi as saying.

"The painful result would be felt sooner rather than later. It would effectively take the wheels off an already derailed economy."

The world risked disaster by placing too much hope on untested alternative energy sources, Naimi told an Opec conference of energy leaders.

"We frankly court disaster if these supplemental resources on which such high hopes for energy security and sustainability are pinned do not fulfil their high expectations," he said.

[Lawmakers question economics of Alaska's proposed natural gas pipeline to the Midwest](#)

And before a shovel has even been put into the ground for the pipeline, some lawmakers are having second thoughts about giving Calgary-based TransCanada Corp. up to a half billion dollars to get the estimated \$30 billion project moving.

With the global recession and Alaska's state coffers dwindling with the low price of oil, state Rep. Jay Ramras, R-Fairbanks, has co-sponsored a resolution asking the Palin administration to revisit the generous financial terms for what some call an uncertain project at best.

The Canadian company won an exclusive state license to build the pipeline under the Alaska Gasline Inducement Act, and with it up to \$500 million in state incentives. Another company, formed by ConocoPhillips and BP PLC, is proposing its own pipeline without the incentives.

In addition, Palin has called for an in-state small diameter line to deliver North Slope natural gas to urban Alaska markets.

[Iran diverting funds into oil production](#)

Iran's oil minister said Wednesday his country is diverting funds from other sectors of its national budget to support its oil industry — its main revenue source — suggesting that at present prices the Islamic Republic was losing money on its crude.

Oil Minister Gholam Hossein Nozari's comments revealed an extra burden on the country ahead of key elections in which popular dissatisfaction with falling living standards is expected to play a large role.

"We have to bring money from other sectors to the oil sector," Nozari told the Fourth OPEC International Seminar.

He gave no figures but later told The Associated Press that while some fields were still profitable at that prices production at others had to be subsidized to maintain output at over 4 million barrels a day. Shutting down production could mean high restart costs if prices rise.

[Iraq Considers Giving Foreign Oil Investors Better Terms](#)

BAGHDAD — To attract badly needed investments to increase its oil production, the

Iraqi government is considering new incentives for foreign companies, including plans to offer majority stakes in joint ventures to develop the country's huge oil and gas fields, senior Iraqi officials said Wednesday.

Foreign companies could own as much as 75 percent of the new ventures, the officials said. In its negotiations with dozens of international companies, including Exxon Mobil and Royal Dutch Shell, Iraq had until now offered stakes of no more than 49 percent in new joint ventures to develop existing and new oil fields.

Under a formal process created last year, companies have been asked to bid openly for the right to take part in expanding Iraq's oil production. But many companies have been skeptical of the country's terms, saying they lacked enough incentives. At the same time, Iraq's improved security has meant that foreign companies are eager to invest in the country after decades of wars and sanctions kept them out.

[Sempra Pipelines & Storage Announces Open Season for Firm, Natural Gas Storage Capacity Available April 1 at Bay Gas Storage](#)

SAN DIEGO, CA - Sempra Pipelines & Storage, a unit of Sempra Energy (NYSE: SRE), today launched a non-binding open season to solicit market interest in up to 1 billion cubic feet (Bcf) of firm, natural gas capacity at its Bay Gas Storage project near McIntosh, Ala.

The pipeline receipt-and-delivery points for the storage service includes those owned and operated by Florida Gas Transmission (FGT), Transcontinental Gas Pipeline (Transco) and Gulf South.

The high deliverability storage services offered in this solicitation of interest would provide customers with a unique capability to respond to market peaking events. These services allow customers to inject natural gas into storage when prices are low due to domestic supply and LNG imports and withdraw the gas when prices escalate.

[10th Circuit dismisses oilman's sweeping natural gas fraud claims](#)

A Denver-area oilman says he will continue his claims that energy and natural gas pipeline companies are cheating the federal government out of billions in royalties.

A three-judge panel of the 10th U.S. Circuit Court of Appeals in Denver on Tuesday upheld a Wyoming federal judge's decision that threw out 73 lawsuits filed by Jack Grynberg, who runs a petroleum company in Greenwood Village, Colo.

The appellate court cited a law that aims to provide incentives to whistle-blowers while discouraging "opportunistic plaintiffs" who have no original information to add. The False Claims Act allows whistle-blowers to collect a bounty so long as their claims are not filed based on publicly disclosed information.

Grynberg's lawsuits allege the companies use several techniques to knowingly

underreport the heating content and volume of natural gas extracted from federal and American Indian lands, which results in the underpayment of royalties.



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