



# Drumbeat: August 27, 2009

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Happy 150th, Oil! So Long, and Thanks for Modern Civilization

One hundred and fifty years ago on Aug. 27, Colonel Edwin L. Drake sunk the very first commercial well that produced flowing petroleum.

The discovery that large amounts of oil could be found underground marked the beginning of a time during which this convenient fossil fuel became America's dominant energy source.

But what began 150 years ago won't last another 150 years — or even another 50. The era of cheap oil is ending, and with another energy transition upon us, we've got to scavenge all the lessons we can from its remarkable history.

"I would see this as less of an anniversary to note for celebration and more of an anniversary to note how far we've come and the serious moment that we're at right now," said Brian Black, an energy historian at Pennsylvania State University and and author of the book *Petrolia*. "Energy transitions happen and I argue that we're in one right now and that we need to aggressively look to the future to what's going to happen after petroleum."

## Peak Oil's Marketing Problem

This week's Op-Ed in the *New York Times* titled "Peak Oil is a Waste of Energy" by energy consultant Michael Lynch was a virtual pandora's box, judging from the number of comments left by readers. Any op-ed piece is self-evidently open for dispute, and dispute this one the New York Times' readers did. I'm almost as fascinated by the smart, and largely negative, reactions to the piece as I am to Lynch's anti-peak oil rhetoric itself.

Many scientists and social scientists take M. King Hubbert's infamous bell-shaped "peak oil" curve as gospel on the planet's finite oil reserves. And why not? If you trust that we are extracting oil at a faster rate than the earth produces it, then oil is a non-renewable resource. So it makes sense that at some point we, the oil drinkers, will hit rock-bottom and understandably, we want to know when that day will come.

Joseph Romm: Michael Lynch, Wrong on Oil Prices for Over a Decade, is Wrong About Peak Oil

Here's my bet to Lynch. Let's take the average price of oil from 2010 to 2015. For every \$1 a barrel it is below \$40, I'll pay you \$200, if you pay me a mere \$100 for every \$1 a barrel it is above \$40.

How the history of oil becomes an argument over its future

It's 150 years since oil was first drilled. Do you...

a) Write a long piece for a respected periodical, reflecting on your Pulitzer-prize winning book, increased volatility and state-control of oil, and the folly of peak oil?

b) Run an oped by a well-known critic of peak oil, criticising peak oil?

c) Write an angry rebuttal of said oped, and let the debate unfold?

d) Invite the author of said oped to a long-term bet on oil prices settling at \$40?

# The New York Times on Peak Oil - Don't Worry, Be Happy

For those who follow the debate over Peak Oil - the idea that world oil production is peaking or is about to peak, and will then decline with disastrous results for the global economy - this has been a banner year for the Peak Oil side.

First, oil prices spiked to record levels - just when many Peak Oilers predicted they would - and helped stagger the economy. Then prices declined dramatically, as Peak Oilers also predicted, but began skyrocketing again even though demand for oil was off sharply - as they also predicted. Based purely on foresight, the Peak Oil side has been scoring touchdowns left and right.

# Whither the Oil Age? 150 years of black gold

What's especially intriguing today is that Drake was inspired to drill his well by the high price of whale oil—the lighting fuel of choice back at the time. That high price was a result of dwindling supplies, as aggressive whaling had pushed many species to the brink of extinction.

And now we're doing the same thing with oil. Massive consumption by the U.S. and

Europe, combined with growing consumption in China, India and the rest of the developing world, seems to be straining existing oil supplies. Oil price shocks are one result, and perhaps the end of cheap oil, or even what some call "peak oil" (when historic supplies crest and start to decline). In any case, the next question is: who will be the Edwin Drake of the 21st-century energy economy?

# Peak Oil? Urban Farms? Cuba's Been There, Done It

Last year all of us were afforded a frightening glimpse of how expensive fuel can trigger a global food crisis. And then, when zooming oil prices tumbled again (for now), causing food commodity prices to drop (for now), our news media moved on.

But I didn't. I became interested in Cuba as an example of how to adapt when the next, similar crisis comes -- and stays.

## Four crucial resources that may run out in your lifetime

We're living in lucky times. Living standards - in the Western world, at least - are the highest in history. It's an era of relative peace and plenty that would amaze our ancestors. But it's not going to continue forever; we're already stretching many of our natural resources to their limits, and the world's population will jump from 6.5 billion to around 9 billion over the next 50 years. Get ready for a painful correction - here are four interconnected resources that are headed for a catastrophic squeeze within our lifetime.

## Global Fresh Water Crisis, Peak Water

The notion of peak water probably sounds crazy to most people. The earth is 70% covered by water. The water cycle replenishes water on a continuous basis. The global warming enthusiasts tell us that glaciers are melting and oceans are rising. This should make water more plentiful.

But, as they say in the real estate business – Location, Location, Location. Freshwater shortages in the wrong places could have calamitous consequences to those regions, worldwide commodity prices, the economic future of nations with water shortages and possible war. Regional water scarcity means water usage exceeds the annual natural replenishment from the water cycle. The impact of water scarcity can be far reaching. It can lead to food shortages, famine, and starvation. Many nations, regions and states have mismanaged their water resources, and they will have to suffer the long-term consequences.

# **Big Oil Still Finds Barriers in Libya**

The release of the Lockerbie bomber triggered speculation that British energy companies trying to access Libya's oil wealth could soon hit a bonanza. But in reality, Big Oil is already there, and its interest in Libya is cooling.

#### Iraq violence threatens oil deals

BAGHDAD (UPI) -- Recent events in Iraq have cast a pall over the government's plans to have a November auction for potentially lucrative oil contracts that are vital for the country's reconstruction.

The surge in violence of the last few weeks, political uncertainty caused by this week's breakup of the ruling Shiite coalition and Iraqis' refusal to give Big Oil the terms it wants are likely to drive off the international companies that see the country's untapped reserves as the big prize.

## Peak oil around 2030 says 'misquoted' IEA

Since Independent's claim was not backed up by a direct quote from Dr Birol, I asked the IEA press office for confirmation. A spokesman emailed:

"I spoke with Fatih who said he was misquoted by the journalist. Concerning peak oil, his position is clear and has not changed since WEO 2008. WEO 2008 said in chapter 11 (highlights page 249) that global conventional oil production will peak around 2020. The article incorrectly made it sound that the total oil production (including unconventional oil etc.) is going to peak at that time. Taking into consideration gains from unconventional oil, oil peak will be later than 2020, more around 2030. Also, oil peak can be delayed by improving energy efficiency, therefore consuming less oil and consequently producing less oil."

So the IEA has not changed its position, and is not forecasting peak oil in ten years. It has, however, and for the first time as far as I am aware, named the date, if only tentatively: 'around 2030'.

#### Study: Oil speculators dominate open interest in oil futures

A new policy paper by Rice University's Baker Institute for Public Policy shows a clear

increase in the size and influence of noncommercial traders, or "speculators," in the oil futures market since regulations were eased by the Commodities Futures Modernization Act of 2000. Speculators now constitute about 50 percent of those holding outstanding positions in the U.S. oil futures market, compared with only about 20 percent prior to 2002. The report also finds that the correlation between oil and the dollar has strengthened significantly over the past several years.

The coauthors of "Who is in the Oil Futures Market and How Has It Changed?"--Kenneth Medlock and Amy Myers Jaffe -- advocate that the government should revise its policies to reverse these trends. Kenneth Medlock is an energy fellow at the Baker Institute and adjunct professor of economics. Amy Myers Jaffe is a fellow in energy studies at the Baker Institute and associate director of the Rice Energy Program.

## London Energy Traders Charged in Oil-For-Food Investigation

(Bloomberg) -- Two energy traders in London were charged with violating United Nations sanctions by funneling illegal bribes to Iraq in exchange for oil contracts, the first individual prosecutions in the U.K. in the oil-for-food scandal.

London businessman Aftab Al-Hassan, 65, was charged with 13 counts for payments totaling \$1.6 million he made to accounts in Iraq, U.K. Serious Fraud Office investigating lawyer Jacob Blatch told a London court today. Riad El-Taher was also charged with violating UN sanctions, SFO spokesman David Jones said.

# Gulf States Stuck Between U.S., Iran On Nuclear Issue

Iran's leaders say the country's nuclear program exists only for the purpose of generating electricity. Western intelligence agencies say the Islamic republic aims to produce nuclear weapons and intimidate its neighbors. How close is Iran to getting the bomb? How might it be stopped? And what are the implications for the United States and the rest of the world if Iran succeeds? This week, NPR looks at Iran and its suspected nuclear weapons programs in a series.

## How PHEVs and EVs Will Sabotage America's Drive for Energy Independence

Tuesday I asked a frequent commenter and staunch electric vehicle advocate whether he ever questioned the ethics of building an EV that can save one owner 400 gallons of gas per year while using enough batteries to build ten Prius-class hybrids that could save their owners a combined total of 1,600 gallons of gas per year. I then spent an hour in stunned silence as the critical importance of that question crystallized in my mind. I didn't get a responsive answer from the commenter, but I did get one of those rare moments of clarity when everything suddenly falls into place.

For years the mainstream media, scientists, elected officials and promoters have written and spoken ad nauseum about how a new generation of plug-in hybrid electric vehicles, or PHEVs, will liberate America from the tyranny of imported oil. The problem is the promises are based on flawed assumptions and utterly false. At their best, PHEVs and EVs are all sizzle and no steak when it comes to national energy independence. At their worst, they are deep cover saboteurs that will undermine America's drive for energy independence while stridently claiming to be part of the solution.

# New Analysis Shows America's Heartland Hardest Hit by Climate Change with States Heating up 10+ Degrees

ARLINGTON, VA — America's heartland will suffer the greatest jump in temperatures from climate change over the next century — with some states potentially heating up more than 10 degrees Fahrenheit — threatening the nation's agriculture industry and food security, according to a new analysis by The Nature Conservancy.

The scientific analysis, which looked at likely temperature changes across the United States over the next 100 years, found that Kansas, Nebraska and Iowa would heat up the most if emissions continue to rise unchecked.

Next were South Dakota, Oklahoma, Missouri and Illinois, all of which would experience more than a 9.5 degree F increase in their average annual temperatures.

"To many, climate change doesn't seem real until it affects them, or their backyards. From the food we put on the table to the animals that make our country unique, this study shows that none of us is immune if temperatures continue to rise as projected," said Jonathan Hoekstra, Director of Climate Change for The Nature Conservancy. "In many states across the country, the weather and landscapes could be nearly unrecognizable in 100 years."

# Climate protection 'to cost more'

Protecting societies against impacts of climate change will be much more expensive than previously believed, according to a new analysis.

In 2007 the UN climate convention came up with a sum of \$49-171bn per year.

The new report says the UN sums omitted important factors and the true cost will be two to three times higher.

## John Michael Greer: Entropy gets no respect

...The hard reality is that the minority of us who happened to have been born in a few powerful countries squandered half a billion years of stored photosynthesis to give ourselves a brief period of spectacular economic abundance, and by doing so, foreclosed the chance that anybody else would enjoy that same abundance in the future. Fossil fuels are not renewable resources in any time frame accessible to our species. Every barrel and ton and cubic foot of fossil fuel we use now is subtracted from the total available to our descendants; despite an orgy of handwaving, no other resource can provide anything approaching the glut of cheap abundant energy on which our lifestyles of relative privilege depend.

Yet this point of view is at least as unmentionable in polite society just now as were the gritty realities of European colonialism in its time, or the equally gritty facts underlying the ascendancy of the world's industrial nations over the Third World today. The strenuous efforts to find a racial basis for European supremacy a century ago, and the equally vigorous efforts to hold up contemporary Western institutions as the key to prosperity and peace in the Third World today, thus have precise equivalents in the enthusiasm with which every imaginable alternative energy resource gets treated by government officials and media pundits throughout the industrial world.

None of these resources can actually provide the cheap abundant energy needed to maintain the kind of society we have today. I know that this is a controversial statement just now. Still, it's worth noting that every alternative energy resource that's actually been brought into production has turned out, at best, to provide a modest increment to existing energy supplies, and that only if you don't keep track of the energy subsidy the new resource gets from fossil fuels. Of course technologies that haven't been put into production look more promising, and the further they are from implementation, the more impressive they look; hype, often geared to the very practical goal of selling shares in IPOs, is at least as abundant in the energy field as anywhere else.

# Oil's 150th Anniversary: Whose Happy Birthday?

But self-sufficiency is not what independence means. The problem of oil dependence is not about the amount of oil consumed or imported. The problem is that oil is a strategic commodity by virtue of its virtual monopoly over transportation fuel. This monopoly gives a small group of nations inordinate power on the world's stage. "Independence" as Webster Dictionary says, is "not being subject to control by others," or in our case, being a free actor by reducing the role of oil in world politics - turning it from a strategic commodity into one interchangeable with others.

This is exactly what happened to another commodity which was once monopolized, and considered critical to humanity's functioning: salt. Odd as it seems, for centuries salt mines conferred national power. Wars were fought over salt. Colonies were formed in remote places where it happened to be found. That was because salt had a virtual monopoly over food preservation. With the advent of canning, electricity, and refrigeration, salt lost its strategic status, and salt rich domains like Orissa, Tortuga and Boa Vista that once held as much sway as today's Gulf Emirates are no longer places of

strategic importance. Countries still use, import, and trade salt, but salt is no longer a commodity that dictates world affairs. Turning oil into salt is what energy independence is all about.

#### A Brief History Of The Oil Barrel

Aug. 27 marks the sesquicentennial of the first oil well, which was drilled in Titusville, Penn. It has been more than a century since any major producer shipped oil in an actual barrel, but the unit has been the industry's standard ever since the overwhelmed Pennsylvania oilmen struck their first gusher. Before U.S. drilling began in 1859, "rock oil" (to differentiate it from vegetable oil or animal fat) was sopped up with rags, wrung out and peddled as a cure for everything from headaches to deafness. Spurred by demand for lamp fuel as whale blubber grew scarce, derricks popped up all over Pennsylvania's oil region in the 1860s--although subsequent overproduction drove prices so far down that at one point, a wooden barrel was worth twice as much as the oil it contained, according to Daniel Yergin's definitive tome on oil, *The Prize*.

## Drake's World

On this day 150 years ago—August 27, 1859—Colonel Edwin Drake struck oil in Titusville, Pennsylvania, with the world's first oil well. We should all say a toast of thanks to the man who helped raise the curtain on the modern world.

#### Mexico's Pemex sees oil output down in 2010: paper

MEXICO CITY (Reuters) - Mexico's state oil monopoly Pemex is forecasting crude production in Mexico will fall in 2010 to 2.5 million barrels per day, Reforma newspaper said on Wednesday, citing Pemex head Jesus Reyes Heroles.

Pemex currently has an oil production goal of 2.65 million bpd for 2009. Mexican oil output fell 7.8 percent in July compared to the same month a year ago to 2.561 million bpd, as Pemex battles with declining output from its Cantarell oil field.

#### Qatari oil minister calls for status quo on production

Qatari Oil Minister Abdullah Bin Hamad Al-Attiyah urged OPEC to keep crude production targets unchanged when member states meet next month as economies struggle to recover from a recession. "The world economy is still weak and this is not the time to discuss a change of quotas," Al-Attiyah said today in a telephone interview from Doha.

#### Industry worries rise as natural gas sags

Despite recent cutbacks in production, natural gas prices are at a seven-year low and the U.S. still faces surpluses, fueling concern the industry has yet to hit bottom.

At the same time, oil and gas producers are beginning to see operational costs creep up again after pushing suppliers to lower prices for products and services in recent months, putting further pressure on margins, an industry analyst said Wednesday at the NAPE summer conference in Houston.

"This is a problem for all of us at the moment," Bob Fryklund, vice president of IHS-Cambridge Energy Research Associates, told a ballroom of oil and gas professionals during a panel discussion at the conference, formerly known as the North American Prospect Expo.

# In 2010 IRS could cut 401(k) contribution limit to \$16,000

Low inflation has made food and gas more affordable during the recession, but there's a downside: Social Security beneficiaries probably won't get a raise next year, and the IRS may reduce the amount workers can contribute to their 401(k) plans.

...The IRS is reviewing the relevant law, IRS spokeswoman Nancy Mathis said in an email. With some inflation figures still outstanding, it's too early to speculate on limits for 2010, she said. In September 2008, inflation was 4.94%, because of energy costs. It's been negative since March, though.

# Coal India May Invest \$1.5 Billion in Overseas Mines

(Bloomberg) -- Coal India Ltd. may invest as much as \$1.5 billion to acquire mines overseas to help overcome a shortage of the fuel as the country plans to almost double power generation capacity by 2012.

The state monopoly is seeking mines in Australia, South Africa, the U.S., Indonesia and Mozambique with an annual capacity of 10 million to 15 million metric tons, Chairman Partha S. Bhattacharyya told reporters in New Delhi today.

#### Cameco raises \$500m as S&P reinforces miner's 'strong position' in global uranium market

RENO, NV - As mega uranium miner Cameco announced Wednesday it had entered into an agreement with a syndicate of underwriters, who have agreed to purchase US\$500 million in 5.67% senior unsecured debentures, Standard & Poor's praised Cameco's strong position in the global uranium market, solid cost profile, and moderate financial policies.

Cameco said the close of the offering with the syndicate lead by RBC Capital Markets and Scotia Capital is expected to provide the world's largest publicly traded uranium miner with net proceeds of US\$496 million. The company plans to use the offering to refinance existing debt and for general corporate purposes.

#### Nuclear in the UK – where did it go wrong?

If we consider the four largest European Union countries, each has a very different nuclear situation. France has a strong programme and the highest nuclear share of electricity in the world, maintained over the long run by excellent government support. Germany has a significant, technically excellent nuclear sector, but all its reactors will be shut down by 2023 unless the nuclear law is changed. Italy has already shut down the few reactors that it built, largely because of the Chernobyl accident in 1986. The United Kingdom is also different, having been an early pioneer of nuclear but one which fell on hard times for a variety of reasons. Having examined nuclear in French last month, it is interesting to contrast a UK programme that could reasonably be described as an excellent case study in how not to 'do nuclear'.

#### Caspian oilfield is Big Oil's new energy frontier

KASHAGAN, Kazakhstan (Reuters) - Face wrapped in a thick scarf against clouds of blinding dust, the electrician gazed at a maze of pipes and pumps teeming with 15,000 workers and said his work was like building the Tower of Babel.

He was speaking casually. But for the oil industry Kashagan, the world's biggest discovery since 1968 with reserves locked amid lethal, high-pressure gases beneath the north Caspian Sea, is a challenge of biblical proportions.

#### Study Warns of 'Energy Sprawl'

A paper published on Tuesday by the Nature Conservancy predicts that by 2030,

energy production in the United States will occupy a land area larger than Minnesota — in large part owing to the pursuit of domestic clean energy.

The authors call it "energy sprawl" - a term meant to draw attention to habitat destruction, and to warn that biofuels in particular will take up substantial amounts of land.

"There's a good side and a bad side of renewable production," said Robert McDonald, a Nature Conservancy scientist and one of the authors, in a telephone interview.

# Q+A-What are the risks of instability in Yemen?

(Reuters) - Yemen, the Arab world's poorest country, is combating a reignited Shi'ite revolt in the north, separatist unrest in the south and intensified al Qaeda militancy.

Oil output is dwindling and water resources are being depleted. The global economic downturn has limited the ability of President Ali Abdullah Saleh's government to cope with high unemployment, runaway population growth and widespread poverty.

If Yemen tipped further into instability, or even state failure, this could endanger its neighbours, especially Saudi Arabia, and complicate efforts to fight al Qaeda and protect international shipping routes from piracy in the Gulf of Aden.

Western alarm is growing.

## Oil Falls a Third Day After Unexpected Increase in U.S. Supply

(Bloomberg) -- Crude oil declined for a third day after a report showed that inventories unexpectedly rose last week in the U.S., the world's largest energy user.

Oil traded below \$72 a barrel after the Energy Department said yesterday that crude stockpiles rose 128,000 barrels last week, compared with forecasts for a 1.15 millionbarrel reduction. The increase in supplies was still lower than that reported the previous day by the American Petroleum Institute.

"It was an unexpected build nevertheless, and obviously enough to send crude prices lower," said Edward Meir, an analyst with MF Global Ltd. in Connecticut. "We could even see further weakness in energy before the current selling runs its course."

## Why You Should Buy Oil

The fact is, China needs -- and is going to need -- a lot of oil. Indeed, according to BP's

*Statistical Review of World Energy 2009*, though global oil consumption was down 0.6% in 2008, oil consumption in China increased 3.3% to nearly 8 million barrels per day.

And while that already accounts for nearly 10% of global oil consumption, China looks like it has a long way to go. That's because while it has *four times the population* of the United States, it today consumes *less than half the amount of oil*. Should China someday consume the same amount of oil per capita as the United States, we are going to see skyrocketing prices and a significant global supply squeeze.

## New CFTC report may raise transparency, questions

NEW YORK (Reuters) - More transparency or too much information?

Energy traders, analysts and mom-and-pop farmers may find themselves swimming in detail on the big bets and hedges in the commodity markets, when the U.S. futures market regulator overhauls its widely-watched report on trader positions.

To help level the playing field between funds, commercial players and smaller participants, the Commodity Futures Trading Commission will break down positions by producers, merchants, swap dealers and hedge funds in its Commitments of Traders report, released every Friday afternoon.

## Oil's Long-Term Premium to Fade as Supplies Fall, Merrill Says

(Bloomberg) -- The price difference between short and long-term oil futures, which drove investment banks and oil companies to hoard crude on board tankers, will narrow further as inventories in developed economies shrink, Bank of America's Merrill Lynch unit said.

In January the amount of oil stored at sea climbed to the most in at least two decades as traders profited from a so- called contango structure where future prices are higher than those for contracts closer to delivery. The spread between front-month futures and those for delivery in a year has since declined 73 percent.

"We expect a modest seasonal draw in total crude oil and petroleum inventories" in developed nations during the fourth quarter, Francisco Blanch, Merrill's head of commodities research, said in a report dated Aug. 26. "The term structure of crude oil prices should flatten further over the next few months."

## Oil May Reach \$90 as Trend Remains Upward: Technical Analysis

(Bloomberg) -- Crude oil is likely to approach \$90 a barrel if it remains above a \$68 support level, according to technical analysts at WJB Capital Group.

#### Indonesia warns Exxon on failing Cepu oil output

JAKARTA (Reuters) - Indonesia's oil watchdog, BPMIGAS, said on Thursday it may bring U.S. oil major Exxon Mobil to arbitration court if the firm fails to produce 15,000 barrels per day (bpd) of crude oil from the Cepu block by the end of August.

#### Petrobras May Get 100 Billion-Real Capital Boost, Valor Says

(Bloomberg) -- Petroleo Brasileiro SA, Brazil's state-controlled oil company, may get an injection of capital from Brazil's government of as much as 100 billion reais (\$54 billion), Valor Economico reported, without saying where it got the information.

The funds would boost the government's voting stake in Petrobras, as the Rio de Janeiro-based company is known, to as much as 70 percent from 55.7 percent, Valor said.

#### Shell turns on Utorogu taps

Anglo-Dutch supermajor Shell has resumed operations at the Utorogu gas plant in Nigeria's southern Niger Delta.

A company spokesman said the plant had restarted after repairs - needed after a pipeline attack - were carried out.

## Glencore Sees Signs of Upturn After Profit Drops 57%

The company, which is owned by its employees, trades oil, metals and agricultural commodities and controls mines and smelters on five continents. Glencore stopped output at its Iscaycruz zinc mine in Peru in March and temporarily suspended lead production at the Portovesme smelter in Italy in June following the plunge in metal prices in the second half of 2008.

"Commodity prices have definitely hit their bottoms and the company's trading operations help them benefit more quickly from that pickup in price," said Jonathan Pitkanen, a credit analyst at Aviva Investors in London.

#### Thailand: Minister warns of oil price rises

Oil prices could soar again to crisis levels as the global economy recovers from the slump and demand increases for the diminishing reserves of fossil fuels, Energy Minister Wannarat Charnukul warned on Thursday afternoon.

Mr Wannarat said crude oil reserves were being depleted and could run out in 30-40 years, while natural gas reserves would last only 60-70 years and coal supplies only an estimated 147 years.

#### China's fuel oil futures world's No. 3

In terms of total transaction value in the first half of 2009, China's fuel oil futures are now the world's third largest energy futures, after NYMEX WTI Crude oil futures and London Brent oil futures traded on the Intercontinental Exchange, said Yang Maijun, president of Shanghai Futures Exchange (SHFE), on August 26.

Statistics showed that by August 25, trading of the fuel oil futures this year has reached 21 tons, or 6.8 trillion yuan.

#### Cities turn off streetlights to save money

The old-fashioned streetlight is the recession's latest victim. To save money, some cities and towns are turning off lights, often lots of them.

The cost-cutting moves coincide with changing attitudes about streetlights. Once viewed as helpful safety measures, the lights are increasingly seen by some public officials and researchers as an environmental issue, creating light pollution and burning excess energy.

#### The Age of Centralization

Here, then, we can find the economic support for the excess of centralization that must otherwise collapse the societies that it plagues: the extraordinary profits from oil have paid for the hypertrophic governments that afflict us. All of the uneconomic activities of the US Federal Government and its economic distortions could be borne as the wealth increased. Indeed, governments know that their uneconomic behavior needs SOME external input to support the system, and the militaries of many nations have launched invasions seeking control of oil, including Imperial Japan and Nazi Germany; oil lifting costs of \$1.50 a barrel in Iraq certainly did not deter the US invasion in 2003, an invasion originally to be paid for from Iraqi oil revenues.

The bonanza from oil, however, is at an end. Sometime between 2005 and 2008 the world produced more oil in one day than ever before, which total was not matched afterwards; this is the concept of peak oil. The oil that remains is less easily produced, and the EROEI is much lower; thus, the subsidy to uneconomic ways of living must be reduced. This is particularly threatening to the Federal Government, which thrashes about, attempting to continue the status quo. It will likely seize larger quantities of wealth from an economy in shock from declining energy inputs, faster collapsing the ability of the economy to support it. As Herbert Stein said, "Things that cannot go on, don't." The era of centralization is fast ending.

# Apocalypse 2012

The 2012 movement would be easy to dismiss as pseudo-mystical mumbo jumbo if it weren't for the disturbing real-world trends that inform the less fanciful predictions of bad times ahead: catastrophic climate change, terrorism, nuclear proliferation, financial collapse, swine flu, peak oil, peak food. This is the everyday fodder of CNN and *Newsweek*, not science fiction or religious fantasy. Home prices have declined almost 33 percent since their peak in 2006, and the unemployment rate in America is the worst it has been since 1983. When you add the specter of nuclear-armed religious fantatics, who wouldn't be a bit anxious about what's coming down the cosmic sewer pipe?

Even before the current economic crisis, Hurricane Katrina in 2005 made clear to many Americans that civilization can sometimes hang by the barest of threads. Those doomsday cultists stocking up on guns and groceries in preparation for the end-times don't seem quite so silly after what happened in New Orleans. As we watched bloated bodies float down the streets of a major American city and witnessed the complete paralysis of all layers of government, who among us didn't think, What would I do in such a situation? Would I have the skills and fortitude to survive?

# Meeting oil demand a trickly affair

To say we have overused oil would be a gross understatement. To say we needed to do so for the benefit of humankind would be an exaggerated overstatement. It took us just one and half century to (almost) exhaust what nature took millions of years to create. We knew long ago that oil contained 83-86 percent carbon yet we continued using it at random, as if there was no end to it. Even when we know almost nothing in this modern world is produced without energy - mostly bad energy as in fossil fuel - we continue not only to overuse everything at our disposal, but also to waste them.

# Utility wants to deploy largest grid battery ever

SAN FRANCISCO (Reuters) - Southern California Edison said on Wednesday it is seeking a U.S. grant to store wind power in the largest-ever grid storage battery, to be built by A123 Systems.

The utility, a unit of Edison International, wants \$65 million in grants from the U.S. Department of Energy for the pilot storage project and for another project involving integration of home energy management systems into the electric grid.

#### Plug-in Fisker Karma car is stylishly environmental

MONTEREY, Calif. — Even as Ferraris, Lamborghinis and Rolls-Royces prowled the avenue, the obscure silver sedan parked at the curb gathered its share of stares and curiosity.

The Fisker Karma, as it is called, has looks that rival a Mercedes-Benz roadster. Yet the key to what makes it different is emblazoned on the sides in chrome letters: Plug-in Hybrid.

## EEStor Awards Contract to Polarity Inc. to Produce EESU's Voltage Converter

EEStor is the Texas-based company secretly developing an ultrahigh energy density, ultra-low cost, ultra-long -life new energy storage material that in theory would antiquate lithium-ion batteries overnight.

Not unexpectedly there is much hype, excitement and intrigue surrounding the company's 10 year private voyage towards unveiling an actual working prototype.

Reportedly they are nearing that climactic day and have publicity stated they will prove their technology to the world by the end of September, slightly more than one month from now.

## Forth Ports to Put Biomass Plants in Scottish Ports

(Bloomberg) -- Forth Ports Plc, the U.K.'s last publicly traded port operator, plans to build four 100-megawatt biomass plants in Scotland costing as much as 1.2 billion pounds (\$1.9 billion) in a venture with Scottish & Southern Energy Plc.

Forth intends to build the plants, to be fueled by wood pellets and forestry waste, at its ports in Dundee, Leith, Grangemouth and Rosyth, Chief Executive Officer Charles Hammond said. "This is purely a commercial venture," he said, citing Forth Port's expertise in handling materials and Scottish & Southern's skills in connecting to the national electric grid.

# Argentina Is Shipping More Biodiesel to Europe, Biopetrol Says

(Bloomberg) -- Biopetrol Industries AG, a Swiss biodiesel producer, said imports of the fuel from Argentina are growing because of lower export taxes on the fuel relative to one of its feedstocks.

"Increasing amounts of indirectly subsidized biodiesel have been coming to Europe from Argentina since the second quarter," the Zug, Switzerland-based company said today in an e-mailed statement.

# Celebrating the birth of the solar cell

I came across the following unbylined news story from our June 1954 issue which I thought solarheads would enjoy. Not only does it recount the invention of the photovoltaic cell at Bell Labs, it provides one of the most elegant explanations I've seen of how the device works, though the predictions about its limited usefulness are charmingly dated. A brief excerpt from this story also appeared in the 50, 100 and 150 Years Ago column of our June 2004 issue.

## A crucial climate vote lost with Ted Kennedy's death

Sen. Edward M. Kennedy's environmental legacy was remarkable, wide-ranging, and not all roses. Joe Romm's got an early look at his record.

But there's one clear and simple impact of Kennedy's death late Tuesday night: The push for a climate-change bill in the Senate lost a reliable supporter.

# Arctic Shipping: Stormy seas or smooth sailing

Climate change is altering these Arctic rhythms of life and culture.

Year-round sea ice is fast disappearing; this once permanent ice pack has thinned over

two feet in the last four years. In the same period, 595,000 square miles of ice, an area about the size of Alaska, have vanished. The Arctic seems destined to resemble the Great Lakes—frozen in winter and completely open in summer. Scientists predict climate change will also bring more extreme weather and greater storm intensity to Arctic seas.

Heading into these increasingly ice-free and turbulent seas is an unprecedented wave of new ship traffic, including cruise ships; oil, gas and mining vessels; and commercial, research and fishing boats. Global shipping companies are mapping routes that will shave days off voyages that previously passed through the Panama Canal or around Cape Horn.

# Methane seepage heightens pressure for climate treaty

Evidence that methane, a dangerous greenhouse gas, is escaping from the warming Arctic seabed makes securing a new international agreement to slash global-warming gas emissions even more urgent, scientists warn.

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