ENVIRONMENTAL ENGINEERING NEWSLETTER

21 OCT. 2013

Please be aware any Newsletter URL ending in **020701.pdf and 020610.pdf** are available for downloading only during the six days following the date of the edition. If you need older URLs contact George at ghh@att.net.

Please Note: This newsletter contains articles that offer differing points of view regarding climate change, energy and other environmental issues. Any opinions expressed in this publication are the responses of the readers alone and do not represent the positions of the Environmental Engineering Division or the ASME.

George Holliday

This week's edition includes:

1) ENVIRONMENT – A. CALIFORNIA'S GREEN TRADE WAR

Sacramento uses carbon mandates to punish out-of-state businesses

Environmental policies are often economic protectionism in green clothing. A case in point is California's low-carbon fuel standard, whose constitutionality is being challenged in federal court. It's also a case study of the incredible contortions of green policy-making today.

California's low-carbon fuel mandate requires the state, by 2020, to reduce the "carbon intensity" of its transportation fuels by 10%. Carbon intensity is a fuel's "life-cycle emissions," which include the energy needed to produce and transport it. You guessed it: California fuels tend to qualify as less carbon intense than imported out-of-state fuels because they're produced closer to market and use "cleaner" (i.e., renewable) sources of power.

But there's one big exception: Some California-based oil that is extracted using "thermally enhanced" techniques produces lots of emissions. But the state's oil industry is a key source of employment in inland areas. What to do? The California Air Resources Board came up with a formula that assigns older sources of crude oil, no matter its production technology, the same score.

What this means is that California's crude oil now rates the same as Alaskan light—even though California's actual carbon intensity is four times as high. Yet another convolution puts oil recovered from Canada's Alberta tar sands at a ratings disadvantage in California.

Now comes the kicker: By the California Air Resources Board's own admission, the state's fuel standard "does not result in reductions in greenhouse gas emissions on a global scale" because more carbon-intense fuels will be sold elsewhere anyway.

So what's the point of all this? The goal is to corner the market for "advanced" biofuels, such as soybean oil, landfill waste and even animal lard. This stuff will be in high demand when the U.S. EPA ratchets up the *federal* Renewable Fuel Standard. California subsidized the biofuels industry by $23 million this year.

The American Fuel & Petrochemical Manufacturers and other affected parties have sued the state for violating the U.S. Constitution's Commerce Clause by discriminating against out-of-

state fuels. In 2011, federal Judge Lawrence O'Neill of the Eastern District of California ruled that the fuel mandate is unconstitutional and issued a preliminary injunction.
Then a three-judge panel of the hyper-liberal Ninth Circuit Court of Appeals weighed in. It vacated the district's court order, arguing that it should have considered whether the local benefits of controlling climate change exceeded the burden on interstate commerce. As argued by Justice Ronald Gould, California could see "its labor force imperiled by rising temperatures, and its farms devastated by severe droughts" due to rising emissions.
By this expansive logic, California could impose restrictions on virtually any out-of-state product on the pretext of reducing carbon emissions as the state defines them. France's wine producers take note.
Last week, the plaintiffs in the case requested *en banc* review by the Ninth Circuit. If the full appellate court rules that the climate trumps the Commerce Clause, the U.S. Supreme Court may have to bring California back to earth.
A version of this article appeared October 11, 2013, on page A12 in the U.S. edition of The Wall Street Journal, with the headline: California's Green Trade War.

B. ASME IS DEVELOPING AN ASME ENERGY FORUM

ASME ENERGY FORUM LIVE

san diego convention center
San Diego, Ca, USA
March 17-19 2014

CALL FOR PRESENTATIONS

Executive Advisory Committee:

The Executive Advisory Committee for ASME Energy Forum Live – Oil & Gas includes senior members from Shell Exploration & Production, Draper Laboratory/Cambridge Research and Technology LLC, Baker Hughes, Stewart & Stevenson, BP Exploration, and ASME.

Doreen Chin, Co-Chair
Shell Exploration & Production Co.
Martin Rylance, Co-Chair
BP
Julio Guerrero
Draper Laboratory, Cambridge Research and Technology L.L.C.
Satya Gupta
Baker Hughes Pressure Pumping
Rustom Mody
Baker Hughes, Inc.
Jared Oehring
Stewart & Stevenson

Raj Manchanda
ASME

Program Committee:
Phil Grossweiler, Program Committee Chair M&H
Blake Burnette, Poster Committee Chair
Baker Hughes Pressure Pumping
David Paradis Weir Oil and Gas Pressure Pumping
Arnold Feldman

C. EED MEETING ANNOUNCEMENT

The Environmental Engineering Division (EED) is planning two meetings for all its members who are able to attend, one on the East Coast and one on the West Coast.
The East Coast meeting will be held in conjunction with the Carbon Management Technology Conference (CMTC), which will take place at the Hilton Alexandria Old Town in Alexandria, VA, October 21-23. The EED meeting will be held the afternoon of **Tuesday, October 22, from 1PM -4PM.**
The West Coast meeting will be held during IMECE 2013 in San Diego, CA, November 15-21. The specific date and time have not yet been set.
At both meetings, we will discuss the recent EED member survey, the revised Division By-Laws, and interest in forming and participating in new technical committees identified as being of interest in the survey. EED members who wish to attend the Division meeting will not be required to register for either conference, although there are certainly benefits to attending these conferences if you are able.
The call-in information for the East Coast meeting in conjunction with CMTC is:

Phone: 1-866-359-4571
Code: 811 047 1915

For more information on the EED meetings contact:

- East Coast: Arnie Feldman, EED ViceChair, 267-880-2325, jjdsenv@att.net
- West Coast: Andy Miller, EED Chair, 213-244-1809, Miller.Andy@epa.gov

D. ENERGY COMMITTEE – ETP 8 RELEASE

The Energy Committee has released its latest Energy Talking Point (ETP 8) titled On the Possible Collapse in our Quality of Life". The ETP addresses the following issue: All aspects of modern life in a civilized society and functioning economy now have a fundamental dependence upon availability of affordable energy. Most energy used today is derived from finite (exhaustible) resources. Developing and transitioning to other energy resources takes time, and, there can be a substantial penalty for procrastination. Exhaustion of low-cost energy resources can result in a decline or collapse in our quality of life (QOL).
A copy of the ETP (along with all other ETP's) can be found at
https://community.asme.org/energy_talking_points/w/wiki/7020.energy-talking-points-released.aspx
Arnold Feldman/Rick Meeker

E. SPE GCS STUDY GROUP MEETING INVITATION - OCTOBER 29, 2013

Please make plans to attend our upcoming October 2013 SPE HSSE-SR Study Group Meeting. We are pleased to host Mr. Donald Graves with Schlumberger to discuss the topic "Chemical Regulatory Changes - Are We Managing them Effectively?" Please circulate this invitation to your personal network and mark your calendar to join us on October 29, 2013. Please click here to reserve your seat: http://www.spegcs.org/events/2328/.

Topic: Chemical Regulatory Changes - Are We Managing them Effectively?

The introduction of new regulations such as the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and the Registration, Evaluation and Authorization of Chemicals (REACH) increase the challenges for companies to keep up with regulatory requirements. In addition, upcoming chemical regulatory requirements are being developed and implemented in all areas around the world where international exploration and production (E&P) companies operate.

In addition to initiatives by companies, to provide more environmentally friendly products and greener technology, there is also an increased demand for transparency and accountability. Companies have to ensure regulatory compliance with the continuously changing regulatory landscape. There are increased requirements for proper management of documentation (safety data sheets [SDS], labels, etc.), integrated software / IT resources, training, auditing and more importantly internal and external communication to ensure compliance. A practical management system is required to monitor and implement these regulatory changes.

The implementation of health, safety and environment (HSE) and regulatory programs can be supported through the effective management of regulatory changes. These regulatory changes can have a significant impact on corporate behavior and reputation. Identification, investigation, implementation and integration are key elements when managing regulatory impact. Identification and documentation of the regulations to monitor and track industry changes is critical in the process. Investigation requires the review and assessment of the regulatory requirements, considering the potential impact on products and business lines. Implementation involves updating relevant documentation to ensure compliance. The final step of integrating controls in the supply chain to ensure regulatory compliance is especially critical with international movement of chemicals and substances. This also involves training and communication to implement changes.

Speaker: Donald Graves, Schlumberger

Mr. Donald Graves has been with Schlumberger for over 12 years and is presently the Disclosure Manager within the Global Chemical Regulatory Compliance Group.

Donald entered service with Schlumberger five years after receiving his BA in Biochemistry at Schreiner College in 1996. He was assigned to the Green Chemistry group in Sugar Land, TX as a laboratory technician. In his years of service, Donald has held laboratory, radiation safety and chemical compliance positions within the Drilling and Measurements, Well Services and Wireline segments of Schlumberger. Prior to Schlumberger, Donald held laboratory and field chemist positions for drilling fluids and hazardous waste disposal companies.

Donald is an active participant in several Schlumberger regulatory task forces and serves to advise clients of the two main chemical segments in Schlumberger, Well Services and M-I SWACO, on matters of chemical disclosure. Donald transitioned to his current position in 2011 and is currently located in Sugar Land, TX.

Date/Time:
October 29, 2013 - 11:30am – 1:00pm
Location:
Petroleum Club of Houston
800 Bell, 43rd Floor
Houston, Texas 77002
713-659-1431 (phone)
www.pcoh.com
Event Pricing:
Member: $40 (pre-registration required)
Non-Members / Walk-in (registered at the event): $50
Unemployed/ Students: $10

Best regards,
Trey Shaffer

F. FIGHTING CLIMATE CHANGE BY KILLING EAGLES

Why isn't the wind industry subject to the Bald and Golden Eagle Protection Act?

By ROBERT BRYCE
For some environmentalists, the threat of climate change is so great that we must allow wind turbines to kill bald and golden eagles. The argument I've heard is that renewables, including wind energy, will reduce the amount of carbon dioxide in the atmosphere. Less carbon dioxide reduces the threat posed by climate change, which benefits eagles and other wildlife.
In other words, we have to kill eagles in order to save them.
If this sounds far-fetched, consider the notice that the U.S. Fish and Wildlife Service published in the Federal Register on Sept. 27. It seeks public comment on a proposed permit that will allow a wind project to kill up to five golden eagles over a five-year period, despite their protected status under the Bald and Golden Eagle Protection Act.
The permit is sought for the Shiloh IV Wind Project in Solano County, Calif. If it is granted, it would formally recognize a legal double standard that is already in existence with regard to wildlife protection in America.
Wind projects routinely violate the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act, but no wind farm has ever faced a single prosecution. Meanwhile, companies in the oil and gas industry and other sectors are routinely indicted for violating those same statutes.
The illegal bird kills are not insubstantial. On Sept. 11, some of Fish and Wildlife's top raptor biologists published a study in the Journal of Raptor Research that found the number of eagles killed by wind turbines increased to 24 in 2011 from two in 2007. In all, some 85 eagles have been killed since 1997. Joel Pagel, the study's lead author, recently told me that the figure is "an absolute minimum." Among the carcasses: six bald eagles.
Associated Press
A golden eagle flies near a wind turbine on a wind farm near Glenrock, Wyo.
Mr. Pagel's study was published just five months after Fish and Wildlife issued a report that stated "there are no conservation measures that have been scientifically shown to reduce eagle disturbance and blade-strike mortality at wind projects." So if more turbines are built, more eagles will be killed.

Wind turbines overall kill some 573,000 birds per year including 83,000 birds of prey, according to a study this March in the Wildlife Society Bulletin. Yet the effect that wind power has on reducing global carbon-dioxide emissions is so small as to be insignificant. Elementary math proves that point.

The American Wind Energy Association claims that in 2012 wind energy production reduced domestic CO2 emissions by 80 million tons. Last year, global emissions of that gas totaled 34.5 billion tons. Thus, the 60,000 megawatts of U.S. wind-generation capacity reduced global carbon-dioxide emissions by about two-tenths of 1%. To achieve a 1% reduction in global carbon-dioxide emissions, the U.S. would have to install at least 120,000 more turbines (assuming each machine has a capacity of two megawatts).

Last year, all of the wind turbines on the planet provided the energy equivalent of about 2.4 million barrels of oil per day. But over the past decade, the annual increase in coal use averaged some 2.6 million barrels of oil equivalent per day. Merely to keep pace with the soaring growth in coal usage, the world's electricity producers would have to nearly replicate the entire global fleet of wind turbines—some 285,000 megawatts of capacity, or roughly 142,000 turbines—every year.

There are two scandals here. First, wind turbines are killing legally protected eagles in the name of slowing climate change, but whatever reductions in carbon-dioxide emissions that may be occurring is equivalent to a baby's burp in a hurricane.

Second, the wind-energy industry is lobbying to extend a production tax credit—the 2.2 cent-per-kilowatt-hour subsidy that has fueled the turbine-building craze over the past few years. Last year the subsidy was extended for one year, at a cost to taxpayers of $12 billion. Another one-year extension will cost an additional $6.1 billion, according to a recent estimate by the congressional Joint Tax Committee.

It's bad enough that this so-called green industry wants to continue killing eagles with impunity. Taxpayers should not be subsidizing the slaughter.

Mr. Bryce is a senior fellow at the Manhattan Institute.

A version of this article appeared October 11, 2013, on page A13 in the U.S. edition of The Wall Street Journal, with the headline: Fighting Climate Change by Killing Eagles.

G. U.S. EPA RATON BASIN HYDRAULIC FRACTURING STUDY

– Las Animas and Huerfano Counties, Colorado As part of the retrospective study of possible impacts from well completions, a third round of sampling and analysis of groundwater from two areas in the Raton Basin was conducted during the week of November 5, 2012. COGCC staff, as well as contractors for Pioneer Natural Resources, collected split samples at many of the sites. The EPA released an interim progress report on the study in December 2012. The EPA is expected to release the study in a draft for public and peer review in 2014. Ultimately, results from the study are intended to inform the public and provide policymakers at all levels with high-quality scientific knowledge that can be used in decision-making. For more information on the EPA hydraulic study, go to http://www.epa.gov/hfstudy/

2) HEALTH – DIETARY SUPPLEMENT, HEPATIC TOXICITY - USA: (HAWAII) RECALL

In this posting:

[1] US CDC
[2] Hawaii Department of Health

[1] US CDC
Date: Tue 8 Oct 2013
Source: FluTrackers, US CDC Health Advisory [edited]
<http://www.flutrackers.com/forum/showthread.php?p=511305#post511305>

Acute hepatitis and liver failure following the use of a dietary supplement intended for weight loss or muscle building
[2] Hawaii Department of Health
Date: Tue 8 Oct 2013
Source: Hawaii Department of Health News Release [edited]
<http://health.hawaii.gov/docd/files/2013/10/DOH-Issues-Voluntary-Removal-of-OxyElite-Pro-From-Sale.pdf>
Department of Health requests voluntary removal of OxyELITE Pro supplement from sale
http://www.eandp-environment.net/Health/Health020701.pdf

3) SAFETY – A. PERFORATING GUN DROPPED DUE TO FAILED ROPE SOCKET

While removing the spent perforating gun from the hole after perforating the 5th stage of a horizontal hydraulically fractured completion, the wire rope parted from the rope socket allowing the gun to fall to the ground. There were no injuries or damage.
The lubricator had been lifted from the wellhead and positioned 50 feet above the ground to lower the 30 foot long spent perforating gun. The gun was lowered out of the lubricator to within 1 foot of the ground when the rope socket failed allowing the gun to drop vertically to the ground and then fall over onto the ground.
http://www.eandp-environment.net/Safety/Safety020701.pdf

4. TRANSPORTATION – A CHEMISTRY BREAKTHROUGH THAT COULD FUEL A REVOLUTION

By GEORGE A. OLAH, CHRIS COX,
In the three weeks since the Obama administration issued its long-promised proposal to reduce carbon dioxide emissions, it has become clear the plan is far from perfect. By placing the burden of expensive new carbon capture and sequestration technology on the U.S. alone, and potentially requiring steep cuts in domestic energy to conform to carbon caps, the proposal could send the U.S. economy into shock without making a significant dent in global emissions.
There is a better approach that can reduce greenhouse-gas emissions while growing the economy and increasing U.S. energy independence.
In place of expensive mandates and wasteful subsidies, what is needed are powerful economic incentives. These incentives should operate not just in the U.S., but in other countries as well.
http://www.eandp-environment.net/Transportation/Transportation020610.pdf

COMMENTS:

A. THE WEEK THAT WAS: 2013-10-12(OCT. 12, 2013)

By Ken Haapala, Executive Vice President, Science and Environmental Policy Project (SEPP)

Chartsmanship. Steve McIntyre has another post on how the UN Intergovernmental Panel for Climate Change manipulated graphs from its Fourth Assessment Report (AR4) to the second order draft of the Fifth Assessment Report (AR5) to the final of AR5. The second order draft, the last one sent out to reviewers, clearly showed observations were running well below the uncertainty envelope for AR4 model projections. In the final version, the IPCC removed the uncertainty envelope for AR4, yet retained these envelopes for the previous three assessment reports. McIntyre estimates that the new range of uncertainty for AR4 is about twice that of what appeared in the original. In brief, between the second order draft of AR5 and the final version, the range of uncertainty approximately doubled. Yet, the IPCC expressed 95 to 100% confidence in its work. Also, McIntyre has not found any peer reviewed literature supporting the new graphic. For the discussion to include comments from IPCC defenders see links under Climategate Continued.

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No Improvement: Last week, TWTW discussed the presentation by Nir Shaviv that showed that from 1979 to 2013 there has been no significant improvements in the estimates of the critical question of how sensitive are earth's temperatures to a doubling of atmospheric carbon dioxide (CO2)? The IPCC estimated range of uncertainty actually increased from AR4 to AR5, with a lowering of the lower boundary. Yet, all the values are above the laboratory derived values of about 1.1 ºC. Shaviv suggests that the reason for no improvement in the science is that basic premise of the IPCC science is wrong. According to Shaviv, contrary to the IPCC, the climate is not very sensitive to increasing CO2 and that if one does not insist it was highly sensitivity, studies indicate the range of sensitivity is more in the order of 1 to 1.5 ºC.

His comments prompted a revisit to a 2008 paper by Richard Lindzen, "Climate Science: Is it currently designed to answer questions?" Lindzen points out that the procedures used by the IPCC and the Climate Establishment [John Christy's term] avoid the intense conflict between observations and theory, whereby theory is continuously refined to explain the observations until a solid theory is established. Instead, the procedures by the Climate Establishment focus on computer simulation of nature and various large programs purportedly to observe nature, which never end. As a result, theory is not refined, but large science programs are created to accommodate political correct positions. The entire effort is driven by government funding. For the work of Shaviv see http://www.sciencebits.com/AR5-FirstImpressions and for the updated paper by Lindzen see http://globalresearch.ca/climate-science-is-it-currently-designed-to-answer-questions/16330.

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Another Elephant? Last week, TWTW discussed two elephants in the room that the IPCC conveniently ignores in its grand pronouncements. One elephant is the failure of surface temperature to increase in a statistical significant way over the past 17 years even though atmospheric CO2 has increased by about 10%. The atmospheric temperatures have not increased for a decade. The second elephant is the composition of the warming as measured by satellites: Notable warming in the northern part of the Northern Hemisphere (roughly 30ºN Latitude), with little or no warming elsewhere.

In presenting their reasoning why they think the world is headed for a cooling period, German scientists Frank Bosse and Fritz Vahrenholt suggest a third elephant. Now that the IPCC has

admitted the existence of the Medieval Warm Period and the Little Ice Age, the IPCC has no theoretical basis for explaining why these warming and cooling periods occurred. It certainly was not from changing CO2.

The authors bring up the concept of "missing heat" used in efforts to explain the failure of the globe to warm. Following a suggestion of Hans von Starch, they assert the heat was not missing, because it did not exist. They point out that the difference in surface temperatures from 1998 to 2012 northern Eurasia and from those in 1980 to 1997. The authors suggest that the strong decline in temperatures is the result of declining ultraviolet (UV) radiation from the sun, which can vary by 10%. UV radiation is unlike the full spectrum of solar radiation (mostly visible light) which varies little. See link under Science: Is the Sun Rising? and the study by Ermolli et al. that is linked therein.

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Clouds: The solar-cosmic ray hypothesis for the formation of clouds advanced by Svensmark, et al. took a slight hit this week. Earlier, researchers at CERN, the European Organization for Nuclear Research, conducted experiments that seemed to support the hypothesis. This week they published further research on "solving a long-standing enigma in climate science: how do aerosols -tiny solid or liquid particles suspended in the air -form in the atmosphere, and which gases are responsible?" They made two discoveries. One, that small concentrations of amine vapors, similar to ammonia, combine with sulfuric acid to greatly accelerate the formation aerosols. And, two, that radiation has little effect on the process. As the press release asserts, this step forward in understanding how clouds are formed does not rule out a role of cosmic rays. See links under Science: Is the Sun Rising?

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Other Mechanisms? One of the annoying arguments found in the UN IPCC reports such as the Summary for Policymakers (SPM) in AR5 is the claim that the human influence must be significant because the models cannot explain the temperature changes without a significant human influence. Although the SPM is still in a draft form, subject to revision, the report has a page with 18 graphs showing the difference between models using only natural forcings and models using both natural and anthropogenic (human caused) forcings. The entire thrust is an example of argument from ignorance. The assumption is that the models successfully include all the natural forcings, which is very doubtful.

In addition to solar UV radiation possibly having a significant effect on changing climate, as mentioned above, several other studies were published suggesting even other mechanisms. One study, by Lam et al, suggests that the solar magnetic field influences the earth's climate by changing surface atmospheric pressure. Tim Ball has extensive commentary on this, suggesting the line of research should be taken further.

Judith Curry, co-author with Marcia Glaze-Wyatt, has a very interesting paper in Climate Dynamics discussing a possible mechanism for oscillation of climate over multiple decades. They liken it to the "stadium wave" often used at [American] football games, where the fans stand or sit in a coordinated pattern. They suggested that this wave pattern can be seen in records going at least as far back as 300 years.

Nicola Scafetta has a paper suggesting that a model based on the movement of the planets (planetary orbital oscillations) better explains climate variation than the General Circulation Models used by the UN IPCC. On her web site, Jo Nova has a good presentation of the paper and a number of useful comments. The descriptive power of the model may be just a statistical artifact, but it may promote useful discussion.

Now that it is becoming evident to many that IPCC science is failing, we may begin to see other directions of research. Of course, the government funding power to the IPCC makes it difficult to attract funding for research other than the standard claim that CO2 is the control knob for climate. Please see links under Science: Is the Sun Rising? and Challenging the Orthodoxy.
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Failing Models: A group at the University of Hawaii used 39 models to forecast temperature trends in the tropics and elsewhere. They looked at temperatures of the period 1850 to 2005 as a base for climate variability and using the models projected the year when warming will exceed the historic monthly variability for many cities around the world. In general, they found that model output will exceed their calculated natural variability first in cities in the tropics, then elsewhere. They concluded that biodiversity will be highly vulnerable in the topics with the emergence of unprecedented climates

Although recognizing that all the models run too hot, Judith Curry saw merit in the approach. But that merit may be lost in the alarmist press.

As Roy Spencer and John Christy have pointed out, all 73climate models are forecast higher temperature trends in the atmosphere above the tropics, than what is being observed. Many of the models forecast trends that are more than twice of what is observed. A further issue with the study is that the period coinciding with the ending of the Little Ice Age is hardly the proper place to start the base. See links under Communicating Better to the Public –Exaggerate, or be Vague? and http://www.drroyspencer.com/2013/06/still-epic-fail-73-climate-models-vs-measurements-running-5-year-means/
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Sea Levels: The World Bank and the IMF have embraced the concept that human caused global warming will cause significant sea level rise. Judith Curry writes that this attitude may present a major danger to the population of Bangladesh. A recent study shows that Bangladesh's sea level rise problem is not really driven by climate change, but by land subsidence. "…the risks here are that UN/WB adaptation solutions will be inadequate to help them deal with their sea level rise problem, or that Bangladesh will find itself ineligible for international climate adaptation funds." As Curry suggests, Bangladesh may become a victim of IPCC over simplification of the climate change issue and its solutions. See link under Changing Seas.
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http://www.sepp.org/twtwfiles/2013/TWTW%2010-12-13.pdf

B. FEDS DEFEND GULF OIL SPILL ESTIMATE IN TRIAL

About 4.2 million barrels of oil spilled from BP's Macondo well into the Gulf of Mexico in 2010, a lawyer representing the Department of Justice said. The U.S., however, concurred with BP's remarks that 810,000 barrels of crude were collected before the material could leak into the sea. "The question for you, your honor, is not how much oil was collected but how much was not," said lawyer Steven O'Rourke during a trial over the incident
http://www.bloomberg.com/news/2013-10-07/bp-well-dumped-4-2-million-barrels-into-gulf-u-s-says.html

C. LINDZEN: UNDERSTANDING THE IPCC AR5 CLIMATE ASSESSMENT

Guest essay by Dr. Richard Lindzen

Each IPCC report seems to be required to conclude that the case for an international agreement to curb carbon dioxide has grown stronger. That is to say the IPCC report (and especially the press release accompanying the summary) is a political document, and as George Orwell noted, political language "is designed to make lies sound truthful and murder respectable, and to give an appearance of solidity to pure wind."
With respect to climate, we have had 17 years without warming; all models show greater tropical warming than has been observed since 1978; and arctic sea ice is suddenly showing surprising growth. And yet, as the discrepancies between models and observations increase, the IPCC insists that its confidence in the model predictions is greater than ever.
Referring to the 17 year 'pause,' the IPCC allows for two possibilities: that the sensitivity of the climate to increasing greenhouse gases is less than models project and that the heat added by increasing CO2 is 'hiding' in the deep ocean. Both possibilities contradict alarming claims.

D. OCEANIC CLOUD DECREASE SINCE 1987 EXPLAINS 1/3 OF OCEAN HEATING**

Posted on October 8, 2013 by Guest Blogger
October 3rd, 2013

I consider what follows to be potentially very significant…but also very preliminary.
Background
Global warming (including the increase in ocean heat content) is supposedly explained by human greenhouse gas emissions (CO2) reducing the ability of the Earth to cool through infrared radiation to outer space, leading to the observed warming in the last 50 years or so.
My (admittedly minority) view is that some portion of this heating/warming is due to Mother Nature, probably from natural cycles in low cloud cover changing the amount of sunlight absorbed by the Earth. (Why? Well, take your pick…ENSO, PDO, NAO, cosmic rays, etc.).
http://wattsupwiththat.com/2013/10/08/lindzen-understanding-the-ipcc-ar5-climate-assessment/#more-95335

E. EPA FACES LAWSUIT FROM INDUSTRY OVER BIOFUEL MANDATE

The American Petroleum Institute is challenging the Environmental Protection Agency's biofuel requirements for 2013, calling them unrealistic and bad public policy. Under the standards, refiners this year must use millions of gallons of ethanol, but there are only 142,000 gallons available for blending, API said. "EPA issued this year's requirements nine months late and has once again mandated significantly more cellulosic ethanol than is available in the marketplace," said Harry Ng, API's vice president and legal counsel.
http://thehill.com/blogs/regwatch/court-battles/327269-industry-sues-epa-over-renewable-fuel-standard-

F. MANN'S EMAILS TO BE SUBJECT OF STATE SUPREME COURT CASE

Posted on October 9, 2013 by Anthony Watts

You have to wonder what he's got in those emails to be fighting so hard to keep people from seeing the supposedly mundane details of research.

Prince William FOIA case on global warming headed for Virginia Supreme Court

The fight by a conservative legal group and Del. Robert Marshall (R-Prince William) to obtain the e-mails written by leading climate change scientist Michael E. Mann while he was at the University of Virginia was shot down by a judge in Prince William County last year. But Marshall and the legal group appealed, and the Virginia Supreme Court has agreed to take the case and rule on whether the state's Freedom of Information Act exempts unpublished academic research from being disclosed to the public, even after it's been concluded or has been released elsewhere.

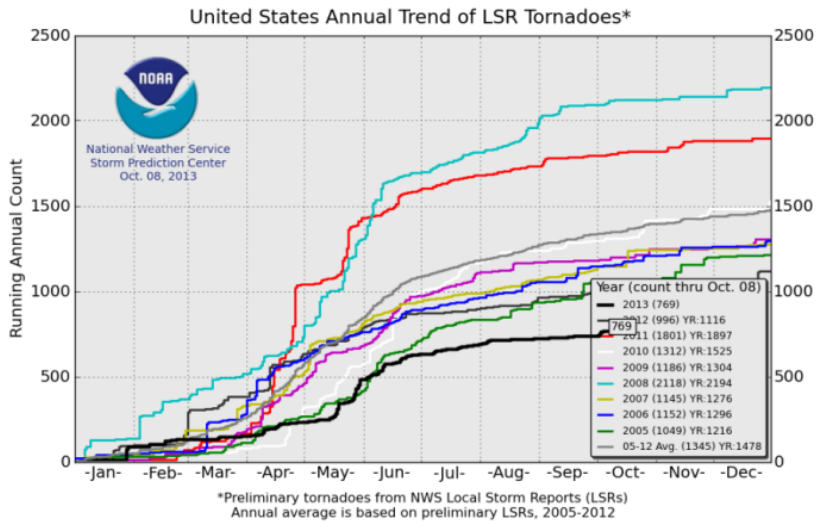
http://wattsupwiththat.com/2013/10/09/manns-emails-to-be-subject-of-state-supreme-court-case/#more-95380

G. A LINK BETWEEN THE SOLAR MAGNETIC FIELD AND WEATHER PATTERNS ON EARTH MAY EXPLAIN OUR LOWER THAN NORMAL SEVERE WEATHER IN 2013

Posted on October 9, 2013 by Anthony Watts

From the "*science is settled*" department comes this new paper that points out a correlation between the Interplanetary Magnetic Field (IMF) and polar jet streams, which drive weather events on Earth. This new paper shows that the effects extend even further towards the Equator than before, meaning it will affect weather experienced by a greater portion of Earth's human population.

Given that the solar magnetic dynamo has been in a slump as of late, and we've experienced a very low U.S. tornado season, one wonders if the low tornado numbers are partially related to lack of perturbations induced in the jet stream, which guide storm tracks and fronts.



2013 tornado count compared to previous years – Source: NOAA Storm Prediction Center – click to enlarge

The effect may also extend to the 2013 Northern Hemisphere hurricane season, which has also been a bust, despite early predictions.

So far the 2013 Accumulated Cyclone Energy (ACE) count for the Northern Hemisphere is 217, about half of what it normally is for this date at 432. Source: WeatherBell, Dr. Ryan Maue http://wattsupwiththat.com/2013/10/02/ipcc-climate-a-product-of-lies-damn-lies-and-statistics-built-on-inadequate-data/#more-94986

H. STUDY PROJECTS WORLD OF HEAT IN NEAR FUTURE

ASSOCIATED PRESS

WASHINGTON — Starting in about a decade, Kingston, Jamaica, will probably be off-the-charts hot — permanently. Other places will soon follow: Singapore in 2028. Mexico City in 2031, Cairo in 2036, Phoenix and Honolulu in 2043.

And eventually the whole world in 2047.

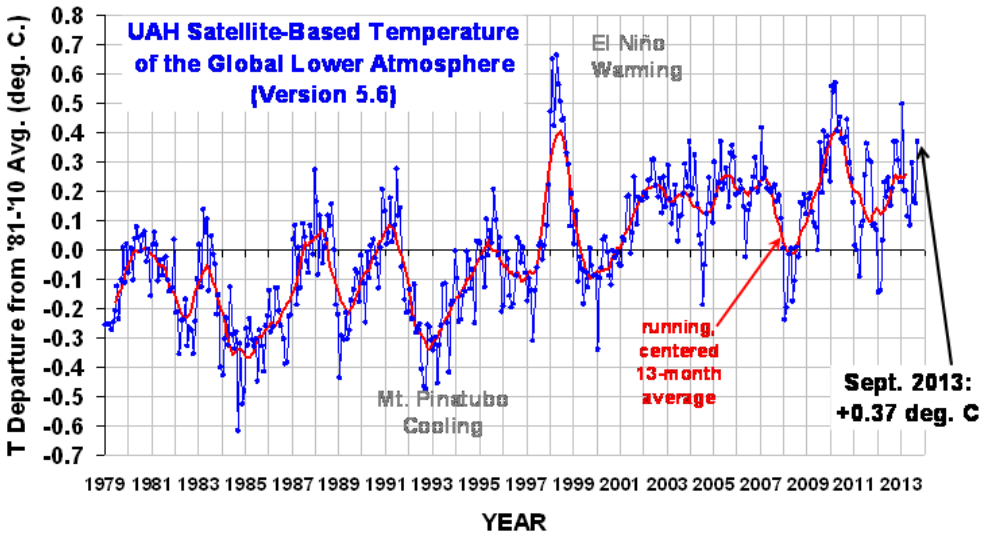
A new study on global warming pinpoints the probable dates for when cities and ecosystems around the world will regularly experience hotter environments the likes of which they have never seen before.

And for dozens of cities, mostly in the tropics, those dates are a generation or less away.

"This paper is both innovative and sobering," said Oregon State University professor Jane Lubchenco, former head of the National Oceanic and Atmospheric Administration, who was not involved in the study.

To arrive at their projections, the researchers used weather observations, computer models and other data to calculate the point at which every year from then on will be warmer than the hottest year ever recorded over the last 150 years.

For example, the world as a whole had its hottest year on record in 2005. **(Is this true? See graph below, GHH)**



The new study, published Wednesday in the journal Nature, says that by the year 2047, every year that follows will probably be hotter than that record-setting scorcher.

Eventually, the coldest year in a particular city or region will be hotter than the hottest year in its past.

Study author Camilo Mora and his colleagues said they hope this new way of looking at climate change will spur governments to do something before it is too late.

Mora, a biological geographer at the University of Hawaii, and colleagues ran simulations from 39 different computer models and looked at hundreds of thousands of species, maps and data points to ask when places will have "an environment like we had never seen before."

By 2043, 147 cities — more than half of those studied — will have shifted to a hotter temperature regime that is beyond historical records.

I. CLIMATE CHANGE IS REAL AND DENIAL IS NOT ABOUT THE SCIENCE

Posted on October 11, 2013 by Guest Blogger

Andrew E. Dressler and Gerald R. North, For the Express-News: October 6, 2013: Updated: October 6, 2013 12:00am

A new report from the Intergovernmental Panel on Climate Change confirms what we already know.

First, the climate system is definitely warming. **(See graph in Comment H above. Certainly the has been temperature increase from 1079 to 2010.GHH)**

Second, humans are now a dominant driver of the climate and are very likely to be responsible for most of the recent warming we have experienced.

And future warming over the 21st century will likely be several degrees.

While a few degrees may not sound like a lot of warming, changes in the global average temperature this large have, in the past, been associated with very large and significant changes in the climate (for example, the last ice age was only about 10 degrees Fahrenheit colder than today).

http://www.mysanantonio.com/opinion/commentary/article/Climate-change-is-real-and-denial-is-not-about-4866529.php

http://wattsupwiththat.com/2013/10/11/political-scientists-gerald-north-and-andrew-dressler-double-down-on-climate-alarmism/#more-95488

J. THE DANGER OF HANGING YOUR HAT ON NO FUTURE WARMING

October 11th, 2013

I'm far from a political moderate, but I've been tagged as a "lukewarmer" in the climate wars. That's because, at least from a theoretical perspective, it's hard (but not impossible) for me to imagine that increasing CO2 won't cause some level of warming.

I would remind folks that the NASA AIRS instrument on the Aqua satellite has actually measured the small decrease in IR emission in the infrared bands affected by CO2 absorption, which they use to "retrieve" CO2 concentration from the data. Less energy leaving the climate

system means warming under almost any scenario you can think of. Conservation of energy, folks. It's the law.
But I've been troubled for quite a while by those "skeptics" (you know who you are) who are forecasting cooling in our future. Not that it couldn't happen, but are you ready to be "debunked" when we see continued slow warming? \
http://www.drroyspencer.com/category/blogarticle/

K. MEASURING AND MODELING GLOBAL VEGETATION GROWTH: 1982–2009 (8 OCT 2013)

Reference

Mao, J., Shi, X., Thornton, P.E., Hoffman, F.M., Zhu, Z. and Myneni, R.B. 2013. Global latitudinal-asymmetric vegetation growth trends and their driving mechanisms: 1982-2009. *Remote Sensing* 5: 1484-1497.

Writing as background for their work, Mao *et al*. (2013) note that "recently, a new global LAI [leaf area index] product was derived from the NDVI [normalized difference vegetation index] version 3g of the Advanced Very High Resolution Radiometer (AVHRR) for Global Inventory Modeling and Mapping Studies (GIMMS) (GIMMS-LAI3g), providing an unprecedented estimate of monthly to annual distribution of vegetation dynamics over the whole globe (Zhu *et al*., 2013)." For their own study, the six scientists assessed the historical trends of the global remote-sensing-derived LAI and the prognostic LAI simulated at half-degree spatial resolution by CLM4 (Community Land Model version 4) between 1982 and 2009, with their main objective being "to gain insight into various mechanisms controlling these vegetation tendencies."

In discussing their findings Mao *et al*. report that "both the remote-sensing product and CLM4 offline simulations demonstrate significant increasing trends of annual vegetation growth during the last three decades." And they say their factorial experiments indicate that "CO_2 fertilization was more important than climate variation in determining the magnitude of the temporal trend in LAI at the global scale, in each hemisphere, and for most of the modeled plant functional types over their study period, in agreement with a previous study using an independently developed model (Piao *et al*., 2006)."

The *CO_2 fertilization effect* of the carbon dioxide emitted to the atmosphere by mankind's burning of fossil fuels, such as coal, gas and oil, is beginning to assume its vaulted position of being a tremendous *boon to the biosphere*, as all of humanity and the entirety of the world's animal life depend ultimately upon having a sufficient supply of plant life to sustain themselves.

Additional References

Piao, S., Friedlingstein, P., Cias, P., Zhou, L. and Chen, A. 2006. Effect of climate and CO_2 changes on the greening of the Northern Hemisphere over the past two decades. *Geophysical Research Letters* 33: 10.1029/2006GL028205.

Zhu, Z., Bi, J., Pan, Y., Ganguly S., Samanta, A., Xu, L., Anav, A., Piao, S., Nemani, R.R. and Myneni, R.B. 2013. Global data sets of vegetation leaf area index (LAI)3g and Fraction of Photosynthetically Active Radiation (FPAR)3g derived from Global Inventory Modeling and Mapping Studies (GIMMS) Normalized Difference Vegetation Index (NDVI3g) for the period 1981 to 2011. *Remote Sensing* 5: 927-948.

L. THE WORK OF UMBERTO MONTERIN (1937) ON THE MWP & LIA IN ITALY (9 OCT 2013)

Reference

Crescenti, U. and Mariani, L. 2010. Carbon dioxide and global temperatures: A causal and historical perspective. *Italian Journal of Engineering Geology and Environment* 2: 51-62.

In a most interesting paper published a few years back in the *Italian Journal of Engineering Geology and Environment* and presented in both the English and Italian languages, Crescenti and Marianai (2010) discussed the studies and research that Umberto Monterin conducted on the alpine area of northern Italy in 1937, which focused on the Medieval Warm Period (MWP, AD 950-1250) and Little Ice Age (LIA, AD 1500-1850).

Monterin - who they describe as "an eminent glaciologist and geomorphologist, then Director of the Monte Rosa Royal Observatories of Meteorology and Geophysics - reported a large mass of data highlighting the alternation of hot and cold phases in the past millennium, with particular emphasis on the Medieval Warm Period and subsequent Little Ice Age." His published work (Monterin, 1937) was focused, for the most part, on the Aosta Valley and adjacent valleys; and his findings were derived from the following sets of observational or documentary data: (1) variations of the timberline, (2) past altitude limits of crops, (3) the presence of networks of irrigation canals at high altitude, (4) evidence of transit across now inaccessible mountain passes, and (5) the current and former extent of glaciers.

Based on these "still observable geomorphological and historical data, not biased by subjective interpretations or mathematical modeling," as Crescenti and Marianai describe them, Monterin's findings suggest that the MWP had temperatures they describe as being "at least 1-3°C warmer than present ones." Yet they report that "no negative phenomena, e.g. extensive flooding of coastal areas by the sea, extreme meteorological events and so on, occurred." In fact, they note that these types of events "were instead typical of the period of decline of the MWP (Lamb, 1977) and the LIA that Europe experienced from the 16th to the 19th century (Giraudi, 2009)."

And so it was that the two Italian researchers concluded that the work of Monterin, like that of many others, "validates the thesis that climate change is mainly driven by natural determinants," and *not* by anthropogenic CO_2 emissions.

Additional References

Giraudi, C. 2009. Late Holocene glacial and periglacial evolution in the upper Orco Valley, northwestern Italian Alps. *Quaternary Research* 71: 1-8.

Lamb, H.H. 1977. *Climate, Present, Past and Future. Volume 2. Climatic History and the Future*. Methuen & Co. Ltd., London, UK.

Monterin, U. 1937. *Il clima sulle Alpi ha mutato in epoca storica?* CNR, Comitato Nazionale di Geografia, 54pp.

M. MISSISSIPPI PLANT SHOWS THE COST OF 'CLEAN COAL'

By Rebecca Smith and Cameron McWhirter
Oct. 13, 2013 7:23 p.m. ET

DEKALB, Miss.—For decades, the federal government has touted a bright future for nonpolluting power plants fueled by coal. But in this rural corner of eastern Mississippi, the reality of so-called clean coal isn't pretty.

Mississippi Power Co.'s Kemper County plant here, meant to showcase technology for generating clean electricity from low-quality coal, ranks as one of the most-expensive U.S. fossil-fuel projects ever—at $4.7 billion and rising. Mississippi Power's 186,000 customers, who live in one of the poorest regions of the country, are reeling at double-digit rate increases. And even Mississippi Power's parent, Atlanta-based Southern Co. SO -1.50% , has said Kemper shouldn't be used as a nationwide model.

Meanwhile, the plant hasn't generated a single kilowatt for customers, and it's anyone's guess how well the complex operation will work. The company this month said it would forfeit $133 million in federal tax credits because it won't finish the project by its May deadline.

Labor and material costs for the Kemper plant exceeded expectations. Bob Miller for The Wall Street Journal

One of just three clean-coal plants moving ahead in the U.S., Kemper has been such a calamity for Southern that the power industry and Wall Street analysts say other utilities aren't likely to take on similar projects, even though the federal government plans to offer financial incentives. Southern recently took $990 million in charges for cost overruns approaching $2 billion. The company's stock has been battered in the past year, and the company's market value has dropped $6.4 billion since April, to $35.8 billion. Mississippi Power's credit rating has dropped to three notches above junk.

http://www.eandp-environment.net/Environment/Env020701.pdf

N. SEA LEVEL ACCELERATION: NOT SO FAST

ea level rise is a topic that we frequently focus on because of all the gross environmental alterations which may result from anthropogenic greenhouse gas emissions; it is perhaps the only one which could lead to conditions unexperienced by modern societies. A swift (or accelerating) sea level rise sustained for multiple decades and/or centuries would pose challenges for many coastal locations, including major cities around the world—challenges that would have to be met in some manner to avoid inundation of valuable assets. However, as we often point out, observational evidence on the rate of sea level rise is reassuring, because the current rate of sea level rise from global warming lies far beneath the rates associated with catastrophe. While some alarmists project sea level rise of between 1 to 6 meters (3 to 20 feet) by the end of this century, currently sea level is only inching up at a rate of about 20 to 30 centimeters per hundred years (or about 7 to 11 inches of additional rise by the year 2100)—a rate some 3-4 times below the low end of the alarmist spectrum, and a whopping 20 to 30 times beneath the high end.

To get from here to catastrophe surely requires a significant acceleration in sea level. And, because disasters pay scientists handsomely, a lot of people have been looking. Here is how the Intergovernmental Panel on Climate Change (IPCC) in its Fourth Assessment Report summed up its investigation:

Global average sea level rose at an average rate of 1.8 [1.3 to 2.3] mm per year over 1961 to 2003. The rate was faster over 1993 to 2003: about 3.1 [2.4 to 3.8] mm per year. Whether the faster rate for 1993 to 2003 reflects decadal variability or an increase in the longer-term trend is unclear. There is high confidence that the rate of observed sea level rise increased from th3 19th to the 20th century, the total 20th-century rise is estimated to be 0.17 [0.12 to 0.22] m.

Since 2003—the last data assessed by the IPCC—the rate of sea level rise has slowed (Figure 1).

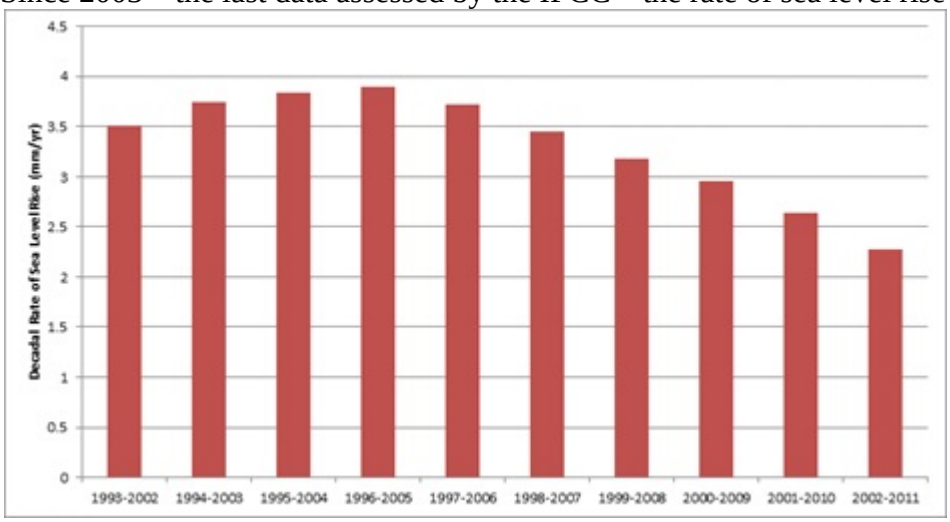


Figure 1. Decadal (overlapping) rates for sea level rise as determined from the satellite sea level rise observations, 1993-2011 (data available from http://sealevel.colorado.edu/).
http://www.worldclimatereport.com/index.php/2012/09/10/sea-level-acceleration-not-so-fast/#more-552

O. ANOTHER REASON WHY IPCC PREDICTIONS (PROJECTIONS) FAIL. AR5 CONTINUES TO LET THE END JUSTIFY THE UNSCRUPULOUS MEANS

Posted on October 14, 2013 by Guest Blogger

Guest essay by Dr. Tim Ball

Someone said economists try to predict the tide by measuring one wave. The IPCC essentially try to predict (project) the global temperature by measuring one variable. The IPCC compound their problems by projecting the temperature variable with the influence of the economic variable.

Use of circular arguments is standard operating procedures for the IPCC. For example, they assume a CO2 increase causes a temperature increase. They then create a model with that assumption and when the model output shows a temperature increase with a CO2 increase they claim it proves their assumption.

They double down on this by combining an economic model that projects a CO2 increase with their climate model projection. To make it look more accurate and reasonable they create scenarios based on their estimates of future developments. It creates what they want, namely that CO2 will increase and temperature will increase catastrophically unless we shut down fossil fuel based economies very quickly.

All their projections failed, even the lowest as, according to them, atmospheric CO2 continued to rise and global temperatures declined. As usual, instead of admitting their work and assumptions were wrong, they scramble to blur, obfuscate and counterattack.

http://wattsupwiththat.com/

P. WILL THEIR FAILURE TO PROPERLY SIMULATE MULTIDECADAL VARIATIONS IN SURFACE TEMPERATURES BE THE DOWNFALL OF THE IPCC?

POSTED ON OCTOBER 14, 2013 BY BOB TISDALE

OVERVIEW

This post illustrates what many people envision after reading scientific papers about the predicted multidecadal persistence of the hiatus period—papers like Li et al. (2013) and Wyatt and Curry (2013). See my blog post Another Peer-Reviewed Paper Predicting the Cessation of Global Warming Will Last At Least Another Decade.

NOTE: In addition to the above papers, see Pierre Gosselin's post Explosive: Max Planck Institute Initial Forecast Shows 0.5°C Cooling Of North Atlantic SST By 2016!

INTRODUCTION

I published a quick post introducing Li et al (2013), Another Peer-Reviewed Paper Predicting the Cessation of Global Warming Will Last At Least Another Decade. The cross post at WattsUpWithThat is here. My Figures 1 and 2 are Figures 3 and 4b from Li et al. (2013). Their Figure 3 shows a multidecadal component from Northern Hemisphere surface temperatures and a relatively low warming rate in a residual—a warming rate that excludes the higher rate imposed by the Atlantic Multidecadal Oscillation since the mid-1970s. Their Figure 4b shows the Li et al. (2013) predicted cooling of Northern Hemisphere temperatures through 2027.

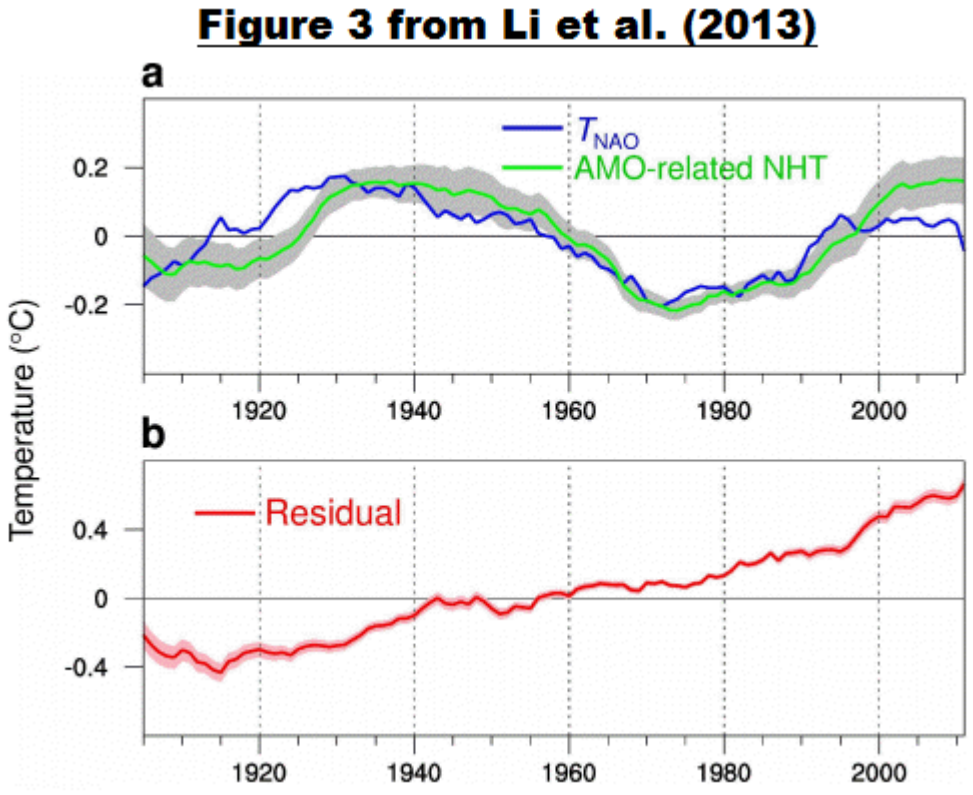


Figure 1

http://wattsupwiththat.com/2013/10/14/will-their-failure-to-properly-simulate-multidecadal-variations-in-surface-temperatures-be-the-downfall-of-the-ipcc/#more-95560

Q. THE CHEVRON SHAKEDOWN EXPOSED

Plaintiffs' 'experts' are repudiating their own claims in the Ecuador case

When plaintiffs lawyers attack, corporations usually settle to avoid the astronomical costs of litigation. One happy exception is Chevron which chose to fight an environmental tort shakedown in Ecuador. The result has been a tragicomic parade of malfeasance and outright fraud, much of which is now being revealed by the plaintiffs' own consultants and partners.

Many of the details will be on display starting Tuesday in a federal court in Manhattan, where Chevron is suing plaintiffs lawyer Steven Donziger for fraud under the federal Racketeer Influenced and Corrupt Organizations Act (RICO). Readers may recall that this story started in 1993, when Mr. Donziger and a legal pack sued Texaco (later merged with Chevron) in federal court for allegedly failing to clean up oil pits it had drilled in the 1970s.

When the court ruled that the trial didn't belong in the U.S., plaintiffs lawyers refiled the charges in Ecuador in 2003. Actress Daryl Hannah came forth with oil on her hands to allege the degradation of the rain forest by an American multinational, and the plaintiffs attorneys chronicled their exploits in a documentary appropriately called "Crude."

Texaco had already agreed with the government of Ecuador to clean up its portion of the sites that had been drilled in cooperation with state oil company PetroEcuador, and had been absolved of all liability. But the plaintiffs plowed ahead anyway, setting up a conga line of dubious experts and legal shenanigans to demand $113 billion.

One of the supposedly independent experts was Ecuadorian geologist Richard Cabrera, whose estimates of the environmental damage formed the basis of the case against Chevron, and ultimately the 2011 decision of an Ecuadorian court to award the plaintiffs $18 billion. Chevron refused to pay and filed a RICO action in federal court in the Southern District of New York seeking to have the Ecuador verdict ruled "fraudulent" and "unenforceable."

That Cabrera report, we now know, was heavily guided by plaintiff consultant and Colorado-based environmental firm, Stratus Consulting. Now Stratus is among the former plaintiff allies fessing up. The company has acknowledged that its contribution to the report was science fiction, and it admitted that the company had ghostwritten the Cabrera report as though it were the expert's independent judgment.

"At no time while working on the Ecuador Project did I see any data supporting a finding of groundwater contamination from TexPet operations away from the pits," Stratus Managing Scientist Ann Maest explained in sworn declarations related to the RICO case. Stratus Vice President Douglas Beltman added that he is "not aware of any scientific data that shows that any adverse health effects are caused by contamination from petroleum operations in the Oriente" and "I disavow any and all findings and conclusions in all of my reports and testimony." Mr. Cabrera has been silent on the matter since the trial.

In its sworn declaration in federal court, Burford Capital a hedge fund that provided litigation financing to the plaintiffs through the law firm Patton Boggs, also laid out its knowledge of what CEO Christopher Bogart called the "fraud and misconduct" that "seems to have permeated" the Ecuador litigation. While the lawyers assured Burford that it was OK under Ecuadorean law for the plaintiffs to have contact with Mr. Cabrera, Mr. Bogart says his firm was never told of the

"wholesale ghostwriting" of the report, let alone plaintiffs' concern they would "go to jail" if their operations came to light.

In a 2011 letter to plaintiffs and lawyers terminating their funding arrangement, Burford called the plaintiffs' operation a "multi-month scheme to deceive and defraud in order to secure desperately needed funding . . . while concealing material information and misrepresenting critical facts in the fear that we would have walked away had we known the true state of affairs."

So how did the plaintiffs come by that big verdict in 2011? According to the sworn statement of Ecuadorian Judge Alberto Guerra, when the Cabrera report fell apart, the plaintiffs offered the Ecuadorian judge on the case, Nicolas Zabrano, $500,000 of any judgment against Chevron on the condition that they help write the decision. Chevron says legal discovery conducted in U.S. federal court as part of the Ecuador litigation has shown that about a third of the pages of Judge Zabrano's opinion contain verbatim text from the plaintiffs' private documents.

Chevron filed a claim against Patton Boggs on May 10 alleging misdeeds including fraud, civil conspiracy and malicious prosecution. Patton Boggs has denied any wrongdoing. The plaintiffs are now forum shopping around the globe to find a court that will enforce the Ecuadorian court's unjust verdict. In another setback, a Canadian judge this spring refused to hear an enforcement action, saying the plaintiffs had to seek enforcement in the U.S.

That's already a tough climb when eight federal courts in the U.S. have ruled that the trial behind the Ecuador verdict was riddled with fraud. A RICO judgment against Mr. Donziger in this week's trial could also make the verdict unenforceable in the U.S. Congratulations to Chevron for refusing to roll over and exposing these all too typical legal abuses.

A version of this article appeared October 14, 2013, on page A18 in the U.S. edition of The Wall Street Journal, with the headline: The Chevron Shakedown Exposed.

Regards
George

Note: There will be no Newsletter for 28 October 2013, because of EED meeting that week.