

ENVIRONMENTAL ENGINEERING

NEWSLETTER

1 JUN. 2015

This week's edition includes:

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 editor alone and do not represent the positions of the Environmental Engineering Division or the ASME.

George Holliday

This week's edition includes:

ENVIRONMENT: A. 22 VERY INCONVENIENT CLIMATE TRUTHS

Here are 22 good reasons not to believe the statements made by the Intergovernmental Panel on Climate Change (IPCC) Guest essay by Jean-Pierre Bardinet. According to the official statements of the IPCC “Science is clear” and non-believers cannot be trusted. Quick action is needed! For more than 30 years we have been told that we...

<http://wattsupwiththat.com/2015/05/12/22-very-inconvenient-climate-truths/> (In French!)

B. WELL, AT LEAST THE DAPHNIA WILL SURVIVE ‘CLIMATE CHANGE’

There's lots of worries about “species extinction” due to climate change, and so far the track record on those predictions isn't doing so good, such as the First animal claimed extinct due to ‘climate change’ found ‘alive and well’. From KU Leuven Water fleas genetically adapt to climate change The water flea has genetically adapted...

<http://wattsupwiththat.com/2015/05/11/well-at-least-the-daphnia-will-survive-climate-change/>

C. EPA'S DRACONIAN NEW PLAN: IS A 1% CUT IN CO2 EMISSIONS WORTH \$50 BILLION AND 15,000 JOBS ANNUALLY?

Guest essay by Steven Capozzola, CAP Media The Environmental Protection Agency (EPA) is preparing to finalize its Clean Power Plan, which aims to reduce power plant carbon dioxide emissions by 30% from 2005 levels over the next 15 years. Looking at some of the best-case scenarios for CO2 reductions, the plan could potentially cut roughly...

<http://wattsupwiththat.com/2015/05/13/epas-draconian-new-plan-is-a-1-cut-in-co2-emissions-worth-50-billion-and-15000-jobs-annually/>

D. BARNETT SHALE

May 13, 2015

Tests on wells near earthquake epicenter are almost complete

By Max B. Baker mabaker@star-telegram.com

Chairwoman [Christi Craddick](#) said she expects testing at five disposal wells near last week's 4.0-magnitude earthquake to be completed by early next week.

During an appearance on an Austin public affairs program, Craddick said the agency, which regulates the oil and gas industry, hopes to "get everybody back up and running by the end of the week, the first of next week," unless the testing uncovers problems.

Craddick said the agency is still "actively engaged."

The earthquake, which occurred around 6 p.m. last Thursday, was centered about 6 miles south of Mansfield and about 3 miles northwest of Venus, according to the U.S. Geological Survey. The temblor was the most powerful of more than 50 quakes that have rumbled through North Texas over the past 18 months, officials said.

A recently released study linked oil and gas activity to a rash of earthquakes near Azle and Reno from November 2013 to January 2014.

As a result, the Railroad Commission sent four teams of inspectors to the area after the quake.

They found no immediate problems, but regulators asked that five disposal wells within 100 square miles of the estimated epicenter be shut down so pressure tests could be run.

The operators, Bosque Disposal Systems, EOG Resources, Metro Saltwater Disposal and Pinnergy, voluntarily did so.

[Commissioner Ryan Sitton](#), a mechanical engineer, toured several of the well pad sites. He said the operators are being asked to send monitors down the wells to determine the pressure at the bottom of the subsurface rock formation and how quickly that pressure dissipates.

"We want to get more data," he said.

The closer to an earthquake, the better, he said. "That is good data for us to have."

Craddick, talking about the string of earthquakes northwest of Fort Worth, cautioned against automatically linking any seismic activity to drilling.

"I think the fallacy we need to remember is that not all seismic activity is oil- and gas-related, so it needs to be a broader perspective," she said.

Lawmakers are already discussing spending about \$4.4 million to buy seismology equipment and to conduct a statewide study on earthquakes. Also being discussed is having the commission hire another seismologist. It hired its first seismologist last year after the series of quakes near Azle.

A second seismologist would cost an estimated \$60,000 to \$80,000 a year.

Read more here: <http://www.star-telegram.com/news/business/barnett-shale/article20864775.html#storylink=cpy>

Roger Zygmunt

E. EPA, ARMY CORPS PROPOSE NEW RULES LIMITING DISCHARGES, AIM TO PUT MORE SMALLER STREAMS, WATERWAYS AND WETLANDS UNDER CLEAN WATER ACT

By Alicia Mundy

Updated March 25, 2014 7:32 p.m. ET

WASHINGTON—The Obama administration Tuesday proposed new rules aimed at putting more small bodies of water and wetlands under Clean Water Act protections, a move criticized by business groups, Republicans and a few Democrats.

The administration and environmental groups describe the regulations as a clarification of which waters are under federal oversight. Opponents say the proposed rules represent regulatory overreach.

The rules, unveiled by the Environmental Protection Agency and the U.S. Army Corps of Engineers, seek to reverse the effects of the Supreme Court's 2006 Rapanos ruling, which narrowed the government's ability to enforce pollution laws for smaller streams and bodies of water.

The proposed rules would clarify which waterways are subject to federal pollution regulations based on a large scientific study on how discharges from smaller bodies of water—including streams that flow only at certain times of the year or wetlands that occasionally dry out—affect water quality downstream.

The high court's Rapanos ruling left room for the government to enforce pollution law if scientific analysis can show a link between the smaller body of water and the effects on downstream water quality. The EPA said the rules will rely on data from analysis completed a few months ago on how interconnected waterways affect water quality downstream.

"The proposed rule clarifies protection for streams and wetlands," but "does not protect any new types of waters that have not historically been covered under the Clean Water Act," the EPA and Army Corps said in a joint statement. The Army Corps and states process permits for work in the nation's waterways, while the EPA enforces pollution laws.

The regulatory action might provoke legal challenges from several economic sectors—including the agriculture, construction and energy industries. Opponents say the rules could delay projects while permits are sought for dredging, filling or drainage in more areas.

"EPA has added just about everything into its jurisdiction by expanding the definition of a 'tributary,'" said Kevin Kelly, president of the National Association of Home Builders. The organization said the regulations would greatly increase the number of construction sites that are required to obtain appropriate permits.

Paul Schlegel, environmental and energy policy director for the American Farm Bureau Federation questioned whether the EPA has the authority to impose the rules: "The EPA is pushing the limits of what it can do."

Environmental groups disagreed. "The new regulations won't affect any streams, lakes or wetlands that weren't covered by the Clean Water Act before the Supreme Court rulings," said Jon Devine, senior attorney at the Natural Resources Defense Council. He called the farm bureau's concerns "a flaming red herring," noting the rules still include longtime exemptions for common agriculture and ranching operations.

Lawmakers have indicated they would attempt to stop the EPA's effort. Sen. David Vitter (R., La.), the top Republican on the Senate Environment and Public Works Committee, said the EPA was undertaking "one of the most significant private-property grabs in U.S. history" that would "give the federal government outright permitting authority over virtually any wet area in the country."

Sen. Mary Landrieu (D., La.), the new chairman of the Energy Committee, also criticized the proposal. "I will work with colleagues on both sides of the aisle to find a legislative solution to reverse this unfair, unwise and unnecessary decision," she said in a statement.

Mr. Vitter and a number of other Republicans complained the Obama administration was inappropriately circumventing Congress by going straight to a regulatory agency proceeding that doesn't require congressional approval.

Mr. Obama has used this process with another controversial EPA action on new regulations limiting carbon emissions from coal-fired power plants. Environmental groups have said it would have been impossible for the White House to get such significant changes passed in a bill on Capitol Hill.

"Since 2006, what is and isn't covered by the Clean Water Act has been under dispute," said Joshua Saks, legislative director of the National Wildlife Federation. "Now the EPA and Army Corps will be able to help preserve wildlife and fishing habitats which have been endangered." The proposed rules are subject to a 90-day comment period before the government can consider putting final regulations in place.

<http://www.wsj.com/articles/SB10001424052702303949704579461333790986144>

F. DANGERS FROM EPA – PLAYING NATIONAL ENERGY REGULATOR

If the Environmental Protection Agency's (EPA) proposed clean power plant rule (CPP) is finalized and withstands expected legislative and court challenges, it would give the agency power to determine how electricity is provided to every household, school, and factory in the United States.

Historically, EPA's authority over power generation and use has been limited to regulating pollutants emitted by power plants and industrial facilities into the air, water, or as solid waste.

As described by attorneys William S. Scherman, Charles H. Haake, and Jason J. Fleischer:

The EPA's sweeping new plant to plug approach is radically different from any other regulation the EPA has previously imposed on electricity generators. Instead of merely saying to an existing power plant "thou shalt not emit more than X" from your smokestack, the Clean Power Plan would insinuate the EPA into every aspect of the Nation's energy grid. For instance, the EPA proposes to reduce the use (demand in industry terms) of electricity by requiring States to impose energy efficiency standards that meet the EPA's approval. At the same time, the EPA is requiring States to massively shift generation away from fossil fuel-fired power plants to renewable sources of electricity such as wind and solar.

Experts in energy reliability have raised significant concerns about the CPP. For instance, the North American Electric Reliability Corporation, the regulatory authority charged with assuring the reliability of the power system in North America, testified before Congress the CPP "may represent a significant reliability challenge" to the electric grid. And a commissioner at the Federal Energy Regulatory Commission, the federal agency charged with regulating the nation's power grid, testified FERC determined the proposal "has the potential to completely undermine the market principles that underpin dispatch' of our Nation's power systems, and that it may have 'profound reliability implications.'"

Leaving aside the question of whether EPA actually has the authority to impose the CPP on the states, Scherman *et al.*, argue EPA's own statements show it does not have the technical expertise to be the nation's energy regulator. EPA has claimed electric power from different types of generating units is fungible, with generation at one power plant substitutable for generation from another wholly different kind of plant, "without regard to the generating unit's operating characteristics, its geographic location, grid design or any of a host of other factors." Any first-year electrical engineering student knows this is not true.

Because wind and solar power are intermittent, highly variable sources of electric power, they cannot be relied on to provide either base load power – daily minimum operating power necessary to keep the grid functional – or peaking power -- electricity dispatchable as needed to

meet greater-than-normal demand. EPA's power fantasy cannot overcome basic physics and the realities of operating a modern, interconnected electric power grid.

CLIMATE CHANGE WEEKLY #173:

HEALTH: A. RABIES - USA (11): (SOUTH CAROLINA) FOX, HUMAN EXPOSURE

A ProMED-mail post

<<http://www.promedmail.org>>

ProMED-mail is a program of the

International Society for Infectious Diseases <<http://www.isid.org>>

Date: Tue 12 May 2015

Source: WMBF News, South Carolina Department of Natural Resources press release [edited]

<<http://www.wmbfnews.com/story/29042871/dhec-fox-exposes-person-to-rabies-in-florence-county>>

Fox exposes person to rabies in Florence County

One person is undergoing treatment after being exposed to rabies in Florence [South Carolina] by a fox that tested positive for the disease, the Department of Health and Environmental Control [DHEC] reported today [12 May 2015]. The exposure occurred on 8 May 2015, as the victim was exiting a car. The fox tested positive for rabies on 9 May [2015].

"To reduce the risk of getting rabies, we recommend that people avoid wild animals acting tame and tame animals acting wild," said Sandra Craig of DHEC's Bureau of Environmental Health Services (BEHS). "About

275 South Carolinians must undergo preventive treatment for rabies every year, with most exposures coming from bites or scratches by a rabid or suspected rabid animal. Wild animals contract the disease most often, but domestic pets can contract rabies as well.

"If you think you have been exposed to the rabies virus through a bite, scratch or the saliva of a possibly infected animal, immediately wash the affected area with plenty of soap and water," Craig said.

"Then be sure to get medical attention and report the incident to DHEC."

During 2014, there were 139 confirmed cases of animal rabies in South Carolina. There have been 53 confirmed cases in animals statewide this year [2015]. This animal is the 1st to test positive in 2015 from Florence County. There were none that tested positive in that county during 2014.

Vaccination is the best way to help protect your pet and your family from this disease. For additional information on rabies, visit <<http://www.scdhec.gov/rabies>>, or contact your local DHEC BEHS office at <<http://www.scdhec.gov/HomeAndEnvironment/DHECLocations/>>. CDC's rabies webpages can be found at <<http://www.cdc.gov/rabies>>.

Communicated by:

ProMED-mail from HealthMap Alerts

<promed@promedmail.org>

[To find Florence, South Carolina, go to:

<<http://www.fallingrain.com/world/US/SC/Florence.html>>.

For a map of fox rabies in the United States in 2010, go to:

<<http://www.cdc.gov/rabies/resources/publications/2010-surveillance/rabid-foxes.html>>.

It is patently up and down the east coast as well as in every other state except Arizona and Oregon. Wild animals accounted for 92 percent of reported cases of rabies in 2010 -- the last year that CDC has assembled data for. Raccoons continued to be the most frequently reported rabid wildlife species (36.5 percent of all animal cases during 2010), followed by skunks (23.5 percent), bats (23.2 percent), foxes (7.0 percent), and other wild animals, including rodents and lagomorphs (1.8 percent). Reported cases decreased among all wild animals during 2010. For all species from 1960-2010, see:

<<http://www.cdc.gov/rabies/resources/publications/2010-surveillance/rabid-wild-animals.html>>.

Outbreaks of rabies infections in terrestrial mammals like raccoons, skunks, foxes, and coyotes are found in broad geographic regions across the United States. Geographic boundaries of currently recognized reservoirs for rabies in terrestrial mammals are shown on this map:

<http://www.cdc.gov/rabies/location/usa/surveillance/wild_animals.html>.

This differs markedly from the map above, however. But either way, be very cautious when you see a wild animal out during an unusual time of day and/or in an unexpected place. Keep your distance. - Mod.MHJ

A HealthMap/ProMED-mail map can be accessed at:

<<http://healthmap.org/promed/p/39020>>.]

SAFETY. A. EPA AGREEMENT WITH CITGO WILL IMPROVE SAFETY AND EMERGENCY RESPONSE IN CORPUS CHRISTI, TX

Contact: Jennah Durant or Joe Hubbard at 214-665-2200 or r6press@epa.gov

DALLAS – (May 22, 2015) Today, the U.S. Environmental Protection Agency (EPA) announced an agreement with the Citgo Refining and Chemicals Company for emissions violations at the company’s facility in Corpus Christi, Texas. In addition to correcting violations and paying a civil penalty, the company will provide the local fire department with equipment to help improve their response to chemical releases.

“Keeping communities and workers safe is the highest priority for EPA’s enforcement program,” said Regional Administrator Ron Curry. “Companies have to be held accountable when they violate these important regulations.”

The agreement follows an unannounced inspection by EPA enforcement staff in June 2012, who acted on a tip from the Chemical Safety Board. The inspectors found violations in a range of areas, including equipment and controls, operation and auditing procedures, and initial and ongoing training. The agreement, achieved through EPA’s alternative dispute resolution process, requires Citgo to address and correct each violation. The company will also pay a civil penalty of \$360,000.

The agreement also included a supplemental environmental project, or SEP, to benefit the Corpus Christi community. Citgo will provide over \$117,000 in equipment to the Corpus Christi Fire Department to help quickly detect and identify suspected chemical leaks. This is an especially valuable resource for a community such as Corpus Christi, which has a high number of chemical and industrial facilities.

More information on EPA compliance assurance and enforcement:

<http://www2.epa.gov/enforcement/air-enforcement>

More on enforcement activities in EPA Region 6: <http://www.epa.gov/region6/6en/>

ASME NEWS A. IMECE 2015 News

Houston, TX

Nov. 13-19, 2015

ASME's International Mechanical Engineering Congress and Exposition (IMECE) is the largest interdisciplinary mechanical engineering conference in the world. Among the 4,000 attendees from 75+ countries are mechanical engineers in advanced manufacturing, aerospace, advanced energy, fluids engineering, heat transfer, design engineering, materials and energy recovery, applied mechanics, power, rail transportation, nanotechnology, bioengineering, internal combustion engines, environmental engineering, and more.

INNOVATION @ IMECE: Things to Look for in 2015

FutureME Mini-Talks @ IMECE

The Board on Career Development will host a special two-hour social experience on Sunday, November 15, at 8:00 pm CST, featuring inspirational talks given by knowledgeable engineers sharing best practices in career development. The mini-talks are created by early career engineers for early career engineers. Along with the mini-talks, you will have the opportunity to meet up with more senior engineers and industry leaders. Go to the [ASME FutureME Mini-Talks at IMECE Facebook event page](#) to learn more, R.S.V.P., and see the latest released Mini-Talks.

Two Conference-Wide Plenary Lecturers Announced

Two new plenary speakers to the 2015 program.

- [Subhendu Ghosh](#), Executive Vice President, Global Engineering & Design, Tata Technologies Limited
- [Hai Wang](#), PhD, Professor of Mechanical Engineering, Stanford University

Poster and Photo Submission Deadline Is June 22

There's still time to become part of this interdisciplinary conference: [submit your abstract for your poster or photo submission](#) by June 22. Present your work in one of the following sessions:

- Heat Transfer Photo Gallery
- DeWitt Poster Session for Heat Transfer
- Heat Transfer Graduate Poster Session
- Mechanics of Solids, Structures and Fluids
- Virtual Podium, including the Society-Wide Micro and Nanotechnology Forum
- ASME International Undergraduate Research and Design Expo
- NSF Student Competition

**Submissions are for presentation only (no publication in the conference proceedings).*

Experienced Tweeters Needed

Are you planning to go to #IMECE2015 and want to share your first-hand experiences with colleagues? We're looking for a few individuals to help us spread the word of #mechanicalengineering this fall in #Houston. If you would like to be considered for an ASME 2015 IMECE Social Media Correspondent spot, send you name, contact information, and a brief description of your experience tweeting to imece@asme.org. **Applications due June 12, 2015.**

In the World of Interdisciplinary Mechanical Engineering

Options Bring Challenges to Floating Platforms

[Learn how](#) engineers are testing wind turbines to ensure they work in the swaying conditions of a deep ocean.

Emerging Frontiers for 2D Materials

[Read about](#) how researchers have shown that the performance of another 2D material- molybdenum disulfide (MoS₂) -- can be similarly improved by BN-encapsulation.

Fully Loaded Car Detects Leaks

[Find out](#) how Essess is using thermal imaging technology to analyze a building to evaluate whether it is leaking -- just by driving by.

Arnold Feldman

B. EED MEETING ANNOUNCEMENT

The Environmental Engineering Division will hold an open meeting for all Division members and interested individuals in conjunction with the ASME Power & Energy Conference, San Diego, CA. The meeting will be on Sunday morning June 28 between 8 AM and 10 AM PDT (11 AM to 1 PM EDT) at the Omni Hotel, 675 L Street, San Diego (room TBD). A formal agenda has not been developed but will include such issues as Technical Sub-Committees, conference/event planning, Division awards including the new Regulatory Engineering Award, and the new Academic Sponsorship Program.

For those in San Diego for the Power & Energy Conference or who live in the area please feel free to attend: a light breakfast will be served (please let Arnie Feldman, at jjdsenv@att.net or 267-880-2325, know if you will attend for food planning purposes).

For those not in San Diego, a dial up number is available for your use:

Phone: 1-866-359-4571

Conference Code: 811 047 1915

If you have any questions please do not hesitate to contact me, Arnie Feldman, Arnold Feldman [jjdsenv@att.net] EED Chair.

COMMENTS

A. NO "THE WEEK THAT WAS" THIS WEEK

B. TRUE COSTS OF WIND ELECTRICITY

Posted on [May 12, 2015](#) | [68 comments](#)

by Planning Engineer and Rud Istvan

Wind turbines have become a familiar sight in many countries as a favorite CAGW mitigation means. Since at least 2010, the US Energy Information Agency (EIA) has been assuring NGOs and the public that wind would be cost competitive by now, all things considered. Many pro-wind organizations claim wind *is* cost competitive [today](#). But is it?

<http://judithcurry.com/2015/05/12/true-costs-of-wind-electricity/#more-18717>

Judith Curry

C. 'WE'LL SCRAP FUNDS FOR WINDFARMS'

Published date: 07 May 2015 |

Published by: Ben Goddard

[Read more articles by Ben Goddard](#)

THE PRIME Minister has pledged to stop future government funding to wind farm projects including the delayed inquiry and to give local people the final say – if he is re-elected today. David Cameron visited Crickhowell on Wednesday when he was quizzed over the delay of any announcement on the results of the Mid Wales Conjoined Wind Farm Inquiry which could see five wind farms built across Powys with each consisting of between 17 and 65 turbines up to 450 feet tall.

The five proposed wind farms, which were the subject of a yearlong planning inquiry, are proposed to be built at Llandinam, Carnedd Wen, Llaithddu, Llanbrynmair and Llanbadarn Fynydd.

Despite planning inspector Andrew Poulter handing his recommendations to Secretary of State Ed Davey back on December 8, a decision was made to delay any decision until after this week's General Election.

Mr Cameron pledged to stop the wind farm project and any other on-shore windfarms within Montgomeryshire if he was elected to take a second term in Government.

He said: "You would have to ask the environment secretary who took that decision and that was a decision for him.

"However, I want to make it clear that if there is a Conservative Government in place we will remove all subsidy for on-shore wind and local people should have a greater say.

"Frankly I think we have got enough on-shore wind and we have enough to be going on with, almost 10 per cent of our electricity needs, and I think we should give local people a say if they want to block these sorts of projects.

"The only way to stop more on-shore wind is to vote Conservative there is no other party with this policy. We are saying very clearly we would remove the subsidy and give local people the power to say yes or no.

"This would end the growth of on-shore wind and if that's what you care about you must vote Conservative."

Last month a leaked report by the Sunday Telegraph suggested that the inquiry's planning inspector had advised for three of the five wind turbines to be approved.

Glyn Davies, Conservative MP for Montgomeryshire, welcomed the delay of the inquiry result but said he was shocked if the report had been leaked.

He said: "I would be shocked if the Secretary of State for Energy & Climate Change, or anyone else at DECC, were to have 'leaked' to the Sunday Telegraph any decision on the Public Inquiry into wind farms in Mid Wales.

"I'm not in a position to confirm the accuracy or otherwise of the report.

"It would be most improper. This is about the future of Mid Wales, not some grubby political game.

"All I do know is that the inspector's report was delivered to the Secretary of State on December 8 and that normally a decision could have been expected in early March.

"We also know that DECC has announced that a decision has been delayed for a new Government to decide in early summer.

"I would be disappointed if any of the wind farms are approved but if the Sunday Telegraph report is correct, it would be another big blow to the wind farm developers in Mid Wales in that two of the biggest wind farms would be refused permission.

“Such refusals would further undermine the horribly destructive proposal by National Grid to build a line of massive pylons from North Shropshire to Cefn Coch in Montgomeryshire.

“I have argued that any decision should be delayed, to allow a Secretary of State – other than Liberal Democrat Ed Davey – to consider it.

“If I am re-elected MP for Montgomeryshire, I will seek a further careful consideration of this wind farms/power lines project. It’s financial and environmental madness. It should be abandoned.”

If all five wind farms are approved National Grid has proposed to build a 33-mile pylon route – eight miles of which will be underground from Cefn Coch to near Oswestry – to connect the power generated by the wind farms to the national power grid.

Judith Curry

D. MICHAEL BASTASCH AT THEDAILYCALLER RECENTLY PENNED AN AMUSING ARTICLE TITLED THE 25 YEARS OF PREDICTING THE GLOBAL WARMING ‘TIPPING POINT’.

It’s an enjoyable read, beginning:

For decades now, those concerned about global warming have been predicting the so-called “tipping point” — the point beyond which it’ll be too late to stave off catastrophic global warming.

Bastasch then lists and discusses “some of the ‘greatest’ predictions made by scientists, activists and politicians — most of which we’ve now passed,” including:

- *2015 is the ‘last effective opportunity’ to stop catastrophic warming*
- *President Barack Obama is the last chance to stop global warming*
- *The U.N.’s top climate scientist said in 2007 we only had four years to save the world*
- *Environmentalists warned in 2002 the world had a decade to go green*

The entire article should make you smile. You can find it [here](#).

E. NYT CLAIM: OBAMA’S CATASTROPHIC CLIMATE DENIAL

Bill McKibben, writing for The New York Times has published an attack on President Obama, accusing him of “climate denial”. According to McKibben; MIDDLEBURY, Vt. — THE Obama administration’s decision to give Shell Oil the go-ahead to drill in the Arctic shows why we may never win the fight against climate change. Even in this...

<http://wattsupwiththat.com/2015/05/13/nyt-claim-obamas-catastrophic-climate-denial/>

F. GUEST POST: “CLIMATE VARIABILITY RESEARCH: DID THE SCEPTICS MAKE US DO IT?” – PROFESSOR RICHARD BETTS

This is a guest post by Prof. Richard Betts, Head of Climate Impacts at the Met Office, (IPCC AR4 and AR5 lead author) about Lewandowsky, Oreskes et al’s forthcoming paper, which suggests that climate skeptics influence climate scientists. Richard’s post starts now. Stephan Lewandowsky and co-authors have published an Executive Summary of their forthcoming paper*...

<http://wattsupwiththat.com/2015/05/13/guest-post-climate-variability-research-did-the-sceptics-make-us-do-it-professor-richard-betts/>

G. RECORD ANTARCTIC ICE: MAWSON BASE MIGHT HAVE TO RELOCATE

Guest essay by Eric Worrall The record busting growth of Antarctic ice is threatening the viability of Australia's Mawson Antarctic research station. According to The Australian; Satellite observations show a new daily record being set for Antarctic sea ice every day for the past two weeks. Annual records have also been broken every year for...

<http://wattsupwiththat.com/2015/05/12/record-antarctic-ice-mawson-base-might-have-to-relocate/>

H. IS CORN ETHANOL BREAKING THE LAW?

by [Joe Romm](#) Posted on May 7, 2015 at 10:04 am

Is Corn Ethanol Breaking The Law? CREDIT: Shutterstock

Corn ethanol may be breaking the law, according to a [study](#) from last month, "Cropland Expansion Outpaces Agricultural and Biofuel Policies in the United States."

It appears that corn was caught yellow-handed by University of Wisconsin-Madison researchers in a plot with other crops like soy to replace "millions of acres of grasslands." But scientists named corn the ring-leader: "Corn was the most common crop planted directly on new land."

I know you're wondering, "since when is it illegal to replace carbon-storing grassland with the Walter White of Biofuels?" Answer: Since the federal Renewable Fuel Standard (RFS), "which requires blending of gasoline with biofuels that are supposed to be grown only on *pre-existing cropland*, in order to minimize land-use change and its associated greenhouse gas emissions," as the UWM [news release](#) explains.

Now if only anybody were actually enforcing the law, the anti-hero of biofuels would be per-pwalked to prison for destroying the very environment it was supposed to help protect.

We last saw the evil genius called corn ethanol in a 2013 [piece headlined](#), "Biofuels Policy Helping Destroy U.S. Grasslands At Fastest Rate Since 1930s, Boosting Threat of Dust-Bowlification."

This new UMW study is the "first comprehensive analysis of land-use change across the U.S. between 2008 and 2012." University of Wisconsin-Madison researchers "tracked crop-specific expansion pathways across the conterminous US and identified the types, amount, and locations of all land converted to and from cropland" during that time.

Scientists learned that crops "expanded onto 7 million acres of new land," during those four years and replaced "millions of acres of grasslands." Half of that was new soy and corn, which was increasingly used to make biofuels between 2008 and 2012 to meet U.S. government mandates, which included a minimum target of over 12 billion gallons of biofuels for in 2010. What was the climate impact of this expansion? The University of Wisconsin-Madison concluded:

"The conversion to corn and soy alone, the researchers say, could have emitted as much carbon dioxide into the atmosphere as 34 coal-fired power plants operating for one year — the equivalent of 28 million more cars on the road."

Corn ethanol should get its own show on HBO or AMC.

The Renewable Fuels Association, which is the "the authoritative voice of the U.S. ethanol industry," has responded to this peer-reviewed study with a [blog post](#) by their Senior Vice President, Geoff Cooper. Cooper points out this is a very difficult calculation to do and that the

dataset the authors use for this purpose has been called into question. Ideally, the RFS will put their critique through the peer-review process to publish it in a journal.

UPDATE: The study's lead author sent me a reply to the RFA blog critique: "Most of their points seem to stem from a misunderstanding of our study and comparable data. We stand confidently by our results and conclusions."

It seems not a month goes by that a study doesn't come out condemning the fuel that now comprises some 10 percent of U.S. gasoline. "New airborne measurements downwind from an ethanol fuel refinery in Decatur, Illinois, show that ethanol emissions are 30 times higher than government estimates," we learned just this Tuesday, for instance, when [NOAA published a study](#) on "ozone-forming compounds" generated by a corn ethanol refinery. "The measurements also show emissions of all volatile organic compounds (VOCs), which include ethanol, were five times higher than government numbers, which estimate emissions based on manufacturing information."

What will we learn in June, that corn ethanol is "[behind uptick in abandoned kittens](#)"? Okay, maybe not that, but still.

In 2011 I wrote a post titled, "[The Corn Ultimatum](#): How long can Americans keep burning one sixth the world's corn supply in our cars?" If we don't voluntarily abandon corn ethanol, it seems inevitable that human-caused climate change and Dust-Bowlification will ultimately arrest its development:

If we stay on business-as-usual CO2 emissions, we will turn the normal climate of our breadbasket into "severe drought." Growing enough food for Americans, let alone the countries we currently help feed, won't leave much land available for crop-based biofuels (Via [NASA](#)).

<http://thinkprogress.org/climate/2015/05/07/3654392/corn-ethanol-illegal/>

Judith Curry

I. POPE FRANCIS WARNS THAT PEOPLE WILL BE JUDGED BY GOD ON HOW WELL THEY CARE FOR THE EARTH

VATICAN CITY

Pope Francis warned the rich and powerful on Tuesday that God will judge them on whether they fed the poor and cared for the Earth, his latest exhortation on the environment ahead of his encyclical on climate change and its effects on the world's most vulnerable.

Francis delivered the warning during a Mass for the Vatican's Caritas Internationalis charity.

In his homily, Francis said the planet has enough food but "it seems that there is a lack of willingness to share it with everyone."

"We must do what we can so that everyone has something to eat. But we must also remind the powerful of the Earth that God will call them to judgment one day," he said. "And there it will be revealed if they really tried to provide for him in every person, and if they did what they could to preserve the environment so that it could produce this food."

No papal document in recent times has produced as much anticipation or anxiety as Francis' encyclical, which is expected next month. Environmentalists are thrilled that Francis is lending his moral authority to provide an ethical foundation for action to stem climate change.

Conservatives, including many Christians, have criticized Francis for wading into the climate debate.

On Tuesday, one of Francis' key advisers, Cardinal Oscar Rodriguez Maradiaga of Honduras, said he was stunned by the complaints he had heard during a trip to the U.S. over a papal document that hasn't even been published yet. He accused those fueling it of an ideology "that is

very strongly linked to a vision of capitalism that doesn't want to renounce damaging the environment for the sake of profits."

ASSOCIATED PRESS

Rob Taylor

J. BREAKING: IS THE VATICAN BACKING OFF ON THEIR ANTICIPATED CLIMATE POSITION?

Kudos to Morano, CFACT and Heartland for their quickly organized and now apparently effective mission. Even with the heavy criticism received, the Vatican seems to have blinked. Report: Papal Climate Encyclical Postponed – To Undergo Revision – Skeptics’ Trip To Rome May Have Forced Revisions? Craig Rucker of CFACT writes: ‘According to Vaticanist Sandro Magister,...

<http://wattsupwiththat.com/2015/05/13/breaking-is-the-vatican-backing-off-on-their-anticipated-climate-position/>

K. NEARLY 3,500 DAYS SINCE MAJOR HURRICANE STRIKE... DESPITE RECORD HIGH CO2

As [Subtropical Storm Ana](#) churns off the southeast U.S. coast, the global atmosphere has exceeded 400 ppm carbon dioxide content for the first time in...well...who knows?

And also on tap for this month (May 25th, Memorial Day) is another milestone: 3,500 days since the last time a major hurricane (Cat 3 or stronger) struck the U.S., which was Hurricane Wilma in 2005.

Maybe we can all pause to remember the “good old days”, when hundreds or thousands of people died in major hurricanes. /sarc

You remember 2005, right? Hurricane Katrina? So many hurricanes that the National Hurricane Center ran out of names? The next year, Al Gore blamed it all on humanity’s carbon dioxide emissions in his movie, *An Inconvenient Truth*.

You might not remember that 2 years ago [news reports](#) also were reporting we hit record CO2, at 400 ppm. So why the [latest report](#) regarding 400 ppm? Well, because now we’ve exceeded 400 ppm, rather than just hitting 400 ppm.

The minor distinction illustrates an important fact: *it takes a huge amount of CO2 emissions to raise the atmospheric CO2 concentration by even a tiny amount.*

It took nearly a century to raise atmospheric CO2 concentrations from 3 parts per 10,000 to 4 parts per 10,000. That’s right, nearly a century to add 1 molecule of CO2 to every 10,000 molecules of atmosphere.

Most people aren’t aware that the atmospheric concentration would have gone up twice as fast if not for the fact that nature loves the stuff. No matter how fast we produce it with our cars and planes and power plants, nature sucks up half of it, like a starving dog that has just been fed dinner.

In fact, without CO2 life as we know it on Earth would not exist.

More CO2 has led to [global greening](#). Increased agricultural productivity. It probably has contributed to recent warming, in my professional opinion, but that warming has been relatively benign, with no observable increase in severe weather.

Which brings me back to hurricanes. There is a huge amount of natural variability in global hurricane activity from year to year, and even decade to decade. For example, see Dr. Ryan Maue’s charts [here](#).

This extreme variability would happen with or without humans, just like it happens in tornado activity. Yet, many people tend to anthropomorphize everything that happens in nature. Changes in nature are seen as an extension of changes in human behavior, specifically our use of fossil fuels. It really isn't much different from medieval witches being blamed for bad things that happened.

Eventually a major hurricane will strike the U.S. again. Maybe it will be this year, maybe next year. No one knows.

But you can be sure that when the current drought in U.S. major hurricane strikes ends, that, too, will be blamed on humans.

Roy Spencer

L. CLAIM: CLIMATE SCIENTISTS FIND ELUSIVE TROPOSPHERIC HOT SPOT OVER THE SOUTHERN OCEAN

First of all, consider the source; UNSW is the same outfit that sponsored the disastrous “ship of fools” aka The Spirit of Mawson. Secondly, Dr. Roy Spencer has been looking for this for years in the satellite data and hasn't found it. Thirdly, radiosonde coverage in their area of study is pretty sparse. From the...

<http://wattsupwiththat.com/2015/05/14/claim-climate-scientists-find-elusive-tropospheric-hot-spot-over-the-southern-ocean/>

M. IN THE CLIMATE DEBATE, HEAR BOTH SIDES

By Christopher Monckton of Brenchley

In May 2015, the Pennant, a biannual magazine for retired UK armed forces personnel, carried an article entitled The Earth's Climate by Rob Varley, chief executive of the Met Office, the world's oldest national weather bureau. The Met Office article does not represent a fair or balanced summary of the...

<http://wattsupwiththat.com/2015/05/14/in-the-climate-debate-hear-both-sides/>

N. FORECASTING CLIMATE CHANGE IS A VERY COMPLEX PROCESS

Guest essay by Howard Lowe

Mother Earth is a dynamic place, constantly changing and evolving. Although it operates in a cyclical manner, the major cycles are not short, falling into a time frame of thousands, tens of thousands, and hundreds of thousands of years. We know that the Sun rises in the east and sets...

<http://wattsupwiththat.com/2015/05/13/forecasting-climate-change-is-a-very-complex-process/>

Editor's Note: This is a very interesting synopsis of a very important new book. GHH

O. NEW FREEMAN DYSON BOOK: DREAMS OF EARTH AND SKY

Freeman Dyson has upset the green movement again, by reminding them that one of the world's most renowned physicists is a climate skeptic. According to Dyson; What I would like to emphasize is that human actions have very large effects on the ecology, which have nothing to do with the climate. Carbon dioxide is what...

<http://wattsupwiththat.com/2015/05/15/new-freeman-dyson-book-dreams-of-earth-and-sky/>

P. APRIL 2015 GLOBAL SURFACE (LAND+OCEAN) AND LOWER TROPOSPHERE TEMPERATURE ANOMALY & MODEL-DATA DIFFERENCE UPDATE

Guest Post by Bob Tisdale This post provides an update of the data for the three primary suppliers of global land+ocean surface temperature data—GISS through April 2015 and HADCRUT4 and NCDC through March 2015—and of the two suppliers of satellite-based lower troposphere temperature data (RSS and UAH) through April 2015. INITIAL NOTES: I'm still using...

<http://wattsupwiththat.com/2015/05/14/april-2015-global-surface-landocean-and-lower-troposphere-temperature-anomaly-model-data-difference-update/>

Q. A BENEFIT OF 'CLIMATE CHANGE' – REDUCED OZONE POLLUTANTS IN COASTAL CITIES

University of Houston researchers: Climate change helped to reduce ozone levels – Houston findings should hold for coastal regions around the world Researchers at the University of Houston have determined that climate change – in the form of a stronger sea breeze, the result of warmer soil temperatures – contributed to the drop in high-ozone...

<http://wattsupwiththat.com/2015/05/14/a-benefit-of-climate-change-reduced-ozone-pollutants-in-coastal-cities/>

R. REGULATIONS COST ALMOST 2 TRILLION \$ PER YEAR

Recent study shows that regulations cost almost 2 trillion dollars per year. The EPA is a major contributor.

“Federal regulations imposed on America have been costing the U.S. economy more than \$2 trillion every year and growing, according to a new study that sought to quantify the economic damage inflicted by Washington, D.C., politicians and bureaucrats. That drag represents well over 10 percent of GDP, the report said. Especially burdened under the perpetually expanding regulatory regime are manufacturers and small businesses — two of the key sectors urgently needed to drive employment, growth, and exports amid ballooning U.S. trade and budget deficits. The most harmful and costly regulations and decrees, researchers found, surround alleged “environmental” issues.”

<http://www.thenewamerican.com/economy/item/19116-federal-regulations-cost-u-s-2-trillion-per-year-study-shows>

Don Shaw

S. I BELIEVE READERS WILL FIND THE FOLLOWING ARTICLES INTERESTING

1. You Just Lived Through The Earth's Hottest January-April Since We Started Keeping Records

<http://thinkprogress.org/person/joe/1>.

Editor's Note. The paper does not indicate how or where the atmospheric temperature measurements were made. NOAA does not use Satellites temperature measurements. Most

likely these measurements were taken by Federal Weather Stations, Which are subject to Heat Island effects. GHH

2. Clean Power Plan Would Save Thousands of Lives Each Year

http://www.scientificamerican.com/article/clean-power-plan-would-save-thousands-of-lives-each-year/?WT.mc_id=SA_DD_20150505

Editor's Note: Note the report contains a Note by John Fowler saying "None of the health benefits the study focused on would come from reduced carbon dioxide emissions, however, but rather, they would come from reduced output of sulfur dioxide and other emissions.

3. The arguments that convinced a libertarian to support aggressive action on climate

<http://www.vox.com/2015/5/12/8588273/the-arguments-that-convinced-this-libertarian-to-support-a-carbon-tax>

Editor's Note: This article contains no data, but lots of opinions. The article also references the EPA "Endangerment Document"(2009), which Alan Carlin harshly criticizes in his review., GHH

4. **Editor's Note:** This article offer no data but doses suggest spending more money on reducing CO2, during a time the atmospheric temperature has remained nearly constant while the CO2 has continued to increase. GHH

Rick Yoder

T. THORIUM: THE LAST GREAT OPPORTUNITY OF THE INDUSTRIAL AGE

Guest essay by David Archibald It is a significant fact that half the protein the world eats has its origin in fossil fuels. We are all aware of the green revolution that, amongst other things, saw dwarf strains of wheat increase yields by a couple of hundred percent. There was another revolution in agriculture sixty...

<http://wattsupwiththat.com/2015/05/16/thorium-the-last-great-opportunity-of-the-industrial-age/>

U. OH NOES! EXPOSURE OF US POPULATION TO EXTREME HEAT COULD QUADRUPLE BY MID-CENTURY

From the National Center for Atmospheric Research/University Corporation for Atmospheric Research and the Department of "ignored data in favor of modeled simulations" comes this claim from Trenberth's mountain climate alarm lair. Only one problem: actual data on U.S.

Temperature Extremes does not support the claim. See below. Interaction of warming climate with a growing, shifting...

<http://wattsupwiththat.com/2015/05/19/oh-noes-exposure-of-us-population-to-extreme-heat-could-quadruple-by-mid-century/>

V. THE RECENT WESTERLY WIND BURST IN THE WESTERN EQUATORIAL PACIFIC COULD HELP TO STRENGTHEN THE 2015/16 EL NIÑO

Guest Post by Bob Tisdale The graphics at the NOAA GODAS website were running a few pentads (5-day periods) behind when I published the May 2015 ENSO Update. They're caught up now, and the Hovmoller diagram of the surface zonal wind stress along the equator, Figure 1, is showing another westerly wind burst during early...

<http://wattsupwiththat.com/2015/05/19/the-recent-westerly-wind-burst-in-the-western-equatorial-pacific-could-help-to-strengthen-the-201516-el-nino/>

X. COAL-FIRED POWER PLANT LOSES STEAM

Mississippi utility withdraws as backer of electricity project as costs soar Southern Co.'s \$6.2 billion coal-fired power plant near Meridian, Miss., lost a utility partner, raising the stakes for the project and resulting in a request for higher power rates to help pay for the project.

Rebecca Smith

The Wall Street Journal

May 22, 2015 5:41 p.m. ET

The future of the most expensive fossil-fuel power plant built in the U.S. is facing new pressures after a Mississippi utility backed out of its commitment to the clean-coal project.

South Mississippi Electric Power Association, which furnishes power to smaller utilities in the state, dropped its plan to buy a \$600 million, 15% stake in the project spearheaded by Atlanta-based [Southern](#) Co. citing construction delays.

Southern, in turn, notified state regulators that it may have to raise electricity rates for Mississippi power customers by 41%, or \$37 a month for the typical household, to pay for the project.

South Mississippi Electric Power's move deals a significant blow to the project in Kemper County, Miss., which has been delayed two years and now has an in-service date of 2016. The plant was expected to provide a bright future for the coal industry, under attack for its pollution profile, but instead it has exposed the risks of pursuing novel clean-coal technology.

Earlier Coverage

- [Duke to Build Natural Gas Power Plant, Retire Coal Plant](#) (May 19)
- [Southern Co. Profit Rises on Smaller Hits From Plant Project](#) (April 29)
- [Appalachian Communities Scraping By as Coal Taxes Drop](#) (April 10)

It also raises a politically-challenging question for Mississippi utility regulators: who will cover the shortfall, Southern's shareholders or its customers?

A Southern spokeswoman on Friday said the company is "evaluating its alternatives."

Under various rate plans, the cost of power for a typical home in Mississippi could rise between 24% and 60% within the first two years that the plant is operating, according to Bigger Pie

Forum, a Mississippi consumer advocacy group that has analyzed the company's filings with state regulators. Southern rejects its assessment.

But earlier this year, the state's highest court found that an 18% rate increase, intended to cover some of the Kemper plant's costs, wasn't justified and ordered Southern to refund money to customers.

Fitch Ratings Inc., a credit-rating firm, said on Friday that it is reviewing its rating of Mississippi Power, Southern's utility. A one-notch downgrade is likely, but "a two-notch downgrade cannot be ruled out at this time," Fitch said. It also noted Southern may have to bolster its balance sheet by issuing more equity.

Southern's stock price fell 15 cents, or less than 1%, to \$43.23 in 4 p.m. trading on Friday.

The cost of the Kemper power plant has ballooned several times to \$6.2 billion, as the price tag swept past the \$2.88 billion cap set by state utility regulators to protect customers from budget overruns. Southern has already taken about \$2 billion in charges to earnings related to the plant construction.

The Kemper project is expensive because its costs include a new coal mine, a chemical plant to gasify coal, a power plant, plus a pipeline and electric transmission lines.

'All the wheels are falling off the project.'

—Thomas Blanton, utility commission candidate

Coal has been one of the cheapest—and dirtiest—sources of energy for power production.

Escalating costs for clean-coal power may make Kemper's electricity some of the priciest in the nation.

The plant is designed to take coal mined locally and convert it into a flammable gas which can be burned to make electricity. Most carbon dioxide created in the process will be captured, so the plant is billed as clean coal. Southern hoped it would be the first of many plants, but the price tag has scared off other utilities from pursuing similar projects.

Kemper's delays and Southern's attempts to pass spiraling costs to customers has become a political issue.

Mississippi is one of the few states to publicly elect its utility commissioners. One candidate up for election this fall, Thomas Blanton, is running on an anti-Kemper platform and vows to oppose the rate proposals before the commission.

"All the wheels are falling off the project," he said.

<http://www.wsj.com/articles/coal-fired-power-plant-loses-steam-1432330865>

Y. OIL GIANTS BAND TOGETHER TO ADD VOICE TO CLIMATE DEBATE

by [Tara PatelJavier Blas](#)

6:30 PM CDT

May 20, 2015

Europe's largest oil companies are banding together to forge a joint strategy on climate-change policy, alarmed they'll be ignored as the world works toward a historic deal limiting greenhouse gases.

Royal Dutch Shell Plc, Total SA, BP Plc, Statoil ASA and Eni SpA are among oil companies that plan to start a new industry body, or think tank, to develop common positions on the issues, according to people with knowledge of the matter. So far the largest U.S. companies -- Exxon Mobil Corp. and Chevron Corp. -- have decided not to participate, the people said, asking not be named before a public announcement expected as early as next month.

Efforts to reduce fossil-fuel investments and spur renewables such as solar and wind power have gathered pace in the past two years with oil companies sitting largely outside the debate. One aim of the European producers will be to push natural gas as more climate friendly in generating power than coal, the people said. Of the most used fossil fuels, gas is the one that pollutes the least while coal tops emissions.

"There are companies that are now going beyond the industry's traditional defensive position by at least appearing to rethink strategy and practices," said Carole Mathieu, research fellow at the [French Institute for International Relations](#) in Paris.

'Strong Statement'

The heads of the biggest European oil producers have been pushing the idea of more active engagement with climate policy in recent weeks.

On Thursday, Shell Chief Executive Officer Ben van Beurden said his company would "put a really strong statement out on what we think should happen." He cited the increased use of gas in power generation as key to tackling emissions.

"Targets will not be enough," he said. "We will argue for what we think should be done to bring carbon down."

The industry is slowly waking up to the existential danger to their operations emerging from policies designed to limit climate change. With global temperatures and carbon emissions at a record, governments are looking for a way to clamp down on pollution. The International Energy Agency, a policy adviser to industrial nations, says half of all fossil-fuel reserves may have to remain in the ground to prevent overheating.

Common Language

"We're trying to put together a group of people to begin to speak the same language" on climate, BP CEO Bob Dudley said at a meeting hosted by IHS Inc.'s CERA consulting unit in Houston in April. "There's a bit of different language coming out of different companies and therefore our voice is lost in this."

His counterpart at Total, Patrick Pouyanne, said in Paris on Wednesday that the industry needs to work together. "If each of us is attacked separately, we will be stronger as a group."

Statoil CEO Eldar Saetre has embraced the United Nations' goal to limit global warming to 2 degrees Celsius, a level beyond which scientists say disastrous climate change will bring more violent storms and rising sea levels. He set up a renewable-energy unit and described steps the

industry should follow, starting with a shift to cleaner fuels such as gas, reducing flaring and support for carbon pricing.

“If we don’t, we risk becoming an industry that neither gets access nor acceptance -- and that’s not a good thing,” Saetre said at the CERA gathering.

Investments Scrapped

Shell is urging the industry to get out of its defensive crouch and make its views understood. It wants alternative arguments to counterbalance the divestment campaign, which has persuaded institutions such as the Rockefeller Brothers Fund and Stanford University to scrap fossil-fuel investments.

“In the past we thought it was better to keep a low profile on the issue,” Van Beurden said in February. “It’s not a good tactic. We have to make sure that our voice is heard by members of government, by civil society and the general public.”

The European companies are more sensitive to environmental issues because governments in the region are leading the way on climate and voters are demanding action. The 28-nation European Union plans to cut carbon emissions 40 percent by 2030, double the commitment it made for 2020.

Exxon, Chevron

For their part, Exxon and Chevron say there’s little difference in the approach between them and their European competitors. Exxon CEO Rex Tillerson has said he’ll speak more openly about the issue and has acknowledged that the risks of climate change warrant action. He is urging policy makers to consider a global price on carbon emissions and since 2007 included carbon prices in his company’s business planning.

Chevron said Wednesday in a statement that it shared the concerns of governments and the public about climate change and action was needed to address the risks. Exxon declined to comment.

While Europe’s big oil groups present a friendlier position toward climate change, they are continuing with investments that environmental groups sharply criticize, including drilling in the Arctic.

Emissions data released through the Carbon Disclosure Project show little difference between the U.S. and European oil companies over the past four years. All have reduced pollution “slightly” since 2011, with BP in the lead mainly because of asset sales needed to pay more than \$40 billion in costs associated with the Gulf of Mexico disaster in 2010.

“All companies need to be low-carbon or zero-carbon by 2050,” said Paul Simpson, CEO of the Carbon Disclosure Project, which helps 822 institutional investors with \$95 trillion in holdings analyze risks from sustainability issues. “The oil and gas sector is one that doesn’t yet show a clear transition. The longer that goes on, the more concern investors will have.”

Don Shaw

Editor’s Note: This article indicates a total lack of understanding regarding “Climate Change”

- 1. Carbon is not a pollutant; it is a necessary element which encourages plant growth. Without Carbon in the form of CO₂, plants will not grow vigorously and will not produce the food needed to feed future generations.**
- 2. Lack of vegetation for food supplies will necessitate resorting to eating bugs, Kofi Annan suggests.**
- 3. Increasing CO₂ in the atmosphere will not adversely impact human or animal life, since human's exhale CO₂ at a concentration of about 4000 ppm, now, Current CO₂ atmospheric concentration is only slightly over 400 ppm.**
- 4. CO₂ atmospheric concentration has consistently increased during the last 18 years, yet the atmospheric temperature has remained almost constant. This demonstrates atmospheric temperature rise is not caused by increasing CO₂ concentrations in the atmosphere.**
- 5. CO₂ is a necessary element of the earth's atmosphere!**

Regards

George