

ENVIRONMENTAL AND ENERGY DIVISION

NEWSLETTER

17 AUG. 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 unidentified EED Review Committee alone, which represents the positions of the Environmental and Energy Division (EED) and ASME.

This week's edition includes a discussion of a portion of the EED Executive meeting:

A. ENVIRONMENT 1. THE TRUTH ABOUT CO 2: A CO-FOUNDER OF GREENPEACE TELLS THE TRUTH ON CO2

[Anthony Watts / 1 hour ago](#)

Dr. Patrick Moore, who was one of the original founders of Greenpeace who left the organization in disgust of their current political zealotry, and Greenpeace is now trying to [have him erased from history](#) for daring to do that. He has now produced this interesting video in conjunction with Prager University that is sure to put some people into conniption fits. Global Warming activists will tell you that CO2 is bad and dangerous. The EPA has even classified it as a pollutant. But is it? Patrick Moore provides some surprising facts about the benefits of CO2 that you won't hear in the current debate.

<https://youtu.be/WDWEjSDYfxc>

Don Shaw

2. MIND-BLOWING TEMPERATURE FRAUD AT NOAA

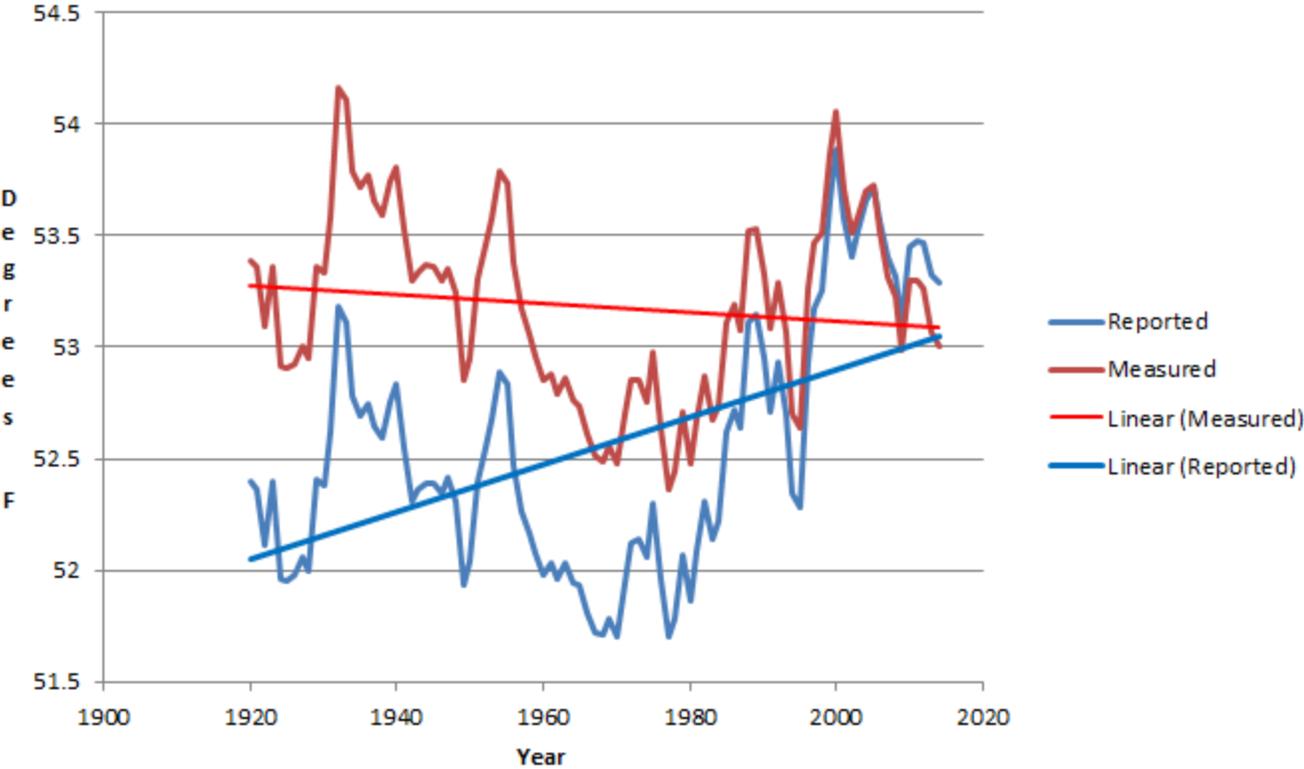
From Steven Goddard:

<https://stevengoddard.wordpress.com/2015/07/27/mind-blowing-temperature-fraud-at-noaa/>

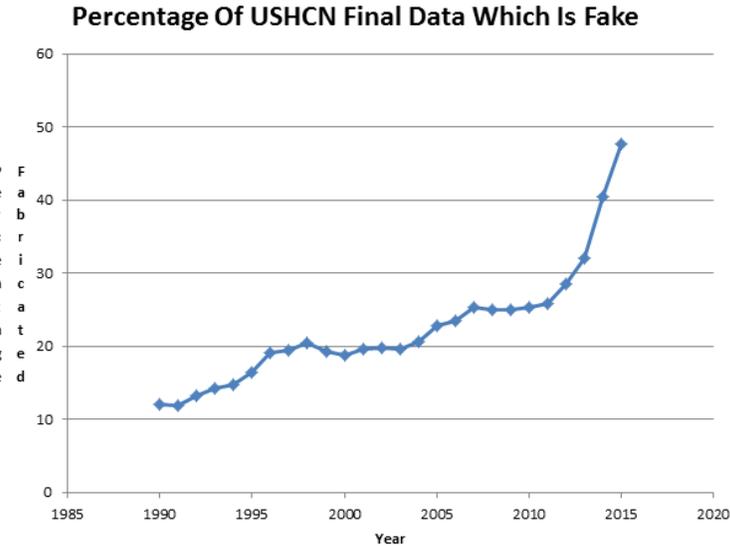
"The measured US temperature data from USHCN shows that the US is on a long-term cooling trend. But the reported temperatures from NOAA show a strong warming trend."

Notice how NOAA cooled the past to make it look like there is more warming than actual today. (Don Shaw)

USHCN US Average Temperature Measured Vs. Reported



"The biggest component of this fraud is making up data. Almost half of all reported US temperature data is now fake. They fill in missing rural data with urban data to create the appearance of non-existent US warming."



Don Shaw

3. A SIMPLE TALE ABOUT SWITCHING TO RENEWABLE POWER: REQUIREMENTS & CONSEQUENCES.

Don Bogard, © 2015 (published here with permission) The tale below is fictional, but every one of its elements and issues has been or will be experienced somewhere in the process of switching electrical power production from fossil fuels to renewable wind and solar. Hopefully this tale will illustrate in a non-technical way some of...

<http://wattsupwiththat.com/2015/08/09/a-simple-tale-about-switching-to-renewable-power-requirements-consequences/>

4. INDUSTRY, STATES SET TO FIGHT EPA GREENHOUSE GAS RULES

Lawsuits would challenge rules requiring significant cuts in power-plant carbon emissions
ENV150817

5. IMECE 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

Stop. Registration Time.

[Registration is open](#) for IMECE 2015. Don't miss this chance to save as much as \$150 on registration rates if you register by August 10.

New Track Plenary Speakers Announced

The 2015 program continues to expand, as we confirm new plenary speakers for our technical tracks:

Biomedical & Biotechnology Engineering: [Jeffrey Sheldon](#), Citare,Tx

Mechanics of Solids, Structures and Fluids: [Gang Bao](#), Rice University, [Brice Lecampion](#), Ecole Polytechnique Federale de Lausanne

Transportation Systems: [Saeed Barbat](#), Ford Motor Company

Awards Preview

The recognition of the excellence of an engineer's work by his or her peers is one of the greatest rewards for accomplishment. By presenting these individuals with tokens of excellence, the Society brings the character and importance of the engineer's work to the attention of the public.

[Check out some of the individuals who will be recognized at IMECE 2015:](#)

- Members' and Students' Luncheon
- President's Luncheon
- Heat Transfer Luncheon
- Electronic & Photonic Packaging Division Wine & Cheese Reception
- Materials Division Reception
- Thurston Lecture
- Applied Mechanics Dinner

In the World of Interdisciplinary Mechanical Engineering: Working Together to Build Drought Resiliency

[Find out](#) how researchers recognize the importance of interdisciplinary dialogue needed to make engineering research effective and move forward.

How to Make 3D Printing Affordable

[Read more](#) about the latest technologies in 3D printing and how we continue to impact Energy Innovation for the Developing World

[See how](#) finding locally appropriate devices and machinery that will work for specific communities can present challenge

HEALTH: 1. FRANCES KELSEY DIES AT 101; AT FDA, DOCTOR BLOCKED SALE OF THALIDOMIDE IN U.S.

<http://www.latimes.com/local/obituaries/la-me-frances-kelsey-20150809-story.html>

Karen Vallark

2..TULAREMIA - USA (09): (COLORADO) MUSKRAT, ALERT

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: Sat 25 Jul 2015

Source: Coloradoan [edited]

<<http://www.coloradoan.com/story/news/2015/07/25/tularemia-rocky-mountain-national-park-colorado/30663335/>>

A dead muskrat recently found at the Lily Lake area of Rocky Mountain National Park [Larimer County] has tested positive for tularemia, or "rabbit fever," according to a news release.

The bacterial disease can cause skin ulcers, swollen and painful lymph glands, respiratory failure, and bloody sputum. Tularemia can be deadly if left untreated, though if identified in a reasonable amount of time, it can be treated with a standard course of antibiotics.

So far in 2015, Colorado health officials have recorded 15 human cases of tularemia. There have been 3 human cases in Larimer County this year, but the current risk level is "low, but present."

To lower your risk of exposure, avoid contact with wild rodents, including squirrels and rabbits, do not handle sick or dead animals directly and wear shoes in areas where rabbits may have died, and a dust mask if you may be kicking up dust and vegetation in an at-risk area.

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Communicated by:

ProMED-mail from HealthMap Alerts

<promed@promedmail.org>

[Tularemia is caused by the gram negative bacterium *Francisella tularensis*.

Tularemia is largely confined to the Northern Hemisphere and is not normally found in the tropics or the Southern Hemisphere.

Francisella tularensis subsp. *tularensis* (type A) is associated with lagomorphs in North America. It is transmitted primarily by ticks and biting flies, is highly virulent for humans and domestic rabbits.

In addition to vector transmission, tularemia may be spread through contact with infected animals or environmental fomites by inhalation, or by ingestion of the poorly cooked flesh of infected animals or contaminated water. - Mod.PMB

The state of Colorado can be located on the HealthMap/ProMED-mail interactive map at <<http://healthmap.org/promed/p/47173>>. Larimer County in north central Colorado can be seen on the map at <<http://geology.com/county-map/colorado-county-map.gif>> and Lily Lake on the map at <http://www.protrails.com/trail/552/rocky-mountain-national-park-lily-lake/Trail_Map>. - Sr.Tech.Ed.MJ]

PIPELINE: 1. GROUP THREATENS TO SUE DOT OVER FACILITY RESPONSE PLANS

On July 28, 2015, the National Wildlife Federation ("NWF") issued a Notice of Intent to Sue the U.S. Department of Transportation ("DOT") over an alleged failure to promulgate regulations governing facility response plans ("FRPs") for certain pipeline and related facilities as required by the Oil Pollution Act of 1990 ("OPA") and Clean Water Act ("CWA").

NWF alleges that DOT failed to perform a nondiscretionary duty to issue regulations within 24 months of the adoption of OPA "requiring an Owner or Operator of an offshore facility to prepare and submit to the President a plan for responding, to the maximum extent practicable, to a worst case discharge, and to a substantial threat of such a discharge, of oil or a hazardous substance." See NOI at 3 (citing 33 U.S.C. § 1321(j)).

The Department of Interior's Mineral Management Service issued FRP regulations for offshore facilities in 1993, but responsibility over issuance of similar regulations for "transportation-related facilities, including pipelines, landward of the coast line" was delegated to DOT via Executive Order 12777 and a Memorandum of Understanding. NWF alleges that "DOT has had the responsibility to issue regulations that should have been issued twenty-three years ago" and that it has failed to issue the required FRP regulations. Further, "[i]f, within sixty days, DOT does not issue such regulations, NWF will bring an action against the agency for violating the CWA and Executive Order 12777."



2015-07-27 Notice of
CWA violation.pdf

Rodger Zygmunt

COMMENTS

A. THE WEEK THAT WAS: 2015-08-8(AUG. 8, 2015)**

BY KEN HAAPALA, PRESIDENT, SCIENCE AND ENVIRONMENTAL POLICY PROJECT (SEPP)

The New Plan: On August 3, the Obama Administration announced its plan to control the production of electricity in the US in the name of protecting the planet from human-caused climate change, even though climate change has been occurring long before humanity existed. The administration's plan is embodied in a 1560-page regulation released by the EPA titled the Final Rule, "Clean Power Plan" (CPP), to be published in the Federal Register sometime in the future. It is not until the rule is published in the Federal Register that activities such as litigation against it can begin, without the courts considering the litigation premature. The most important rules are on power plants operating today rather than those to be built or those which have to be modified or re-built.

The Final Rule contains major changes to the draft CPP including increasing the time given to the several states to comply with the rules by 2 years. Overall, the plan mandates that the states, together, reduce their emissions of carbon dioxide (CO₂) by 32 percent below 2005 levels by 2030, a more stringent mandate than 30% in the earlier version. **However, mandates to the states changed in what appears to be clear political bias, with states controlled by democrats seeing their mandates reduced while those controlled by republicans seeing their mandates increased.**

The CPP promotes the development of solar and wind, far more expensive and unreliable forms of electricity generation than coal, which the plan seeks to curtail. Also, the plan appears to favor wind and solar over natural gas for electricity generation, although previously government agencies bragged that under Obama carbon dioxide emissions were falling by the use of natural-gas-fired power plants. The New Plan raises the percentage of power to be generated by solar and wind from 22% to 28%. The natural gas power industry seems to be somewhat taken back, but should realize that opponents of fossil fuels will try to regulate use of all such fuels.

Also missing from the Final Rule that was in the prior draft are credits for energy efficiency. The EPA had assumed that consumers would actually save on their energy bills by reducing electricity consumption, even more than any increase in energy costs. Statements that consumers will save money appear to be invalid. See links under The Administration's New Plan and The Administration's New Plan – Independent Analysis

The Allies: **Overall**, leaders of environmental groups seemed pleased with the new plan. For example, writing in the *Wall Street Journal*, Fred Krupp, the president of the Environmental Defense Fund called it a clean energy breakthrough, which gives the US an advantage in the race to produce “clean” energy rather than “unsafe pollution for the climate.” He, and others, uncritically repeats the Administration's highly questionable health assertions about carbon dioxide and climate change.

The support of the environmental industry for the plan is not surprising. On August 4 the Majority Staff of U.S. Senate Committee on Environment and Public Works released a report on how the EPA worked hand-in-glove with the National Resources Defense Council and other environmental groups on the plan to control carbon dioxide emissions. See links under The Administration's New Plan and The Political Games Continue.

The Benefit-Cost: Using the EPA's MAGICC* policy-analysis model, Patrick Michaels and Chip Knappenberger of Cato estimated the extent of global temperature reduction under the New Plan as compared with the “business as usual”, giving an approximation of the New Plan's impact on climate. [All this is highly speculative.] They estimated that the New Plan will result in temperature reduction of 0.019°C (0.034°F) by the year 2100. The New Plan is hardly the great breakthrough the environmental proponents assert.

EPA veteran Alan Carlin estimates that, based on analysis of costs experienced in Western Europe, the New Plan may increase electricity prices to consumers in the US by up to **four times**. Such an increase is drastically different from pronouncements by supporters of the New Plan about consumer savings.

Paul Homewood presents an excellent summary on electricity costs occurring in Western Europe from increased wind and solar (non-hydro renewables). Writing in WUWT, Ed Hoskins uses 2014 data from EurObservER to estimate the megawatts, by nameplate, of renewable installations by country per million people. German and Denmark have, by far, the greatest. Homewood compares these with 2014 electricity prices from Eurostat, the official EU statistical entity. The subsequent graph of EU Electricity Prices & Renewable Energy is revealing. As the installed renewable capacity per capita increases, the electricity cost increases. The increase in prices range from a low in Hungary of about 12 cent/kWhour (lowest renewables per capita) to a high in Denmark and Germany of about 30 cent/kWh (greatest renewables).

There is no reason why the EPA, or the Department of Energy, or the US Climate Change Research Program could not perform such analysis. But if they did, it is hidden from the public. Reliance on renewable energy (non-hydro) is very costly, and that is what the New Plan entails. See links under The Administration's New Plan –Independent Analysis and Alternative, Green ("Clean") Solar and Wind.

An Analogy? Many veterans of the Vietnam era have asked what went wrong. Why did President Johnson commit massive resources, including extensive ground troops, without a clear strategic plan and an understanding of the enemy? Part of the answer can be found in the *Pentagon Papers*. Ordered in secret by Secretary of Defense Robert McNamara, who was soon to leave the administration, this collection of documents reveal views of many members of the administration and in the Pentagon. Strangely, rather than using it for political advantage, Richard Nixon tried to suppress it. The *Pentagon Papers* reveal a lack of critical thinking coupled with ignorance and arrogance. **These same characteristics can be found in this Administration's war on climate change.** Ignorance can be seen in the changing of the terminology from **global warming** to **climate change**, which has been occurring for hundreds of millions of years, long before humanity existed. Arrogance can be seen in the belief that humans are the primary cause, especially in the climate models, which ignore a multitude of natural influences. *The Neglected Sun* discusses six types of solar cycles influencing the earth's climate, which are largely dismissed by the UN Intergovernmental Panel on Climate Change (IPCC). *CO2 Science* presents the poor correlation between carbon dioxide and temperature changes, yet CO2 is the primary area of concern expressed by the administration. The British Antarctic Survey presents a 10°C (18°F) jump in temperatures within 40 years shown in the Greenland Ice Cores about 38,000 years ago; yet, modest, late 20th century warming is called unprecedented.

There is no measure of victory with such an undefined, nebulous enemy. Unless, those who manipulated historic data (by lowering earlier data, giving a warming trend where there was none) reverse course, victory can be declared.

See links under Commentary: Is the Sun Rising?, Review of Recent Scientific Articles by CO2 Science, Measurement Issues, and Changing Cryosphere –Land / Sea Ice.

April Fools Award: Presented on August 2, at the 33rd Annual Meeting of the Doctors for Defensive Preparedness. Each year SEPP conducts its annual vote for the recipient of the coveted trophy. Readers of "The Week That Was" are asked to nominate and vote for who they think does most to deserve the trophy under following criteria:

- The nominee has advanced, or proposes to advance, significant expansion of governmental power, regulation, or control over the public or significant sections of the general economy.
- The nominee does so by declaring such measures are necessary to protect public health, welfare, or the environment.
- The nominee declares that physical science supports such measures.
- The physical science supporting the measures is flimsy at best, and possibly non-existent.

There were 16 nominations representing 5 countries. Their locations range from a states in Australia to Vermont. The votes have been tabulated.

The vote was very close, but the victor emerged based on the strength of his nomination (below).

"I would like to nominate Energy Secretary Ernest Moniz. In brief, when the Secretary of Energy is more interested in developing energy policy that supports CO2 emission targets than producing reliable energy, we have a problem. With Kerry, Obama or Lisa Jackson [previous recipients] you can sum it up to ignorance --they are not educated in science and they surround themselves with supposed experts, whom they choose to trust. With Moniz, you cannot --he has a renowned academic pedigree. Yet in spite of his obvious intelligence and education, he believes that despite the fact that computer simulations

cannot predict the drag on a golf ball based on first principles, they can solve the vastly more complex problem of the earth's climate, which includes inter-related thermodynamic, heat transfer and chemistry in a multi-phase domain set in a non-inertial reference frame, which is over 10^5 times the size of the golf ball.

"He spoke at a graduation at [my university], where I was the Chair of the Department of Mechanical Engineering. It was a painful experience for me. Rather than giving the students useful words of advice, he spent his entire speech expounding on the dangers of climate change:

"Based on his willful ignorance and in a position of great importance, I can think of no better candidate for this prestigious award."

DOD: The US Department of Defense issued another National Security bulletin on climate change. "DoD recognizes the reality of climate change and the significant risk it poses to U.S. interests globally. The National Security Strategy, issued in February 2015, is clear that climate change is an urgent and growing threat to our national security, contributing to increased natural disasters, refugee flows, and conflicts over basic resources such as food and water. These impacts are already occurring, and the scope, scale, and intensity of these impacts are projected to increase over time." See comments on ignorance and arrogance, above, and links under Expanding the Orthodoxy.

Number of the Week: \$40 to \$50 per barrel. The CEO of Whiting Petroleum, which is operating in North Dakota, said: "We are tooling Whiting to run and grow at \$40 to \$50 oil." See Article # 3.

<http://www.sepp.org/twtwfiles/2015/TWTW%208-8-15%20Final.pdf>

B DR. JAMES HANSEN'S RECENT ALARM OF CATASTROPHIC CO2 DRIVEN SEA LEVEL RISE LOOKS TO JUST BE SPURIOUS CORRELATION IN HIS OWN MIND

[Anthony Watts](#) / [19 mins ago](#)

"Looking back at a recently published paper on ancient sea level and CO₂, and noting that the most recent paper by Dr. James Hansen seems to be getting the cold shoulder, I thought it would be a good idea to have a look at both.

First, Hansen's paper, which isn't peer-reviewed yet, but is generating some media attention, and some of it isn't so good. It is titled:

Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2 °C global warming is highly dangerous

Hansen, J., Sato, M., Hearty, P., Ruedy, R., Kelley, M., Masson-Delmotte, V., Russell, G., Tselioudis, G., Cao, J., Rignot, E., Velicogna, I., Kandiano, E., von Schuckmann, K., Kharecha, P., Legrande, A. N., Bauer, M., and Lo, K.-W.: Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2 °C global warming is highly dangerous, Atmos. Chem. Phys. Discuss., 15, 20059-20179, doi:10.5194/acpd-15-20059-2015, 2015. "

"Abstract. There is evidence of ice melt, sea level rise to +5–9 m, and extreme storms in the prior interglacial period that was less than 1 °C warmer than today. Human-made climate forcing is stronger and more rapid than paleo forcings, but much can be learned by combining insights from paleoclimate, climate modeling, and on-going observations. We argue that ice sheets in contact with the ocean are vulnerable to non-linear disintegration in response to ocean warming, and we posit that ice sheet mass loss can be approximated by a doubling time up to sea level rise of at least several meters. Doubling times of 10, 20 or 40 years yield sea level rise of several meters in 50, 100 or 200 years. Paleoclimate

data reveal that subsurface ocean warming causes ice shelf melt and ice sheet discharge. Our climate model exposes amplifying feedbacks in the Southern Ocean that slow Antarctic bottom water formation and increase ocean temperature near ice shelf grounding lines, while cooling the surface ocean and increasing sea ice cover and water column stability. Ocean surface cooling, in the North Atlantic as well as the Southern Ocean, increases tropospheric horizontal temperature gradients, eddy kinetic energy and baroclinicity, which drive more powerful storms. We focus attention on the Southern Ocean's role in affecting atmospheric CO₂ amount, which in turn is a tight control knob on global climate. The millennial (500–2000 year) time scale of deep ocean ventilation affects the time scale for natural CO₂ change, thus the time scale for paleo global climate, ice sheet and sea level changes. This millennial carbon cycle time scale should not be misinterpreted as the ice sheet time scale for response to a rapid human-made climate forcing. Recent ice sheet melt rates have a doubling time near the lower end of the 10–40 year range. We conclude that 2 °C global warming above the preindustrial level, which would spur more ice shelf melt, is highly dangerous. Earth's energy imbalance, which must be eliminated to stabilize climate, provides a crucial metric. "

"Hansen's paper is now [open for public comment](#).

Meanwhile, **Climate Depot reports: [Former NASA lead global warming scientist James Hansen's new sea level rise scare study gets 'cold shoulder' from climate establishment.](#)** "

- **Warmist AP climate reporter Seth Borenstein said he 'would not cover' Hansen's paper.**
- **UN IPCC Lead Author Kevin Trenberth calls Hansen's study 'rife with speculation and 'what if' scenarios' and based on 'flimsy evidence.'**
- **NYT's Andrew Revkin: "Associated Press, The New York Times, the BBC and The Guardian..among those who steered clear of [Hansen] study"**
- **Even Michael Mann admits Hansen's sea level rise estimates are 'prone to a very large 'extrapolation error'"**

"Marc Morano comments:

"James Hansen's new paper ratcheting up future sea level rise numbers is consistent with the new strategy of the global warming activists. Given that [current sea level rise rates are not alarming](#), the only way climate activists can claim anything is 'worse than we thought' is to make more dire predictions of the future.

Simply making scarier predictions of the future in order to alarm policymakers is not 'good science.'

Claiming that climate change impacts are 'worse than we thought' because predictions are now more frightening is a well worn playbook of the climate movement.

Simply put, when current reality fails to alarm, make scarier and scarier predictions of the distant future.

"

"It seems even some of the worst offenders in alarmism, including Michael Mann, consider Hansen's claims "over the top". This may in fact be the first paper in recent times that Hansen has submitted that has a strong possibility of being rejected for publication. It appears he's lost his mojo with his peers when they say thing like in the bullet point list above.

I'll remind readers that one of Hansen's most alarming predictions about sea level rise in New York City has yet to come to pass, looked to be falsified in 2011, and so the goalposts got moved into the future, just as Morano says. Readers may recall our story about the claim Hansen made about the West Side Highway in New York city being underwater by now, due to sea level rise, visible from Hansen's office at GISS. "

[A little known 20 40 year old climate change prediction by Dr. James Hansen – that failed will likely fail badly](#)

Read more at:

<http://wattsupwiththat.com/2015/07/26/dr-james-hansens-recent-alarm-of-catastrophic-co2-driven-sea-level-rise-looks-to-just-be-spurious-correlation-in-his-own-mind/>

Don Shaw

C. ELECTRIC CAR PROSPECTS STALL, AWAITING PROMISED BATTERY IMPROVEMENTS

"As investors start to lose faith in [Tesla Motors TSLA -0.7%](#) and its battery-powered future, some of the more brazen claims for electric cars generally are starting to look a bit ambitious."

"But as battery-only sales tread water, hybrids, free of the range anxiety curse, will spurt ahead."

"Too much faith has been put in the development of lithium ion batteries, according to Donald Sadoway, Professor of Materials Chemistry at the [Massachusetts Institute of Technology](#) (MIT). He wants more imaginative investment to produce radical improvements."

"A couple of years ago BMW, which is leading the way with battery-only i3 and i8 plug-in hybrid vehicles, said within four to five years electric cars will have twice the current power and double the range. BMW board member Ian Robertson added then, that in the next three to four years there will be more progress in battery development than in the previous 100 years."

"MIT's Sadoway said battery development has been disappointingly slow, and this will hurt sales of electric cars generally."

"Development (of lithium-ion batteries) is not going to be significant enough to change the price performance ratio for it to have an impact on auto sales predictions. These numbers are so low because it will still make more sense to have an internal combustion engine in 2025 using fossil fuel," Sadoway said in an interview."

"Sadoway said battery prospects haven't been helped by the price of oil falling to unpredicted low levels. And technically, battery success depended on the amount of energy you could put in, and how long it took before it began to fade or weaken, and the overall cost of ownership."

"If you have to replace the battery every three years and that costs 80 per cent of the price of the car, that isn't going to work. But if the cost was like replacing a set of tires," Sadoway said."

"Sadoway insists that new ideas are needed for as big breakthrough."

"I've tried to market my ideas of beyond lithium, but they are seen as too radical, too high a chance of failure. I don't see much chance of success because resources are not being sensibly allocated. We need something better than incremental change. This will come from universities letting loose unfettered minds doing radical research. But the total amount of money is really very small and the likelihood of a major breakthrough? Your guess is as good as mine," Sadoway said."

<http://www.forbes.com/sites/neilwinton/2015/07/24/electric-car-prospects-stall-awaiting-promised-battery-improvements/3/?ss=energy>

Don Shaw

D. ANOTHER UNKNOWN CLIMATE FEEDBACK – PLANKTON BLOOMS CREATE BRIGHTER CLOUDS

Marine plankton brighten clouds over Southern Ocean From the NASA/GODDARD SPACE FLIGHT CENTER
New research using NASA satellite data and ocean biology models suggests tiny organisms in vast stretches of the Southern Ocean play a significant role in generating brighter clouds overhead. Brighter clouds reflect more sunlight back into space affecting the amount of solar...

<http://wattsupwiththat.com/2015/07/27/another-unknown-climate-feedback-plankton-blooms-create-brighter-clouds/>

E. DR. JAMES HANSEN'S RECENT ALARM OF CATASTROPHIC CO2 DRIVEN SEA LEVEL RISE LOOKS TO JUST BE SPURIOUS CORRELATION IN HIS OWN MIND

Looking back at a recently published paper on ancient sea level and CO2, and noting that the most recent paper by Dr. James Hansen seems to be getting the cold shoulder, I thought it would be a good idea to have a look at both.

<http://wattsupwiththat.com/2015/07/26/dr-james-hansens-recent-alarm-of-catastrophic-co2-driven-sea-level-rise-looks-to-just-be-spurious-correlation-in-his-own-mind/>

F. OCEAN HEAT: NEW STUDY SHOWS CLIMATE SCIENTISTS CAN STILL TORTURE DATA UNTIL THE DATA CONFESS

Guest Post by Bob Tisdale

A week or so ago, a troll left a link at my blog (Thanks, David) to a supposed-to-be-alarming blog post about a new climate study of ocean heat content. According to the study, a revised method of tweaking ocean heat reconstructions has manufactured new warming so that the top 700...

<http://wattsupwiththat.com/2015/07/26/ocean-heat-new-study-shows-climate-scientists-can-still-torture-data-until-the-data-confess/>

G. EPA SAID GLOBAL WARMING UNPROVEN TO OBTAIN A LEGAL RULING FOR THEIR CLIMATE REGULATIONS

Guest opinion: Dr. Tim Ball

Courts will not sit in judgment of scientific disputes. A lawyer told me it becomes "your paper" against "my paper" and courts argue they're not qualified to make the required scientific judgments. This is a reasonable position and causes some to advocate for "scientific" courts, but that is not normally...

<http://wattsupwiththat.com/2015/07/25/epa-said-global-warming-unproven-to-obtain-a-legal-ruling-for-their-climate-regulations/>

H. HANSEN'S BACKFIRE POSTED ON [JULY 26, 2015](#) | [171 COMMENTS](#)

by Judith Curry

Jim Hansen's new paper, and his PR strategy, are raising a whole host of issues that are arguably a backfire for his objectives.

<http://judithcurry.com/2015/07/26/hansens-backfire/#more-19429>

I. EPA HEAD: WE DON'T NEED TO JUSTIFY OUR REGULATIONS WITH DATA

EPA Administrator Gina McCarthy took a [drumming yesterday](#) when she refused to release the 'secret science' her agency used when drafting new regulations. Testifying before the House Science, Space and Technology committee, Rep. Lamar Smith (R) began the Q&A by asking McCarthy why she wouldn't release the studies and data in which her regulations are based. Rep. Smith told McCarthy that his

'secret science' reform act would make the data public without interfering in the EPA's primary job and maintain the confidentiality of third parties.

Rep. Smith also quoted Obama's science adviser, John Holdren, saying "The data on which regulatory decisions are based should be made available to the committee and should be made public. Why don't you agree with the president's science adviser?" McCarthy replied that while she supports transparency in the regulatory process, the bill would make public the personal information of the people working on the science.

<http://www.climatechangedispatch.com/epa-head-we-don-t-need-to-justify-our-regulations-with-data.html>

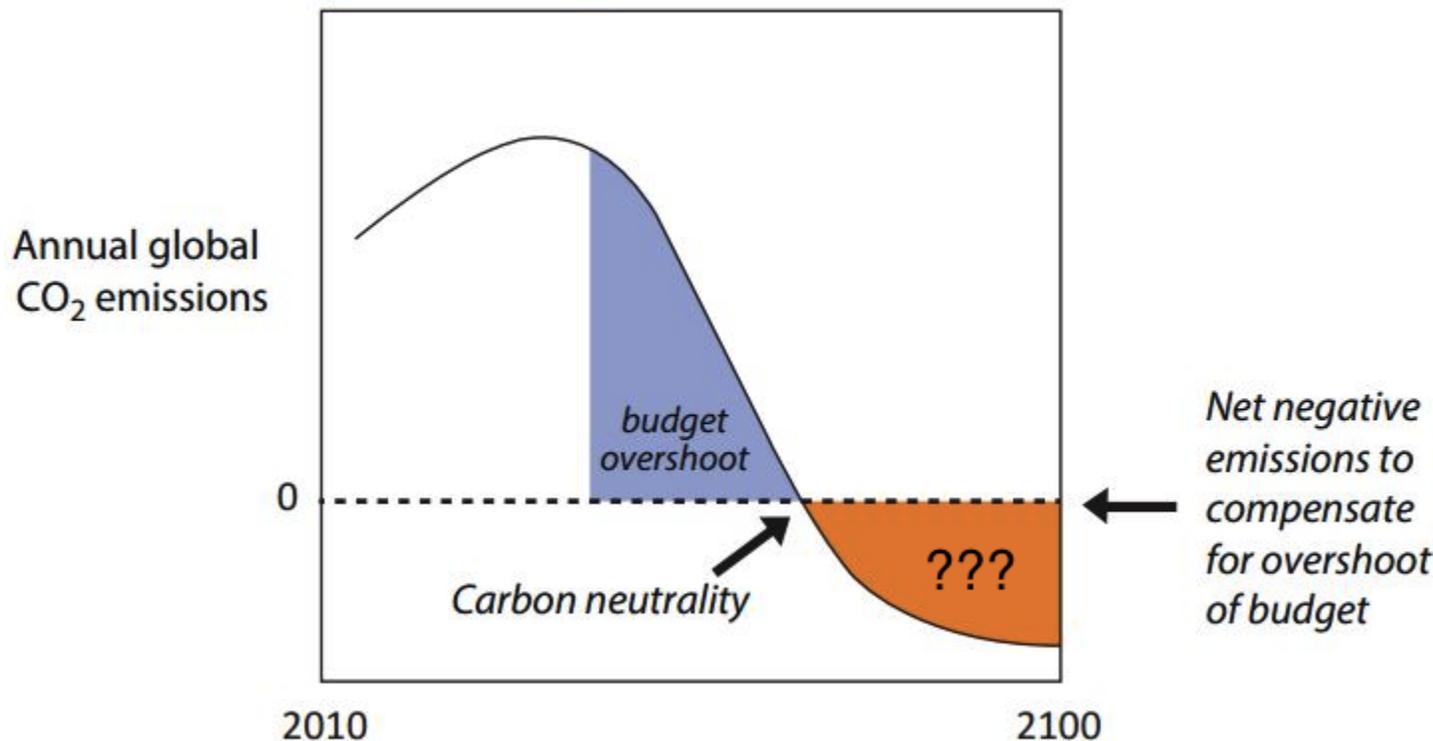
J. IT'S TIME TO LOOK SERIOUSLY AT SUCKING CO2 OUT OF THE ATMOSPHERE

**UPDATED BY [BRAD PLUMER](#) ON JULY 13, 2015, 2:10 P.M. ET [@BRADPLUMER](#)
BRAD@VOX.COM**

By [Cass R. Sunstein](#)

If you ask climate modelers how humanity can avoid severe global warming — say, 2°C or more — most will say we [need to do two big things](#). First, we'll need to reduce global greenhouse gas emissions down to zero by the end of the century. Second, since we've been so tardy in making those cuts, we'll also need to figure out how to pull some carbon dioxide back *out* of the atmosphere.

And that's ... a problem. We at least have some notion of how to cut emissions. But sucking carbon dioxide back out of the atmosphere? At the massive scale likely needed? No one really has a clue how to do that. It's a huge, embarrassing blind spot in climate policy.



If we're too slow in cutting emissions, we may need to remove some CO₂ from the atmosphere. But how?? ([UNEP Emissions Gap Report 2014](#))

The IPCC has estimated that, to stay below 2°C of warming, we'll need to zero out our emissions *and* start removing [between 2 and 10 gigatons of CO₂](#) from the atmosphere each year by 2050. For perspective, all of the world's forests and soils put together currently remove just [3.3 gigatons of CO₂](#) each year. So imagine doubling or tripling that. Planting more trees could help, but we'll need sweeping new carbon-removal techniques on top of that.

<http://www.vox.com/2015/7/13/8949701/carbon-removal>

K. THE ECONOMIC RISKS OF CLIMATE CHANGE IN THE UNITED STATES

The Southeast U.S. and Texas are experiencing an economic boom, mostly due to manufacturing and energy industry growth. But that boom is at risk from unchecked climate change, which could render this region—already one of the hottest and most weather-vulnerable of the country—at significant economic risk. However, if policymakers and business leaders act aggressively to adapt to the changing climate and to mitigate future impacts by reducing their carbon emissions, this region can lead in responding to climate risk. The Southeast can demonstrate to national and global political leaders the kind of strong response necessary to ensure a strong economic future.

This region, comprising the 11 Southeastern states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee and Virginia as well as Texas to the west, has witnessed a major recent manufacturing boom, and is poised for further economic growth in the coming years. ^[i] In 2013, manufacturing contributed \$2.1 trillion to the U.S. economy—more than 12% of GDP—and accounted for 88% of all U.S. exports, a remarkable 51% increase from declines during the last recession. The region's economic vitality makes it one of the most productive parts of the country.

But climate change is putting that productivity at risk. While the Southeast and Texas are generally accustomed to heat and humidity, the scale of increased heat—along with other impacts such as sea level rise and storm surge—will **likely** cause significant and widespread economic harm, especially to a region so heavily invested in physical manufacturing, agriculture and energy infrastructure.

If we continue on our current greenhouse gas emissions pathway, ^[ii] the Southeastern U.S. and Texas will **likely** experience significant drops in agricultural yield and labor productivity, along with increased sea level rise, higher energy demand, and rising mortality rates. In particular, the region's agricultural sector will be negatively influenced by the changing climatic conditions, with several commodity crops **likely** to face severe yield declines. Meanwhile, residents and businesses will **likely** be affected by higher heat-related mortality, increased electricity demand and energy costs, and declines in labor productivity, threatening the manufacturing base that is increasingly driving the regional economy. And in some cities, such as Miami and New Orleans, sea level rise will put significant amounts of existing coastal property at risk.

The mission of the Risky Business Project is to quantify the economic risks to the U.S. from unmitigated climate change. Our inaugural report, *Risky Business: The Economic Risks of Climate Change in the United States*, ^[iii] highlighted these impacts across every region of the country, with a focus on three sectors: agriculture, energy demand and coastal infrastructure. We also looked at overarching issues such as changes in labor productivity and heat-related mortality. This follow-up report focuses on the Southeast and Texas and offers a first step toward defining the range of potential economic consequences to this specific region if we continue on our current greenhouse gas emissions pathway. Our research combines state-of-the-art climate science projections through the year 2100 (and beyond in some cases) with empirically derived estimates of the impact of projected changes in temperature and precipitation on the Southeastern and Texan economies. We analyze not only those outcomes most **likely** to occur, but also lower-probability, higher-cost climate futures. These are tail risks, most often

expressed in this report as the 1-in-20 chance events. As in our other reports, we look at climate impacts at a geographically granular level.

Our findings show that if we stay on our current emissions path, the Southeast and Texas will **likely** experience significant economic impacts due to climate change.

By the end of the century, the Southeast and Texas will likely experience dangerous levels of extreme heat.

- By the end of this century, the average number of extremely hot days across the region each year – with temperatures above 95°F – will **likely** increase by as much as 14 times from nine days per year in recent decades to as many as 124 days per year.
- Rising humidity combined with increased heat across the region will **likely** mean more frequent days that reach extremely dangerous levels on the Human Heat Stroke Index.^[iv] By the end of the century, Florida will **likely** experience as many as 24 days per year with heat and humidity conditions similar to the Chicago heat wave of 1995, which caused more than 700 heat-related deaths.
- By mid-century, the average Mississippi resident will **likely** experience 33 to 85 days above 95°F per year, with a 1-in-20 chance of encountering more than 101 extremely hot days — more than three full months — per year. By the end of the century, the average Arkansas resident will **likely** experience between 65 and 135 days above 95°F in a typical year — more extremely hot days than the average Arizonan has experienced annually in recent decades.

Rising temperatures will likely lead to a surge in electricity demand, as well as to a decline in energy system efficiency in many of the manufacturing-intensive states in the Southeast and Texas.

- The Southeast and Texas are high-emitting and high energy-use regions, mainly due to their economic reliance on energy- and emission-intensive sectors such as manufacturing, agriculture, oil and gas production and mining.
- As temperatures rise and individual households and businesses increase their use of air conditioning, electricity demand across the region will rise—with a corresponding increase in prices. The Southeast region will **likely** see an average increase of 4% to 12% in energy costs by mid-century, with a 1-in-20 chance these costs will increase by more than 38% by the end of the century.

Sea level rise along the Atlantic and Gulf coasts will likely lead to large-scale losses from damage to coastal property and infrastructure.

- The Southeast region faces the highest risks of coastal property losses in the nation. If we continue on our current emissions path, between \$48.2 billion and \$68.7 billion in existing coastal property in the Southeast will **likely** be below sea level by 2050, with a 1-in-100 chance of more than \$107 billion in existing property at risk. Rising sea levels will also damage critical infrastructure, including water supply, energy, and transportation systems.
- Louisiana and Florida will be hit hardest by property damages due to sea level rise. By 2030, \$19.8 billion in existing coastal property in Louisiana will **likely** be below mean sea level. By 2050, that number increases to between \$33.1 billion and \$44.8 billion. In Florida, losses of existing property will **likely** range between \$5.6 billion and \$14.8 billion by 2030 to between \$14.8 billion and \$23.3 billion by 2050.
- Hurricanes and other coastal storms will interact with rising sea levels, resulting in a **likely** growth in average annual storm losses due to higher storm surge. By 2050, average annual losses in the Southeast will **likely** increase by \$3.6 to \$6.8 billion. Potential changes in hurricane activity could lead to even greater losses.
- By 2030, average annual losses from hurricanes and other coastal storms will **likely** increase by \$167 million to \$222 million in Texas. By 2050, storm losses will **likely** increase to between \$483 million and \$648 million.
- Local sea level rise will vary along the coasts. At Grand Isle, Louisiana, mean sea level will **likely** rise 1.9 to 2.4 feet by 2050 and by 4.1 to 5.8 feet by 2100. Meanwhile, mean sea level at Charleston, South Carolina will **likely** rise by 0.9 to 1.4 feet by 2050 and by 2.1 to 3.8 feet by the end of the century.

Changes in temperature and precipitation will likely lead to changes in crop yields, with several major commodity crops facing steep potential declines.

- Over the next five to 25 years, without significant adaptation by farmers, the Southeast will likely see losses in corn yields of as much as 21% and in soybean yields of as much as 14% on average across the region as a whole. By the end of the century, these crops will take an even bigger hit: Corn yields will likely decrease by as much as 86%, with a 1-in-20 chance of more than 93% decline, and soybean yields will likely decrease by as much as 76%.
- Kentucky will likely experience the third largest crop losses in the country. By mid-century, Kentucky will likely see average losses in its grain and oilseed crops of as much as 32% annually, absent adaptation. By the end of the century, Kentucky's losses will likely increase to as much as 69% annually.
- Over the next five to 25 years, Texas will likely see corn yield declines of as much as 22% annually, absent adaptation. These losses grow to as much as 39% annually by mid-century.
- On the other hand, warmer temperatures may actually improve the growing conditions for some crops in several southeastern states. Wheat yields, for example, are likely to increase as a result of benefits from higher carbon dioxide in the atmosphere. Cotton yields will see mixed effects, with the likely range of impacts spanning yield gains to losses for many Southeastern states.

Rising temperatures will likely increase heat-related mortality and reduce labor productivity across the Southeastern U.S. and Texas.

- Over the next five to 25 years, Florida will likely see as many as 1,840 additional deaths per year and Texas, as many as 2,580 additional deaths per year due to extreme heat. By mid-century, these two states combined will likely see as many as 10,000 additional deaths per year. The elderly are most vulnerable to heat-related health risks.
- When the temperature rises past human comfort levels, labor productivity declines, specifically in "high-risk" industries involving outdoor work (which include industries such as manufacturing, agriculture and transportation).
- By mid-century, Southeastern states will likely see labor productivity decline by up to 0.6% on average in these high-risk industries. In Mississippi, there is a 1-in-20 chance that by mid-century the decrease for labor productivity will exceed 2.5% in high-risk sectors.

These diverse impacts from climate change put the Southeastern and Texan economies at risk and could reverse the positive trends seen in the manufacturing sector in recent years. By fully understanding the climate risks these states face if we stay on our current emissions path, Southeastern and Texan businesses and policymakers have the opportunity to become models of climate risk mitigation and resilience.

FOOTNOTES

^[i] These 11 states make up the Southeast region as defined in our inaugural report, "Risky Business: The Economic Risks of Climate Change in the United States," using National Climate Assessment's organization of regions around shared geologic characteristics and climate impacts. See U.S. Global Change Research Program, "Regions & Topics," available at <http://www.globalchange.gov/explore> (last accessed July 2015).

^[ii] The "current greenhouse gas emissions pathway" we use throughout the report refers to RCP 8.5, one of the four Representative Concentration Pathways developed by the Integrated Assessment Modeling Consortium. The pathway represents a continuation of recent global emissions growth rates, with atmospheric concentrations of carbon dioxide reaching 940 ppm by 2100.

^[iii] Kate Gordon, "[Risky Business: The Economic Risks of Climate Change in the United States](http://riskybusiness.org/uploads/files/RiskyBusine...)" (New York: The Risky Business Project, 2014). <http://riskybusiness.org/uploads/files/RiskyBusine...>

^[iv] The Risky Business Project describes the combined levels of high heat and humidity using what "American Climate Prospectus" (Rhodium Group, 2014) calls the Human Heat Stroke Index (HHSI), which is derived from a scientific measure known as wet bulb temperature. Under high Human Heat Stroke

Index conditions, core body temperature may rise to the point of heat stroke or death. The ACP classifies HHSI into four categories of ascending severity – I: Uncomfortable; II: Dangerous; III: Extremely dangerous; IV: Extraordinarily dangerous.

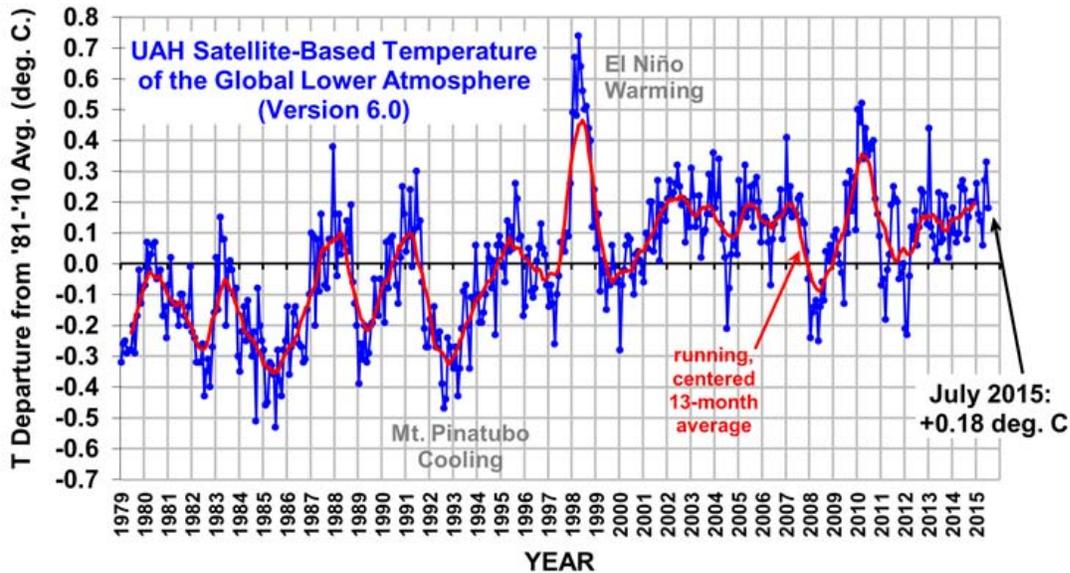
Editor’s Note: Please note each “likely” is colored red. There are 38 likelys in the EXECUTIVE SUMMARY. The authors apparently needed to protect themselves. GHH
<http://riskybusiness.org/index.php?p=reports/southeast-report/executive-summary>

L. UAH V6.0 GLOBAL TEMPERATURE UPDATE FOR JULY 2015: +0.18 C

August 3rd, 2015

NOTE: This is the fourth monthly update with our new Version 6.0 dataset. Differences versus the old Version 5.6 dataset are discussed [here](#).

The Version 6.0 global average lower tropospheric temperature (LT) anomaly for July, 2015 is +0.18 deg. C, down considerably from the June, 2015 value of +0.33 deg. C (click for full size version):



The global, hemispheric, and tropical LT anomalies from the 30-year (1981-2010) average for the last 7 months are:

YR MO GLOBE NH SH TROPICS

2015 1	+0.28	+0.40	+0.16	+0.13
2015 2	+0.18	+0.30	+0.05	-0.06
2015 3	+0.17	+0.26	+0.07	+0.05
2015 4	+0.09	+0.18	-0.01	+0.10
2015 5	+0.29	+0.36	+0.21	+0.28
2015 6	+0.33	+0.41	+0.25	+0.46
2015 7	+0.18	+0.33	+0.03	+0.48

Strong July cooling occurred in the Southern Hemisphere extratropics, with a weak drop in the Northern Hemisphere extratropics. The tropics continue to warm with El Niño conditions there.

The global image for July, 2015 should be available in the next several days [here](#).

The new Version 6 files (use the ones labeled “beta2”) should be updated soon, and are located here:
Lower Troposphere: <http://vortex.nsstc.uah.edu/data/msu/v6.0beta/tlt>
Mid-Troposphere: <http://vortex.nsstc.uah.edu/data/msu/v6.0beta/tmt>
Tropopause: <http://vortex.nsstc.uah.edu/data/msu/v6.0beta/ttp>
Lower Stratosphere: <http://vortex.nsstc.uah.edu/data/msu/v6.0beta/tls>
Roy Spencer

M. LAWMAKERS TAKE AIM AT EPA 'SUE-AND-SETTLE' COLLUSION

By [George Russell](#)

Published August 05, 2015, [FoxNews.com](#)

Faced with President Obama’s vastly expensive Clean Power Plan to remake the U.S. electrical system and other looming regulatory decisions that dramatically affect energy supplies, Republican lawmakers have renewed their offensive against alleged under-the-table legal collusion between the administration and environmental lobbyists in the cascading anti-carbon agenda.

A Senate subcommittee on Tuesday heard witnesses argue that “sue-and-settle” legal arrangements involving the Environmental Protection Agency, the U.S. Fish and Wildlife Service and hyper-aggressive environmental organizations have cut energy suppliers and state regulators out of the discussion, speeded up the agenda to force unrealistic environmentalist priorities on the energy market, and are likely to cost consumers and producers billions of dollars in the years ahead.

Such charges have been heard before, especially as the Obama Administration faced increased Congressional opposition in its second term. But they are reaching a new crescendo with the arrival of the Clean Power Plan and impending costly new rules governing ozone and methane, to name just two substances, as the Administration heads toward its lame duck year after an unprecedented blizzard of rule-making.

<http://www.foxnews.com/politics/2015/08/05/lawmakers-take-aim-at-epa-sue-and-settle-collusion/?intcmp=hplnws>

N. HOW OBAMA'S CLEAN POWER PLAN ACTUALLY WORKS — A STEP-BY-STEP GUIDE

<http://www.vox.com/2015/8/4/9096903/clean-power-plan-explained>

<http://wattsupwiththat.com/2015/08/06/the-pause-draws-blood-a-new-record-pause-length-no-warming-for-18-years-7-months/>

O. A Simple Tale About Switching To Renewable Power: Requirements & Consequences.

Don Bogard, © 2015 (published here with permission) The tale below is fictional, but every one of its elements and issues has been or will be experienced somewhere in the process of switching electrical power production from fossil fuels to renewable wind and solar. Hopefully this tale will illustrate in a non-technical way some of...

<http://wattsupwiththat.com/2015/08/09/a-simple-tale-about-switching-to-renewable-power-requirements-consequences/>

Regards,
George