

ENVIRONMENTAL ENGINEERING

NEWSLETTER

12 JAN. 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. OBAMA ADMINISTRATION CRAMS OVER 1,200 NEW REGULATIONS JUST BEFORE THE NEW YEAR

The Obama administration is cramming like a college student trying to study for a final exam, publishing more than 1,200 new regulations in the last 15 days alone, [according to data from Regulations.gov](#).

Energy and environment rules are the biggest category, with 139 published by the federal government in the last 15 days, [according to Regulations.gov](#).

One of the most contentious new regulations is the EPA's [coal ash rule](#). The rule has been criticized by the coal industry and environmental groups — though for entirely different reasons — and [has a price tag of up to \\$20.3 billion](#). The rule was finalized last Friday.

<http://www.foxnews.com/politics/2014/12/23/obama-admin-crams-over-1200-new-regulations-just-before-new-year/>

Roger Zygmunt

B. OIL LOBBY SUES FEDS OVER THREATENED ALASKA RINGED SEALS

Two oil-industry groups have teamed up to [file](#) a lawsuit challenging federal scientists' designations of the Arctic ringed seal as threatened under the Endangered Species Act.

The lawsuit also targets the National Marine Fisheries Service's plan to [label a 350,000-square-mile expanse of Alaska waters as critical habitat](#) for the seals.

The statewide Alaska Oil and Gas Association, as well as the American Petroleum Institute, made the Dec. 23 filing in U.S. District Court for Alaska. They seek to have a federal judge overturn the seals' threatened listing, along with a rule which allowed the listing based on a 100-year projection of climate change effects.

<http://www.ktuu.com/news/news/oil-lobby-sues-feds-over-threatened-alaska-ringed-seals/30480388>

Roger Zygmunt

C. A GIANT GAS WELL CONFIRMS DEEP UTICA POTENTIAL

Summary

- Range Resources reported a record IP in deep dry gas Utica test.
- The well extends the play's proven frontier almost 2,000 feet downdip and far to the east from the majority of existing wells.
- However, the high well cost sets well performance bar high.
- The note summarizes the play's evaluation results to-date.

<http://seekingalpha.com/article/2788275-a-giant-gas-well-confirms-deep-utica-potential?ifp=0>

Roger Zygmunt

D. SMALL OIL COMPANY TO QUIT DRILLING AMID FALLING CRUDE

HOUSTON – A small Colorado oil explorer is the latest to yield to the downturn in global petroleum markets, saying it will quit drilling until oil prices improve.

The move makes American Eagle Energy, worth about \$19 million on the stock market Wednesday, the first U.S. oil producer to completely stall its drilling plans in the face of the 50-percent slide in crude prices since this summer.

American Eagle's stock fell 4 cents Wednesday to 62 cents. Before crude began its long descent, the company, which has property in Montana and Canada, was worth \$6.11 a share.

<http://fuelfix.com/blog/2014/12/31/small-oil-company-to-quit-drilling-amid-falling-crude/>

Roger Zygmunt

E. CHENIERE SECOND LNG TERMINAL GETS CONSTRUCTION PERMIT

Cheniere Energy Inc. ([LNG:US](#)), the developer of the first U.S. liquefied natural gas export terminal in decades, received authorization to build a second one.

The Federal Energy Regulatory Commission said it will allow Cheniere to build an LNG plant and pipeline in Corpus Christi, Texas, according to a filing today.

The permit paves the way for the U.S. Department of Energy to consider if the project can ship LNG to countries with which the U.S. doesn't have a free trade agreement.

<http://www.businessweek.com/news/2014-12-30/cheniere-second-lng-terminal-gets-construction-authorization>

Roger Zygmunt

ASME: A. NEW ASME PERFORMANCE TEST CODES (PTC'S) COMMITTEES

ASME has started 2 new PTC committees for:

- Concentrated Solar Panels (PTC 52)
- Energy Storage Systems (PTC 53)

1. PTC 52 will provide procedures, methods, and definitions for the performance testing of the solar- to-thermal conversion systems, i.e., Solar Fields, and thermal energy storage systems associated with Concentrated Solar Power (CSP) plants. It is intended that accurate instrumentation and measurement techniques shall be used to determine the following performance results: Thermal Power Output of Solar Field; Thermal Energy Production of Solar Field; Solar Energy Conversion Efficiency; Heat Transfer Fluid (HTF) System Parameters; and Auxiliary Load. This Code will also provide procedures for the calculation of the performance results.

2. PTC 53 will provide uniform test methods and procedures for the determination of the performance of energy storage systems used in electric power applications. The Code will provide a quantifiable method to compare performance across technology platforms. This Code will provide explicit methodologies for the determination of the following performance results: Energy Performance; Energy Storage Loss; Ramp Rate; Roundtrip Energy Efficiency; Energy Release Response Time; and Stored Energy Capacity.

The Code committees are looking for knowledgeable people (both inside and outside ASME) to participate on each Committee. If you are interested or have questions please feel free to contact Fred Constantino at:

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COMMENTS:

A. THE WEEK THAT WAS: 2015-01-03 (JAN. 3, 2015)

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

Changes at SEPP: As announced in TWTW in December, after 25 years Fred Singer has stepped down as the founding President of the Science and Environmental Policy Project (SEPP). He will continue to be the guiding light for the organization, remaining as Chairman of the Board of Directors. Ken Haapala has assumed the duties as President, Tom Sheahen as Vice President and Donna Bethel remains Secretary.

There are no major anticipated changes in policies or activities of SEPP. It will remain faithful to the principles of empirical science and challenge government policies, claimed to be substantiated by science, that are not supported by comprehensive observations or experiments. *The Week That Was* will remain the primary publication of SEPP. In addition, we will continue to provide scientific expertise to other organizations on policy issues, to include issuing brief handouts such as “Climate Fears and Finance.”

The web site will undergo minor modifications to bring it up-to-date, to include topics such as explanations why the climate science, as expressed by the UN International Panel on Climate Change (IPCC) and its followers such as the US National Assessment, and their models, failed to predict the current plateau, pause, in temperatures. Another topic will be the file do objections to Administration's Clean Power Plan as announced by the US Environmental Protection Agency. Emphasis will be on the scientific objections, but some legal objections will be included. Other topics will be developed as appropriate.

The officers and directors of SEPP look forward to serving you far into the future.

The Pause or Plateau: Fred Singer provides an analysis of the explanations, largely expressed by global-warming promoters, why atmospheric temperatures have failed to rise for over a decade, and surface temperatures have failed to rise for about 18 years. The explanations described by providing an excellent foundation for an effort to note them and categorize them. Some of the explanations are internal to the earth's climate system, some external. All major explanations are, in effect, alternative hypotheses or a modification to the hypothesis embraced by the UN IPCC that human emissions of carbon dioxide (CO₂) are the dominant cause of global warming, now called climate change. Those who exclusively use the term climate change, reflect a general ignorance of the earth's climate history. Please see Article # 1.

The Race: The final results need to be tallied, but it appears that both the US National Oceanic and Atmospheric Administration (NOAA) and NASA's Goddard Institute of Space Studies (NASA-GISS) lost the big race in declaring that 2014 was the hottest year ever recorded. Atmospheric temperature measurements by satellites, confirmed by weather balloons, just do not play the game that some of those who report surface temperatures play. One of the two atmospheric temperature reporting entities, Remote Sensing Systems, reports that 2014 was not the hottest year ever (since 1978). Could it be that adding CO₂ to the atmosphere does not cause temperature change as previously attributed? We are still waiting for independent confirmation from the Earth System Science Center at the University of Alabama in Huntsville. See links under Measurement Issues

Children's Education: It appears the Administration is serious about a major climate education program directed at children. The Climate Education and Literacy Initiative will "help connect American students and citizens with the best-available, science-based information about climate change." According to the promotion sheet, the initiative will employ 1) the National Park Service for Climate-science workshops, 2) NOAA to emphasize regional impacts as highlighted in the Third National Climate Assessment. 3) Enhance energy literacy. 4) Disseminate climate information through (NASA) Earth Systems Technology, and Energy Education. It will use a multitude of external organizations including American Meteorological Society (AMS), Earth Day Network, and Zoos.

The President's announcement of the program in June at the University of California, Irvine, was disturbing. Reliance on the Third National Climate Assessment with its questionable assertions using global climate projections, modified for particular regions, is worse. The failure of the earth to warm illustrates that the National Climate Assessment contains highly limited knowledge of the natural causes of global climate change and their relative importance when compared with human causes. Using deficient models to project regional climate change is folly. As it develops, pointing out the deficiencies in the program will be an appropriate undertaking

for SEPP, and other organizations. See links under Communicating Better to the Public –Use Propaganda on Children

Shoe on a Different Foot? For years, SEPP and other organizations have insisted that, when the science used to justify expansion of EPA powers is inadequate, the expansion of power is unconstitutional. SEPP and Fred Singer, particularly, have been falsely accused of being engaged by coal companies, oil companies, tobacco companies, etc.

Lawrence Tribe, Professor of Law at Harvard, is an icon of liberal Democrats. Tribe filed a document to the EPA, declaring the Administration’s proposed Clean Power Plan is unconstitutional. Tribe wrote an article explaining his actions which was published in the *Wall Street Journal*. Both the article and the filing are well reasoned. Will the defenders of the EPA slander Lawrence Tribe as they have others who spoke out in the past? See Article # 2 and the link to the filing.

A Breakthrough? The Breakthrough Institute can hardly be called a center for skeptics of the unsubstantiated claim that human emissions of carbon dioxide are causing unprecedented and dangerous global warming (or climate change). Using the eight regions of the North American Electric Reliability Council, from 2007 to 2013, analysts estimated the extent to which coal-fired electricity has been replaced by natural gas and by renewable sources. The findings may be of value, but perhaps not for the reasons intended. The main findings are:

- “1. 80% of decline in coal generation nationally occurred in just two of the eight NERC regions.
2. The growth of gas generation nationally came almost entirely at the expense of coal generation.
3. Growth of non-hydro renewables accounts for little of the decline in coal generation.
4. New wind generation and new gas generation nationally appear to have had similar impacts on emissions on a per-MWh basis.
5. Net growth of gas generation in regional grids does not appear to be associated with declining net nuclear generation.
6. Growth of gas generation is not associated with rising demand for electricity.

Changes in generation shares at the regional level, however, strongly support the conclusion that fuel-switching from coal to gas, along with falling electricity demand in the wake of the Great Recession, account for the vast majority of the decline in emissions. Moreover, the shift from coal to gas accounts for a significant majority of the decline in the carbon intensity of the US electrical grid since 2007.”[The cited parts are not contiguous.]

Looking from a different perspective, one can argue that in the US there is little justification for continuing subsidies and mandates for solar and wind power, even if the purpose is to reduce CO2 emissions. Natural gas can reduce emissions, without the unreliable characteristics of solar and wind, and associated costs, provided pipelines are built to deliver natural gas where needed. Of course, such a view would be rejected by zealous promoters of global warming. But, one can counter that the unreliable characteristics of solar and wind requires a reliable fuel, such as natural gas. See links under Energy Issues –US.

Religious Issue: There have been several articles suggesting that the Pope will favor controls on carbon dioxide emissions in some form. This raises questions if the authors speak for the Pope or are privy to his thoughts. TWTW suggests that the articles are purely speculative. See links under Expanding the Orthodoxy.

Number of the Week: Down 41%. The US standard for crude oil is West Texas Intermediate. Each week the US Energy Information Administration announces an estimated spot price (which is usually different from (often more than) a contract price for a fixed delivery date. According to tracking entities, the spot price for the last week of December, 2013 (Dec 26) was \$90.71 per barrel. The spot price for the last week of December, 2014 (Dec 29) was \$53.46—a decline of \$37.25, or 41% for the year.

During the time of rising oil and gasoline prices, many politicians and energy experts in Washington declared that expanding drilling will not lower prices. As expressed previously in TWTW, all the increase in oil production in the US in recent years has been on private and state-owned lands. There has been no increase on federal government owned lands and waters.

Contrary to these experts, with expanded US production, world

<http://www.sepp.org/twtwfiles/2015/TWTW%201-3-15.pdf>

B. 2014: YEAR OF FUTILITY IN THE FIGHT AGAINST CLIMATE CHANGE

[Guest Blogger](#) / [4 hours ago](#)

Guest essay by Steve Goreham

"The year 2014 was another year of futility in the fight against climate change. Climatists redoubled efforts to convince citizens that urgent action is needed to stop dangerous global warming. But the gap between public warnings and actual events produced an endless stream of climate irony.

January began with a frosty bang as an arctic air mass descended on the central United States, following a similar event in December. What was once called a cold snap is now ominously christened a "polar vortex." Record-low daily temperatures were recorded from Minnesota to Boston, along with all-time seasonal snowfalls in many cities.

In a White House video [released](#) on January 8, John Holdren, chief science advisor to President Obama, made the paradoxical statement, "**But a growing body of evidence suggests that the kind of extreme cold being experienced by much of the United States as we speak is a pattern that we can expect to see with increasing frequency as global warming continues.**"

Also, in January, passengers of the research ship Akademik Shokalskiy were [rescued](#) after the ship was locked in ice for 10 days near the Antarctic coast. The expedition led by professor Chris Turney had intended to study how weather patterns near Antarctica were changing due to man-made global warming.

On February 16, during a presentation in Indonesia, Secretary of State John Kerry [stated](#) that climate change was "perhaps the world's most fearsome weapon of mass destruction." Only two days later, protestors set fire to Kiev, the capital of Ukraine, leading to the resignation of President Viktor Yanukovich. In March, Russia seized the Crimea. In July, Malaysia Airlines Flight 17 was shot down over eastern Ukraine, and political unrest continues today. In the Middle East, slaughter of innocent civilians and beheading of western captives became a growing trend. Man-made climate casualties seem remarkably scarce in comparison.

In March, the Intergovernmental Panel on Climate Change of the United Nations [released](#) *Climate Change 2014: Impacts, Adaptation, and Vulnerability*, part of its Fifth Assessment Report. The report said that man-made climate change would reduce world agricultural output. Lead author Dr. Mark Howden [stated](#), "There's increasing evidence that climate change is also

impacting on agriculture, particularly on some of the cereal crops such as wheat and maize. The negative impacts are greater and quicker than we previously thought.”

Meanwhile, farmers continued to ignore the warnings of the IPCC. [According](#) to the US Department of Agriculture, world agricultural production set all-time records for all three major cereal crops in 2014, with rice output up 1.1 percent, wheat up 11.2 percent, and corn up a whopping 14.0 percent over 2013.

The Obama administration continued its attack on coal-fired power plants, which provide about 40 percent of US electricity. In June, the EPA [proposed](#) new restrictions on carbon emissions that would make it virtually impossible to build a new coal-fired plant in the US. At the same time, more than 1,200 new coal-fired plants are [planned](#) across the world, with two-thirds to be built in India and China.

In his 2007 Noble Prize acceptance speech, former Vice President Al Gore [warned](#) that the arctic ice could be gone in “as little as seven years.” But arctic sea ice rebounded in 2014 and Antarctic sea ice has been growing for decades. According to the University of Illinois, satellites [measured](#) global sea ice area at above the 30-year average at the end of 2014.

In September, the United Nations held a climate summit in New York City to urge the world to conserve energy and reduce emissions. Spokesman Leonardo DiCaprio [stated](#), “This disaster has grown beyond the choices that individuals make.” Mr. DiCaprio neglected to mention his frequent flights on carbon-emitting private jets or his ownership of the world’s fifth largest yacht, purchased from a Middle East oil tycoon.

In October, climate skeptics [reported](#) the eighteenth straight year of flat global temperatures. Satellite data shows no temperature increase since 1997. The “pause” in global warming is now old enough to vote or to serve in the military.

Hurricanes and tornados are favored events for generating alarming climate headlines, but US weather events were few in 2014. US tornadic [activity](#) was below average and the lack of strong hurricanes continued. No Category 3 or stronger hurricane has made US landfall for more than eight years, the longest [period](#) since records began in 1900.

The last half of 2014 witnessed a steep drop in world petroleum prices from over \$100 per barrel to under \$60 per barrel. Hydraulic fracturing and horizontal drilling, technologies perfected by US geologists and petroleum engineers over the last two decades, produced an explosion in US oil production and triggered the fall in world prices.

But the concurrent drop in US gasoline prices to two dollars per gallon is not welcomed by man-made global warming believers. Former Energy Secretary Stephen Chu [said](#) in 2008, “So we have to figure out how to boost the price of gasoline to the levels in Europe.” English journalist George Monbiot has [lamented](#), “We were wrong about peak oil: there’s enough in the ground to deep-fry the planet.”

With all the climate fun in 2014, what will 2015 hold?

Steve [Goreham](#) is Executive Director of the [Climate Science Coalition of America](#) and author of the [book](#) *The Mad, Mad, Mad World of Climatism: Mankind and Climate Change Mania*.

<http://wattsupwiththat.com/2014/12/29/2014-year-of-futility-in-the-fight-against-climate-change/>
Don Shaw

C. ASME GENERAL POSITION PAPER - SECURING AMERICA’S ENERGY FUTURE

This ASME Position Paper (<http://ppec.asme.org/wp-content/uploads/2014/11/PS14-24-Securing-Americas-Energy-Future.pdf>) presents suggestions for America’s Future Energy

without taking a firm position on anyone of the methods. The paper discusses means of producing energy using gas, liquid, and solid fuels; solar, wind sources; biomass; Nuclear; and unspecified future sources without recommending concentrated efforts on the most likely item to succeed. ASME discusses Greenhouse gases as if they are a problem: one of the Greenhouse gases, CO₂, is a necessary for life on Earth as we know it. (<http://www.scienceclarified.com/Ch/Carbon-Dioxide.html>). Earth without CO₂ would produce little or no vegetation; humans would speak like Donald Duck, and the Earth would be only slightly cooled. but without adequate food supplies.

To remove CO₂ ASME suggests sequestration underground. **Unknown poorly abandoned wells in the area of CO₂ sequestration wells can provide a source of CO₂ leakage to the atmosphere.** (http://sequestration.mit.edu/pdf/GHGT8_Ide.pdf) In addition,

ASME recommends more study of solar and wind turbines. **The Mojave Desert boiler tower, built with the Government loan of \$1.6 Billion, operates far (40%) below design capacity.** (<http://breakingenergy.com/2014/10/29/at-ivanpah-solar-power-plant-energy-production-falling-well-short-of-expectations/>). Currently, part of the unrealized capacity is augmented by natural gas fired boilers.. **Our Tax Dollars again is spent on a failed project.**

Wind Turbines have a history of reduction gear box failure and fires. See the 2011 Fig. 1, below, (<http://toryardvark.com/2011/12/13/why-wind-turbines-explode>) **Additionally, solar and wind sources are not reliable enough for grid Base Loading, without standby engine powered generators.** But that is alright, the Government has exempted these boiler towers and Wind Turbines from bird protection.

ASME recommends use of Nuclear Power plants, which appear practical, but they rely on a source of fuel such as coal, oil or gas fired equipment for manufacturing of plant components. In this regard, people keep reminding us of the possibility of running out of oil and gas in the near future (http://en.wikipedia.org/wiki/Hubbert_peak_theory), but producers keep finding more reserves. It is interesting to note ASME discusses the presence of Mercury in coal. **Mercury does exist in coal, but during the about 150 years of burning coal for heat, power, and lighting , there is no recorded instance of Mercury poisoning caused by coal use.** The ASME Position Paper makes interesting reading, but I believe it lacks reality. (GHH)



Figure. 1. Scottish windmill exploding in high winds on Dec. 8, 2011 (photo: Stuart McMahon)

D. CLIMATE AND TRUTH: A TALE OF IMMORALITY?

Guest opinion: Dr. Tim Ball

The most recent aberration of climate science is the apparent cherry picking of ocean temperature data by government scientists, Richard Feely and Christopher Sabine. The objective is not to determine what is happening, but why it is happening, and then linking it to a human cause. This, cart before the...

<http://wattsupwiththat.com/2015/01/02/climate-and-truth-a-tale-of-immorality/>

E. CARBON STORAGE NEWSLETTER

Check out the December 2014 edition of the National Energy Technology Laboratory's (NETL) Carbon Storage Newsletter to stay up to date on recent public and private sector carbon storage news from around the world.

Carbon Storage News from Around the World:

- The Carbon Capture Simulation Initiative (CCSI) and the National Risk Assessment Partnership (NRAP) are using predictive computational modeling for carbon capture and storage (CCS) technologies.
- The 5th version of NETL's CCS Database is now available.
- The Call for Papers for the 14th Annual Conference on Carbon Capture, Utilization, and Storage has been released.
- The White House Office of Science & Technology Policy is launching a new Climate Education and Literacy Initiative.
- Shell Cansolv has initiated testing of its carbon dioxide (CO₂) capture process.
- The United States of America and the People's Republic of China announced cooperation on climate change and will collaborate with other countries.
- The United Kingdom Department of Energy and Climate Change and Department of Natural Resources of Canada signed an agreement to collaborate on CCS research, innovation, and knowledge sharing.
- The U.S. Environmental Protection Agency (EPA) issued a permit to Nuevo Midstream, LLC.
- Officials from the California Air Resources Board said that firms spent approximately \$407 million in the latest quarterly auction of CO₂ emissions permits.
- The states participating in Regional Greenhouse Gas Initiative (RGGI) announced that 18,198,685 CO₂ allowances were sold at their 26th auction at a clearing price of \$5.21.

Research Articles:

- The prospects for coal-fired power plants with carbon capture and storage: A UK perspective
- Constraints on the magnitude and rate of CO₂ dissolution at Bravo Dome natural gas field
- Reactive and Pore Structure Changes in Carbon Dioxide Sequestration
- Influence of Porous Texture and Surface Chemistry on the CO₂ Adsorption Capacity of Porous Carbons: Acidic and Basic Site Interactions
- Influence of Maximum Pressure on the Path of CO₂ Desorption Isotherm on Coal
- Intrinsic Kinetics of Platy Hydrated Magnesium Silicate (Talc) for Geological CO₂ Sequestration: Determination of Activation Barrier
- Experimental and Computational Study of CO₂ Storage and Sequestration with Aqueous 2-Amino-2-hydroxymethyl-1, 3-propanediol (TRIS) Solutions

- Field Demonstration of CO₂ Leakage Detection in Potable Aquifers with a Pulselike CO₂-Release Test
- Field based stable isotope analysis of CO₂ by mid-infrared laser spectroscopy for CCS monitoring
- Threshold Dynamics in Soil Carbon Storage for Bioenergy Crops
- Futures trading with information asymmetry and OTC predominance: Another look at the volume/volatility relations in the European carbon markets

Did you know that the United States has at least 2,400 billion metric tons of potential CO₂ storage resources in saline formations, oil and gas reservoirs, and unmineable coal? Download DOE's [United States Carbon Storage Atlas](#) to learn more.

Be sure to read current event information and other special announcements in your December 2014 Carbon Storage Newsletter from DOE's NETL. Learn more about [DOE's Carbon Storage Program](#).
Arnold Feldman

F DICK STORM NEWSLETTER

Storm Newsletter 1

G. CLIMATE NEWS ROUNDUP / OCEAN ACIDIFICATION

[A Neutral View of Oceanic pH](#)

Guest Post by Willis Eschenbach

Following up on my previous investigations into the oceanic pH dataset, I've taken a deeper look at what the 2.5 million pH data points from the oceanographic data can tell us. Let me start with an overview of oceanic pH (the measure of alkalinity/acidity, with neutral being a pH of...

<http://wattsupwiththat.com/2015/01/02/a-neutral-view-of-oceanic-ph/>

I. AN OPEN LETTER TO POLITIFACT.COM

Guest essay by Andy May This is an open letter to Lauren Carroll regarding her Politifact.com article on December 17, 2014. I have sent a very similar letter to her asking for her comments, but no reply yet. I'm always annoyed at the media "bait and switch" tactic of picking the most outlandish statements of...

<http://wattsupwiththat.com/2015/01/02/an-open-letter-to-politifact-com/>

J. NASA'S NEW ORBITING CARBON OBSERVATORY SHOWS POTENTIAL TECTONICALLY-INDUCED CO₂ INPUT FROM THE OCEAN?

Guest essay by Martin Hovland, Geophysicist and Professor Emeritus, Center for Geobiology, University of Bergen, Norway The newly released satellite OCO₂-data indicates that there is CO₂ input in tectonically active oceanic areas. This becomes evident by pairing seafloor topography and tectonic data with the recently published OCO₂-results. Thus, in the released OCO₂ dataset, showing the...

<http://wattsupwiththat.com/2015/01/02/nasas-new-orbiting-carbon-observatory-shows-potential-tectonically-induced-co2-input-from-the-ocean/>

K. IUCN POLAR BEAR SPECIALIST GROUP OUT-LIVED ITS USEFULNESS 20 YEARS AGO

The IUCN Polar Bear Specialist Group (PBSG) should have been disbanded in 1996, the year polar bears were down-graded from a status of ‘vulnerable to extinction’ to ‘lower risk – conservation dependent’ (now called ‘least concern’) on the IUCN Red List. Guest essay by Dr. Susan Crockford, Zoologist Polar bears had recovered from previous decades...

<http://wattsupwiththat.com/2015/01/01/iucn-polar-bear-specialist-group-out-lived-its-usefulness-20-years-ago/>

L. HIATUS IN GLOBAL WARMING

The Great Pause lengthens again

Global temperature update: the Pause is now 18 years 3 months By Christopher Monckton of Brenchley Since October 1996 there has been no global warming at all (Fig. 1). This month’s RSS [1] temperature plot pushes up the period without any global warming from 18 years 2 months to 18 years 3 months. Figure 1

<http://wattsupwiththat.com/2015/01/03/the-great-pause-lengthens-again/>

Don Shaw

M. POLAR ICE CAPS MORE STABLE THAN PREDICTED, NEW OBSERVATIONS SHOW

Happy New Year! Polar Ice Caps More Stable Than Predicted, New Observations Show Daily Express, 25 December 2014 Levi Winchester THE North and South Poles are “not melting”, according to a leading global warming expert. In fact, the poles are “much more stable” than climate scientists once predicted and could even be much thicker than...

<http://wattsupwiththat.com/2015/01/05/polar-ice-caps-more-stable-than-predicted-new-observations-show/>

N. RECENT GLOBAL WARMING TRENDS: SIGNIFICANT OR PAUSED OR WHAT?

- See more at: <http://www.realclimate.org/index.php/archives/2014/12/recent-global-warming-trends-significant-or-paused-or-what/#sthash.pmYaE4sl.dpuf>

As the World Meteorological Organisation WMO has just announced that “The year 2014 is on track to be the warmest, or one of the warmest years on record”, it is timely to have a look at recent global temperature changes. I’m going to use Kevin Cowtan’s nice interactive temperature plotting and trend calculation tool to provide some illustrations. I will be using the HadCRUT4 hybrid data, which have the most sophisticated method to fill data gaps in the Arctic with the help of satellites, but the same basic points can be illustrated with other data just as well. Let’s start by looking at the full record, which starts in 1979 since the satellites come online there (and it’s not long after global warming really took off). Fig. 1. Global temperature 1979 to present – monthly values (crosses), 12-months running mean (red line) and linear trend line with uncertainty (blue) - See more at: <http://www.realclimate.org/index.php/archives/2014/12/recent-global-warming-trends-significant-or-paused-or-what/#sthash.pmYaE4sl.dpuf>

<http://www.realclimate.org/index.php/archives/2014/12/recent-global-warming-trends-significant-or-paused-or-what/>

O. HOTTEST YEAR EVER? GIANT CLAM REVEALS MIDDLE AGES WERE WARMER THAN TODAY

While government science and media begin the ramp-up to claim 2014 as the “hottest year ever” China’s Sea’s biggest bivalve shows that the Middle Ages were warmer than today, when Carbon Dioxide was lower. From the Chinese Academy of Sciences: Two recent papers, one is in Earth-Science Reviews and the other is in Chinese Science...

<http://wattsupwiththat.com/2015/01/05/hottest-year-ever-giant-clam-reveals-middle-ages-were-warmer-than-today/>

P. METH HEADS IN THE WHITE HOUSE

Obama plans to regulate methane even as emissions plummet.

Jan. 4, 2015 5:54 p.m. ET

In his last two years in office, President Obama seems determined to leave an environmental legacy by undermining the major reason his economic legacy will be better than it deserves to be: the domestic fossil fuel boom. A surge of new federal regulation is headed for the oil and gas industry, starting as soon as this month with a crackdown on methane.

The Administration is targeting everything from offshore drilling to oil trains but the methane rule is likely to be among the worst. The noncrisis that it will purport to solve is already well in hand thanks to industry innovation. The Environmental Protection Agency is going ahead anyway.

Env150112

Roger Zygmont

Q. STUDY TIES OUTSIZE METHANE EMISSIONS TO SOME OILFIELD EQUIPMENT

Posted on **December 9, 2014 at 12:01 am** by [Jennifer A. Dlouhy](#) in [Politics/Policy](#)

WASHINGTON — As federal regulators mull new mandates to curb methane leaks from the oil sector, new research suggests two major sources are techniques to dislodge fluid from wells and the pneumatic devices used to control valves at the sites.

The research from the University of Texas at Austin, with support from the Environmental Defense Fund and 10 natural gas companies, reveals that a large portion of methane emissions from oil and gas production can be traced to small subset of outlier wells and equipment.

For instance, about 19 percent of the pneumatic devices monitored by the research team accounted for 95 percent of the emissions from pneumatic devices. And 20 percent of the wells that vent emissions to the atmosphere during “unloading” operations designed to dislodge fluids accounted for 65 to 83 percent of those emissions.

Even so, the research documents a decline in methane emissions from the development and production of natural gas — now 10 percent lower than the same research team found in [a 2013 study](#).

Oil industry representatives also cheered the researchers’ finding that most of the sites recorded low to no emissions — a sign, they said, that companies are investing in equipment needed to mitigate methane.

Howard Feldman, director of regulatory and scientific affairs at the American Petroleum Institute, said the report demonstrates “industry-led efforts to reduce emissions through investments in new technologies and equipment are paying off.”

The study also confirms wide regional differences in the amount of methane leaking from pneumatic controllers that use gas to manipulate valves and other devices at well sites. Emissions from those devices were highest in the Gulf Coast and the lowest in the Rocky Mountains region. Mark Brownstein, an Environmental Defense Fund vice president, speculated the regional variations could be tied to the “history of more comprehensive regulation of air emissions from oil and gas operations” in Rocky Mountains states, particularly Colorado and Wyoming. “The results in this study speak to the value of those kind of leak detection and repair requirements,” he said. “The idea that you’ve got a certain subset of pneumatic devices that are responsible for a large proportion of emissions in the study suggests proper operation and maintenance is an important strategy for keeping emissions low overall.”

The Environmental Protection Agency and the Interior Department are considering a combination of regulations and voluntary programs that would rein in methane, a powerful heat-trapping pollutant that is the primary component of natural gas. After releasing a series of white papers earlier this year, the EPA is expected to decide its next steps later this month.

The study published Monday in the journal *Environmental Science & Technology* is unique in the way it measured methane emissions — directly at their source, including pneumatic controllers and wells with liquid unloading operations.

Liquids unloading operations are designed to remove fluid that, over time, can suppress gas production and keep it from flowing freely and easily out of a well. One method is a plunger-lift operation that involves first shutting in wells to stop them from flowing, then sending a plunger down the well and allowing pressure to build up. Once it does, a controller opens a valve and the gas-propelled plunger lifts liquid to the surface.

The plungers can be triggered automatically or manually. And in some cases, the flow may be diverted to a storage tank at atmospheric pressure.

According to the lead researcher, David Allen, a chemical engineering professor at UT-Austin’s Cockrell School of Engineering, the most reliable indicator of emissions wasn’t the precise technique used but the amount of times those unloading events were triggered. Some natural gas wells are vented just one or two times a year, while others will vent thousands of times annually, Allen said. “That is the dominant determinant of whether you have a high-emitting well.”

For pneumatic controllers, leaks averaged about the same whether the devices were designed to continuously vent gas or do so intermittently, sometimes with brief spikes up to 150 standard cubic foot per hour.

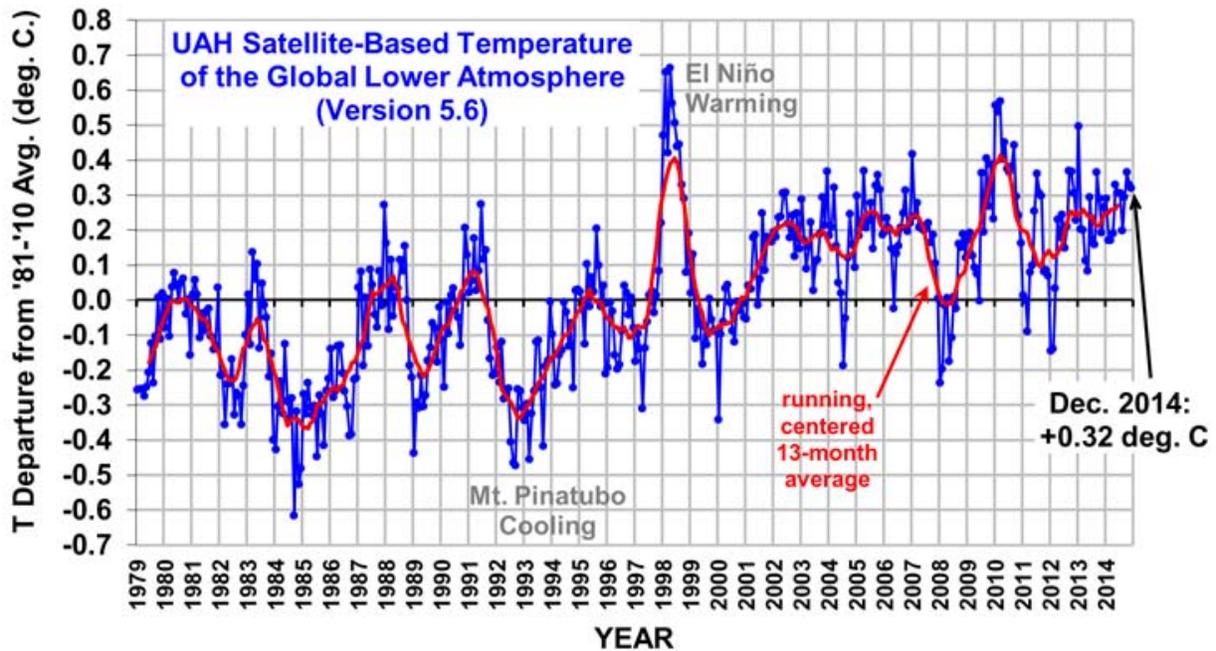
Roughly two-thirds of the high-emitting controllers documented in the study probably “were not operating as designed” and may be in need of repairs or replacements, Allen said.

It is unclear how many of those pneumatic controllers are in operation in the United States. An EPA greenhouse gas inventory documents about half a million of the controllers in use at the half million natural gas wells in the United States. But Allen noted that researchers saw an average of 2.7 of the devices at each of the wells they visited.

<http://fuelfix.com/blog/2014/12/09/study-ties-outsize-methane-emissions-to-some-oilfield-equipment/>

Roger Zygmunt

R. LATEST GLOBAL TEMPS



Roy Spencer

S. SHELL TO PAY \$83 MILLION SETTLEMENT FOR NIGERIA OIL SPILLS

Royal Dutch Shell Plc (RDSA) agreed to pay compensation to thousands of residents of the Bodo community in Nigeria’s crude-rich Niger River delta region for two “highly regrettable” oil spills in 2008.

Shell will pay a total of 55 million pounds (\$83.3 million) with “an individual payment to each claimant who accepts the settlement agreement in compensation for losses arising from the spills,” the Hague-based company said today in a statement. The settlement follows a three-year legal tussle between Shell and 15,600 Nigerians from Ogoniland, mostly fishermen, in a London court.

<http://www.bloomberg.com/news/2015-01-07/shell-agrees-83-million-settlement-for-nigeria-bodo-oil-spills.html>

Roger Zygmunt

T. CLIMATE SKEPTICISM: THE ‘SHOW ME’ STATE

There’s a nickname for Missouri, the “Show Me State”. It is a label attributed to Representative Willard Van Diver. It connotes a certain self-deprecating stubbornness and devotion to simple common sense. A recent post highlighted by Andrew Montford at Bishop Hill illustrates how this is applicable to climate skepticism. He writes: The trust me crowd...

<http://wattsupwiththat.com/2015/01/07/climate-skepticism-the-show-me-state/>

Regards
George