

The Week That Was: 2014-10-04 (October 4, 2014)
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The Science and Environmental Policy Project

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Quote of the Week: *“I think it's much more interesting to live not knowing than to have answers which might be wrong.”* Richard Feynman

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Number of the Week: 60/40 blend

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THIS WEEK:

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

Good Enough? The article by Physicist Steve Koonin “Climate Science Is Not Settled”, which appeared in the *Wall Street Journal* on September 19, is producing interesting responses. Now, the claim by the defenders of the UN Intergovernmental Panel on Climate Change (IPCC) has shifted from over 95% certainty that humans are the primary cause (largely by carbon dioxide (CO₂) emissions) of global warming since 1950, to claims that the science is good enough for governments to implement policy based on this claim. It is useful to review some of the science that is considered good enough as stated in a letter by Ben Santer and Thomas Stocker. Santer, of the US Lawrence Livermore Laboratory, is a long-time player in the IPCC process. Stocker, of Physics Institute at the University of Bern, was co-chair of Working Group I, the Physical Science, of the IPCC’s Fifth Assessment Report (AR-5), 2013.

The politically negotiated Summary for Policymakers (SPM) of AR-5 contained the assertion of more than 95% certainty. TWTW knows of no record that Stocker objected to this claim which is highly questionable and not scientifically derived.

In the 35 years since the Charney report to the US National Academy of Sciences, the climate establishment has failed to improve on the estimate of the warming impact from a doubling of CO₂, which is called the Climate Sensitivity. It remains 1.5°C to 4.5°C.

As demonstrated by the IPCC reports, the climate establishment has failed to adequately separate the human influence from the natural influence. As the Apollo veterans on the Right Climate Stuff Team have stated, if we cannot successfully model the natural influence, we cannot hope to model the human influence.

Recently, there has been a rash of papers published in scientific journals, largely using the same data used by the IPCC, showing that, if anything, the climate sensitivity is on the low end of the 1.5°C to 4.5°C range, and may be less than 1°C.

Further, late 20th century warming has stopped. There is no warming trend in the atmosphere or on the surface, even though CO₂ emissions, particularly from China, continue to increase substantially.

These facts draw into question the entire IPCC process, does it incorporate natural cause of climate change as human causes. SEPP thinks so, and that the argument the IPCC used to claim a proper separation in the SPM is a circular argument, which would not pass basic logic.

Further, it has been demonstrated by John Christy, Roy Spencer, and others, that the vast majority of the climate models grossly overestimate warming since 1979. There is no excuse for continuing the use of such models and the results therefrom in reports supposedly summarizing climate science.

By claiming the science is good enough, the participants in the IPCC are embracing low quality work.

Ben Santer is to be remembered as the inventor of the fabled hot spot, a region of the atmosphere of a pronounced warming trend centered over the tropics at about 10 km, 33,000 feet. The hot spot was presented in the 1996 IPCC Second Assessment Report, and has not been retracted, even though Michaels and Knappenberger showed that it is based on a selected portion of the available dataset. No such conclusion can be drawn from the entire dataset.

Santer incorrectly called it the distinct human fingerprint. No one else, except Mr Santer and his group, has been able to find the human fingerprint. It does not appear in the actual data and it should occur regardless of the cause of the warming. Fred Singer asserts that the absence of the hot spot is likely to be from an overestimate of the surface warming trend.

These, and other, inadequacies in the IPCC science can have a dramatic effect on the health and prosperity of the American public. The US EPA has used the non-existent hot spot, false claims that late 20th century warming was human caused and dangerous, even though it stopped, and the failing climate models as the lines of evidence that CO₂ and other greenhouse gas emissions endanger public health.

The US Federal court system has refused to review this questionable work, thus embracing it as part of the body of law being used to establish policy. Using these claims, the EPA and the Administration have embarked on a program of eliminating electricity generation from even the most efficient and cleanest modern coal-fired power plants, without carbon capture and storage – a technology untested for general application.

Worse, energy expert Donn Dears calculates that CO₂ emissions from electric power generation by natural gas, claimed by the EPA and the Administration as the replacement for coal-fired plants, already exceed the stated goal for 2050. The IPCC and its supporters have placed the United States on a bureaucratic path to a cold, hostile future, without affordable, reliable electricity. And now, they are claiming their science is good enough?

See Articles # 1 & #2, links under Defending the Orthodoxy, Energy Issues – US, the September 20 TWTW, and

http://www.americanthinker.com/2013/09/the_un_climate_panels_hot_spot_is_missing_in_action.html

Sea Level Rise: The independent, Nongovernmental International Panel on Climate Change (NIPCC) issued a brief on sea level rise for coastal management policy. Although the report is based on sea level rise for New South Wales, AU, the general principles apply world-wide.

World-wide, sea-level rise varies significantly by location and time frame. No effective coastal management plan can rest upon speculative computer projections of idealized future sea levels,

such as those used by the IPCC. If the computer modelers have not bothered to validate their models, there is no reason to assume they are valid.

Coastal management must instead rest upon accurate knowledge of local geological, meteorological and oceanographic conditions, including, amongst other things, changes in local relative sea level.

The three general guidelines provided are: 1) abandon global sea-level rise policy, 2) recognize the local or regional nature of coastal hazards, 3) use planning controls that are flexible and adaptive. See link under Challenging the Orthodoxy – NIPCC.

Abandon 2 °C? One of the more questionable stated goals of the global warming alarmists is the goal of preventing global temperatures from rising beyond 2 °C (about 4°F) above the pre-industrial levels, whatever that is. Writing in *Nature*, astrophysicist Charles Kennel and political scientist David Victor proposed abandoning this bureaucratically contrived goal. They were sharply criticized by members of the climate establishment for their efforts. Yet, the idea may have some merit, depending on what is used to replace it.

Assuming “pre-industrial” means before 1750, we really do not know what global temperatures were then. Thermometers were not in wide-spread use and were not accurate to fractions of a degree. Based on other written records, we can be quite certain there were periods of extreme cold in Northern Europe and in the region in Canada controlled by the Hudson Bay Company. Writing in Reference Frame, Luboš Motl expresses his views about abandoning the 2 °C goal. See links under Problems in the Orthodoxy.

AMA: The September 2014 special Bulletin of the American Meteorological Society is back in the news with claims that global warming is causing extreme weather events such as extreme heat. The normally prudent Martin Hoerling seems to be influenced by reports of extreme heat from Australia. However, as brought up in the past few TWTWs, there is strong reason to sharply question the data used by the Australian Bureau of Meteorology.

The records starting in 1911, ignoring the extremely hot 1880s and 1890s. Records were mathematically adjusted for station moves, even if there were no moves. Critic Jennifer Marohasy has her typically blunt comments:

Sophie C. Lewis and David J. Karoly have just had a paper published by the American Meteorological Society.

Its starts on page 31 of a special edition, ‘Explaining Extreme Events of 2013: From a Climate Perspective’ that is a special supplement to the Bulletin of the American Meteorological Society, Volume 95, Number 9, September 2014.

In this peer-reviewed paper I see that the homogenised ACORN-SAT data is labelled “Observations”.

Without careful and transparent delineation, records that have undergone mathematical manipulation cannot be considered to be the same as direct observations. Add to this, that the conclusions are based, in part, on simulations of climate models that have not been validated. See

links under Measurement Issues, Lowering Standards, and
<http://jennifermarohasy.com/2014/09/open-thread-30/>

OOPS: The UK Department of Energy and Climate Change (DECC) apparently made a more than slight miscalculation. As Andrew Montford writes:

UK energy policy has one key predicate, namely that fossil fuels are going to get inexorably more expensive. This is, not to put too fine a point on it, the sine qua non of the whole renewables programme. Renewables, we are told, will save consumers money, and only if we dig much deeper might we discover that in fact we are actually being told that renewables are being forecast to be cheaper than fossil fuels in the future

The *Telegraph* reports that DECC previous forecasts suggested the market price for electricity would rise from about £56 per megawatt-hour in 2015-16 to £64 in 2020-21. Yesterday's forecast cuts that to £51 in 2015-16, rising to less than £54 in 2020-21. Ministers currently offer offshore wind farms guaranteed prices of close to £150 per megawatt-hour, with consumers subsidising the difference.

Guaranteeing prices close to £150 per megawatt-hour for electricity with an estimated market value of about £56 per megawatt-hour! Further, the DECC allowed inflation indexation of contracts "because consumers are thought to be better placed to absorb the impact of high inflation than generators."

No wonder Montford is calling for the abolition of the DECC. See links under Questioning European Green.

The New Fad – Walruses: A group estimated to be 35,000 walruses hauled onto a beach in Alaska. In a statement the US Geological Survey (USGS) said the walruses "are hauling out on land in a spectacle that has become all too common in six of the last eight years as a consequence of climate-induced warming." Susan Crockford promptly found reports of similar mass haul-out in the 1970s, when we had global cooling. Whatever is the cause, the official reports now must state global warming?

In the past decade or so, seals have taken over some beaches in southern and central California. For example, Elephant Seals have established a major rookery on San Simeon, near the Hearst Castle, on the central coast. Will the USGS blame global warming? See links under Communicating Better to the Public – Exaggerate, or be Vague? and <http://www.elephantseal.org/>

Number of the Week: 60/40 Blend. Writing in the *Wall Street Journal*, promoters of natural gas use in light-to-medium duty work trucks claim they have hit a good blend of 60% natural gas to 40% diesel. The set-up allows the truck to operate on the blend, and if the natural gas is consumed first, on diesel only. Some manufacturers install key components allowing the fuel use shift to occur later, without voiding the warranty. Numerous small fleets of such trucks would reduce diesel use in the US, save the truckers significantly, without any government subsidies or similar programs. But, without subsidies or mandates, would politicians support such a program? See Article #4.

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ARTICLES:

For the numbered articles below, please see this week's TWTW at: www.sepp.org. The articles are at the end of the pdf.

1. We Don't Need Perfect Knowledge to Act on the Climate

Steven E. Koonin's essay "Climate Science Is Not Settled" (Review, Sept. 20) isn't an accurate reflection of the current state of climate science.

Letters, WSJ, Oct 2, 2014

<http://online.wsj.com/articles/we-dont-need-perfect-knowledge-to-act-on-the-climate-letters-to-the-editor-1412195749?KEYWORDS=santer>

2. Climate Science and Interpreting Very Complex Systems

It is only when climate models are more accurate that we will be able to have fact-based discussions to distinguish between human and natural changes in our climate.

Letters in response Climate Science Is Not Settled, WSJ, Sep 26, 2014

<http://online.wsj.com/articles/climate-science-and-interpreting-very-complex-systems-letters-to-the-editor-1411766297>

3. Let's Find Out How Much 'Clean Power' the Feds Really Have

The EPA should ask for a court ruling before states and utilities spend billions in compliance costs.

By Brian Potts and David Zoppo, WSJ, Oct 1, 2014

<http://online.wsj.com/articles/brian-h-potts-and-david-r-zoppo-lets-find-out-how-much-clean-power-the-feds-really-have-1412204691>

4. Forget Electric Cars. Natural Gas Is Powering Vehicles in Texas

One fleet of 24 natural-gas Fords will displace more gasoline than 700 Chevy Volts and 'save' taxpayers \$5.3 million.

By Bob Lukefahr and Balu Balagopal, WSJ, Sep 26, 2014

<http://online.wsj.com/articles/bob-lukefahr-and-balu-balagopal-forget-electric-cars-natural-gas-is-powering-vehicles-in-texas-1411770393>

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NEWS YOU CAN USE:

Climategate Continued

Mike's NYT trick

By Jean S. Climate Audit, Sep 26, 2014

<http://climateaudit.org/2014/09/26/mikes-nyt-trick/>

Challenging the Orthodoxy -- NIPCC

NIPCC Policy Brief – Sea Level Rise, New South Wales, AU

By Carter, et al, NIPCC, Sep 24, 2014

http://www.sepp.org/science_papers/NIPCC_NSW_Coastal.pdf

Challenging the Orthodoxy

Satellite Data: No Global Warming For Past 18 Years

By Barbara Hollingsworth, CNS News, Sep 30, 2014 [H/t Timothy Wise]

<http://www.cnsnews.com/news/article/barbara-hollingsworth/satellite-data-no-global-warming-past-18-years>

Why Don't More People Care About Global Warming?

By Roy Spencer, His Blog, Oct 1, 2014

<http://www.drroyspencer.com/2014/10/why-dont-more-people-care-about-global-warming/>

[SEPP Comment: Great graphs on atmospheric CO2 and world-wide life expectancy.]

New Research Erases Global Warming from Pacific Northwest

By Paul C. "Chip" Knappenberger and Patrick J. Michaels, CATO, Oct 1, 2014

<http://www.cato.org/blog/new-research-erases-global-warming-pacific-northwest>

Link to paper: Atmospheric controls on northeast Pacific temperature variability and change 1900-2012

By Johnstone and Mantua, PANS, Sep 22, 2014

<http://www.pnas.org/content/early/2014/09/16/1318371111.abstract>

Apollo Astronauts: Climate Science 'One Of the Greatest Scientific Fiascos'

By Jonathan Leake, Sunday Times, Via GWPF, Sep 28, 2014

<http://www.thegwpf.com/apollo-astronauts-climate-science-one-of-the-greatest-scientific-fiascos/>

Ben Santer's 17 year itch, revisited – he and a whole stable of climate scientists have egg on their faces

By Anthony Watts, WUWT, Oct 3, 2014

<http://wattsupwiththat.com/2014/10/03/ben-santer-17-year-itch-revisited-he-and-a-whole-stable-of-climate-scientists-have-egg-on-their-faces/>

Climate Change and Extinction: What Is Natural?

By Tim Ball, WUWT, Sep 28, 2014

<http://wattsupwiththat.com/2014/09/28/climate-change-and-extinction-what-is-natural/>

Hey Andy Dessler, Let's Debate Live

By Roy Spencer, His Blog, Sep 29, 2014

<http://www.drroyspencer.com/2014/09/hey-andy-dessler-lets-debate-live/>

Defending the Orthodoxy

Climate Science Is Settled Enough

The Wall Street Journal's fresh face of climate inaction.

By Raymond T. Pierrehumbert, Slate, Oct 1, 2014

http://www.slate.com/articles/health_and_science/science/2014/10/the_wall_street_journal_and_s_teve_koonin_the_new_face_of_climate_change.html

Paris talks: a climate for action?

By Jonathan Cobb, WNN, Sep 30, 2014

<http://www.world-nuclear-news.org/E-Paris-talks-a-climate-for-action-30091401.html>

[SEPP Comment: Does the World Nuclear Association actually believe nuclear power will boom if it helps shut down coal-fired electricity?]

Questioning the Orthodoxy

An Already Lost Battle Against Climate Change?

By John Merline, IBD, Oct 3, 2014

<http://news.investors.com/100314-720010-climate-change-fight-may-be-futile-waste-of-money.htm?p=full>

[SEPP Comment: Good graph of emissions from China, U.S., and EU.]

Dreary climate summit was surely their saddest fiasco yet

The leaden speeches at this year's UN climate summit shows our leaders' gullibility

By Christopher Booker, Telegraph, UK, Sep 27, 2014 [H/t Timothy Wise]

<http://www.telegraph.co.uk/earth/11124976/Dreary-climate-summit-was-surely-their-saddest-fiasco-yet.html>

The Obvious Failures of Climate Science That Mainstream Media Ignores

By Bob Tisdale, WUWT, Sep 30, 2014

<http://wattsupwiththat.com/2014/09/30/the-obvious-failures-of-climate-science-that-mainstream-media-ignores/>

Climate Policy Implications of the Hiatus in Global Warming

By Ross McKittrick, Fraser Institute, Oct 2014

<http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/climate-policy-implications-of-the-hiatus-in-global-warming.pdf>

Low Climate Sensitivity: Accumulating Evidence

By Chip Knappenberger, Master Resource, Oct 2, 2014

<https://www.masterresource.org/debate-issues/low-climate-sensitivity-accumulating/>

Real Climate Debate Hasn't Even Begun

By Larry Bell, Newsmax, Sep 29, 2014

<http://www.newsmax.com/LarryBell/koonin-climate-warming-obama/2014/09/29/id/597391/>

Problems in the Orthodoxy

Ditch the 2 °C warming goal

Average global temperature is not a good indicator of planetary health. Track a range of vital signs instead, urge David G. Victor and Charles F. Kennel.

By David G. Victor & Charles F. Kennel, Nature, Oct 1, 2014

<http://www.nature.com/news/climate-policy-ditch-the-2-c-warming-goal-1.16018>

Writers in Nature declared heretics by RC for dissing the 2 °C "target"

By Luboš Motl, The Reference Frame, Oct 2, 2014

<http://motls.blogspot.com/2014/10/writers-in-nature-declared-heretics-by.html>

Getting Beyond the 2-Degree Threshold on Global Warming,

By Andrew Revkin, NYT, Oct 3, 2014 {H/t Clyde Spencer}

http://dotearth.blogs.nytimes.com/2014/10/03/getting-over-the-2-degree-limit-on-global-warming/?_php=true&_type=blogs&partner=rss&emc=rss&r=0

Off target

By Andrew Montford, Bishop Hill, Oct 1, 2014

<http://bishophill.squarespace.com/blog/2014/10/1/off-target.html>

WOW. Nature article suggests 'Ditch the 2 °C warming goal'

By Anthony Watts, WUWT, Oct 1, 2014

<http://wattsupwiththat.com/2014/10/01/wow-nature-article-suggests-ditch-the-2-c-warming-goal/>

Challenging the 2 degree target

By Judith Curry, Climate Etc. Oct 3, 2014

<http://judithcurry.com/2014/10/03/challenging-the-2-degree-target/#more-17010>

Climate change? China rebuts Obama

By George Russell, Fox News, Sep 24, 2014 [H/t GWPF]

<http://www.foxnews.com/world/2014/09/24/climate-change-china-rebuts-obama/>

Post-socialist EU members find climate alarmist policies undesirable

By Luboš Motl, The Reference Frame, Oct 1, 2014

<http://motls.blogspot.com/2014/10/post-socialist-eu-members-find-climate.html>

Seeking a Common Ground

Why is the Northwest U.S. warming? Natural variations or mankind's greenhouse gases?

By Cliff Mass, Weather Blog, Sep 28, 2014

<http://cliffmass.blogspot.com/2014/09/why-is-northwest-us-warming-natural.html>

A physicist does Bayes

By Andrew Montford, Bishop Hill, Sep 29, 2014

<http://bishophill.squarespace.com/blog/2014/9/29/a-physicist-does-bayes.html>

Models v. Observations

Review: Yet More Expert Peer-Reviewed Papers Tell Us Why Climate Models Should Land In The Dustbin

More fun with climate models: Nowhere do they fit reality

By Sebastian Lüning and Fritz Vahrenholt (Translated/edited by P Gosselin), No Tricks Zone, Oct 3, 2014

<http://notrickszone.com/2014/10/03/review-yet-more-expert-peer-reviewed-papers-tell-us-why-climate-models-should-land-in-the-dustbin/>

2 German Scientists Calling For Climate Modelling Moratorium: So Far Only “Failures, Flops And Fumbles”!

Fun with Climate Models: Flops, Failures and Fumbles

By Dr. Sebastian Lüning and Prof. Fritz Vahrenholt (Translated, edited by P Gosselin), Oct 1, 2014

<http://notrickszone.com/2014/10/01/2-german-scientists-calling-for-climate-modelling-moratorium-so-far-only-failures-flops-and-fumbles/>

Met Office Arctic Ice Forecast Hopelessly Wrong

By Paul Homewood, Not A Lot Of People Know That, Oct 2, 2014 [H/t GWPF]

<http://notalotofpeopleknowthat.wordpress.com/2014/10/02/met-office-arctic-ice-forecast-hopelessly-wrong/>

[SEPP Comment: A 27% underestimate should give great confidence in the models?]

Model Issues

Climate models and clouds

By Andrew Montford, Bishop Hill, Oct 1, 2014

<http://bishophill.squarespace.com/blog/2014/10/1/climate-models-and-clouds.html>

Measurement Issues

2014 Global Temperature So Far

By David Whitehouse, GWPF, Sep 28, 2014

<http://www.thegwpf.com/2014-global-temperature-so-far/>

In all probability, 2014 will continue the global surface temperature standstill in a statistically perfect manner.

Maurice Newman Calls For Independent Inquiry Into Australia's Met

By Maurice Newman, The Australian, Via GWPF, Oct 1, 2104

<http://www.thegwpf.com/maurice-newman-calls-for-independent-inquiry-into-australias-met-office/>

Maurice Newman chairs the Prime Minister's Business Advisory Council. These views are his own.

Review and Audit of Bureau of Meteorology needed

By Geoff Brown, Australian Climate Sceptics, Oct 1, 2014

<http://theclimatescepticsparty.blogspot.com.au/2014/10/review-and-audit-of-bureau-of.html>

The Rutherglen Stoush on homogenisation — Bill Johnston bravely ventured onto “the Conversation”

By Bill Johnston, Jo Nova's Blog, Oct 2, 2014

<http://joannenova.com.au/2014/10/the-rutherglen-stoush-on-homogenisation-bill-johnstone-bravely-ventured-onto-the-conversation/#more-38351>

Another toothless review of the BOM?

By Jo Nova, Her Blog, Sep 30, 2014

<http://joannenova.com.au/2014/09/another-toothless-review-of-the-bom/#more-38400>

Changing Weather

3,264 Days Without a Major Hurricane Strike

By Roy Spencer, His Blog, Oct 1, 2014

<http://www.drroyspencer.com/2014/10/3264-days-without-a-major-hurricane-strike/>

Insurance companies not seeing effects from posited ‘climate change’ spawned weather disasters

By Anthony Watts, WUWT, Sep 28, 2014

<http://wattsupwiththat.com/2014/09/28/insurance-companies-not-seeing-effects-from-positied-climate-change-spawned-weather-disasters/>

[SEPP Comment: Could a cynic say that the fear of extreme weather events from global warming is a hoax created by insurance companies?]

Scientists reject climate change link to Colorado floods

Fluky weather pattern, not greenhouse gas emissions, caused heavy rainfall

By Valerie Richardson, Washington Time, Oct 2, 2014

<http://www.washingtontimes.com/news/2014/oct/2/scientists-reject-climate-change-link-to-colorado-/>

The freak hurricane of 1821 and why it should worry every Mid-Atlantic and Northeast coastal resident

By Jason Samenow, Capital Weather Gang, Oct 2, 2014 [H/t Climate Etc.]

<http://www.washingtonpost.com/blogs/capital-weather-gang/wp/2014/10/02/the-freak-hurricane-of-1821-and-why-it-should-worry-every-mid-atlantic-and-northeast-coastal-resident/>

Weatherbell had last winter and spring and summer right...how about the winter

By Joe D'Aleo, ICECAP, Sep 30, 2014

<http://icecap.us/index.php/go/new-and-cool/obvious-failure-of-climate-science-that-mainstream-media-ignores1/>

Changing Seas

Climate Exaggeration: Trashing Science to Trash the GOP (Florida under water is a ruse)

By James Rust, Master Resource, Oct 1, 2014

<https://www.masterresource.org/climate-exaggeration/misrepresenting-climate/>

[SEPP Comment: More on exaggerations of Florida sea level rise in the New York Times.]

One wonders how many of these newly found thousands of volcanic seamounts are producing CO2 that bubble into the ocean

By Anthony Watts, WUWT, Oct 2, 2014

<http://wattsupwiththat.com/2014/10/02/one-wonders-how-many-of-these-newly-found-thousands-of-volcanic-seamounts-are-producing-co2-that-bubble-into-the-ocean/>

“One of the most important uses will be to improve the estimates of seafloor depth in the 80 percent of the oceans that remain uncharted or [where the sea floor] is buried beneath thick sediment,” the authors state.

Changing Cryosphere – Land / Sea Ice

Antarctic sea-ice hits new high as scientists puzzle over the cause

By Robert McSweeney, The Carbon Brief, Sep 23, 2014

[http://www.carbonbrief.org/blog/2014/09/antarctic-sea-ice-hits-new-high-as-scientists-puzzle-over-the-](http://www.carbonbrief.org/blog/2014/09/antarctic-sea-ice-hits-new-high-as-scientists-puzzle-over-the-cause/?utm_content=buffer8e4eb&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer)

[cause/?utm_content=buffer8e4eb&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer](http://www.carbonbrief.org/blog/2014/09/antarctic-sea-ice-hits-new-high-as-scientists-puzzle-over-the-cause/?utm_content=buffer8e4eb&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer)

Advances in understanding of the Greenland Ice Sheet’s meltwater channels

By Anthony Watts, WUWT, Oct 2, 2014

<http://wattsupwiththat.com/2014/10/02/advances-in-understanding-of-the-greenland-ice-sheets-meltwater-channels/>

Agriculture Issues & Fear of Famine

No sign of health or nutrition problems from GMO livestock feed

By Staff Writers, Davis CA (SPX), Oct 02, 2014

http://www.seeddaily.com/reports/No_sign_of_health_or_nutrition_problems_from_GMO_livestock_feed_999.html

Un-Science or Non-Science?

Claim: Changing Antarctic waters could trigger steep rise in sea levels

By Anthony Watts, WUWT, Oct 2, 2014

<http://wattsupwiththat.com/2014/10/02/claim-changing-antarctic-waters-could-trigger-steep-rise-in-sea-levels/>

Link to paper: Antarctic contribution to meltwater pulse 1A from reduced Southern Ocean overturning

By Gollege, et al. Nature Communications, Sep 29, 2014

<http://www.nature.com/ncomms/2014/140929/ncomms6107/full/ncomms6107.html>

[SEPP Comment: A major portion of the Northern Hemisphere is no longer covered by thousands of feet of ice as it was when the meltwater pulse occurred.]

California's drought linked to greenhouse gases, climate change in Stanford study

By Lisa M. Krieger, San Jose Mercury News, Sep 29, 2014

http://www.mercurynews.com/drought/ci_26627640/californias-drought-linked-greenhouse-gases-climate-change

To test their theory, the Stanford team applied advanced statistical techniques to a large suite of climate model simulations. One set mirrored the present climate, in which the atmosphere is warming due to human emissions of carbon dioxide and other greenhouse gases. In the other, greenhouse gases were kept at a level similar to those before the Industrial Revolution began in the early 18th century.

California Drought – A Novel Statistical Analysis of Unrealistic Climate Models and of a Reanalysis That Should Not Be Equated with Reality

By Bob Tisdale, WUWT, Oct 3, 2014

<http://wattsupwiththat.com/2014/10/03/california-drought-a-novel-statistical-analysis-of-unrealistic-climate-models-and-of-a-reanalysis-that-should-not-be-equated-with-reality/>

[SEPP Comment: See link immediately above.]

Lowering Standards

Scientists Trace extreme Heat in Australia to Climate Change

By Justin Gillis, NYT, Sep 29, 2014 [H/t Clyde Spencer]

http://www.nytimes.com/2014/09/30/science/earth/human-related-climate-change-led-to-extreme-heat-scientists-say.html?emc=edit_th_20140930&nl=todaysheadlines&nlid=59831859&r=0

Link to report: Explaining Extreme Events of 2013 from a Climate Perspective

By Herring, Hoerling, Peterson and Stott, Bulletin of the American Meteorological Society, Sep 2014

http://www2.ametsoc.org/ams/assets/File/publications/BAMS_EEE_2013_Full_Report.pdf

Fury as top medical journal joins the green bandwagon: Think-tank slams BMJ's 'alarmist' global warming claims

The BMJ says has called global warming a 'public health emergency'. And said that it will make the deaths from ebola seem insignificant . Critics have described the articles as 'alarmist' and 'desperate'

By Sophie Borland, Daily Mail, Oct 2, 2014 [H/t GWPF]

<http://www.dailymail.co.uk/news/article-2777192/Fury-medical-journal-joins-green-bandwagon-Think-tank-slams-BMJ-s-alarmist-global-warming-claims.html>

Oh Godlee

By Andrew Montford, Bishop Hill, Oct 2, 2014

<http://bishophill.squarespace.com/blog/2014/10/2/oh-godlee.html>

[SEPP Comment: See link immediately above.]

Justin Gillis NYT and Politifacts get it wrong

By Joseph D'Aleo, ICECAP, Sep 28, 2014

http://icecap.us/index.php/go/political-climate/justin_gillis_nyt_and_politifacts_get_it_wrong1/

Communicating Better to the Public – Exaggerate, or be Vague?

Mass haulouts of Pacific walrus and stampede deaths are not new, not due to low ice cover

By Susan Corckford, Polar Bear Science, Oct 1, 2014

<http://polarbearscience.com/2014/10/01/mass-haulouts-of-pacific-walrus-and-stampede-deaths-are-not-new-not-due-to-low-ice-cover/#more-5985>

[SEPP Comment: See articles immediately below.]

Mass gatherings of walrus follow-up – sea ice maps for 1978 and 1972

By Susan Crockford, Polar Bear Science, Oct 2, 2014

<http://polarbearscience.com/2014/10/02/mass-gatherings-of-walrus-follow-up-sea-ice-maps-for-1978-and-1972/>

[SEPP Comment: See articles immediately below.]

As sea ice melts amid global warming, 35,000 walruses crowd the shores of Alaska

By Justin Moyer, Washington Post, Oct 2, 2014 [H/t Timothy Wise]

http://www.washingtonpost.com/news/morning-mix/wp/2014/10/02/as-sea-ice-melts-amid-global-warming-35000-walrus-crowd-the-shores-of-alaska/?tid=hp_mm

Climate Crazyness of the Week – ‘Mass gathering of 35,000 walruses is latest sign of global warming’

By Eric Worall, WUWT, Oct 1, 2014

<http://wattsupwiththat.com/2014/10/01/climate-crazyness-of-the-week-mass-gathering-of-35000-walruses-is-latest-sign-of-global-warming/>

[SEPP Comment: See links immediately above.]

Flight ban to protect baby walruses beached in Alaska

By Staff Writers, Los Angeles (AFP), Oct 02, 2014

http://www.terraily.com/reports/Flight_ban_to_protect_baby_walruses_beached_in_Alaska_999.html

Climate Change Has Jumped the Shark

By Steven Hayward, Forbes, Sep 29, 2014

<http://www.forbes.com/sites/stevenhayward/2014/09/29/climate-change-has-jumped-the-shark/>

DOE's Poneman: Nuclear, climate two key 'existential threats'

By Laura Barron-Lopez, The Hill, Sep 29, 2014

<http://thehill.com/policy/energy-environment/219187-does-poneman-nuclear-climate-two-key-existential-threats>

[SEPP Comment: What is an existential threat?]

Communicating Better to the Public – Make things up.

Another story about global warming causing volcanoes...

By Anthony Watts, WUWT, Oct 2, 2014

<http://wattsupwiththat.com/2014/10/02/another-story-about-global-warming-causing-volcanoes/>

Baseless claim from WWF: Half of global wildlife lost, says new WWF report

By Anthony Watts, WUWT, Sep 30, 2014

<http://wattsupwiththat.com/2014/09/30/baseless-claim-from-wwf-half-of-global-wildlife-lost-says-new-wwf-report/>

Global Warming's Twin Crises: Gravity And The Islamic State

Editorial, IBD, Oct 1, 2014 [H/t Timothy Wise]

<http://news.investors.com/ibd-editorials/100114-719840-west-antarctic-ice-melt-gravity-loss.htm>

Portland will Still Be Cool, but Anchorage May Be the Place to be

On a Warmer Planet, Which Cities Will be Safest?

By Jennifer Kingson, NYT, Sep 22, 2014 [H/t Timothy Wise]

http://www.nytimes.com/2014/09/23/science/on-a-warmer-planet-which-cities-will-be-safest.html?_r=2&gwh=D60CBB23BA9965FDAC1E81638D1C9B07&gwt=pay&assetType=nyt_now

Communicating Better to the Public – Go Personal.

Quote of the day, murderous edition

By Andrew Montford, Bishop Hill, Sep 30, 2014

<http://bishophill.squarespace.com/blog/2014/9/30/quote-of-the-day-murderous-edition.html>

“Via Warwick Hughes comes this award of money from the government of the Australian Capital Territory:

Aspen Island Theatre Company: \$18,793 to assist with costs of the creative development of a new theatre work, ‘Kill Climate Deniers’.

Classy.”

Communicating Better to the Public – Use Propaganda on Children

NYC Students Will be ‘Environmental Stewards’ Despite Lack of Math and English Skills

City spending \$23 million on solar panel installations

By Mary Lou Byrd, Washington Free Beacon, Oct 1, 2014 [H/t Timothy Wise]

<http://freebeacon.com/issues/nyc-students-will-be-environmental-stewards-despite-lack-of-math-and-english-skills/>

Expanding the Orthodoxy

The new ploy of climate activism: attacking financial institutions

By Eric Worrall, WUWT, Sep 29, 2014

<http://wattsupwiththat.com/2014/09/29/climate-activistims-new-ploy-attacking-financial-institutions/>

Questioning European Green

Expensive green energy a 'bad gamble' as ministers slash gas price forecasts

Ministers cut forecasts of gas prices for the rest of the decade by as much as a fifth, meaning green energy will remain relatively far more costly

By Emily Gosden, Telegraph, Oct 3, 2014 [H/t GWPF]

<http://www.telegraph.co.uk/earth/energy/11137332/Expensive-green-energy-a-bad-gamble-as-ministers-slash-gas-price-forecasts.html>

The underpinning of energy policy collapses

By Andrew Montford, Bishop Hill, Oct 2, 2014

<http://bishophill.squarespace.com/blog/2014/10/2/the-underpinning-of-energy-policy-collapses.html>

Close down DECC

By Andrew Montford, Bishop Hill, Oct 3, 2014

<http://www.bishop-hill.net/blog/2014/10/3/close-down-decc.html>

Quote of the day, consumer care edition

By Andrew Montford, Bishop Hill, Oct 3, 2014

<http://bishophill.squarespace.com/blog/2014/10/3/quote-of-the-day-consumer-care-edition.html>

Six EU states cast doubt on proposed 2030 climate goals

Central European countries reject renewables and efficiency goals as part of EU's 2030 climate package

By Sphie Yeo, RTCC, Oct 1, 2014 [H/t GWPF]

<http://www.rtcc.org/2014/10/01/six-eu-states-cast-doubt-on-proposed-2030-climate-goals/>

Alternative Energy: Should other nations follow Germany's lead on promoting solar power?

By Ryan Carlyle, Quora, Jul 21, 2014

<http://www.quora.com/Alternative-Energy/Should-other-nations-follow-Germanys-lead-on-promoting-solar-power-1/answer/Ryan-Carlyle>

EU must reconsider climate targets if UN talks fail, says energy commissioner

By Tom Revell, Blue & Green, Sep 27, 2014

<http://blueandgreentomorrow.com/2014/09/27/eu-must-reconsider-climate-targets-if-un-talks-fail-says-energy-commissioner/>

Germany's CO2 Emissions Rising

By Paul Homewood, Not a Lot of People Know That, Sep 30, 2014 [H/t GWPF]

<http://notalotofpeopleknowthat.wordpress.com/2014/09/30/germanys-co2-emissions-rising/>

When Green Dreams Beget Brown Nightmares

By Walter Russell Mead & Staff, American Interest, Sep 27, 2014 [H/t GWPF]

<http://www.the-american-interest.com/blog/2014/09/27/when-green-dreams-beget-brown-nightmares/>

Questioning Green Elsewhere

Earth-Friendly Energy Is Anything But

By Deroy Murdock, National Review, Sep 26, 2014 [H/t NCPA]

<http://www.nationalreview.com/energy-week/388892/earth-friendly-energy-anything-deroy-murdock>

Oregon LEEDing The Way To Break The Timber Certification Monopoly

Editorial, Daily Caller, Oct 1, 2014 [H/t Timothy Wise]

<http://dailycaller.com/2014/10/01/oregon-leeding-the-way-to-break-the-timber-certification-monopoly/>

Non-Green Jobs

Fossil Fuels Are Key To Our Economy — Don't Divest Their Stocks

By Robert Bradley, IBD, Oct 2, 2014

<http://news.investors.com/ibd-editorials-on-the-right/100214-720043-us-schools-shouldnt-divest-their-fossil-fuel-stock-holdings.htm?p=full>

Funding Issues

Developing countries' fund key to climate pact

By Zack Colman, Washington Examiner, Sep 29, 2014

<http://washingtonexaminer.com/developing-countries-fund-key-to-climate-pact/article/2553989>

[SEPP Comment: \$100 Billion per year is a good will token?]

EPA and other Regulators on the March

An opportunity to rein in the EPA

States will be faced with passing on the costs of mandated upgrades

By Todd Snitchler, Washington Times, Sep 26, 2014

<http://www.washingtontimes.com/news/2014/sep/26/snitchler-an-opportunity-to-rein-in-the-epa/>

EPA chief's climate pitch ignores rising electric prices

Gina McCarthy insists reducing carbon emissions, fighting climate change boost economy

By Ben Wolfgang, Washington Times, Sep 25, 2014 [H/t Timothy Wise]

<http://www.washingtontimes.com/news/2014/sep/25/epa-chief-pushes-green-energy-agenda-ignores-high/>

Citing climate change, Obama fences in huge Pacific area after wheeling and dealing

By George Russell, Fox News, Sep 26, 2014 [H/t Timothy Wise]

<http://www.foxnews.com/world/2014/09/26/citing-climate-change-obama-fences-in-huge-pacific-area-after-wheeling-and/?intcmp=latestnews>

EPA pushing tougher emissions rules for some steel manufacturers

By Tim Devaney, The Hill, Oct 3, 2014

<http://thehill.com/regulation/219703-epa-pushing-tougher-emissions-rules-for-steel-manufacturers>

Small Business Administration hits EPA over water rule

By Tim Devaney, The Hill, Oct 1, 2014

<http://thehill.com/regulation/219516-small-business-administration-criticizes-epa-over-new-waters-rule>

Energy Issues – Non-US

Government to remove barriers to onshore oil and gas and deep geothermal exploration

By Staff Writers, Department of Energy & Climate Change, UK Govt, Sep 25, 2014 [H/t GWPF]

<https://www.gov.uk/government/news/government-to-remove-barriers-to-onshore-oil-and-gas-and-deep-geothermal-exploration>

How did the UK grid respond to losing few EDF nuclear reactors?

By Jani-Petri Martikainen, PassiiviIdentiteetti, Sep 16, 2014, [H/t GWPF]

<http://passiiviidentiteetti.wordpress.com/2014/08/29/how-did-the-uk-grid-respond-to-losing-few-edf-nuclear-reactors/>

Energy Issues -- US

An Analysis of the War on Fossil Fuels

By Donn Dears, Power For USA, Oct 3, 2014

<https://dddusmma.wordpress.com/2014/10/03/an-analysis-of-the-war-on-fossil-fuels/>

NERC's Polar Vortex Review Bares Natural Gas Dependency, Equipment Vulnerabilities

By Sonal Patel, Power Mag, Oct 2, 2014

http://www.powermag.com/nercs-polar-vortex-review-bares-natural-gas-dependency-equipment-vulnerabilities/?hq_e=el&hq_m=2950548&hq_l=5&hq_v=5e660500d0

[SEPP Comment: The "Polar Vortex Review" detracts from the serious issue of energy security during cold snaps such as in the 1950s & 1960s.]

Washington's Control of Energy

API says its oil train proposals offer reasonable solution

By Daniel J. Graeber, Washington (UPI), Oct 1, 2014

http://www.oilgasdaily.com/reports/API_says_its_oil_train_proposals_offer_reasonable_solution_999.html

Green Energy and Red Tape

By Katie Tubb and Jack Spencer, Heritage Foundation, Sep 29, 2014

<http://www.heritage.org/research/commentary/2014/9/green-energy-and-red-tape>

Oil lobby: Rail tank Car Phaseout Could Cost \$45.2B

By Timothy Cama, The Hill, Sep 30, 2014

<http://thehill.com/policy/energy-environment/219348-oil-lobby-rail-tank-car-phaseout-could-cost-452b>

[SEPP Comment: Washington must stop the US oil and gas boom somehow!]

Oil and Natural Gas – the Future or the Past?

Japanese companies band together to test methane hydrates

By Sara Stefanini, Natural Gas Daily, Oct 2, 2014

<http://interfaxenergy.com/gasdaily/article/13807/japanese-companies-band-together-to-test-methane-hydrates>

How the oil and gas boom is changing America

By Karen Bleier, Vox, Oct 2, 2014 [H/t Climate Etc.]

<http://www.vox.com/2014/10/2/6892781/how-the-oil-and-gas-boom-is-changing-america>

Move over Saudi Arabia, here comes U.S. oil and gas

By Rob Nikolewski, New Mexico Watchdog, Sep 30, 2014

<http://watchdog.org/174064/move-saudi-arabia-comes-u-s-oil-gas-market/>

America's Energy Outlook Is Fracking Great, For Now

By Christopher Helman, Forbes, Sep 25, 2014 [H/t Timothy Wise]

<http://www.forbes.com/sites/christopherhelman/2014/09/25/americas-energy-outlook-is-fracking-great-for-now/>

Link to report: Economic Impact of the Eagle Ford Shale

By Thomas Tunstall, et al. Center for Community and business Research, U. of Texas, San Antonio, Sep 2014

http://iedtexas.org/images/documents/2014_EFS_Release_Oct.pdf

[SEPP Comment: How long is “for now” – 50 plus years?]

Baker Hughes to start disclosing fracking chemicals

By Timothy Cama, The Hill, Oct 1, 2014

<http://thehill.com/policy/energy-environment/219443-baker-hughes-to-start-disclosing-fracking-chemicals>

Exxon issues report on how it mitigates fracking risks

By Daniel J. Graeber, Irving, Texas (UPI), Oct 1, 2014

http://www.oilgasdaily.com/reports/Exxon_issues_report_on_how_it_mitigates_fracking_risks_99.html

Return of King Coal?

Russia, China agree to develop Siberian coal

By Leonid Homeriki, David Miller, Russia Beyond the Headlines, Sep 29, 2014 [H/t GWPF]

http://rbth.com/business/2014/09/29/russia_china_agree_to_develop_siberian_coal_40187.html

Alternative, Green (“Clean”) Solar and Wind

Germany's Solar Failure

By Doug Hoffman, Resilient Earth, Sep 26, 2014 [H/t GWPF]

<http://theresilientearth.com/?q=content/germanys-solar-failure>

Solar energy could dominate electricity by 2050: IEA

By Sarah McFarlane, Reuters, Sep 29, 2014 [H/t Timothy Wise]

<http://uk.reuters.com/article/2014/09/29/us-solar-iea-electricity-idUKKCN0HO11K20140929>

[SEPP Comment: Still need to resolve the problems of reliability and costs.]

Alternative, Green (“Clean”) Energy -- Other

The contradictions of biomass

By Martin Livermore, Scientific Alliance, Oct 3, 2014

<http://scientific-alliance.org/scientific-alliance-newsletter/contradictions-biomass>

Carbon Schemes

First large-scale carbon capture goes online in Canada

By Staff Writers, Ottawa (AFP), Oct 01, 2014

http://www.energy-daily.com/reports/First_large-scale_carbon_capture_goes_online_in_Canada_999.html

[SEPP Comment: According to EPA and DOE, a proven, commercially technology. Let us review the success in 5 years.]

California Dreaming

Fed Up With Federal Inaction, States Act Alone on Cap-and-Trade

By Nick Cunningham of Oilprice.com, Washington DC (SPX), Oct 01, 2014

http://www.spacemart.com/reports/Fed_Up_With_Federal_Inaction_States_Act_Alone_on_Cap_and_Trade_999.html

Health, Energy, and Climate

Parker Gallant: WHO’s facts are right!

By Parker Gallant, Energy Probe, Sep 12, 2014 [H/t Energy and Environmental Newsletter]

<http://ep.probeinternational.org/2014/09/12/parker-gallant-whos-facts-are-right/>

Environmental Industry

Enron: Robert Kennedy Jr.'s Corporate Climate Champion?

By Robert Bradley, Master Resource, Oct 3, 2014

<http://www.masterresource.org/debate-issues/enron-robert-kennedy-jr-favorite/>

Other Scientific News

The Lost Donkeys of Science

By Abraham Loeb, Project Syndicate, Oct 2, 2014

<http://www.project-syndicate.org/commentary/fund-science-research-not-specific-outcomes-by-abraham-loeb-2014-10>

Other News that May Be of Interest

Happy 90th Birthday, Dear S. Fred Singer! Alles Gute Zum Geburtstag!

By P Gosselin, No Tricks Zone, Sep 27, 2014

<http://notrickszone.com/2014/09/27/happy-90th-birthday-dear-s-fred-singer-alles-gute-zum-geburtstag/>

How To Protect A Vulnerable America From EMP Threat

By Henry Cooper and Robert Pfaltzgraff, IBD, Oct 3, 2014

<http://news.investors.com/ibd-editorials-perspective/100314-720276-countering-an-emp-attack-on-america.htm?p=full>

A Better Way to Preserve Endangered Species

By Staff Writers, NCPA, Oct 2, 2014

http://www.ncpa.org/sub/dpd/index.php?Article_ID=24915&utm_source=newsletter&utm_medium=email&utm_campaign=DPD

Fulfilling the Promise of the Endangered Species Act: The Case for an Endangered Species Reserve Program

By Brian Seasholes, Reason Foundation, Sep 2014

http://reason.org/files/endangered_species_act_reform.pdf

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BELOW THE BOTTOM LINE:

Scientists speed up analysis of human link to wild weather

By Megan Rowling, Reuters, Oct 2, 2014 [H/t Clyde Spencer]

<http://www.reuters.com/article/2014/10/02/us-foundation-climatechange-weather-idUSKCN0HR13220141002?feedType=RSS&feedName=scienceNews&rpc=76>

Extreme Stupidity: Bremen's 'Weser Kurier' Daily Now Claiming Climate Change Is Damaging Church Organs

Bremen's Weser Kurier daily is very sure: "Climate change is damaging organs"

By Sebastian Lüning and Fritz Vahrenholt (Translated, edited by P Gosselin) –

<http://notrickszone.com/2014/10/02/extreme-stupidity-bremens-weser-kurier-daily-now-claiming-climate-change-is-damaging-church-organs/>

Offshore Wind Turbines Could Tame Hurricanes

Huge Arrays of Windmills Could Protect U.S. Coastal Cities—and Produce Power

By Peter Green, WSJ, Sep 28, 2014

<http://online.wsj.com/articles/offshore-wind-turbines-could-tame-hurricanes-1411937788>

[SEPP Comment: *May be behind a paywall (\$\$).*

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ARTICLES:

1. We Don't Need Perfect Knowledge to Act on the Climate

Steven E. Koonin's essay "Climate Science Is Not Settled" (Review, Sept. 20) isn't an accurate reflection of the current state of climate science.

Letters, WSJ, Oct 2, 2014

<http://online.wsj.com/articles/we-dont-need-perfect-knowledge-to-act-on-the-climate-letters-to-the-editor-1412195749?KEYWORDS=santer>

Steven E. Koonin's essay "Climate Science Is Not Settled" (Review, Sept. 20) isn't an accurate reflection of the current state of climate science. We have spent our careers developing computer models of the climate system, comparing models with observations and studying the causes of climate change. Over our lifetimes a human-caused warming signal has emerged from the background noise of natural climate variability. This warming signal is discernible not only over the land surface, but also in the Earth's oceans, lower atmosphere, and snow and ice cover. Our best understanding—from observations, basic physics and models—is that the global climate changes observed over the last century are largely human driven. They aren't "comparable to the intrinsic, natural variability of the climate system itself."

Models will always have important uncertainties in the size, rate and regional details of the climatic shape of things to come. These uncertainties are dealt with openly and transparently in the climate-science community and aren't relegated to "hushed sidebar conversations at academic conferences." They are quantified in all documents of the recent assessment of the Intergovernmental Panel on Climate Change.

Uncertainties in projections of 21st century climate change shouldn't be an excuse for policy inaction. The longer we delay concerted action to reduce emissions of greenhouse gases, the more difficult it will be to avoid dangerous interference with the climate system. Time is a luxury we don't have.

We welcome the constructive collaboration of the physics community in improving our understanding of the human fingerprint on climate. This collaboration has a long and rich history. Many climate scientists are trained physicists, who decided to work on an important problem that impacts every person on this planet. We invite Dr. Koonin to join their ranks. Actively advancing scientific understanding of human-caused climate change and its consequences is a much tougher task than pronouncing judgment on the maturity and credibility of climate science.

Ben Santer
Lawrence Livermore National Laboratory
Livermore, Calif.

Prof. Thomas Stocker
Co-chair, Working Group I, Intergovernmental Panel on Climate Change
Physics Institute, University of Bern
Bern, Switzerland

2. Climate Science and Interpreting Very Complex Systems

It is only when climate models are more accurate that we will be able to have fact-based discussions to distinguish between human and natural changes in our climate.

Letters in response Climate Science Is Not Settled, WSJ, Sep 26, 2014

<http://online.wsj.com/articles/climate-science-and-interpreting-very-complex-systems-letters-to-the-editor-1411766297>

"Climate Science Is Not Settled" (Review, Sept. 20) discusses the current shortfalls in scientists' ability to computationally model the climate and therefore be able to accurately predict the impact of human influence on climate change. The interplay between computational models and observation (data) is critical to further development of prediction methods in climate science. More resources should be provided to increase the collection of atmospheric and oceanic data to increase the accuracy of the computer simulations. It is only when these models are more accurate that we will be able to have fact-based discussions to distinguish between human and natural changes in our climate.

James Carter

Avon, Conn.

Climate scientists acknowledge that their findings continue to evolve as better data become available while at the same time agreeing, to a very large extent, that we can't wait for a perfect understanding to emerge before taking policy actions. Our understanding of cancer biology is far from settled, too, but nobody is arguing that we should halt chemotherapy until we know with absolute certainty whether it will benefit the particular patient for whom it is prescribed.

Michael J. Dougherty

Roxborough Park, Colo.

We who are labeled extremist and ignorant for doubting the definitive nature of climate-science data suspect that much of the hoopla is intended to enrich the climate-change industry, the political class and assorted cronies, while simultaneously setting the stage for greater redistribution of wealth from developed to developing nations. Most of us doubters don't doubt that the global climate is changing, as it has since the Earth's creation, that human activity influences the magnitude and nature of the change or that the planet warmed a bit over the past century. What we doubt is the trustworthiness of politicians and experts who claim to know exactly how bad things are going to get and what we need to do about it.

Activists calling doubters idiots and demanding immediate action based on biases, vested interests and bogus data will continue to elicit intense opposition, not reasonable debate. Climate science may never be settled, but a decent climate-change case built on the solid, untainted and unspun scientific methodology suggested by Steven E. Koonin could at least get us past name calling and, with cooler heads prevailing, get us into decent shape for agreeing on practical and affordable action.

Tom Morrison

Charleston, S.C.

As a scientist, I applaud Dr. Koonin's effort to provide a balanced assessment of the science underlying climate projections. As an investor, however, I find his discussion of risks associated with action or inaction inadequate. Public policies, like investment decisions, are almost always based on probabilities rather than certainties. A penny stock with high risk of failure demands a high reward potential. Catastrophic climate change, even with a modest risk of occurrence,

requires a public policy to mitigate potential damage. There is no insurance policy in the event we guess wrong.

John Swaney
Malvern, Pa.

The scientific community may not be settled on the details or magnitude of future global warming, but there is widespread agreement that the climate will change significantly in coming decades and centuries and that the threat of abrupt, catastrophic shifts isn't inconsiderable. There is certainly ample precedent for taking actions, including costly ones, in the face of threats whose magnitude isn't fully ascertained. After all, people routinely spend large sums on insurance, but mitigating climate change may not be so costly. A recent report by the Global Commission on the Economy and Climate projects net economic savings if we factor in additional benefits from decreasing fossil-fuel use, such as greater fuel efficiency and reduced air pollution and medical costs. Ultimately, with so much under threat, including major coastal cities, vulnerable populations, critical water resources, productive farmlands, vital ecosystems, the Earth's biodiversity, and, indeed, the natural world as we have known it, our deepest human values demand vigorous action, even if the science isn't 100% settled.

Peter F. Cannavò
Clinton, N.Y.

3. Let's Find Out How Much 'Clean Power' the Feds Really Have

The EPA should ask for a court ruling before states and utilities spend billions in compliance costs.

By Brian Potts and David Zoppo, WSJ, Oct 1, 2014

<http://online.wsj.com/articles/brian-h-potts-and-david-r-zoppo-lets-find-out-how-much-clean-power-the-feds-really-have-1412204691>

The Environmental Protection Agency's proposed Clean Power Plan is unquestionably the most controversial rule the agency has ever proposed. If it goes into effect, the plan would require that total carbon emissions from the power sector in the U.S. be reduced by 30% (from 2005 levels) by 2030. Although reductions would be allowed to occur outside the fencelines of power plants, if implemented, the rule would hit coal-producing states and coal-fired power plants—which generate 40% of U.S. electricity—the hardest.

Within hours of the proposal's June 2 release, Murray Energy Corp., the largest underground coal-mining company in the country, filed a lawsuit asking the court to invoke an "extraordinary writ" to halt the rule-making process in its tracks. Murray Energy argues that the Clean Air Act "unambiguously prohibits" the EPA from issuing the rule. Twelve states followed up with their own lawsuits on the same grounds a few weeks later.

On Oct. 20, the EPA must file a brief asking the U.S. Court of Appeals for the D.C. Circuit to decide the Murray lawsuit now or to wait until the rule-making process is finalized late next year. For the benefit of the American energy industry, U.S. consumers and the climate, the EPA should ask the court to rule on the suit now.

The legal question raised in the Murray case is a good one: Does the EPA actually have the legal authority to issue its Clean Power Plan? The answer lies in how the court decides to interpret section 111(d) of the Clean Air Act, which the EPA cites as its sole authority for issuing the rule.

The problem for the EPA is that if you pick up a statute book and read section 111(d), it says the agency cannot use the section to regulate any plants that are already regulated under the agency's air toxics program. The EPA already regulates mercury emissions from existing power plants under the toxics program, so—as the EPA has acknowledged—a "literal reading" of the act would prohibit the agency from issuing its climate rule, in any form.

Fortunately for the EPA, the analysis is not that simple. When Congress last updated this section of the Clean Air Act in 1990, the House and Senate each passed its own set of amendments, which were sent to a conference committee that was supposed to reconcile the differences. But the Democratic-controlled committee screwed up: It failed to harmonize the House and Senate language in section 111(d), and both versions were signed into law. Only the House version ended up in the statute books.

The difference between the amendments is subtle, but important. The House version plainly prohibits the EPA from issuing its climate rule. The Senate version, however, says that the EPA can regulate existing plants using section 111(d) so long as the pollutant being regulated isn't toxic. Under the Clean Air Act, carbon dioxide isn't a "toxic pollutant," so the Senate version gives the EPA the authority it wants.

Enter the EPA's lawyers, who argue that the discrepancy between the House and Senate versions of section 111(d) creates a conflict that renders the statute ambiguous. And when a statutory provision is ambiguous, the courts defer to the agency's interpretation so long as it is reasonable. The EPA says its interpretation is reasonable because its reading is consistent with the intent of the 1990 amendments, which were aimed at expanding, not contracting, the agency's authority to regulate air pollution.

Murray Energy and its state allies disagree. They point out that when mistakes like this are made, courts will attempt to treat both amendments as the law of the land. In this case, that's possible to do: The EPA could use section 111(d) to regulate carbon dioxide (a nontoxic pollutant) from sources that aren't subject to the toxics program (of which there are many). But the EPA's Clean Power Plan can't comply with both amendments, which is why we think industry has the stronger argument.

So why should the EPA ask the court to decide now? For one thing, waiting to go to court until the rule is final late next year won't help lower emissions. Most states will ignore the EPA's proposal until it is final, and even after it's finalized, they won't need to start complying until 2020.

But if the EPA were to lose in court sooner rather than later, there might still be time for the agency to mitigate the loss before President Obama leaves office in 2017. For example, the EPA could decide that regulating carbon dioxide is more important than regulating mercury, and withdraw its toxics rule for power plants. The agency could also go after additional greenhouse-gas reductions from other sources, like cars, which it is allowed to do under other parts of the Clean Air Act. Or the EPA could ratchet down its regulation of other power-plant pollutants (like sulfur dioxide), which would drive up the cost of using coal to generate electricity as compared with other, less carbon-intensive options.

At a minimum, litigating the issue now—even if the EPA ends up losing—would save the agency, states and industry the substantial amount of time and resources necessary to prepare for a complex and highly contentious rule that may never actually materialize.

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4. Forget Electric Cars. Natural Gas Is Powering Vehicles in Texas

One fleet of 24 natural-gas Fords will displace more gasoline than 700 Chevy Volts and 'save' taxpayers \$5.3 million.

By Bob Lukefahr and Balu Balagopal, WSJ, Sep 26, 2014

<http://online.wsj.com/articles/bob-lukefahr-and-balu-balagopal-forget-electric-cars-natural-gas-is-powering-vehicles-in-texas-1411770393>

At Mike Scully's Apple Towing in Houston, just one of their big Ford F650 tow trucks saves more gasoline each year than 20 Nissan Leaf electric cars. When it comes to reducing carbon dioxide, nitrogen oxides and other pollutants, Mike's F650s are equally impressive, and his fuel cost per mile is about the same as that of a four-seat Jeep Wrangler. What is Apple Towing's secret? The F650 tow trucks run on natural gas, which they refuel for less than \$1.70 per gasoline-gallon equivalent, or gge.

PIRA Energy Group estimates that natural gas in transportation will approach 800 million gges this year. Do some simple math and it quickly becomes apparent that natural-gas vehicles (NGVs) will displace 10-12 times more gasoline and diesel than the 250,000 electric cars currently on the road. When complete, Apple Towing's small fleet of 24 natural-gas tow trucks will displace more gasoline than around 700 Chevy Volts. And here is a nice side benefit: Those Volts would cost federal taxpayers a whopping \$5.3 million in subsidies while Mr. Scully's F650 Fords cost them nothing.

For more than a decade, policy makers and the automotive press have been enamored of electric vehicles, lavishing them with attention and incentives. All this even though when it comes to reducing oil dependence, pollution and fuel cost, the transition of America's truck fleet to natural gas is the hands-down winner.

Mention NGVs to a Washington policy wonk, however, and he will immediately start chattering about chickens and eggs. Received wisdom tells us that natural-gas vehicles won't sell until a huge national refueling infrastructure is built (and refueling infrastructure cannot get built without vehicles). Apple Towing's Mr. Scully, not being a poultry farmer and thus unaware of this seemingly insoluble dilemma, asked our company, Nat G Solutions, to upgrade his F650s and at the same time install a natural-gas fueling compressor in his parking lot and hook it up to his city gas line. The great infrastructure crisis disappeared.

The other solution to the infrastructure challenge lies in the new generation of multi-fuel systems found on most modern NGVs. For trucks with gasoline engines, most natural-gas upgrades allow them to run on either natural gas or gasoline. These bi-fuel vehicles are user-switchable and they automatically revert to gasoline if the compressed natural gas runs out or the system has a fault.

For diesel trucks, a new generation of retrofit systems—from companies like NGV Motori USA and Landi Renzo—allow us to upgrade the big diesel engines to run on a 60/40 blend of natural gas and diesel, which is combined in real-time inside the engine. If the compressed natural gas

runs dry, the truck switches back to 100% diesel and keeps on driving. This dual-fuel approach is now opening the door for long-haul natural-gas trucking without the need for multibillion-dollar infrastructure incentives or even the need to go out and buy new tractor-trailers.

The multi-fuel approach adopted by the NGV industry means that a driver never gets stuck if he runs out of natural gas. This, combined with the more than 1,500 commercial natural gas stations expected by the end of next year and the hundreds of private fueling solutions being installed, means the chicken-and-egg question is headed back to freshmen biology where it belongs.

Ford has been leading the way in building "gas prepped" trucks—typically a \$350 option—which enables any Ford-certified "qualified vehicle modifier" to install an approved natural-gas system without affecting the original power-train warranty. Nearly the entire F-series line, from F150s to F650s, is now available in a natural-gas-ready version as are the Transit and E-series work vans. GM has taken a more incremental approach, with fewer models available so far, but the industry has responded by creating aftermarket EPA-certified upgrades for nearly every GM truck and SUV on the market.

Most of this new technology remains aimed squarely at the work-truck market, exactly where it ought to be focused. This segment drives the most miles, drives the biggest vehicles, and burns the most fuel. Perhaps it is where alternative vehicle policy ought to have been focused all along. Consumer-oriented models available today (the Chevy Equinox, half-ton pickups, SUVs, and a few small sedans) will become more numerous over time. For now, however, the most sensible policy approach is to encourage companies like Apple Towing to move their big-truck fleets to natural gas and to unlock the economic and environmental benefits of America's gas boom.

Messrs. Lukefahr and Balagopal are the co-CEOs of Nat G CNG Solutions, based in Houston.

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