

The Week That Was: 2016-03-12 (March 12, 2016)
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The Science and Environmental Policy Project

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Quote of the Week: “It is not what the man of science believes that distinguishes him, but how and why he believes it. His beliefs are tentative, not dogmatic; they are based on evidence, not on authority or intuition.” — Bertrand Russell

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Number of the Week: 16, 45, and 63 times more expensive.

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THIS WEEK:

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

Quest for Precision: One of the characteristics of scientific activities is the quest for precision to describe the physical world. Precision in understanding the error, or uncertainty, of one’s knowledge is an example of this quest. In some of his many essays on the philosophy of modern science Bertrand Russell, a prolific writer, used the ability to articulate uncertainty of knowledge as an example of what separates a scientist from an ideologue. The scientist defines with empirically established boundaries of the certainty of his findings. For example, a finding may be within plus or minus 5% using rigorous procedures that are well established. The ideologue is certain, absolutely, without boundaries of error.

Another issue is false precision, that is presenting numerical data in a manner that implies greater precision than is possible with the instrumentation or procedures used or knowledge current. Combining high precision data with low precision data and using the error range of the high precision data is a common example. To others, this practice gives the illusion of greater understanding and overconfidence in the accuracy of the results. Scientists and engineers have various techniques to correct for false precision.

Writing in *American Thinker*, physicist Tom Sheahan describes the enormous steps taken over the past 90 years to develop the precise instruments needed to discover and measure gravitational waves, a quest that has gone-on for 100 years since Einstein published the General Theory of Relativity. The detection of these waves shows that space-time deforms and bends, as predicted from the theory of General Relativity. This is one more verification, a very complex and delicate one, of the theory that overthrew classical mechanics developed by Isaac Newton. Near the end of the 19th century classical mechanics was considered a certainty.

The resources, including over \$600 million, needed to measure gravitational waves were not suddenly thrown together. They came from decades of effort with many intermediate steps supporting the theory. An early step was measuring the bending of light during a solar eclipse in 1919. Other intermediate steps followed. The multi-decade process illustrates another characteristic of modern, empirical science – it is built step-by-step by empirical verification.

The discovery of gravitational waves illustrates one reason why SEPP does not accept the global climate models used by the UN Intergovernmental Panel for Climate Change (IPCC). Further, these models are relied upon by the US Global Change Research Program (USGCRP) and by the EPA’s endangerment finding, that increasing greenhouse gases, primarily Carbon Dioxide (CO₂) endanger human health. The models have not been empirically verified or validated. In general,

the models greatly overestimate the warming of the atmosphere, where the greenhouse effect takes place. There is no logical reason to assume they are able to predict future global warming caused by CO2 emissions as General Relativity was used to predict gravitational waves. There is no logical basis for using these models for establishing government policy, especially energy policy. See Article # 1.

Sea Level Rise – Seeking Greater Imprecision? As shown in the first report of the Nongovernmental International Panel on Climate Change (NIPCC), *Nature, Not Human Activity, Rules the Climate* (2008), the first four assessment reports (ARs) of the IPCC had a reduction in the maximum estimates of global sea level rise to 2100. In AR-1 (1990) it was between a minimum of 10 centimeters (cm) to a maximum of 367 cm (4 to 144 inches). In AR-2 (1995) it was 3 to 124 cm (1 to 49 inches); in AR-3 (2001) it was 11 to 77 cm (4 to 30 inches); in AR-4 (2007) it was 18 to 59 (7 to 23 inches). (The draft of AR-4 had it between 14 to 43 cm (6 to 17 inches). AR-4 was current when the EPA Endangerment Finding was announced.

Based on historical data, Fred Singer of NIPCC estimated the rise will be 18 to 20 cm (7 to 8 inches). These estimates are global. The rise and fall of local sea levels depends upon numerous local conditions such as land subsidence and plate tectonics.

It is quite jarring to read a 2009 NOAA (updated in 2015) report stating “Scientists are very confident that global mean sea level will rise at least 8 inches (0.2 meter) but no more than 6.6 feet (2.0 meters) by 2100.” The upper bound is inflated dramatically, without justification.

One cannot state that the NOAA estimate is wrong, any more than one can state that the sea level rise will be between **minus** 2 meters and **plus** 10 meters is wrong. But one can state that some US government entities are misleading the public by inflating their reports. Such reports are being used by federal government representatives to insist that local officials must account the inflated reports when making land use decisions in low lying areas, which include extensive areas of the southeastern US near coastal regions.

A separate issue is the claim that there is an acceleration in sea level rise by using two sets of data. One dataset is from historic tidal gages, and the second dataset from satellite measurements. The two sets of measurements are not fully calibrated. To claim an acceleration in sea level rise by jumping from one dataset to another without fully explaining the effects of the jump is misleading. Also a claim by NOAA that the pace of sea level rise has increased since 1990 from acceleration and glacier and ice sheet melting is also questionable. See links under Challenging the Orthodoxy – NIPCC and Changing Seas.

Unreliable and Costly: Last week, TWTW discussed an experiment in the Canary Islands to make the electricity on one of the islands independent from fossil fuels, and dependent only on renewable generation from a combination of wind power with pumped hydro as back-up. After eight months of operation, the renewable system generated only about 32% of the electricity used, while diesel generators provided the remainder. It appears that, at best, the renewable system will generate a maximum of 50% of the total electricity needed. The major shortcoming is not the wind turbines. The shortcoming is inadequate storage in the upper reservoir that is needed for water to generate electricity when wind fails for prolonged periods. Since the islands are quit arid, and depend on desalination plants, nature cannot be relied upon to fill the reservoirs when needed. The estimated costs of the entire system were not available, much less the costs of expanding existing upper reservoirs.

Using data from the US Energy Information Administration (EIA) and EurObserv'ER, Ed Hoskins of the UK, makes some rough comparisons of capital costs needed to generate one Gigawatt (GW) of electricity from onshore wind, offshore wind, and solar photovoltaic (pv) on grid. The variance in estimated capacity factors is striking. The EIA estimate of onshore wind is 36%, offshore wind 38%, and solar pv on grid is 25%. The EurObserv'ER measured capacity (2014) is 21.8% for combined onshore and offshore wind, and 12.1% for solar pv. The Renewable Energy Foundations measured capacity factor for the UK (2002-2015) is 22.4% for onshore, 24.9% for offshore and 9.8% for solar pv.

The differences in the capacity factors for solar pv are not that surprising. In general, Europe is at more northern latitudes than the US. Further, northern Europe has cloudy weather. Certainly, solar pv there makes far less sense than installing solar pv in southwestern US. Yet, Germany has spent far more on solar pv than either Italy or Spain. All too often, capacity measurements are ignored by promoters of wind or solar, both in and out of government.

For comparison among alternative generating types, the EIA data gives an estimated levelized cost of electricity for each type of electricity generation per megawatt hour with 2013 cost of fuel. For example, the natural gas-fired conventional combined-cycle had a capacity factor of 87%, a levelized capital cost of 14.4 dollars, a fixed operation and maintenance of 1.7 dollars, variable operation and maintenance (including fuel costs) of 57.8 dollars, and transmission investment of 1.2 dollars for a system total of 75.2 dollars. As illustrated in 2013, fuel costs were the greatest component.

Using parity of one euro per one dollar and estimates of 2016 fuel prices along with actual EurObserv'ER capacity, Hoskins makes very rough estimates of the cost of renewables per gigawatt of generation. The approach needs to be refined, but it gives some idea of the enormous expense of solar and wind generated electricity as compared with natural gas. Further, the approach does not account for the inherent unreliability of solar and wind and the fact that they cannot be called upon to produce when needed.

Hoskins concludes: *“If the objectives of using Renewables were not confused with ‘saving the planet’ from the output of Man-made CO2, their actual cost in-effectiveness and inherent unreliability would have always ruled them out of any consideration as means of electricity generation for any developed economy.”* See Number of the Week and link under Questioning European Green.

Additions and Corrections: The February 27 TWTW contained the statement: According to historian Bernie Lewin, the hot spot was invented, without empirical support, at the 1995 UN Intergovernmental Panel on Climate Change (IPCC) scientific conference in Madrid by Benjamin Santer and promoted by IPCC Chairman John Houghton. This became a turning point for IPCC. <https://enthusiasmcepticismscience.wordpress.com/2015/11/21/remembering-madrid-95-a-meeting-that-changed-the-world-2/#more-1838>

It should have stated: According to historian Bernie Lewin, **terming** the hot spot **“the distinct human fingerprint”** was invented, without empirical support, at the 1995 UN Intergovernmental Panel on Climate Change (IPCC) scientific conference in Madrid by Benjamin Santer and promoted by IPCC Chairman John Houghton. This became a turning point for IPCC **because it**

permitted the claim that *the balance of evidence points towards a discernible human influence on global climate.*”

<https://enthusiasmcepticismscience.wordpress.com/2015/11/21/remembering-madrid-95-a-meeting-that-changed-the-world-2/#more-1838>

Number of the Week: 16, 45, and 63 times more expensive. Although his analysis could use refinement, Ed Hoskins demonstrates that with today’s natural gas prices and actual capacities measured in Europe, onshore wind, offshore wind, and solar pv are roughly 16, 45, and 63 times more expensive than combined cycle natural gas, respectively. See link under Questioning European Green.

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ARTICLES: The Articles section is now at the bottom of TWTW.

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NEWS YOU CAN USE:

Climategate Continued

Marvel et al.: GISS did omit land use forcing

By Nic Lewis, Climate Audit, Mar 11, 2016

<http://climateaudit.org/2016/03/11/marvel-et-al-giss-did-omit-land-use-forcing/>

“I reported in a previous post ...a number of serious problems that I had identified in Marvel et al. (2015): *Implications for climate sensitivity from the response to individual forcings*. ‘This Nature Climate Change paper concluded, based purely on simulations by the GISS-E2-R climate model, that estimates of the transient climate response (TCR) and equilibrium climate sensitivity (ECS) based on observations over the historical period (~1850 to recent times) were biased low.’”

Suppressing Scientific Inquiry

Blog Comments Suspended

By Roy Spencer, His Blog, Mar 11, 2016

<http://www.drroyspencer.com/2016/03/blog-comments-suspended/>

[SEPP Comment: Spencer give one reason why SEPP decided against a blog some years ago.]

Suppressing Scientific Inquiry – The Witch Hunt

AG Lynch [US Attorney General] testifies DoJ [Department of Justice] ‘discussed’ prosecuting ‘climate deniers’

By Thomas Lifson, American Thinker, Mar 10, 2016 [H/t Joseph McDowell]

http://www.americanthinker.com/blog/2016/03/ag_lynch_testifies_doj_discussed_prosecuting_climate_deniers_.html

Deposition sheds troubling new light on the #RICO20/DOJ “potential investigation of climate deniers”

By Guest essay by Chris Horner, WUWT, Mar 10, 2016

<http://wattsupwiththat.com/2016/03/10/deposition-sheds-troubling-new-light-on-the-rico20doj-potential-investigation-of-climate-deniers/>

Suppressing Scientific Inquiry – The Witch Hunt – Push-Back

Oil industry pushes back against Exxon climate accusations

By Timothy Cama, The Hill, Mar 10, 2016

<http://thehill.com/policy/energy-environment/272509-oil-industry-pushes-back-against-exxon-climate-accusations>

Challenging the Orthodoxy -- NIPCC

Nature, Not Human Activity, Rules the Climate

By S. Fred Singer, ed., Heartland Institute, 2008

http://www.sepp.org/publications/nipcc_final.pdf

Why Scientists Disagree About Global Warming

The NIPCC Report on the Scientific Consensus

By Craig D. Idso, Robert M. Carter, and S. Fred Singer, NIPCC, Nov 23, 2015

<http://climatechangereconsidered.org/>

Download with no charge

<https://www.heartland.org/policy-documents/why-scientists-disagree-about-global-warming>

Climate Change Reconsidered II: Physical Science

Idso, Carter, and Singer, Lead Authors/Editors, 2013

<https://www.heartland.org/media-library/pdfs/CCR-II/CCR-II-Full.pdf>

Summary: <http://www.nipccreport.org/reports/ccr2a/pdf/Summary-for-Policymakers.pdf>

Climate Change Reconsidered II: Biological Impacts

Idso, Idso, Carter, and Singer, Lead Authors/Editors, 2014

<http://www.nipccreport.org/reports/ccr2b/pdf/Full-Report.pdf>

Summary: <https://www.heartland.org/media-library/pdfs/CCR-IIb/Summary-for-Policymakers.pdf>

Challenging the Orthodoxy

Scientific Elitism Is Fundamentally Destructive To Science

Guest opinion: Dr. Tim Ball, WUWT, Mar 5, 2016

<http://wattsupwiththat.com/2016/03/05/scientific-elitism-is-fundamentally-destructive-to-science/>

Defending the Orthodoxy

Claim: Greenhouse gas 'bookkeeping' turned on its head

By Anthony Watts, Mar 10, 2016

<http://wattsupwiththat.com/2016/03/10/claim-greenhouse-gas-bookkeeping-turned-on-its-head/>

Link to paper: The terrestrial biosphere as a net source of greenhouse gases to the atmosphere

By Tian, + 20 others, Nature, Mar 9, 2016

<http://www.nature.com/nature/journal/v531/n7593/full/nature16946.html>

Why is Virginia complying with a costly plan already halted by the Supreme Court?

By Terry Jarrett, Washington Examiner, Mar 7, 2016 [H/t Timothy Wise]

<http://www.washingtonexaminer.com/why-is-virginia-complying-with-a-costly-plan-already-halted-by-the-supreme->

[court/article/2584110?utm_campaign=Washington%20Examiner:%20Opinion%20Digest&utm_source=Washington%20Examiner:%20Opinion%20Digest%20-%2003/07/16&utm_medium=email](http://www.washingtonexaminer.com/why-is-virginia-complying-with-a-costly-plan-already-halted-by-the-supreme-court/article/2584110?utm_campaign=Washington%20Examiner:%20Opinion%20Digest&utm_source=Washington%20Examiner:%20Opinion%20Digest%20-%2003/07/16&utm_medium=email)

Questioning the Orthodoxy

Rapidly Ballooning Body Of Doubt ...Over 500 Papers From Past 2 Years Cast Shadow Over „Consensus“ Climate Science!

By P Gosselin, No Tricks Zone, Mar 9, 2016

<http://notrickszone.com/2016/03/09/rapidly-ballooning-body-of-doubt-over-500-papers-from-past-2-years-cast-shadow-over-consensus-climate-science/#sthash.JIhGaLDJ.dpbs>
[SEPP Comment: SEPP has not reviewed all the papers.]

Yet Another Hottest Year on Record?

By Norman Rogers, American Thinker, Mar 8, 2016

http://www.americanthinker.com/articles/2016/03/yet_another_hottest_year_on_record.html

The Anthropocene Epoch

By Martin Livermore, The Scientific Alliance, Nov 10, 2016

<http://scientific-alliance.org/node/983>

Scientifically Unsupported Climate Fears Spread to Fracking

By Alan Carlin, Carlin Economics and Science, Mar 11, 2016

<http://www.carlineconomics.com/archives/2580>

The Laws of Bureaucracy

By John Brignell, Number Watch, Mar 4, 2016

<http://www.numberwatch.co.uk/2016%20March.htm#laws>

After Paris!

Emissions Trading in Practice: A Handbook on Design and Implementation

By Staff Writers, World Bank, Mar 7, 2016 [H/t Dennis Ambler]

<https://openknowledge.worldbank.org/handle/10986/23874>

[SEPP Comment: For the US, the abstract confuses an administration's pledge with a nationally determined contribution. Does the same confusion apply to governments under dictators?]

The next president could make or break the Paris climate agreement

By Carolyn Beeler, PRI (Public Radio), Mar 3, 2016 [H/t GWPF]

<http://www.pri.org/stories/2016-03-03/next-president-could-make-or-break-paris-climate-agreement>

United States delivers first payment to global climate fund

By Valerie Volcovici, Reuters, Mar 7, 2016

<http://news.yahoo.com/united-states-delivers-first-payment-global-climate-fund-024226394.html>

You Ought to Have a Look: Faced with a Losing Hand, Obama Sweetens the Pot

By Patrick J. Michaels and Paul C. "Chip" Knappenberger, Cato, Mar 11, 2016

<http://www.cato.org/blog/you-ought-have-look-faced-losing-hand-obama-sweetens-pot>

The Administration's Plan

Breaking: The EPA Will Limit Methane From Existing Oil And Gas Facilities

By Samatha Page, Climate Progress, Mar 10, 2016

<http://thinkprogress.org/climate/2016/03/10/3758507/methane-new-rule-existing-sources/>

The Administration's Plan – Independent Analysis

EPA's Methane Rule: All Burden for No Climate Benefit

By Steve Everley, Master Resource, Mar 11, 2016

<https://www.masterresource.org/methane-emissions/epa-methane-rule-burden/>

Link to recent press release: EPA Proposes New Commonsense Measures to Cut Methane Emissions from the Oil and Gas Sector/Proposal Cuts GHG Emissions, Reduces Smog-Forming Air Pollution and Provides Certainty for Industry

By Staff Writers, EPA, Aug 18, 2015

<http://yosemite.epa.gov/opa/admpress.nsf/f0d7b5b28db5b04985257359003f533b/e5f2425e2e668a2b85257ea5005176fa!OpenDocument>

From the EPA: "The proposed standards for new and modified sources are expected to reduce 340,000 to 400,000 short tons of methane in 2025, the equivalent of reducing 7.7 to 9 million metric tons of carbon dioxide. EPA estimates the rule will yield net climate benefits of \$120 to \$150 million in 2025."

The Administration's Plan – Push-Back

EPA: 11 states have failed to write sulfur dioxide pollution plans

By Devin Henry, The Hill, Mar 11, 2016

<http://thehill.com/policy/energy-environment/272738-epa-11-states-have-failed-to-write-sulfur-dioxide-pollution-plans>

Social Benefits of Carbon

A Century of Forest Coverage Change on South Africa's Cape Peninsula

By Craig Idso, Cato, Mar 10, 2016

<http://www.cato.org/blog/century-forest-coverage-change-south-africas-cape-peninsula>

Seeking a Common Ground

The National Weather Service Selects A New Global Weather Prediction Model: Will It Make the Right Choice?

By Cliff Mass, Weather Blog, Mar 10, 2016

<http://cliffmass.blogspot.com/2016/03/the-national-weather-service-selects.html>

Thermodynamics, Kinetics, and Microphysics of Clouds

By Vitaly I. Khvorostyanov and Judith A. Curry, Textbook reviewed by Nathan Magee, Physics Today, Mar 2016 [H/t Climate Etc.]

<http://scitation.aip.org/content/aip/magazine/physicstoday/article/69/3/10.1063/PT.3.3110>

"I highly recommend Thermodynamics, Kinetics, and Microphysics of Clouds for atmospheric science professionals and advanced students. Its combination of analytical rigor, up-to-date references, and equations adapted for modeling applications makes it a valuable resource for modelers and experimentalists in cloud physics and climate research. This important work will also challenge readers with its novel approach to the field and provide a fresh perspective that they have likely not encountered."

[SEPP Comment: *Towards understanding the physics of clouds, a big unknown in climate science.*]

Review of Recent Scientific Articles by CO2 Science

CMIP5 Models Attempting to Replicate Antarctic Sea Ice Trends

Bintanja, R., Van Oldenborgh, G.J. and Katsman, C.A. 2015. The effect of increased freshwater from Antarctic ice shelves on future trends in Antarctic sea ice. *Annals of Glaciology* 56: 120-126., Mar 11, 2016

<http://www.co2science.org/articles/V19/mar/a9.php>

"...virtually all CMIP5 models disregard ocean-ice-sheet interactions and project strongly retreating Antarctic sea ice," but the opposite is occurring.

A Review of the Record 2013 Southern Hemispheric Sea-Ice Extent

Reid, P., Stammerjohn, S., Massom, R., Scambos, T. and Lieser, J. 2015. The record 2013 Southern Hemisphere sea-ice extent maximum. *Annals of Glaciology* 56: 99-106. March 9, 2016
<http://www.co2science.org/articles/V19/mar/a7.php>

The Future of Coastal Productivity

Villafañe, V.E., Valiñas, M.S., Cabrerizo, M.J. and Helbling, E.W. 2015. Physio-ecological responses of Patagonian coastal marine phytoplankton in a scenario of global change: Role of acidification, nutrients and solar UVR. *Marine Chemistry* 177: 411-420. Mar 8, 2016
<http://www.co2science.org/articles/V19/mar/a6.php>

[SEPP Comment: The authors conclude future increases in primary production, benefiting secondary production, including fisheries.]

Higher-Than-Present Relict Treelines in the Western United States

Carrara, P.E. and McGeehin, J.P. 2015. Evidence of a higher late-Holocene treeline along the Continental Divide in central Colorado. *The Holocene* 25: 1829-1837. Mar 7, 2016
<http://www.co2science.org/articles/V19/mar/a5.php>

Model Issues

Cloudy modeling problems: Today's clouds might not be the same as pre-industrial ones

By Anthony Watts, WUWT, Mar 6, 2016

<http://wattsupwiththat.com/2016/03/06/cloudy-modeling-problems-todays-clouds-might-not-be-the-same-as-pre-industrial-ones/>

Link to paper: Challenges in constraining anthropogenic aerosol effects on cloud radiative forcing using present-day spatiotemporal variability

By Ghan, et al, PNAS, Feb 26, 2016

<http://www.pnas.org/content/early/2016/02/25/1514036113>

[SEPP Comment: A major issue with climate models. We do not have comprehensive, reliable data on clouds today. Thus, one cannot measure whether they have changed or not, much less predict whether or how they will change in the future.]

We can end the climate policy wars: demand a test of the models

By Larry Kummings, Fabius Maximus,

<http://fabiusmaximus.com/2016/03/07/testing-models-to-end-climate-wars-94671/>

“My experience shows that neither side of the climate wars has much interest in a fair test; both sides want to win through politics.”

[SEPP Comment: Apparently, the author does not recognize the work of NIPCC, The Right Climate Stuff Team, Vincent Gray, Fred Singer of SEPP, and many others who have repeatedly stated the models have not been validated and that un-validated models should not be used for policy.]

Measurement Issues -- Surface

Why You Don't Adjust Data

By Steven Goddard, Real Science, Mar 11, 2016

<http://stevengoddard.wordpress.com/2016/03/11/why-you-dont-adjust-data/>

“...people normally assume the errors are random and expect them to cancel out.”

[SEPP Comment: But when it becomes clear that the data are biased, such as with NOAA-14 satellite data, the data must be adjusted.]

Measurement Issues -- Atmosphere

End of the satellite data warming pause?

By Judith Curry, Climate Etc. Mar 6, 2016

<https://judithcurry.com/2016/03/06/end-of-the-satellite-data-pause/>

[SEPP Comment: Discussed in the Mar 5 TWTW.]

Even Warmed Up Satellite Temperature Data Isn't Close To What Climate Models Predicted

By Michael, Bastasch, Daily Caller, Mar 4, 2016

<http://dailycaller.com/2016/03/04/even-warmed-up-satellite-temperature-data-isnt-even-close-to-what-climate-models-predicted/>

Changing Weather

Is the 2015/16 El Niño an El Niño Modoki?

AND Is that the Reason Why This El Niño is Not Suppressing the California Drought as Expected?

Guest Post by Bob Tisdale, WUWT, Mar 4, 2016

<http://wattsupwiththat.com/2016/03/04/is-the-201516-el-nino-an-el-nino-modoki/>

[SEPP Comment: The California rains hit hard after this article.]

March 2016 Update of Global Temperature Responses to 1997/98 and 2015/16 El Niño Events

Guest Post by Bob Tisdale, WUWT, Mar 5, 2016

<http://wattsupwiththat.com/2016/03/05/march-2016-update-of-global-temperature-responses-to-199798-and-201516-el-nino-events/>

Drought Buster Hits California

By Cliff Mass, Weather Blog, Mar 7, 2016

<http://cliffmass.blogspot.com/2016/03/drought-buster-hits-california.html>

“So with massive precipitation, restoration of soil moisture in the northern 2/3rds of the state, above normal streamflow, and above normal snow water content in the mountains, what is the NOAA Drought Monitor showing over California?”

“Exceptional drought....the absolute worst...over half of the State, with the rest in extreme and severe drought. Can you imagine if California wasn't floating away with heavy rain? What would drought monitor show then? One shudders just thinking about it.”

Shipwrecks, tree rings reveal Caribbean hurricanes in buccaneer era

By Staff Writers, Phys.org, Mar 7, 2016 [H/t WUWT]

<http://phys.org/news/2016-03-shipwrecks-tree-reveal-caribbean-hurricanes.html>

Link to paper: Shipwreck rates reveal Caribbean tropical cyclone response to past radiative forcing,

By Trouet, Harley, and Marta Domínguez-Delmás, PNAS, Mar 7, 2016

<http://www.pnas.org/content/early/2016/03/02/1519566113>

[SEPP Comment: The estimated solar influence on hurricanes (Caribbean tropical cyclone) activity is interesting and questionable.]

Changing Seas

Sea Level Rise

By Donn Dears, Power For USA, Mar 8, 2016

<https://dddusmma.wordpress.com/2016/03/08/sea-level-rise/>

Climate Change: Global Sea Level

By Rebecca Lindsey, Climate.gov, Aug 30, 2009, updated Nov 4, 2015

<https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level>

Changing Cryosphere – Land / Sea Ice

Climate data on Indus and Himalayas ‘scanty’

By Athar Parvaiz, SciDev.Net, Mar 3, 2016 [H/t Climate Etc.]

http://www.scidev.net/south-asia/climate-change/news/climate-data-on-indus-and-himalayas-scanty.html?utm_source=twitter&utm_medium=social%20media&utm_content=new%20article&utm_campaign=broadcast%20content

[SEPP Comment: Yet, waiting for the IPCC to withdraw its false claims in AR-4 is unrealistic.]

Himalayan glaciers stable for now

By Justin Petrone, SciDev.Net, Jan 31, 2016

<http://www.scidev.net/south-asia/environment/news/himalayan-glaciers-stable-for-now.html>

Worrywart biologists fuel media fearmongering over winter sea ice levels

By Susan Crockford, Polar Bear Science, Mar 8, 2016

<https://polarbearscience.com/2016/03/08/worrywart-biologists-fuel-media-fearmongering-over-winter-sea-ice-levels/>

Un-Science or Non-Science?

Global warming increases rain in world’s driest areas

By Anthony Watts, WUWT, Mar 9, 2016

<http://wattsupwiththat.com/2016/03/09/global-warming-increases-rain-in-worlds-driest-areas/>

Link to paper: More extreme precipitation in the world’s dry and wet regions

By Donat, Lowry, Alexander, O’Gorman & Mahe, Nature Climate Change, Mar 7, 2016

<http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate2941.html>

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

Developing a consistent message

By Andrew Montford, Bishop Hill, Mar 9, 2016

<http://bishophill.squarespace.com/blog/2016/3/9/developing-a-consistent-message.html>

[SEPP Comment: A major accounting firm supporting the fad of the moment.]

Flawed Claim of New Study: ‘Extreme Tornado Outbreaks Have Become More Common’

By Anthony Watts, WUWT, Mar 7, 2016

<http://wattsupwiththat.com/2016/03/07/flawed-claim-of-new-study-extreme-tornado-outbreaks-have-become-more-common/>

Link to paper: Tornado outbreak variability follows Taylor’s power law of fluctuation scaling and increases dramatically with severity

By Tippett and Cohen, Nature Communications, Feb 29, 2016

<http://www.nature.com/ncomms/2016/160229/ncomms10668/abs/ncomms10668.html>

[SEPP Comment: The great improvements in instrumentation and their broad use greatly increase tornado counts of every type.]

Oklahoma takes action on fracking-related earthquakes — but too late, critics say

By William Yardley, Los Angeles Times, Mar 2, 2016

<http://www.latimes.com/nation/la-na-sej-oklahoma-quakes-fracking-20160302-story.html>

[SEPP Comment: The earthquakes are not associated with deep underground hydraulic fracking, but with waste-water injection. See link under Questioning the Orthodoxy.]

Communicating Better to the Public – Make things up.

Climate numerology! Man-made CO2 caused heatwaves in 1930s, '40s, '80s and '90s

By Jo Nova, Her Blog, Mar 11, 2016

<http://joannenova.com.au/2016/03/climate-numerology-man-made-co2-caused-heatwaves-in-1930s40s-80s-and-90s/>

Human influence on climate dates back to 1930s, new research finds

By Staff Writers, Science News, Mar 8, 2016

<https://www.sciencedaily.com/releases/2016/03/160308134917.htm>

Link to paper: Emergence of heat extremes attributable to anthropogenic influences.

By King, et al. Geophysical Research Letters, Mar 7, 2016

<http://onlinelibrary.wiley.com/doi/10.1002/2015GL067448/abstract;jsessionid=EA220BC565C8A07487DFA62C3C6C5FCB.f02t01?systemMessage=Wiley+Online+Library+will+be+unavailable+for+up+to+3+hours+on+Saturday+19th+March+2016+from++11%3A00-14%3A00+GMT+%2F+07%3A00-10%3A00+EDT+%2F+19%3A00-22%3A00+SGT+for+essential+maintenance.+Apologies+for+the+inconvenience.>

From the article: “The researchers examined weather events that exceeded the range of natural variability and used climate modelling to compare those events to a world without human-induced greenhouse gases.”

From the abstract: “Climate scientists have demonstrated that a substantial fraction of the probability of numerous recent extreme events may be attributed to human-induced climate change. However, it is likely that for temperature extremes occurring over previous decades a fraction of their probability was attributable to anthropogenic influences.”

[SEPP Comment: How do they determine natural variability? Was the melting of the last ice age glaciation beyond natural variability? The dominate state for the past 2.5 million years is glaciation.]

Snakes' Expanding Habitat Could Bring Their Venom to Surprising Places

Climate change's impact on species could include snakes slithering northward in the U.S. with warming temperatures, study says.

By Sheila Kumar, Inside Climate News, Mar 2, 2016

<http://insideclimatenews.org/news/01032016/venomous-snakes-climate-change-northern-us-canada>

What Fossil Fuel Subsidies, Catherine?

By Paul Homewood, Not a Lot of People Know That, Mar 11, 2016

<https://notalotofpeopleknowthat.wordpress.com/2016/03/11/what-fossil-fuel-subsidies-catherine/>

[SEPP Comment: No fossil fuel subsidies in the UK, so assume them.]

Communicating Better to the Public – Do a Poll?

What's the REAL story behind the CBC's changing coverage of that climate change poll?

By Tom Harris, The Rebel, Mar 10, 2016

http://www.therebel.media/cbc_ombudsman_and_the_climate_change_poll

Expanding the Orthodoxy

Global Scientific Organization Launches New Assessment of Biodiversity and Ecosystem Services

By Staff Writer, Exchange Magazine, Feb 29, 2016 [H/t Dennis Ambler]

<http://www.exchangemagazine.com/morningpost/2016/week9/Monday/16022904.htm>

“Sir Robert Watson, the organization's former Vice-Chair and the former Chair of the Intergovernmental Panel on Climate Change, was elected Chair of IPBES by acclamation. Dr. Watson serves as Director of Strategic Development at the Tyndall Centre for Climate Change Research, University of East Anglia.”

[SEPP Comment: More international non-science from Al Gore's science adviser.]

Lagarde: The New Green International Monetary Fund

Guest essay by Eric Worrall, WUWT, Mar 5, 2016

<http://wattsupwiththat.com/2016/03/05/lagarde-the-new-green-international-monetary-fund/>

[SEPP Comment: The new head of the IMF is counting on cash from the Paris Agreement.]

Questioning European Green

European Renewable Energy performance and costs: 2014

By Ed Hoskins, His Blog, No Date

<https://edmhdotme.wordpress.com/renewable-energy-the-question-of-capacity/>

Energy bribes betray Amber Rudd's desperation

The Department of Energy and Climate Change now realises that, to keep the lights on, we badly need new back-up

By Christopher Booker, Telegraph, UK, Mar 5, 2016

<http://www.telegraph.co.uk/comment/12184689/Energy-bribes-betray-Amber-Rudds-desperation.html>

[SEPP Comment: Booker terms subsidies as bribes.]

„Energiewende“ Shattering German Power Sector: Europe's Largest Power Company, E.on, Loses Whopping 10.2 Billion Euros! [in 2014 & 2015]

By P Gosselin, No Tricks Zone, Mar 10, 2016

<http://notrickszone.com/2016/03/10/energiewende-shatters-german-power-sector-europes-largest-power-company-e-on-loses-whopping-10-2-billion-euros/#sthash.mpvNnVvN.nCa9gwOG.dpbs>

News article: Energy Provider EON Posts Record Net Loss of €7 Billion in 2015

By Tino Andresen, Bloomberg, Mar 9, 2016

<http://www.bloomberg.com/news/articles/2016-03-09/eon-posts-record-loss-on-german-power-plant-writedowns>

[SEPP Comment: Several years ago, EON operated under the belief that with sufficient market penetration wind would become reliable.]

Reform Of National Grid

By John Constable, GWPF, Mar 6, 2016

<http://www.thegwgf.com/reform-of-national-grid/>

“Furthermore, the 2010 act notes that these interests consist not only of “security of supply” but also “the reduction of electricity-supply emissions of targeted greenhouse gases” (See 17.3.1a). In effect, this amendment has made it all but impossible for Ofgem to protect the consumer against climate policy cost or even to offer more than the most muted of criticisms.”

Wind and solar have destroyed the ability of the market to signal price

By Rubert Darwall, Telegraph, UK, Mar 7, 2016

<http://www.telegraph.co.uk/business/2016/03/06/wind-and-solar-have-destroyed-the-ability-of-the-market-to-signal/>

Criticism: Barefaced

By Andrew Montford, Bishop Hill, Mar 10, 2016

<http://bishophill.squarespace.com/blog/2016/3/10/barefaced.html>

Time to cancel this nuclear white elephant

EDF cannot afford to build Hinkley Point and we cannot afford its electricity

By Matt Ridley, Rational Optimist, Mar 9, 2016

<http://www.rationaloptimist.com/blog/hinkley-point/>

Funding Issues

Aussie Gov't Fires Climate Scientists, Outsources Their Work To Britain

By Michael Bastasch, Daily Caller, Mar 9, 2016

<http://dailycaller.com/2016/03/09/aussie-govt-fires-100-climate-scientists-outsource-their-work-to-britain/>

The Political Games Continue

Clinton Against American Energy - Blue States already paying the price

By Staff Writer, ICECAP, Mar 8, 2016

<http://icecap.us/index.php/go/political-climate/clinton-against-american-energy-blue-states-already-paying-the-price/>

[SEPP Comment: Interesting table of electricity rates by state.]

Litigation Issues

Chief Justice Roberts Rejects Bid to Suspend MATS Rule

By Aaron Larson, Power Mag, Mar 4, 2016

http://www.powermag.com/chief-justice-roberts-rejects-bid-to-suspend-mats-rule/?hq_e=el&hq_m=3222027&hq_l=13&hq_v=5e660500d0

“Michigan Attorney General Bill Schuette had requested the stay to pause any further action to implement the rule until the EPA finishes complying with a June 2015 Supreme Court ruling that the agency did not properly consider costs in its rulemaking for MATS.”

Prof's emails on climate change ruled public

By Howard Fischer, Arizona Daily Sun, Mar 4, 2016

http://azdailysun.com/news/state-and-regional/profs-emails-on-climate-change-ruled-public/article_3654cbcf-f6a1-5187-af02-e94e57be904f.html

The ruling does not guarantee that the Energy & Environment Legal Institute, which has raised questions about climate change and the causes behind it, will get all of the documents. But in raising the bar for the university to shield them from disclosure, it increases the chances at least some of these will see the light of day.

[SEPP Comment: Some of these documents may be related to the creation of Mr. Mann's generalized hockey-stick.]

Energy Issues – Non-US

From Champs To Chumps: Latin America Oil Giants Owe \$275 Billion

Staggering debt levels means higher default risks

By Benjamin Bain, Bloomberg, Mar 11, 2016

<http://www.bloomberg.com/news/articles/2016-03-11/from-champs-to-chumps-latin-america-oil-giants-owe-275-billion>

Germany's 'energy transition' still faces challenges

By Mathilde Richter, Berlin (AFP) March 10, 2016

http://www.nuclearpowerdaily.com/reports/Five_years_after_Fukushima_Germanys_energy_transition_still_faces_challenges_999.html

Energy Issues -- US

Gas-Fired Generation Will Beat Coal in 2016, EIA Says

By Thomas Overton, Power Mag, Mar 9, 2016

http://www.powermag.com/gas-fired-generation-will-beat-coal-in-2016-eia-says/?hq_e=el&hq_m=3222027&hq_l=5&hq_v=5e660500d0

Coal's Long Goodbye

By Editors, Real Clear Energy, Mar 9, 2016

http://www.realclearenergy.org/charticles/2016/03/09/coins_long_goodbye_109060.html

[SEPP Comment: In general, older, smaller plants have been retired.]

Bird poop on the lines causes nuclear power shutdown

By Euan McKirdy, CNN, Mar 4, 2016, [H/t Toshio Fujita]

<http://edition.cnn.com/2016/03/04/us/bird-poop-nuclear-power-shutdown/index.html?eref=edition>

U.S. Shale Rigs Nearing Record Low as Drillers Conserve Cash

By Dan Murtaug, Bloomberg, Mar 4, 2016

<http://www.bloomberg.com/news/articles/2016-03-04/u-s-oil-explorers-idle-drilling-rigs-by-8-to-392>

[SEPP Comment: The article does not discuss the increasing output per rig site.]

Washington's Control of Energy

Feds block Oregon natural gas export terminal

By Timothy Cama, The Hill, Mar 11, 2016

<http://thehill.com/policy/energy-environment/272743-feds-block-oregon-natural-gas-export-terminal>

Venezuela's PDVSA seeks 8 million barrels of crude in large tender

By Marianna Parraga, Reuters, Mar 10, 2016

<http://www.reuters.com/article/us-oil-venezuela-imports-idUSKCN0WC2SK>

[SEPP Comment: About 90,000 barrels per day of US or Nigerian light crude needed for blending with Venezuela's heavy crude. Will Washington try to stop this export?]

Oil and Natural Gas – the Future or the Past?

Australia's Gorgon, one of the world's LNG megaprojects, prepares to ship first cargo

And Natural Gas Weekly Update

By Staff Writers, EIA, Mar 17, 2016

<http://www.eia.gov/naturalgas/weekly/>

[SEPP Comment: Gorgon is the largest coalbed methane project in Australia. The chart on US natural gas rig counts is interesting. As the price fell, the rigs for horizontal drilling fell less than those for vertical and directional drilling.]

Nuclear Energy and Fears

Cancer Rates Spiked After Fukushima. But Don't Blame Radiation

By Sarah Fallon, Wired, Mar 9, 2016

<http://www.wired.com/2016/03/cancer-rates-spiked-fukushima-dont-blame-radiation/>

Japan court orders shutdown of two nuclear reactors over safety fears

By Harumi Ozawa, Tokyo (AFP) March 9, 2016

http://www.nuclearpowerdaily.com/reports/Japan_court_orders_shutdown_of_two_nuclear_reactors_over_safety_fears_999.html

Palo Verde Nuclear Plant Shatters Own Generation Record in 2015

By Sonal Patel, Power Mag, Mar 9, 2016

http://www.powermag.com/palo-verde-nuclear-plant-shatters-own-generation-record-in-2015/?hq_e=el&hq_m=3222027&hq_l=17&hq_v=5e660500d0

[SEPP Comment: The plant is the only large nuclear plant not located near a large body of water. Cooling is provided by evaporation of treated sewage.]

Alternative, Green ("Clean") Solar and Wind

AWED Energy & Environmental Newsletter: March 7, 2016

By John Droz, Jr. Master Resource, Mar 7, 2016

<https://www.masterresource.org/alliance-for-wise-energy-decisions/awed-energy-environmental-newsletter-march-7-2016/>

Shale, Renewables, and the New Energy Paradigm

By Riju Agrawal, Energy Collective, Mar 7, 2016

<http://www.theenergycollective.com/rijuagrawal/2323263/shale-renewables-and-new-energy-paradigm>

[SEPP Comment: Contrary to the assertion by the author, cost parity is not the Holy Grail of renewable electricity, reliability is.]

Alternative, Green ("Clean") Vehicles

Stupidity signaling

By Andrew Montford, Bishop Hill, Mar 7, 2016

<http://bishophill.squarespace.com/blog/2016/3/7/stupidity-signalling.html>

[SEPP Comment: Discussing the EP Tender, "a trailer containing an electric generator, which you tow behind your electric car on longer trips."]

Carbon Schemes

Construction Begins on Project to Demonstrate Entirely New Natural Gas Power Cycle

By Sonal Patel, Power Mag, Mar 9, 2016

http://www.powermag.com/construction-begins-on-project-to-demonstrate-entirely-new-natural-gas-power-cycle/?hq_e=el&hq_m=3222027&hq_l=3&hq_v=5e660500d0

The quest for negative carbon emissions

By Chris Mooney, Washington Post, Mar 4, 2016 [H/t William Raddy]

https://www.washingtonpost.com/business/economy/the-quest-for-negative-carbon-emissions/2016/03/04/7c9b6d10-d742-11e5-9823-02b905009f99_story.html

[SEPP Comment: Just send money and your problems will be solved, No matter how imaginary. How about this precautionary principle problem? Will the technology be so successful that it will result in killing green plants, thus depriving animals of necessary oxygen?]

Health, Energy, and Climate

New Laughable Study Blames Carbs for Lung Cancer

By Ruth Kava, ACSH, Mar 8, 2016

<http://acsh.org/news/2016/03/08/new-study-blames-carbs-for-lung-cancer/>

[SEPP Comment: Trying to find the cause of that 10% of total lung cancers, which occur in non-smokers.]

Environmental Industry

War Against Natural Gas

By Donn Dears, Power For USA, Mar 11, 2016

<https://dddusmma.wordpress.com/2016/03/11/war-against-natural-gas/>

Other Scientific News

Academics ‘regularly lie to get research grants’

Scholars in the UK and Australia contemptuous of impact statements and often exaggerate them, study suggests

By David Matthews, Times Higher Education, Mar 9, 2016 [H/t GWPF]

<https://www.timeshighereducation.com/news/academics-regularly-lie-to-get-research-grants>

Link to paper: Artifice or integrity in the marketization of research impact? Investigating the moral economy of (pathways to) impact statements within research funding proposals in the UK and Australia

By Chubb and Watermeyer, Studies in Higher Education, Feb 24, 2016

<http://www.tandfonline.com/eprint/BNcrdTIpVaCStSmK8g6V/full>

From the abstract: “In this article, we consider how academics sacrifice scholarly integrity when selling their research ideas, or more specifically, the non-academic impact of these, to research funders.”

From the article: “Their dismissive comments about the “charade” of impact statements brings to light what appears to be an open secret in academia – that academics simply do not take such projections seriously.”

Are the Constants of Physics Constant?

So far, they seem to be—but nobody really understands why

By Venkat Srinivasan, Scientific American, Mar 7, 2016

<http://blogs.scientificamerican.com/guest-blog/are-the-constants-of-physics-constant/>

American Statistical Association Statement On Statistical Significance & P-values, With My Comments

By Matt Briggs, His Blog, Mar 8, 2016

<http://wmbriggs.com/post/18135/>

“‘The p-value was never intended to be a substitute for scientific reasoning,’ said Ron Wasserstein, the ASA’s executive director. ‘Well-reasoned statistical arguments contain much more than the value of a single number and whether that number exceeds an arbitrary threshold. The ASA statement is intended to steer research into a ‘post p<0.05 era.’”

On inappropriate use of least squares regression

By Greg Goodman, Climate Etc. Mar 9, 2016

<https://judithcurry.com/2016/03/09/on-inappropriate-use-of-least-squares-regression/>

[SEPP Comment: Statistical tools need to be used with caution.]

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BELOW THE BOTTOM LINE:

Academic Gibberish Watch: We Have Another Winner

By Steven Hayward, Power Line, Mar 4, 2016

<http://www.powerlineblog.com/archives/2016/03/academic-gibberish-watch-we-have-another-winner.php>

Link to paper: Glaciers, gender, and science: A feminist glaciology framework for global environmental change research

By Mark Carey, M Jackson, Alessandro Antonello and Jaclyn Rushing, Progress in Human Geography, Jan 10, 2016

<http://phg.sagepub.com/content/early/2016/01/08/0309132515623368.long>

From the abstract: "...However, the relationships among gender, science, and glaciers – particularly related to epistemological questions about the production of glaciological knowledge – remain understudied. This paper thus proposes a feminist glaciology framework with four key components: 1) knowledge producers; (2) gendered science and knowledge; (3) systems of scientific domination; and (4) alternative representations of glaciers."

Feds Spent \$412,930 Studying ‘Relationship Between Gender and Glaciers’

Glaciers can shape ‘religious beliefs and cultural values’

By Elizabeth Harrington, Washington Free Beacon, Mar 7, 2016 [H/t Timothy Wise]

<http://freebeacon.com/issues/feds-spent-412930-relationship-gender-glaciers/>

[SEPP Comment: See link immediately above.]

Climate Crazyiness of the Week: Pumping sea level rise away onto Antarctica

By Anthony Watts, WUWT, Mar 9, 2016

<http://wattsupwiththat.com/2016/03/09/climate-craziiness-of-the-week-pumping-sea-level-rise-away-onto-antarctica/>

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ARTICLES:

Please note that articles not linked easily or summarized here are reproduced in the Articles Section of the full TWTW that can be found on the web site under the date of the TWTW.

1. The Discovery of Gravitational Waves

By Tom Sheahan, American Thinker, Mar 6, 2016

http://www.americanthinker.com/articles/2016/03/the_discovery_of_gravitational_waves.html

[SEPP Comment: Explaining the complexity and extreme delicacy of the instrumentation to detect gravitational waves. See commentary above.]

2. U.S. Targets Oil, Gas Wells to Cut Methane Emissions

U.S., Canada commit to reducing emissions by 2025

By Amy Harder, WSJ, Mar 10, 2016

<http://www.wsj.com/articles/u-s-to-target-existing-oil-gas-wells-in-effort-to-cut-methane-emissions-1457586241>

SUMMARY: According to the reporter:

The U.S. and Canada will commit to cut methane emissions from oil and gas by between 40% and 45% below 2012 levels by 2025, a commitment the Obama administration has previously made.

The U.S. Environmental Protection Agency, already working on rules cutting methane emissions from oil and gas wells not yet drilled, will begin devising regulations for existing wells and aims to release in April draft requirements for companies to provide information about equipment, emissions and control technologies from a broad range of oil and gas activities, including production, transmission, processing and storage, EPA Administrator Gina McCarthy said Thursday.

The step, being taken under the Clean Air Act, indicates the agency is preparing to write a regulation that is likely to affect hundreds of thousands of existing wells across the U.S.

The EPA is unlikely to complete a regulation before Mr. Obama leaves office at the end of 2016. Any proposal the EPA issues would likely stay on track if a Democrat wins the White House, while a Republican administration would likely withdraw it. Ms. McCarthy wouldn't say Thursday whether the EPA would propose a rule before Mr. Obama leaves office.

The EPA says the oil and gas sector's methane emissions account for almost 30% of all U.S. methane emissions, second to agricultural sources, which account for roughly 36%.

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