Did Obama Sign? What? There were reports speculating that U.S. President Obama and Chinese President Xi Jinping would officially sign the Paris Climate Treaty (Agreement) when they met on September 3, ahead of the G-20 economic meeting in Hangzhou, China. As of midnight US Eastern Daylight Time on September 3, noon Hangzhou daylight time on September 4, there were no official reports that such a formal signing had taken place. Several news reports stated that both groups announced ratification of the treaty. However, there may be a language problem. According to the Constitution of the US, the President cannot ratify a treaty, ratification requires approval of two-thirds of the US Senate. In closing hours of the Paris Conference of Parties (COP-21) ending December 12, 2015, the US delegation insisted on changing the document so it would not appear to be a treaty but a non-binding agreement. No doubt, there will be several interpretations of the theater taking place in Hangzhou. It may be another version of theater dating back to the period of the Six Dynasties. See links under After Paris!

The Balance Game: Writing in Climate Etc., global climate model commentator Nic Lewis addresses the recent claims that human influence on global warming/climate change started about 180 years ago, about 1830. The claims are based on very scanty data and use climate models that have not been validated. [Please note the correction at the end of his comments.]

Very interesting is the statement by Lewis before the correction. “Ironically, should the study’s finding of anthropogenic warming starting as early as circa the 1830s be correct, it would imply that anthropogenic aerosol forcing is weaker than estimated in IPCC AR5, and therefore that observational estimates of climate sensitivity (both transient and equilibrium) based on AR5 forcing values need to be revised downwards. That is because total anthropogenic forcing would only have become positive enough to have had any measurable impact on temperatures in the 1830s if AR5 best estimates significantly overstate the strength of anthropogenic aerosol forcing.”

The statement highlights flaws in what the UN Intergovernmental Panel on Climate Change (IPCC) and its followers, such as the EPA, offer as proof that human emissions of carbon dioxide (CO2) are causing unprecedented and dangerous global warming. The report discussed is the Fifth Assessment Report (AR5, 2013). The models simultaneously calculate possible warming influence of CO2 and the possible cooling influence of aerosols (fine liquid droplets or particles suspended in the atmosphere). Aerosols can be natural or human caused. Systematic measurement did not begin until the late 1970s when “the first satellite instrument capable of crudely monitoring aerosol optical depth from space—the Advanced Very High Resolution Radiometer (AVHRR)—retrieved optical depth from measurements in the visible and near-infrared spectrum,
beginning in the late 1970s.” As with satellite measurements of global atmospheric temperatures going back to December 1978, anything earlier is pure guesswork.

Further, the calculation procedure itself is suspect. As explained in the Summary for Policymakers, the models work only if both natural and human forcings are used. They do not work using only anthropogenic (human) forcings. However, even assuming that the numbers used are appropriate, the procedure does not establish human cause. The procedure has been called circular reasoning or tautology. The procedure, itself, can lead to an unlimited number of solutions, not a finite range of solutions.

For example, assume A plus B is equal to 10. There is no unique solution to A, without first determining a solution to B. In fact, the value of A may be positive or negative, yet fit the equation, depending on the value of B. Trying to trace influence of CO2 and aerosols on temperatures prior to solid measurements of both is a similar exercise with unlimited solutions. See links under Challenging the Orthodoxy, Defending the Orthodoxy and Measurement Issues -- Atmosphere

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Arctic Changes: The internet web site, Phys.org., picked up on a paper indicating rapid change in Arctic sea ice related to Dansgaard-Oeschger (D/O) Events over the past 90,000 years. D/O events are described as rapid warming followed by gradual cooling. The strongest evidence has been from Greenland ice cores. The D/O events have been independently linked to Heinrich events [by Gerard Bond], which are demonstrated by deposits of rock mass on the bottom of the North Atlantic. When the ice sheets scraped the earth, they picked-up the rock mass and carried it to the sea where large sections broke-off forming icebergs. When melting, the icebergs deposited the rock mass originating on the continent on the floor of the North Atlantic.

According to the new paper by Hoff, et al., the researchers obtained a marine sediment core near the Faroe Islands, in the Nordic seas. The researchers examined single celled algae, called diatoms, in the sediment core. The algae form under the sea ice, with the algae production dependent on the thickness of the ice – with thicker ice, the sun rays do not readily reach the algae for photosynthesis. Using the algae in the marine sediments, the researchers estimated the thickness of the ice over time. According to a hypothesis involving the Thermohaline Circulation, thick ice in the North Atlantic slows down the circulation. This may explain why the D/O events feature a gradual cooling. The cause of the rapid warming is not explained. However, these natural events may have contributed to what is claimed to be human-caused global warming. See links under Changing Cryosphere.

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Censorship: According to an article appearing in the student newspaper of the University of Notre Dame: "Three professors co-teaching an online course called ‘Medical Humanities in the Digital Age’ at the University of Colorado-Colorado Springs recently told their students via email that man-made climate change is not open for debate, and those who think otherwise have no place in their course." "The point of departure for this course is based on the scientific premise that human induced climate change is valid and occurring. We will not, at any time, debate the science of climate change, nor will the ‘other side’ of the climate change debate be taught or discussed in this course ...."

The email from the three professors also cites the made-up claim of “98% [97%] of climate scientists…” Since the topics involve “fracking” – hydraulic fracturing of shale for oil and natural gas – discussion of the solid evidence in supporting and opposing each position is in order.
Following the above quote of the week from Einstein, perhaps the professors involved censor questions because they do not understand the subject sufficiently well to provide answers. See link under Censorship.

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**Boring, But Important:** Donn Dears has a succinct description on the levelized costs of replacing existing power plants with new wind and solar power plants. [Levelized costs are used in attempting to compare the costs of various forms of generating electricity over a period of time.] For example, Dears uses the estimate that an existing coal-fired power plant costs 4 cents per kWh, while a new typical wind turbine costs about 10.4 cents per kWh. Such high costs for renewables are being demonstrated in Spain, Italy, Germany, Denmark, and the UK. Yet, politicians such as California Governor Pat Brown do not believe that replacing reliable, affordable electricity generation with unreliable, more expensive generation leads to job losses. Apparently, they believe that unreliable, expensive electric power is the path to prosperity. See Links under Energy Issues – US and California Dreaming.

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**Who Benefits?** The threats of litigation by various states’ attorneys general and US Senators against organizations who do not follow the declarations of these politicians on global warming seems to be imploding. The threats were built on largely unsubstantiated, and absurd claims that the views of many organizations are based on the comparatively few dollars a few organizations may have received from Exxon, etc. As discussed previously in TWTW, some of the academic instigators of potential litigation had visions of great windfalls similar to what occurred following the settlements with tobacco companies.

Writing in the *Wall Street Journal*, columnist Holman Jenkins explains the distasteful behavior of these attorneys general and their supporters. The following day, the *Journal* has an editorial on the subject. Just before these, the *Journal* published an op-ed piece on who benefited from the billions in cash settlements the federal government extracted from major banks, in part from their participation in programs that the federal government encouraged or required. And many politicians wonder why the current economic period, following the much heralded Stimulus Bill”, is called the Great Recession.

See Articles # 1, 2, & 3. [SEPP has not confirmed the recipients of the bank settlements.]

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**Additions and Corrections:** There were several errors and examples of poor wording in last week’s TWTW.

Several readers pointed out the following statement is incorrect: What is very interesting is that, other than Canada, the largest receiver of US oil exports is Curacao in oil-rich Venezuela, with 54,000 b/d.

Curacao is part of the Kingdom of Netherlands, but is located approximately 40 mi (65 km) north of the Venezuelan coast. The refinery there is operated by Petróleos de Venezuela (PDVSA), the state-owned oil company of Venezuela.

Another reader asked: “Your last item about the 500,000 bpd exports of US oil to Canada begs an explanation. Is it that Canada has under used refining capacity that is not engaged with its own prodigious production from the oil sands, or is it mostly the logistics, without a west to east pipeline, preventing an economic means of transporting western crude to the refineries on the St. Lawrence seaway?”
The oil to Canada is probably used mostly for blending with heavy Canadian crude and replacement of light oil from Libya. From EIA June 5, 2013, post:

“Eastern Canadian refineries are increasing their use of U.S.-sourced crude oil … Canadian refineries, like those in the United States, are working to increase their use of growing production of crude oil from Texas and North Dakota. Monthly exports of crude oil from the United States to Canada have historically averaged 24,000 barrels per day (bbl/d) and were principally delivered to refineries in central Canada. However, U.S. exports to Canada averaged nearly 100,000 bbl/d over the first 3 months of 2013.”
http://www.eia.gov/petroleum/weekly/archive/2013/130530/twipprint.html

Also, the discussion on water injection causing earthquakes in Oklahoma and similar areas needs amplification. In certain areas, conventional oil wells often produce a great deal of surplus water under high pressure. Often, the produced water has a high salt content as well as other Total Dissolved Solids (TDS). A common practice has been to inject the produced water into sand-stone formations. The practice is leading to minor earthquakes.

This is different than the process of using hydraulic fracturing of underground formations, principally dense shale, to produce oil and natural gas. The water used, mixed with sand and chemicals is often “slick-water.” SEPP does not know of an example where hydraulic fracturing, using “slick-water”, is causing earthquakes.

Environmental Engineer Jeffrey Miller writes: “There was some good work in the mid 90’s that I was involved with, managing produced water from natural gas wells. The documents were Gas Research Institute (GRI) sponsored projects. Effectively treatment with Electro-dialysis (ED) was tested on brine water from the Lysite, Wyoming, gas field. There is some other work that was done, characterizing produced water from gas fields published in some papers.”

These will be discussed in an upcoming TWTW.

Another addition: Reader Clyde Spencer writes to Fred Singer concerning the Antarctic Ozone Hole (AOH).

“I just read your article from the American Thinker. You may remember that we first exchanged email about 1996. I had built a computer model to try to predict surface UV [Ultra-Violet radiation] based on TOMS ozone data. To this day, I still have not seen any ground-based measurements confirming an increase in surface UV, despite all the Media warnings about cataracts and melanoma. Of course, one of the reasons is that the sun never gets above the so-called ‘ozone hole.” It always has a long slant range in September and October, passing through air that is rich in ozone outside the circumpolar vortex.

“The AOH is a problem in search of validation.

Unlike some professors at the University of Colorado, TWTW deeply appreciates meaningful questions and comments from its readers.

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Number of the Week: Up 18.6%. The web site, Climate Change Predictions.org reports on a 2005 two-day international discussion meeting held by the Royal Society entitled “Food Crops in
a Changing Climate”, which was partially organized by the University of Reading. A press release announced the grim findings that, in spite of carbon dioxide fertilization, climate change will cause yields of maize, rice, soybean and wheat to decline by as much as 20%. According to the World Bank, the average yield in cereals in 2005 was 3280 kg per hectare, in 2014 (the last year data is available) the yield was 3890 kg per hectare, an increase of 18.6%. See links under Below the Bottom Line and http://data.worldbank.org/indicator/AG.YLD.CREL.KG.

NEWS YOU CAN USE:

Commentary: Is the Sun Rising?
New study suggests the Sun is even more important than we thought on Earth's climate due to its impact on cosmic rays
By Paul Dorian, Vencore Weather, Aug 29, 2016 [H/t GWPF]
http://www.vencoreweather.com/blog/2016/8/29/1030-am-new-study-says-sun-may-be-even-more-important-than-we-though-on-earths-climate
Link to report; Cosmic Rays are Intensifying [Mar 2025 – Jan 2016]
By Tony Phillips, Spaceweather.com, Jan 31, 2016
http://news.spaceweather.com/cosmic-rays-are-intensifying/
“The agreement between the two curves is remarkable [Bishop, CA, and Oulu, Finland.]. It means that the intensification of cosmic rays is making itself felt not only over the poles, but also over lower latitudes where Earth’s magnetic field provides a greater degree of protection against deep space radiation.”
[SEPP Comment: It may be more correct to say small variations in the Sun are more important…]

Climate science debates find their place in the Sun
http://www.thenational.ae/uae/science/climate-science-debates-find-their-place-in-the-sun#full

Censorship
Professors tell students: Drop class if you dispute man-made climate change
‘We will not, at any time, debate the science of climate change
By Kate Hardiman, Univ of Notre Dame, The College Fix, Aug 31, 2016 [H/t Clyde Spencer]
http://www.thecollegefix.com/post/28825/
[From Spencer: Voltaire: “I may not agree with what you say, but I will defend with my life your right to say it.” How much we have changed!]

Conservative Think Tank Sues New York Attorney General Over Exxon Documents
The Competitive Enterprise Institute tries legal maneuver to uncover collaboration between AGs in their investigations of the oil giant.
By David Hasemyer, Inside Climate News, Aug 31, 2016

RICO Charges Against ‘Climate Deniers’: A Case of Goose and Gander
Guest Opinion: Dr. Tim Ball, WUWT, Aug 29, 2016
Journalist: #ExxonKnew is ‘completely unraveling’
[WSJ video] interview with Business World Columnist Holman Jenkins Jr. of the Wall Street Journal on how #ExxonKnew “is completely unraveling.”
By Anthony Watts, WUWT, Aug 29, 2016
https://wattsupwiththat.com/2016/08/29/journalist-exxonknew-is-completely-unraveling/

New York AG That Attacked Exxon Sued For Concealing Investigation
By Kathryn Watson, Daily Caller, Aug 31, 2016

Challenging the Orthodoxy -- NIPCC
Why Scientists Disagree About Global Warming
The NIPCC Report on the Scientific Consensus
http://climatechangereconsidered.org/
Download with no charge

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

Nature, Not Human Activity, Rules the Climate
S. Fred Singer, ed., NIPCC, 2008

Challenging the Orthodoxy
Assessing the causes of early industrial-era warming
By Nic Lewis, Climate Etc. Sep 1, 2016

Was early onset industrial-era warming anthropogenic, as Abram et al. claim?
A guest post by Nic Lewis, Climate Audit, Aug 31, 2016
https://climateaudit.org/2016/08/31/was-early-onset-industrial-era-warming-anthropogenic-as-abram-et-al-claim/
[SEPP Comment: Some more detail than post in Climate, Etc. immediately above.]

Reversing a Long Standing Wrong
By Donn Dears, Power For USA, Aug 30, 2016
https://dddusmma.wordpress.com/2016/08/30/reversing-a-long-standing-wrong/
[SEPP Comment: The Linear No-Threshold Model.]
Mid-19th Century Warming Likely To Be Natural, Not Human-Induced, Says Independent Climate Scientist
By Staff Writers, GWPF, Aug 31, 2016

People enhanced the environment, not degraded it, over past 13,000 years
By Staff Writers, Waterloo, Canada (SPX) Aug 31, 2016
http://www.terradaily.com/reports/People_enhanced_the_environment_not_degraded_it_over_past_13000_years_999.html
Link to paper: Intertidal resource use over millennia enhances forest productivity
http://www.nature.com/ncomms/2016/160830/ncomms12491/full/ncomms12491.html
[SEPP Comment: Results for a coastal section of British Columbia, Canada, should not be over-generalized.]

Defending the Orthodoxy
Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change

Why people can't grasp climate change
By Phil Plait, Dallas Morning News, Aug 30, 2016 [Clyde Spencer]
[SEPP Comment: A few problems with the “facts” as expressed by the author.]

Questioning the Orthodoxy
Refocusing the USGCRP
By David Wojick, Climate Etc. Aug 29, 2016
https://judithcurry.com/2016/08/29/refocusing-the-usgcrp/#more-22082

A Brave New Epoch?
http://www.thegwpf.com/a-brave-new-epoch/

An Inconvenient Truth: Few Signs Of Global Warming In Antarctica
By Michael Bastasch, Daily Caller News Foundation, Aug 27, 2016

After Paris!
President Obama and Chinese President Xi will officially join the Paris Climate Treaty on 3rd September
By Myron Ebell, Global Warming.org, Sep 2, 2016
Obama formally joins US into climate pact
By Timothy Cama and Devin Henry, The Hill, Sep 3, 2016

Paris deal will cost at least $1.28T — economist
By Hannah Hess, E&E reporter, Aug 31, 2016 [H/t GWPF]
http://www.eenews.net/stories/1060042242

Hollande Admits Paris Climate Treaty Has a Long Way to Go
By Staff Writers, The American Interest, Sep 1, 2016
http://www.the-american-interest.com/2016/09/01/hollande-admits-paris-climate-treaty-has-a-long-way-to-go/

Emergency Theater for Paris Agreement: China, US rush to sham ratification
By Jo Nova, Her Blog, Aug 28, 2016 [H/t Climate Depot]

A turning point looms for electricity and climate
By David Fullbrook, Energy Post, Aug 31, 2016
http://www.energypost.eu/turning-point-looms-electricity-climate/

“To prevent catastrophic global warming, the world may have to issue a moratorium on new fossil-fuel power plants, writes David Fullbrook,”

“’…if [Asia] implements the coal-based plans right now, I think we are finished,’ Jim Yong Kim, World Bank president, told Washington’s Climate Action Summit in early May.”

[SEPP Comment: If they do not, declare war?]

The Administration’s Plan – Independent Analysis
The $8 Trillion Fight Over How to Rid America of Fossil Fuel
Economists agree it can be done, but differ on how much it will cost.
By Eric Roston, Bloomberg, Aug 30, 2016

[SEPP Comment: Will all who subscribe to the plan sign contracts that they will never use facilities, including hospitals, that use fossil fuels?]

The Administration’s Plan – Push-Back
Where Climate “Let’s Pretends” Lead
By Alan Carlin, Carlin Economics and Science, Sep 1, 2016
http://www.carlineconomics.com/archives/2903

Failures and Fallout of Iran Nuclear Deal
By Larry Bell, Newsmax, Aug 29, 2016
http://www.newsmax.com/LarryBell/deal-nuclear/2016/08/29/id/745623/

Obama shows what not to do on climate policy
**Social Benefits of Carbon**

*Climate change has less impact on drought than previously expected*

Plants retain more moisture in high carbon dioxide conditions, keeping water on land

By Staff Writers, Science Daily, Aug 29, 2016

[https://www.sciencedaily.com/releases/2016/08/160829163305.htm](https://www.sciencedaily.com/releases/2016/08/160829163305.htm)

Link to paper: Plant responses to increasing CO2 reduce estimates of climate impacts on drought severity


[http://www.pnas.org/content/early/2016/08/24/1604581113](http://www.pnas.org/content/early/2016/08/24/1604581113)

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**Problems in the Orthodoxy**

*“Dominating Factor”...Leading Warmist Climatologist Concedes Natural Oceanic Cycles Directly Related To Troposphere Temperature*

By P Gosselin, No Tricks Zone, Aug 31, 2016


Link to paper: Decadal variability of tropical tropopause temperature and its relationship to the Pacific Decadal Oscillation

By Wang, Matthes, Omrani, & Latif, Nature Scientific Reports, July 12, 2016

[http://www.nature.com/articles/srep29537](http://www.nature.com/articles/srep29537)

*[SEPP Comment: Cooling of the stratosphere due to PDO, not CO2 or greenhouse effect?]*

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**Seeking a Common Ground**

*Experiment Results Show a Cool Object Can Make a Warm Object Warmer Still*

By Roy Spencer, His Blog, Aug 28, 2016


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**Simple Time-Dependent Model of the Atmospheric Greenhouse Effect**

By Roy Spencer, His Blog, Aug 30, 2016


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**Review of Recent Scientific Articles by CO2 Science**

**Tree Range Shifts**


[http://www.co2science.org/articles/V19/sep/a2.php](http://www.co2science.org/articles/V19/sep/a2.php)

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**Modeling 12 Centuries of Northern Hemispheric Hydroclimate**


[http://www.co2science.org/articles/V19/aug/a15.php](http://www.co2science.org/articles/V19/aug/a15.php)
“And so it is that Ljungqvist *et al.* conclude that ‘much work remains before we can model hydroclimate variability accurately, and highlights the importance of using paleoclimatic data to place recent and predicted hydroclimate changes in a millennium-long context.’"

**Elevated CO2 Stimulates the Growth of an Aquatic Fern**

[SEPP Comment: Using CO2 at 400, 1000 and 1600 ppm, Spring and Autumn growth is particularly impressive.]

**Model Issues**

**Climate policy: Fake it ’til you make it**
By Judith Curry, Climate Etc. Aug 30, 2016
[https://judithcurry.com/2016/08/30/climate-policy-fake-it-til-you-make-it/#more-22084](https://judithcurry.com/2016/08/30/climate-policy-fake-it-til-you-make-it/#more-22084)

“The economic models that are used to inform climate policy currently contain an unhealthy dose of wishful thinking.”

**Measurement Issues -- Surface**

**NOAA Adjustments Increase US July Warming By 1,000%**
By Steve Goddard, NYT, Via ICECAP, Aug 27, 2016

**Measurement Issues -- Atmosphere**

**UAH Global Temperature Update for August, 2016: +0.44 deg. C**
By Roy Spencer, His Blog, Sep 1, 2016

**Global Temperature Report: August 2016**
August 2016 and 2016-to-date are second warmest
By Anthony Watts, WUWT, Sep 1, 2016

**Measuring Aerosols**
By Staff Writers, NASA Earth Observatory, Accessed September 4, 2016
[http://earthobservatory.nasa.gov/Features/Aerosols/page5.php](http://earthobservatory.nasa.gov/Features/Aerosols/page5.php)

**Changing Climate**

**Sea ice strongly linked to climate change in past 90 000 years**
By Staff Writers, Phys.org, Aug 16, 2016

Link to paper: Sea ice and millennial-scale climate variability in the Nordic seas 90 kyr ago to present
By Hoff, Rasmussen, Stein, Ezat & Fahl, Nature Communications July 26, 2016

[SEPP Comment: Indicates Dansgaard/Oeschger events.]
Have precipitation extremes and annual totals been increasing in the world's dry regions over the last 60 years?
By Sebastian Sippel, et al. Physics.Geo, Sep 1, 2016 [H/t Climate Etc.]
https://arxiv.org/abs/1609.00154
[SEPP Comment: Choice of reference periods creates trends that do not apply to the complete dataset.]

Clues in ancient mud hold answers to climate change
By Staff Writers, Science Daily, Sep 1, 2016
Link to paper: A progressively wetter climate in southern East Africa over the past 1.3 million years
http://www.nature.com/nature/journal/vaop/ncurrent/full/nature19065.html
“Climate in this sector of eastern Africa (unlike northern Africa) evolved from a predominantly arid environment with high-frequency variability to generally wetter conditions with more prolonged wet and dry intervals.”
[SEPP Comment: Some commentators apply the findings to all of Africa.]

1200 years of climate change in the Bear River Basin, Utah
By Jo Nova, Her Blog, Sep 2, 2016
[SEPP Comment: None!]

The “Dantean Anomaly” Project: Tracking Rapid Climate Change in Late Medieval Europe
By Dr. Martin Bauch, Historical Climatology, Aug 27, 2016 [H/t Climate Etc.]
http://www.historicalclimatology.com/projects/-the-dantean-anomaly-project-tracking-rapid-climate-change-in-late-medieval-europe
[SEPP Comment: Would Dante’s third circle of hell be censored today?]

Changing Seas
30 Scientific Papers Reveal Inverse CO₂ – Sea Level Signal: As CO₂ Rises, Sea Level Falls
By Kenneth Richard, No Tricks Zone, Aug 29, 2016

New Papers Confirm Sea Levels Aren’t Rising Fast Enough — Coastal Land Area Growing, Not Shrinking
By Kenneth Richard, No Tricks Zone, Sep 1, 2016

Rising seas, by decade [From Space]
By Staff Writers, Sea Level Change, No Date
https://sealevel.nasa.gov/resources/83/rising-seas-by-decade
[SEPP Comment: Dispute the statement: “...and the long term rise in global sea levels that is the result of human-caused warming.” Four hundred feet (120 meters) of long term rise in global sea levels occurred before man’s use of fossil fuels.]
**Changing Cryosphere – Land / Sea Ice**

**How bacteria, rust dust, and a murdered star may explain Earth’s Ice Age**
By Staff Writers, Yahoo, Aug 28, 2016 [H/t Clyde Spencer]
Link to press release: Detection of a time-resolved supernova signal in microfossils
Interaction of Earth with supernova remnants lasting for one million years
By Staff Writers, Technical University of Munich, Aug 10, 2016
Link to paper: Time-resolved 2-million-year-old supernova activity discovered in Earth’s microfossil record
http://www.pnas.org/content/113/33/9232.abstract
[SEPP Comment: Covers the period from about 2.8 to 1.7 million years ago. Does not explain later ice ages.]

**Permafrost**
By Staff Writers, Nature Geoscience, No Date [H/t Climate Etc.]
http://www.nature.com/ngeo/focus/Permafrost/index.html?platform=hootsuite
[SEPP Comment: Series of research and comment pieces on the Arctic Permafrost.]

**An ice-free Arctic Ocean has happened before**
By Matt Ridley, Rational Optimist, Aug 29, 2016
http://www.rationaloptimist.com/blog/arctic-sea-ice/

**Matt Ridley: Ice Scares Aren’t All They’re Cracked Up To Be**
By Matt Ridley, The Times, Via GWPF, Aug 29, 2016
http://www.thegwpf.com/matt-ridley-ice-scares-arent-all-theyre-cracked-up-to-be/

**German Scientists Slam Guardian’s Hyping Of A “Fringe Scientific Position” On Arctic Sea Ice**
Arctic sea ice more stable than thought: once again likely no new record melt
By Dr. Sebastian Lüning and Prof. Fritz Vahrenholt, (German text translated by P Gosselin), No Tricks Zone, Aug 27, 2016

**Technique could assess historic changes to Antarctic sea ice and glaciers**
Staff Writers, Phys.org, Aug 30, 2016
Link to paper: Source identification and distribution reveals the potential of the geochemical Antarctic sea ice proxy IPSO25
http://www.nature.com/ncomms/2016/160830/ncomms12655/full/ncomms12655.html

**Changing Earth**
**Earth’s Surface Gaining Coastal Land Area, Despite Sea Level Rise**
Guest post by David Middleton, WUWT, Aug 30, 2016
NASA Study Solves Two Mysteries About Wobbling Earth
By Carol Rasmussen, NASA, Apr 8, 2016
http://www.nasa.gov/feature/nasa-study-solves-two-mysteries-about-wobbling-earth

Pounding waves from weather bomb storm felt across continents
By Jo Nova, Her Blog, Aug 29, 2016

Communicating Better to the Public – Exaggerate, or be Vague?
New map shows alarming growth of the human footprint
By Staff Writers, Science Daily, Aug 24, 2016 [H/t Toshio Fujita]
https://www.sciencedaily.com/releases/2016/08/160824122227.htm
Link to paper: Sixteen years of change in the global terrestrial human footprint and implications for biodiversity conservation
By Oscar Venter, et al. Nature Communications, Aug 23, 216
http://www.nature.com/ncomms/2016/160823/ncomms12558/full/ncomms12558.html
[SEPP Comment: According to the story, another 97% of something? According to the abstract from 1993 to 2009: “We note that while the human population has increased by 23% and the world economy has grown 153%, the human footprint has increased by just 9%.”]

Communicating Better to the Public – Make things up.
Studies blaming ailments on Pennsylvania fracking are flawed
By Katie Brown, Energy In Depth, UPI, Aug 30, 2016
Link to defensive article: Fracking & health: What we know from Pennsylvania's natural gas boom
By Rasmussen, Schwartz, and Casey, UPI, Aug 25, 2016
“In their study claiming a link between fracking and sinus problems, migraines and fatigue, the researchers did not even ask the patients if they had migraines or fatigue before shale development.”

Questioning European Green
Comparative cost effectiveness of weather dependent Renewable Energy in the UK
By Ed Hoskins, Edmhdotme, No Date [2015 data] [H/t Paul Homewood]
The late Professor David Mackay in his final interview with Mark Lynas in April 2016 stated that powering the UK wholly with Renewable Energy is an “Appalling Delusion”.

Britain Likely To Miss Climate Target As Motorists Shun Electric Cars
By Peter Campbell, Financial Times, Via GWPF, Sep 1, 2016
“Britain has a legally binding obligation to cut its greenhouse gas emissions by 80 per cent by 2050 compared with 1990 levels. To meet these targets, about 60 per cent of the cars and lorries on the roads must be electric by 2030.”

**Energy Issues – Non-US**

*Chart: Which Countries Are Damaged Most by Low Oil Prices?*
By Jeff Desjardins, Visual Capitalist, Aug 26, 2016 [H/t Market Watch]
http://www.visualcapitalist.com/chart-countries-damaged-most-low-oil-prices/

[SEPP Comment: Saudi Arabia, Russia, Iraq and UAE lead the way in losses from export earnings.]

**EIA: OPEC oil revenue down nearly 50 percent**
http://www.oilgasdaily.com/reports/EIA_OPEC_oil_revenue_down_nearly_50_percent_999.html

**France To Cut Nuclear Power By A Third**
By Paul Homewood, Not a Lot of People Know That, Aug 30, 2016
https://notalotofpeopleknowthat.wordpress.com/2016/08/30/france-to-cut-nuclear-power-by-a-third/

“Which rather begs the question, where the hell will we [UK] get our electricity from, when we are reliant upon interconnectors to France and the wind is not blowing?”

**UK government looks to 'the internet of energy' to help keep the lights on**

[SEPP Comment: All going back to wood & coal stoves and fireplaces for heat?]

**Energy Issues -- US**

**Boring, But Important LCOEs**
By Donn Dears, Power For USA, Sep 2, 2016
https://dddusmma.wordpress.com/2016/09/02/boring-but-important-lcoes/

Link to report: The Levelized Costs of Electricity from Existing Generation Resources, 2016
By Stacy and Taylor, IER, July 2016

**Five things to know about the Dakota Access Pipeline fight**
By Devin Henry, The Hill, Aug 27, 2016

**NREL Study: Eastern Interconnect Would Strain If 30% Of Annual Electricity Was Solar And Wind**
By Ron Adams, Forbes, Aug 31, 2016 [H/t Clyde Spencer]
http://www.forbes.com/sites/rodadams/2016/08/31/nrel-study-eastern-interconnect-would-strain-if-30-of-annual-electricity-was-solar-and-wind/#21e7ac995e52

Link to study: Eastern Renewable Generation Integration Study
By Staff Writers, NREL, No Date
http://www.nrel.gov/grid/ergis.html
Using high-performance computing capabilities and innovative visualization tools, NREL shows the power grid of the Eastern United States—one of the largest power systems in the world—can accommodate upwards of 30% wind and solar/photovoltaic (PV) power.

*SEPP Comment: If the speculative models do not work, does the grid work?*

**Oil and Natural Gas – the Future or the Past?**  
**Proving Them Wrong: How The U.S. Oil And Gas Industry Survived**  
By Stuart Burns, Oil Price.com, Aug 31, 2016  

**When Global Oil Prices Tanked, Shale Oil Production Didn't. Here's Why.**  
By Thomas Covert, Forbes, Aug 31, 2016  

**Oil Spills, Gas Leaks & Consequences**  
**Fracking Really Isn't So Bad**  
By James Conca, Forbes, Aug 28, 2016  
Link to study: Point source attribution of ambient contamination events near unconventional oil and gas development  
…[studies using instruments] “suggest that contamination events from unconventional oil and gas development can be monitored, controlled, and reduced.”

**Nuclear Energy and Fears**  
**Nuclear power plants prepare for old age**  
Materials research is at the heart of efforts to keep the world’s reactors running well past 2050.  
http://www.nature.com/news/nuclear-power-plants-prepare-for-old-age-1.20499

**Fusion facilities at PPPL and Culham, England, could provide path to limitless energy**  
By Staff Writers, Princeton NJ (SPX), Aug 31, 2016  
http://www.energy-daily.com/reports/Fusion_facilities_at_PPPL_and_Culham_England_could_provide_path_to_limited_energy_999.html

**S. Korea succeeds in mass production of nuclear fusion fuel**  
By Staff Writers, The Korea Times, Aug 25, 2016 [H/t Toshio Fujita]  

**Alternative, Green (“Clean”) Solar and Wind**  
**Offshore Wind’s $0.24/kWh: Deepwater Project Nears Launch (states, ratepayers take note)**  
https://www.masterresource.org/offshore/offshore-wind-rhode-island/

**Alternative, Green (“Clean”) Energy – Other**
World first for Shetlands in tidal power breakthrough
Nova Innovation deploys first fully operational array of tidal power turbines in the Bluemull Sound
By Severin Carrell, Guardian, UK, Aug 29, 2016

Why Are Early Adopters of Lithium-Ion Battery Manufacturing Getting Out of the Game?
Sony and (maybe) Nissan are dropping their battery production as the industry matures.
By Julian Spector, Green Tech Media, Aug 31, 2016
[SEPP Comment: It may be that they no longer foresee high profit margins.]

Alternative, Green (“Clean”) Vehicles
EVs: An Ancient, Not Infant, Industry
https://www.masterresource.org/electric-vehicles/evs-historically-considered/

California Dreaming
California Keeps its Dying Carbon Market on Life Support
By Staff Writers, The American Interest, Aug 26, 2016
http://www.the-american-interest.com/2016/08/26/california-keeps-its-dying-carbon-market-on-life-support/

[SEPP Comment: Replacing reliable, affordable electricity generation with unreliable more expensive generation is the path to prosperity?]

Environmental Industry
How to Milk a Bull! Bad bee science and activist capture at the FT
By Staff Writers, The Risk Monger, Aug 26, 2016 [H/t GWPF]

Other Scientific News
Earth Just Narrowly Missed Getting Hit by an Asteroid
The asteroid missed the Earth by less than a quarter of the distance to the Moon.
By Avery Thompson, Popular Mechanics, Aug 30, 2016 [H/t Clyde Spencer]
http://www.popularmechanics.com/space/a22619/earth-narrowly-missed-by-asteroid/

Commonly Cited Stat — 10 Bacteria For Every 1 Human Cell — Is Wrong
By Alex Berezow, ACSH, Aug 26, 2016

Link to paper: Revised Estimates for the Number of Human and Bacteria Cells in the Body
By Sender, Fuchs & Milo, PLOS Biology, Aug 19, 2016
http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1002533

Other News that May Be of Interest
Chevron Paves The Way For Corporations To Fight 'Shakedown Lawsuits'
Editorial, IBD, Sep 2, 2016

BELOW THE BOTTOM LINE:
Worse than we thought – global food production!
By Staff Writers, Climate Change Predictions.org, Aug 31, 2016
http://climatechangepredictions.org/uncategorized/6723

“'The impact of climate change on global crop production is likely to be worse than previously predicted, scientists said at a Royal Society discussion meeting partly organised by Reading scientists in London.

'A two-day international meeting entitled ‘Food Crops in a Changing Climate’ brought together world-class scientists in the fields of meteorology, climate science and agriculture, to discuss the impacts of a changing climate on the productivity of staple food crops, grown throughout the world.

‘'Both these results show that we need to seriously re-examine our predictions for future global food production as they are likely to be far lower than previously estimated.' said Professor Steve Long from Illinois University.”
From: University of Reading, Impact of climate change on crops worse than previously thought, 27 Apr 2005

ARTICLES:
1. How the Exxon Case Unraveled
It becomes clear that investigators simply don’t know what a climate model is.
By Holman Jenkins, WSJ, Aug 30, 2016
http://www.wsj.com/articles/how-the-exxon-case-unraveled-1472598472

“New York Attorney General Eric Schneiderman’s investigation of Exxon Mobil for climate sins has collapsed due to its own willful dishonesty. The posse of state AGs he pretended to assemble never really materialized. Now his few allies are melting away: Massachusetts has suspended its investigation. California apparently never opened one.

“The U.S. Virgin Islands has withdrawn its sweeping, widely criticized subpoena of research groups and think tanks. In an email exposed by a private lawsuit, one staffer of the Iowa AG’s office tells another that Mr. Schneiderman himself was “the wild card.”

“His initial claim, flounced to the world by outside campaigners under the hashtag “exxonknew,” fell apart under scrutiny. This was the idea that, through its own research in the 1970s, Exxon knew one thing about climate science but told the public something else.
“In an Aug. 19 interview with the New York Times, Mr. Schneiderman now admits this approach has come a cropper. He reveals that he’s no longer focusing on what Exxon knew/said but instead on how it goes about valuing its current oil reserves. In essence, Mr. Schneiderman here is hiding his retreat behind a recent passing fad in the blogosphere for discussing the likelihood that such reserves will become “stranded assets” under some imaginary future climate regime.

“His crusade was always paradoxical. The oil industry reliably ranks last in Gallup’s annual survey of public credibility. The $16 million that Exxon spent between 1998 and 2005 to support organizations that criticized speculative climate models is a minuscule fraction of the propaganda budgets of the U.S. Energy Department, NASA, NOAA, EPA, not to mention the United Nations’ climate panel, etc. etc.

“The episode ends happily, though, if Mr. Schneiderman’s hoped-for political career now goes into eclipse. But we haven’t finished unless we also mention the press’s role.

“The ‘Exxon knew’ claim, recall, began with investigative reports by InsideClimate News and the Los Angeles Times, both suffering from the characteristic flaw of American journalism—diligently ascertaining and confirming the facts, then shoving them into an off-the-shelf narrative they don’t support.

“We have since learned that both the L.A. Times (via a collaboration with the Columbia School of Journalism) and InsideClimate News efforts were partly underwritten by a Rockefeller family charity while Rockefeller and other nonprofit groups were simultaneously stoking Mr. Schneiderman’s investigation.

“When caught with your hand in the cookie jar in this way, there’s only one thing to do, and last week the Columbia School of Journalism did it, awarding a prize to InsideClimate News.

“For this columnist, however, the deeper mystery was cleared up last year when I appeared on the NPR show “To the Point” to discuss the subject “Did Exxon Cover Up Climate Change?” (Google those phrases) with ICN’s “energy and climate” reporter Neela Banerjee.

“Ms. Banerjee has been collecting plaudits all year for her work. The work itself involved revisiting Exxon’s climate modeling efforts of the 1970s. Yet, at 16:28, see how thoroughly she bollixes up what a climate model is. She apparently believes the uncertainty in such models stems from uncertainty about how much CO2 in the future will be released.

“‘The uncertainties that people talk about . . . are predicated on the policy choices we make,’ namely the “inputs” of future CO2.

“No, they aren’t. The whole purpose of a climate model is to estimate warming from a given input of CO2. In its most recent report, issued in 2013, the U.N.’s Intergovernmental Panel on Climate Change assumes a doubling of atmospheric CO2 and predicts warming of 1.5 to 4.5 degrees Celsius—i.e., an uncertainty of output, not input.

“What’s more, this represents an increase in uncertainty over its 2007 report (when the range was 2.0 to 4.5 degrees). In fact, the IPCC’s new estimate is now identical to Exxon’s 1977 estimate and the 1979 estimate of the U.S. National Research Council.

“In other words, on the crucial question, the help we’re getting from climate models has not improved in 40 years and has been going backward of late.
“For bonus insight, ask yourself why we still rely on computer simulations at all, rather than empirical study of climate—even though we’ve been burning fossil fuels for 200 years and recording temperatures even longer.

“OK, many climate reporters have accepted a role as enforcers of orthodoxy, not questioners of it. But this colossal error not only falsifies the work of the IPCC over the past 28 years, it falsifies the entire climate modeling enterprise of the past half-century.

“But it also explains the non sequitur at the heart of the InsideClimate News and L.A. Times exposés as well as Mr. Schneiderman’s unraveling investigation. There simply never was any self-evident contradiction between Exxon’s private and public statements. In emphasizing the uncertainty inherent in climate models, Exxon was telling a truth whose only remarkable feature is that it continues to elude so many climate reporters.”

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2. Schneiderman’s Climate Secrets
What is New York’s Attorney General trying to hide?
Editorial, WSJ, Aug 31, 2016
http://www.wsj.com/articles/schneidermans-climate-secrets-1472616000

The editorial states:
“When Eric Schneiderman and 16 other Democratic state attorneys general announced in March that they were targeting Exxon Mobil for its alleged heresy on climate change, they called themselves “AGs United for Clean Power.” A better name would have been AGs United for More Power. To great media fanfare, they unleashed a series of broad subpoenas designed to intimidate dissenters from the Obama orthodoxy on climate change.

“One such dissenter was the Competitive Enterprise Institute, a free-market think tank that was hit in April with a subpoena from Virgin Islands AG Claude Walker. Mr. Walker sought a decade’s worth of emails and donor names regarding the think tank’s climate and energy work. But CEI fought back in the press and in court, and Mr. Walker withdrew his subpoena after he was countersued.

“That’s not the end of the story. CEI still doesn’t know how this campaign came to be—and where it might still be headed. So on Wednesday the group headed back in court, filing a suit under New York’s freedom of information law to ask the ringleader of the AG coalition—Empire State AG Schneiderman—to produce “any common interest agreements” he entered into as part of this effort.

“Specifically, CEI wants to know about any deal the AGs made with groups such as the Eco-Accountability Project, the Center for International Environmental Law and others. In other words, CEI wants to know which “private activists” Mr. Schneiderman was working with and what the terms of the deal were when he launched this crusade. This relates directly to the political and economic motives behind this government power play.

“So far Mr. Schneiderman’s office has refused to cooperate with the CEI request. CEI’s lawyer says this is nothing more than an attempt to hide what the AGs were up to behind “a shroud of secrecy.”
“Let’s hope a judge agrees. Mr. Schneiderman, his fellow AGs and their activist pals have been trying to use the law to punish people, businesses and institutions over a difference of opinion. This is the kind of abuse that public transparency laws were designed to expose.”

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3. Look Who’s Getting That Bank Settlement Cash

Tens of millions of dollars disguised as ‘consumer relief’ are going to liberal political groups.
By Andy Koenig, WSJ, Aug 28, 2016

“Imagine if the president of the United States forced America’s biggest banks to funnel hundreds of millions—and potentially billions—of dollars to the corporations and lobbyists who supported his agenda, all while calling it “Main Street Relief.” The public outcry would rightly be deafening. Yet the Obama administration has used a similar strategy to enrich its political allies, advance leftist pet projects, and protect its legacy—and hardly anyone has noticed.

“The administration’s multiyear campaign against the banking industry has quietly steered money to organizations and politicians who are working to ensure liberal policy and political victories at every level of government. The conduit for this funding is the Residential Mortgage-Backed Securities Working Group, a coalition of federal and state regulators and prosecutors created in 2012 to “identify, investigate, and prosecute instances of wrongdoing” in the residential mortgage-backed securities market. In conjunction with the Justice Department, the RMBS Working Group has reached multibillion-dollar settlements with essentially every major bank in America.

“The most recent came in April when the Justice Department announced a $5.1 billion settlement with Goldman Sachs. In February, Morgan Stanley agreed to a $3.2 billion settlement. Previous targets were Citigroup ($7 billion), J.P. Morgan Chase ($13 billion), and Bank of America, which in 2014 reached the largest civil settlement in American history at $16.65 billion. Smaller deals with other banks have also been announced.

“Combined, the banks must divert well over $11 billion into “consumer relief,” which is supposed to benefit homeowners harmed during the Great Recession. Yet it is unknown how much, if any, of the banks’ settlement money will find its way to individual homeowners. Instead, a substantial portion is allocated to private, nonprofit organizations drawn from a federally approved list. Some groups on the list—Catholic Charities, for instance—are relatively nonpolitical. Others—La Raza, the National Urban League, the National Community Reinvestment Coalition and more—are anything but.

“This is a handout to the administration’s allies. Many of these groups engage in voter registration, community organizing and lobbying on liberal policy priorities at every level of government. They also provide grants to other liberal groups not eligible for payouts under the settlements. Thanks to the Obama administration, and the fungibility of money, the settlements’ beneficiaries can now devote hundreds of thousands or even millions of dollars to these activities.

“The settlements also give banks a financial incentive to fund these groups. Most of the deals give double credit or more against the settlement amount for every dollar in “donations.” Bank of America’s donation list—the only bank to disclose exactly where it sends its money—shows how this benefits liberal groups. The bank has so far given at least $1.15 million to the National Urban League, which counts as if it were $2.6 million against the bank’s settlement. Similarly, $1.5 million to La Raza takes $3.5 million off the total amount of “consumer relief” owed by the bank. There are scores of other examples.
“Our analysis of over 80 beneficiaries from Bank of America’s settlement shows that they received, on average, more than 10% of their 2015 budgets from the bank. When other bank checks are added, the amount funneled to these organizations is guaranteed to rise. And the banks have multiple years to pay their total penalties, meaning some liberal interest groups can count on additional funding for years—and election cycles—to come.

“As part of their “consumer relief” penalties, Bank of America and J.P. Morgan Chase must also pay a minimum $75 million to Community Development Financial Institutions—taxpayer-funded groups propped up by the Obama administration as an alternative to payday lenders. “Housing Counseling Agencies” also get at least $30 million. This essentially circumvents Congress’s recent decision to cut $43 million in federal funds routed to these groups through the Department of Housing and Urban Development.

“The politicians who negotiate the settlements as part of the RMBS Working Group have also directed money to their supporters and states. Illinois’s Democratic attorney general Lisa Madigan announced she had secured $22.5 million from February’s Morgan Stanley deal for her state’s debt-ridden pension funds—a blatant payout to public unions. The deals with J.P. Morgan Chase, Bank of America and Citigroup yielded a further $344 million for both “consumer relief” and direct payments to pension funds.

“New York hit the jackpot too. Attorney General Eric Schneiderman, also a Democrat and chairman of the RMBS Working Group, arranged for Morgan Stanley to fork over $400 million to New York nonprofits and $150 million to the state.

“Despite the best efforts of a few principled legislators late last year, Congress missed an opportunity to amend the Justice Department’s funding bill to stop further handouts. Lawmakers now have another opportunity as Congress enters budget negotiation for fiscal year 2017. Rep. Bob Goodlatte (R., Va.) introduced a bill in April that would prevent government officials from enforcing settlements that funnel money to third parties, and it needs to gain wider traction with his colleagues. The political shakedowns disguised as public service must end.”

Mr. Koenig is senior policy adviser at Freedom Partners Chamber of Commerce.

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