

The Week That Was: 2019-01-12 (January 12, 2019)

Brought to You by SEPP (www.SEPP.org)

The Science and Environmental Policy Project

Quote of the Week: *"There is no such thing as consensus science. If it's consensus, it isn't science. If it's science, it isn't consensus. Period."* — Michael Crichton. [H/t William Readdy]

Number of the Week: ZERO

THIS WEEK:

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

Two Types of Energy Flow: Last week's TWTW produced several responses with questions that need to be explained further. Forty years of comprehensive atmospheric temperature trends, the last twenty years with no statistically significant warming, and 60 years of balloon observations show that the global atmosphere is not the warming envisioned in the 1970s and early 1980s, for example, in the influential Charney Report of 1979. Yet, the assumptions in these speculated findings are embodied in the "theory" of climate science and the reports of the UN Intergovernmental Panel for Climate Change (IPCC) and the US Global Change Research Program (USGCRP). These government entities have failed to test their findings against atmospheric data, the data set that most clearly reflects the impact of greenhouse gases.

It is important to understand that the findings in Charney speculated changes in two types of energy flow from the surface through the atmosphere into space: 1) carbon dioxide (CO₂) absorbing some of the outbound long-wave radiation from the surface to space and 2) increased water vapor absorbing even more outbound long-wave radiation. The summary and conclusions state:

"We have examined the principal attempts to simulate the effects of increased atmospheric CO₂ on climate. In doing so, we have limited our considerations to the direct climatic effects of steadily rising atmospheric concentrations of CO₂ and have assumed a rate of CO₂ increase that would lead to a doubling of airborne concentrations by some time in the first half of the twenty-first century. As indicated in Chapter 2 of this report, such a rate is consistent with observations of CO₂ increases in the recent past and with projections of its future sources and sinks. However, we have not examined anew the many uncertainties in these projections, such as their implicit assumptions with regard to the workings of the world economy and the role of the biosphere in the carbon cycle. These impose an uncertainty beyond that arising from our necessarily imperfect knowledge of the manifold and complex climatic system of the earth.

"When it is assumed that the CO₂ content of the atmosphere is doubled and statistical thermal equilibrium is achieved, the more realistic of the modeling efforts predict a global surface warming of between 2°C and 3°C, with greater increases at high latitudes. This range reflects both uncertainties in physical understanding and inaccuracies arising from the need to reduce the mathematical problem to one that can be handled by even the fastest available electronic computers. It is significant, however, that none of the model calculations predicts negligible warming.

“The primary effect of an increase of CO₂ is to cause more absorption of thermal radiation from the earth's surface and thus to increase the air temperature in the troposphere. A strong positive feedback mechanism is the accompanying increase of moisture, which is an even more powerful absorber of terrestrial radiation. We have examined with care all known negative feedback mechanisms, such as increase in low or middle cloud amount, and have concluded that the oversimplifications and inaccuracies in the models are not likely to have vitiated the principal conclusion that there will be appreciable warming. The known negative feedback mechanisms can reduce the warming, but they do not appear to be so strong as the positive moisture feedback. We estimate the most probable global warming for a doubling of CO₂ to be near 3°C with a probable error of ± 1.5°C. Our estimate is based primarily on our review of a series of calculations with three-dimensional models of the global atmospheric circulation, which is summarized in Chapter 4. We have also re-viewed simpler models that appear to contain the main physical factors. These give qualitatively similar results.” [Boldface added.]

The section continues with exploring the possibility that the oceans, particularly the deep oceans below 70 meters (230 feet), will absorb some of the surface warming, thus slowing the observed warming of the surface.

From the quote, we realize there are two types of interference with energy flow from the surface through the atmosphere being considered: 1) increased CO₂ interfering with outgoing radiation and 2) increased water vapor, a more dominant greenhouse gas, interfering with outgoing radiation. We now have 40 years of knowledge of temperature trends in the bulk atmosphere, excluding small extreme polar regions, that shows that warming, speculated before atmospheric temperature trends were available, is not occurring as envisioned. If the atmosphere is not warming significantly, it cannot be causing significant surface warming. Thus, any greater warming trend of the surface is not from greenhouse gases. Claiming greenhouse gas warming is hiding in the oceans is a red herring – a ploy to deceive or distract others. See links under Challenging the Orthodoxy and Defending the Orthodoxy.

Quantifying Error? Generally, researchers try to quantify errors in measurement – *i.e.*, to calculate uncertainty. A number of researchers have attempted to quantify the types of energy flow discussed above. Perhaps the most familiar model was the 1997 effort by Kiehl and Trenberth, Earth's “Annual Global Mean Energy Budget” published the American Meteorological Society. In their graph, Figure 7, one can see the component allocated to outgoing longwave radiation and the component allocated to increasing water vapor, evapotranspiration and latent heat. Others have generally accepted this breakdown but disagreed with specific numbers.

For example, following the publication of the IPCC's Fifth Assessment Report (AR5, 2013 & 2014) the Royal Meteorological Society published an updated version. The authors state:

“These represent some of the most comprehensive studies to date that include strenuous efforts to trace the uncertainties in all of the main fluxes. They update the earlier work of Trenberth et al. (2009), which used a similar mix of data sources and reanalysis data instead of free-standing model simulations. Figure 1 thus represents the current state of the art in deriving such an energy budget for an entire planet. Anticipating how this approach will be adapted in the following sections for other planets, we present the flux data in Figure 1 directly in $W m^{-2}$ and with each flux normalized by the incoming solar irradiance (which is given 100 dimensionless irradiance percentage units or IPU). This helps to see how the energy in the system is partitioned into

various upward and downward channels and also helps to emphasize features such as the greenhouse warming of the surface.” [From Section 2.1}

In section 2.2 “Global energy budget” the authors state:

“Thus, the picture for the Earth is seen to be quite a complicated one, in which the atmosphere plays a major role in modifying the energy flow in both the visible/UV and thermal infrared. Incoming solar energy is partly transmitted to the surface, with around 54 dimensionless IPU reaching the ground, the rest being either scattered and reflected back out to space (around 22 IPU due to the atmosphere) or absorbed directly (around 23 IPU, at least partly in the stratospheric ozone layer). Around 7 IPU are reflected from the surface itself back out to space, leaving around 47 IPU actually absorbed at the surface. In the infrared, the atmosphere is relatively opaque, due to the combined effects of various greenhouse gases (H₂O, CO₂, O₃, CH₄, N₂O, etc.) and highly variable clouds and aerosols....”

The point to all this is that, despite tens of billions spent on climate science, the modeling and climate science are stagnant and not advancing. Part of the reason may be the assumption in the Charney Report stating

“A plausible assumption, borne out qualitatively by model studies, is that the relative humidity remains unchanged. The associated increase of absolute humidity increases the infrared absorptivity of the atmosphere over that of CO₂ alone and provides a positive feedback. There is also increased absorption of solar radiation by the increased water vapor, which further increases the infrared feedback by about 10 percent.”

If the plausible assumption is incorrect, then the assumption of a strong positive feedback from water vapor is incorrect. The paper by McKittrick and Christy on sixty years of limited atmospheric temperature measurements over the tropics indicates that a strong feedback from water vapor is not occurring. Certainly, the distinct human fingerprint over the tropics, as claimed by Ben Santer and embodied in the Second Assessment Report by the IPCC, is not found by satellites or by weather balloon instruments. The fingerprint “hot spot” would be a strong warming trend over the tropics created by latent heat, where water vapor “freezes out.” The absence of the hot spot was discussed in the first report of the Nongovernmental International Panel on Climate Change (NIPCC, 2008).

A positive feedback over the tropics could happen regardless of the cause of a warming, CO₂, solar energy inflow, etc. The fact that over the past hundreds of thousands of years, the globe’s climate has warmed and cooled, but within fairly narrow bounds, indicates there is no positive feedback, or if it exists it is minor. See links under Challenging the Orthodoxy – NIPCC, Challenging the Orthodoxy, and Defending the Orthodoxy.

Stagnant Science? The paper published by the Royal Meteorological Society, discussed above, appeared to be more of a paper trying to justify the findings of the IPCC rather than questioning them. As reader Bob Armstrong reminded TWTW, shortly after IPCC AR-5 came out, Nir Shiviv published his “most boring graph ever” in 2013 showing how climate science has stagnated after the 1979 Charney Report with virtually no change in the estimated range of temperature change with a doubling of CO₂. Shaviv states:

“One reason for the lack of improved understanding could be incompetence of the people in the field. That is, all the billions of dollars invested in climate research were not or could not be used to answer the most important question in climate, one which will allow predicting the 21st century climate change. I doubt however that this is the real reason. Among the thousands working in climate research, surely there are at least a few who are competent, if not more.”

“I think the real reason why there is no improvement in the understanding of climate sensitivity is the following. If you have a theory which is correct, then as progressively more data comes in, the agreement becomes better. Sure, occasionally some tweaks have to be made, but overall there is an improved agreement. However, if the basic premises of a theory are wrong, then there is no improved agreement as more data is collected. In fact, it is usually the opposite that takes place, the disagreement increases. In other words, the above behavior reflects the fact that the IPCC and alike are captives of a wrong conception.”

To the statement “the IPCC and alike are captives of a wrong conception,” TWTW adds “to include using the wrong measurements.”

Advancing knowledge of climate change is important to civilizations. As discussed in last week’s TWTW, new evidence shows that the Sahara varied between a wet place and the current desert over the past 240,000 years with periods of about 20,000 years. This variation indicates that the Intertropical Convergence Zone, bringing monsoon rains, varies with regularity. Understanding the varying climate is critical for humanity. Falsely blaming CO₂ and the use of hydrocarbons as the primary cause is irresponsible. See links under Challenging the Orthodoxy.

Averaging Out Errors? Pan Michaels points out that a new paper published in Nature illustrates some of the problems of the models used to estimate sea surface temperatures. The problems demonstrate that using the average from a group of models will not average out errors. The errors may not be randomly distributed. Assuming errors are randomly distributed is a common assumption used in averaging different model results. The problem goes to the entire approach used by the IPCC and other government entities reporting on global warming, etc. See links under Model Issues.

Pacific Cooling: The oceans contain a great deal of heat, far more than the atmosphere. The slow transfer of this heat is one reason why the complexity of the climate system is difficult to understand. According to a paper in Science Magazine, “the most recent top-to-bottom global assessment of ocean temperatures comes from the World Ocean Circulation Experiment (WOCE) campaign of the 1990s.” The authors of the paper made a statistical comparison of those findings with the findings of the HMS Challenger, a British sailing ship that made temperature measurements of the deep oceans between 1872 to 1876.

The authors found that: “at depths below 2000 m, [6500 feet] the Atlantic warms at an average rate of 0.1°C over the past century, whereas the deep Pacific cools by 0.02°C over the past century.”

It is very doubtful that anyone can calculate meaningful oceans to such a precision. And it is more doubtful that a British vessel in the 1870s could measure deep ocean temperatures to the precision suggested in the paper. Thus, one can interpret these findings a number of ways, but they support the view of the complexity of the climate system, especially the oceans, and that it

may take centuries to discover what is occurring in the oceans. See links under Changing Climates

Water Management – Teheran: According to a German report translated by P Gosselin, researchers at the Remote Sensing Section of the German Research Center for Geoscience (GFZ) found that the earth’s surface around Teheran, Iran, is sinking by about 25 centimeters per year (10 inches). This significant sinking of an area with 8 million people appears to be from ground water extraction. Tehran, elevation 3900 feet (1200 meters), is about 75 miles (120 km) from the inland Caspian Sea and 300 hundred miles (500 km) from the Persian Gulf.

Unlike what is happening to US cities on the Coastal Plain, the sinking cannot be blamed on sea level rise. Ground water extraction is a serious problem that needs to be addressed directly, not by false claims. See links under Other News that May Be of Interest.

Number of the Week: Zero. Although due to the government shutdown the official NOAA web site on tornadoes cannot be accessed, it appears that 2018 was the first year since modern record keeping began in 1950 that the US has not been hit by a violent tornado, category EF4 or EF5. Previously, the fewest was in 2005, which had one violent tornado, in November. Thus, TWTW feels confident to make the bold prediction that in 2019, the US will see as many or even more violent tornadoes as 2018! See link: <https://www.concordmonitor.com/2018-will-be-the-first-year-with-no-violent-tornadoes-in-the-United-States-22408722>

NEWS YOU CAN USE:

Censorship

U.S. Media Bans Scientific Dissent – Claim Wildfires, Floods, Droughts, Hurricanes Are Human-Controlled

By Kenneth Richard, No Tricks Zone, Jan 7, 2019

<http://notrickszone.com/2019/01/07/u-s-media-bans-scientific-dissent-claim-wildfires-floods-droughts-hurricanes-are-human-controlled/>

Suppressing Scientific Inquiry

Letter in IST Responding to Briggle

By Roger Pielke Jr. His Blog, Jan 10, 2019

<https://rogerpielkejr.com/2019/01/10/letter-in-ist-responding-to-briggle/>

“I have a letter in the current issue of issues in Science and Technology. It is a response to an article by Adam Briggle that calls for what he labels the “responsible rhetoric of research” (RRR) to sit alongside the “standard definition of research misconduct” as falsification, fabrication and plagiarism (FFP). My work is offered up as an example of irresponsible research, even though, in Briggle’s word it appears to be ‘logically, or empirically, flawless.’

“I welcome Briggle’s disagreement with the substance, focus, or rhetoric of my writing. His sharp mind and incisive writing can help us all to become smarter. However, Briggle’s suggestion to equate judgments of RRR with FFP represents yet another effort from within the academy to silence others whose views are deemed politically unwelcome or unacceptable.”

Challenging the Orthodoxy -- NIPCC

Video of the public release of Climate Change Reconsidered II: Fossil Fuels. ET from Katowice, Poland – site of the UN’s COP24.

By Staff, Video, NIPCC, Dec 4, 2018

<http://climatechangereconsidered.org/climate-change-reconsidered-ii-fossil-fuels/>

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>

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>

Nature, Not Human Activity, Rules the Climate

S. Fred Singer, Editor, NIPCC, 2008

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

Climate Change Reconsidered II: Fossil Fuels

By Multiple Authors, Bezdek, Idso, Legates, and Singer eds., Nongovernmental International Panel on Climate Change, Draft Summary for Policymakers, NIPCC, Oct 3, 2018

<http://climatechangereconsidered.org/wp-content/uploads/2018/10/10-05-18-DRAFT-CCRII-Fossil-Fuels-Summary-for-Policy-Makers.pdf>

Challenging the Orthodoxy

UAH Global Temperature Update for December 2018: +0.25 deg. C

2018 was 6th Warmest Year Globally of Last 40 Years

By Roy Spencer, His Blog, Jan 2, 2019

<http://www.drroyspencer.com/2019/01/uah-global-temperature-update-for-december-2018-0-25-deg-c/>

December 2018 Maps and Graphs

Including 40 Year Trend (Jan 1979 to Dec 2018)

By Staff, ESSC Global Temperature Report, University of Alabama in Huntsville, Accessed Jan 4, 2019

<https://www.uah.edu/essc/weather-products/global-temperature-report>

<https://www.nsstc.uah.edu/climate/>

A Test of the Tropical 200- to 300-hPa Warming Rate in Climate Models

By Ross McKittrick and John Christy, Earth and Space Science, AGU 100, July 6, 2018

<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2018EA000401>

The IPCC AR5 – First impressions

By Nir Shaviv, Science Bits, Oct 2, 2013

<http://www.sciencebits.com/AR5-FirstImpressions>

The Urgent Need for a Formal Reevaluation of Climate Alarmist Scam Science

By Alan Carlin, Carlin Economics and Science, Jan 11, 2019

<http://www.carlineconomics.com/archives/4775>

Why Climate Change Isn't Science

By Daniel G. Jones, American Thinker, Jan 11, 2019 [H/t ICECAP]

https://www.americanthinker.com/articles/2019/01/why_climate_change_isnt_science.html

Update: How Do You Tell If The Earth's Climate System "Is Warming"?

By Francis Menton, Manhattan Contrarian, Jan 8, 2019

<https://www.manhattancontrarian.com/blog/2019-1-7-update-how-do-you-tell-if-the-earths-climate-system-is-warming>

[SEPP Comment: If the warming stopped in 2016, was it due to the election of Trump?]

There is no [statistically significant] snow cover trend due to global warming since 1972 in the Northern Hemisphere

By Anthony Watts, WUWT, Jan 11, 2019

<https://wattsupwiththat.com/2019/01/11/there-is-no-snow-cover-gain-or-loss-trend-due-to-global-warming-since-1972-in-the-northern-hemisphere/>

Another expert climate professor retires and becomes outspoken skeptic

By Jo Nova, Her Blog, Jan 12, 2019

<http://joannenova.com.au/2019/01/another-expert-climate-professor-retires-and-becomes-outspoken-skeptic/>

[SEPP Comment: Last week's TWTW carried the comments by Anastasios Tsonis.]

Of discount rates and candy-canes

By Christopher Monckton of Brenchley, WUWT, Jan 11, 2019

<https://wattsupwiththat.com/2019/01/11/of-discount-rates-and-candy-canes/>

[SEPP Comment: Monckton exposes the abuse discount rates.]

Defending the Orthodoxy

Ad Hoc Study Group on Carbon Dioxide and Climate

By Jule G. Charney, Massachusetts Institute of Technology, Chairman, et al. to the: Climate Research Board, Assembly of Mathematical and Physical Sciences, National Research Council, National Academy of Science, 1979

https://www.bnl.gov/envsci/schwartz/charney_report1979.pdf

Earth's Annual Global Mean Energy Budget

By J. T. Kiehl and Kevin E. Trenberth, National Center for Atmospheric Research, Bulletin of the American Meteorological Society, 1997

http://climateknowledge.org/figures/Rood_Climate_Change_AOSS480_Documents/Kiehl_Trenberth_Radiative_Balance_BAMS_1997.pdf

Figure 7, page 206

Global energy budgets and 'Trenberth diagrams' for the climates of terrestrial and gas giant planets

By P.L. Read, et al. Quarterly Journal of the Royal Meteorological Society, January 2016
<https://rmets.onlinelibrary.wiley.com/doi/full/10.1002/qj.2704>

Tipping elements in the Earth System

By Hans Joachim Schellnhuber, PNAS, Dec 8, 2009
<https://www.pnas.org/content/106/49/20561>

How we can combat climate change

The world has until 2030 to drastically cut our emissions. Where do we begin?

Editorial, Washington Post, Jan 2, 2019

https://www.washingtonpost.com/news/opinions/wp/2019/01/02/feature/opinion-here-are-11-climate-change-policies-to-fight-for-in-2019/?utm_term=.10182e5cc95d

Kerry to Trump: Forget 'fictional' border crisis, declare emergency for climate

By John Bowden, The Hill, Jan 11, 2019

<https://thehill.com/policy/energy-environment/424913-kerry-to-trump-forget-fictional-emergency-declare-national>

Questioning the Orthodoxy

Does the IPCC say we have until 2030 to avoid catastrophic global warming?

By Patrick Brown, His Blog, Jan 4, 2019 [H/t WUWT]

<https://patrickbrown.org/2019/01/04/does-the-ipcc-say-we-have-until-2030-to-avoid-catastrophic-global-warming/>

“In my experience, the primary reason that people skeptical of climate science come to their skepticism is that they believe climate scientists are acting as advocates rather than dispassionate evaluators of evidence. They believe climate scientists are acting as lawyers, making the case for climate action, rather than judges objectively weighing facts. The meme of a global catastrophe by 2030 seems to put a prediction on the record that is likely to be proven false and thus likely to reinforce this notion of ‘climate scientists as untrustworthy activists’ and thus harm the credibility of climate science thereafter.”

Will Somebody Actually Start A Serious "Climate" Emissions-Reduction Program In 2019?

By Francis Menton, Manhattan Contrarian, Jan 6, 2019

<https://www.manhattancontrarian.com/blog/2019-1-6-will-somebody-actually-start-a-serious-climate-program-in-2019>

Leading German Climate Scientist Mojib Latif Caught Up In A Web Of Contradictions

Mojib Latif: three statements, three times totally off the mark

By Die kalte Sonne (German text translated by P Gosselin), No tricks Zone, Jan 8, 2019

<http://notrickszone.com/2019/01/08/leading-german-climate-scientist-mojib-latif-caught-up-in-a-web-of-contradictions/>

After Paris!

Australia is worst casualty of Paris: Big hit to GDP, wages, dollar, trade balance for nothing

By Jo Nova, Her Blog, Jan 11, 2018

<http://joannenova.com.au/2019/01/australia-under-paris-largest-hit-to-gdp-wages-dollar-trade-balance-for-almost-no-benefit/>

Link to report: Global economic and environmental outcomes of the Paris Agreement

By Weifeng Liu, Warwick J. McKibbin, Adele Morris, and Peter J. Wilcoxon, Brookings, Jan 7, 2019

<https://www.brookings.edu/research/global-economic-and-environmental-outcomes-of-the-paris-agreement/>

“Australia Wins The Global Patsy Award 2019.” “Economically, everyone is a loser, but the three biggest losers are Australia, Russia and OPEC.”

[SEPP Comment: Brookings claims China and USA will be the biggest recipients of global CO2 benefits under Paris.]

China: No Wind Or Solar If It Can't Beat Coal On Price

By John Parnell, Forbes, Jan 10, 2019 [H/t Paul Homewood]

<https://www.forbes.com/sites/johnparnell/2019/01/10/china-no-wind-or-solar-if-it-aint-as-cheap-as-coal/#3e060b1c3e2f>

Change in US Administrations

Trump formally nominates Wheeler to head EPA

By Timothy Cama, The Hill, Jan 9, 2019

<https://thehill.com/policy/energy-environment/424555-trump-formally-nominates-wheeler-to-head-epa>

Social Benefits of Carbon Dioxide

Prosperity is Linked to Energy

By Donn Dears, Power For USA, Jan 8, 2019

<http://ddears.com/2019/01/08/prosperity-is-linked-to-energy/>

Problems in the Orthodoxy

Forget Climate Hysteria: Heathrow Plans 25,000 More Flights P.A.

By Staff Writers, The Times, Via GWPF, Jan 5, 2019

<https://www.thegwpf.com/forget-climate-hysteria-heathrow-plans-25-000-more-flights-p-a/>

Seeking a Common Ground

The Lessons of ‘Dieselgate’

Insane amounts of political capital were spent trying to wring meaningless CO2 reductions from cars.

By Holman W. Jenkins, Jr., WSJ, Via GWPF, Jan 6, 2019

<https://www.thegwpf.com/germanys-diesel-disaster-the-lessons-of-dieselgate/>

Opening sentence: “The science is clear that human activities over the last century have contributed to greenhouse-like warming of the Earth's surface.”

[SEPP Comment: Avoids the central issue: is global warming caused by human emissions of CO2 and other greenhouse gases.]

Don't Join The Media Freak Out Over Recent Jump In CO2 Emissions — It Won't Last

Editorial, IBD, Jan 9, 2019

<https://www.investors.com/politics/editorials/co2-emissions-economy/>

Ocean Cleanup device breaks down, well before ridding Pacific of plastics

By Charles the Moderator, WUWT, Jan 5, 2019

<https://wattsupwiththat.com/2019/01/05/ocean-cleanup-device-breaks-down-well-before-ridding-pacific-of-plastics/>

[SEPP Comment: The failure of EU recycling, which contributes heavily to the plastics pool in the Pacific, is not discussed.]

Review of Recent Scientific Articles by CO2 Science

Reef-dwelling Fish Resilience Despite Widespread Coral Bleaching

Wismer, S., Tebbett, S.B., Streit, R.P. and Bellwood, D.R. 2019. Spatial mismatch in fish and coral loss following 2016 mass coral bleaching. *Science of the Total Environment* 650: 1487-1498. Jan 11, 2019

<http://www.co2science.org/articles/V22/jan/a7.php>

More Evidence for the Positive Impacts of Elevated CO2 on Wheat

Macabuhay, A., Houshmandfar, A., Nuttall, J., Fitzgerald, G.J., Tausz, M. and Tausz-Posch, S. 2018. Can elevated CO2 buffer the effects of heat waves on wheat in a dryland cropping system? *Environmental and Experimental Botany* 155: 578-588. Jan 10, 2019

<http://www.co2science.org/articles/V22/jan/a6.php>

In light of the above findings, it can be concluded that atmospheric CO2 enrichment positively impacts wheat growth and yield, even when growing conditions are less than ideal, as was the case here, where very high (7-15°C above normal air) temperatures reduced those benefits in one year (though the impacts were still *positive*) but *maintained* them in another.

A Two-century Reconstruction of Summer Temperatures on the Southeastern Tibetan Plateau

Li, M., Duan, J., Wang, L. and Zhu, H. 2018. Late summer temperature reconstruction based on tree-ring density for Sygera Mountain, southeastern Tibetan Plateau. *Global and Planetary Change* 163: 10-17. Jan 9, 2019

<http://www.co2science.org/articles/V22/jan/a5.php>

Elevated CO2 and the Growth Response of Three Rice Cultivars

Rahman, S., Duursma, R.A., MuktaDir, M.A., Roberts, T.H. and Atwell, B.J. 2018. Leaf canopy architecture determines light interception and carbon gain in wild and domesticated *Oryza* species. *Environmental and Experimental Botany* 155: 672-680. Jan 7, 2019

Model Issues

Evaluation of cloud and water vapor simulations in CMIP5 climate models using NASA “A-Train” satellite observations

By Jonathan H. Jiang, et al, Journal of Geophysical Research, July 18, 2012 [H/t Tom Quirk]

<https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2011JD017237>

From Tom Quirk: “I think we were a bit bold on the Russian model. It comes from the Institute for Numerical Mathematics (INM) and having found the attached assessment of all the models treatment of water vapour and clouds, it seems to be no better or worse than others and the temperature prediction is just a random walk down the correct path!!”

A Sea-Surface Temperature Picture Worth a Few Hundred Words!

Guest Essay by Patrick Michaels, CATO, Jan 8, 2019

<https://www.cato.org/blog/sea-surface-temperature-picture-worth-few-hundred-words>

Link to paper: Taking climate model evaluation to the next level

By Veronika Eyring, et al. Nature, Climate change, Jan 7, 2019

<https://www.nature.com/articles/s41558-018-0355-y>

Changing Weather

Tracking Progress on Disasters, 2018 Update

By Roger Pielke Jr. His Blog, Jan 10, 2019

<https://rogerpielkejr.com/2019/01/10/tracking-progress-on-disasters-2018-update/>

Link to press release: Extreme storms, wildfires and droughts cause heavy nat cat losses in 2018

By Staff Writers, Munich RE, Jan 8, 2019

<https://www.munichre.com/en/media-relations/publications/press-releases/2019/2019-01-08-press-release/index.html?ref=Twitter&tid=%23Natcat2018%20Year%20End%20report>

From Pielke: “2018 saw substantial disasters with large costs.

“However, in terms of economic damage it was a fairly typical year in historical context.

“2018 contributes to the trend (1990-2018) of disaster losses decreasing as a proportion of global GDP.”

El Niño Has Failed to Develop But Ocean Remains Warm

By Australian Bureau of Meteorology & John Kemp, Reuters, GWPF, Jan 8, 2019

<https://www.thegwpf.com/el-nino-has-failed-to-develop-but-ocean-remains-warm/>

Additional links:

<https://fingfx.thomsonreuters.com/gfx/ce/7/2512/2509/ENSO%20SELECTED%20INDICATORS.pdf>

ENSO Wrap-Up

Current state of the Pacific and Indian oceans

Some recent cooling in the tropical Pacific Ocean

By Staff Writers, Australian Government, Bureau of Meteorology, Jan 8, 2019

<http://www.bom.gov.au/climate/enso/>

[SEPP Comment: The traditional El Niño has not developed; the Modoki El Niño has developed.]

It’s Weather!...Cold, Heavy Snowfall Across Europe Not Linked To Global Warming And Melting Arctic

By P Gosselin, No Tricks Zone, Jan 11, 2019

<http://notrickszone.com/2019/01/11/its-weather-cold-heavy-snowfall-across-europe-not-linked-to-global-warming-and-melting-arctic/>

Al Gore Demonstrates Scientific Ignorance Again.

By Tim Ball, A Different Perspective, Jan 7, 2019

<https://drtimball.ca/2019/al-gore-demonstrates-scientific-ignorance-again/>

[SEPP Comment: Explaining the Circumpolar Vortex and Rossby Waves.]

Death and Destruction on Snoqualmie Pass: Time for WSDOT to Make Better Use of Weather Information

By Cliff Mass, Weather and Climate Blog, Jan 10, 2019

<http://cliffmass.blogspot.com/2019/01/death-and-destruction-on-snoqualmie.html>

2018 was 4th warmest year on record, EU climate change report finds

This year will also likely be hot, Copernicus Climate Change Service says

By Staff Writers, Thomson Reuters, Jan 7, 2019

<https://www.cbc.ca/news/technology/2018-temperatures-copernicus-climate-change-report-1.4968286>

[SEPP Comment: TWTW predicts that the US will experience more severe tornadoes in 2019 than in 2018 – total in 2018 of class IV or V – Zero (0)]

Changing Climate

The 'Little Ice Age' hundreds of years ago is STILL cooling the bottom of Pacific, researchers find

By Cheyenne MacDonald, Daily Mail, UK, Jan 4, 2018

<https://www.dailymail.co.uk/sciencetech/article-6558285/Little-Ice-Age-hundreds-years-ago-cooling-bottom-Pacific-researchers-find.html>

Link to paper: The Little Ice Age and 20th-century deep Pacific cooling

By G. Gebbie and P. Huybers. Science, Jan 4, 2019

<http://science.sciencemag.org/content/363/6422/70>

Changing Seas

Sea Level Rise (SLR) Satellite Altimetry—Fit for Purpose?

By Rud Istvan, WUWT, Jan 11, 2019

<https://wattsupwiththat.com/2019/01/11/sea-level-rise-slr-satellite-altimetry-fit-for-purpose/>

[SEPP Comment: Good illustration on the differences between accuracy and precision. Explains why satellite instruments do not produce accurate and precise estimates of sea level rise.]

Changing Cryosphere – Land / Sea Ice

Greenland Is Way Cool

Guest Post by Willis Eschenbach, WUWT, Jan 8, 2019

<https://wattsupwiththat.com/2019/01/08/greenland-is-way-cool/>

Michael Portillo's Alaskan Glacier

By Paul Homewood, Not a Lot of People Know That, Jan 10, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/10/michael-portillos-alaskan-glacier/#more-37158>

“This latest series is based in Alaska, and, at 23 mins in, Portillo moves into glacier country. He informs us that his Appleton's Guide for Alaska, which was **published in 1899**, states:

“*Old residents insist that the climate is changing. That the summers are warmer and drier. The rapid retreat of all the glaciers during even 20 years is offered as another proof.*”

[Italics in original, boldface added]

Agriculture Issues & Fear of Famine

The longest homogeneous series of grape harvest dates, Beaune 1354–2018, and its significance for the understanding of past and present climate

By Thomas Labbé, Christian Pfister, Stefan Brönnimann, Daniel Rousseau, Jörg Franke, and Benjamin Bois, Climate of the Past, Jan 11, 2019 [H/t Judith Curry]

<https://www.clim-past-discuss.net/cp-2018-179/>

[SEPP Comment: Ignores three significant issues: CO2 fertilization, changing clones with different growth characteristics, and adaption of American rootstock, which is more cold-hardy and resistant to diseases, also imported from the Americas.]

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

A jellyfish 'epidemic' has Australian scientists wondering whether climate change is to be blamed

By Rick Noack, Washington Post, Jan 7, 2019

https://www.washingtonpost.com/world/2019/01/07/jellyfish-epidemic-has-australian-scientists-wondering-if-climate-change-is-be-blamed/?noredirect=on&utm_term=.0e02e1cd9c82

Link to BBC report: Bluebottle: Thousands of Queensland beachgoers stung
By Staff Writers, BBC, Jan 7, 2019

<https://www.bbc.com/news/world-australia-46777854>

[SEPP Comment: Not mentioned by the Washington Post but in the BBC report: “About 13,000 stings were recorded in the past week.” “That’s three times more [as many] than in the corresponding period last year.” And the bluebottles were driven to the beaches by high winds.]

Communicating Better to the Public – Make things up.

Quantifying uncertainties of sandy shoreline change projections as sea level rises

By Gonéri Le Cozannet, et al. Nature, Science Reports, Jan 10, 2018

<https://www.nature.com/articles/s41598-018-37017-4>

“Since 1870, sea level has been rising, mainly due to the melting of land-ice and ocean expansion caused by anthropogenic climate warming.”

[SEPP Comment: Did anthropogenic climate warming cause sea level rise of some 120 meters (420 feet) prior to 1870?]

Communicating Better to the Public – Do a Poll?

Climate change conformity may well bury the truth

The large mass of scientific opinion tends to keep individual scientists in a conforming orbit. But what of the dissenting views?

By Lee Harding, Troy Media, Jan 7, 2019, [H/t GWPF]

<http://troymedia.com/2019/01/07/climate-change-conformity-bury-truth/>

Link to NASA Consensus: Scientific consensus: Earth's climate is warming

By Staff Writers, NASA, Global Climate Change, Accessed Jan 9, 2019

<https://climate.nasa.gov/scientific-consensus/>

[SEPP Comment: NASA using surface data. Scientific consensus disagrees with nature?]

Communicating Better to the Public – Use Propaganda

Bernie Sanders Said Climate Change Was Our ‘Biggest Crisis of All,’ But He Was Silent When Asked About Private Jets

By Michael Bastasch, Daily Caller, Jan 9, 2019

<https://dailycaller.com/2019/01/09/bernie-sanders-climate-change-jets/>

Expanding the Orthodoxy

Climate Change and National Security, Part II: How Big a Threat is the Climate?

By Michelle Melton, Lawfare, Jan 7, 2019

<https://www.lawfareblog.com/climate-change-and-national-security-part-ii-how-big-threat-climate>

[SEPP Comment: The dire report is dated 2003! The Pentagon’s climate thinking is as solid as its strategic thinking was when the US committed hundreds of thousands of combat troops into Southeast Asia.]

EU Wants to Green the Financial Sector: Critics Fear a Green Nanny State

By Staff Writers, Handelsblatt, Via GWPF, Jan 7, 2019

<https://www.thegwpf.com/eu-wants-to-green-the-financial-sector-critics-fear-a-green-nanny-state/>

World’s Poor Better Off Without Dr Kim as World Bank Head

Press Release, Global Warming Policy Forum, Jan 9, 2019

<https://www.thegwpf.com/gwpf-worlds-poor-better-off-without-jim-yong-kim-as-world-bank-head/>

Questioning European Green

Victims of the Green Deal gravy train: How cold-call conmen [con-men] left thousands saddled with debts, HIGHER bills and trapped in their homes

By Tom Kelly, Ben Wilkinson and Fiona Parker, This is Money, Jan 9, 2019 [H/t Paul Homewood]

<https://www.thisismoney.co.uk/money/bills/article-6570851/Victims-green-rush-thousands-homeowners-left-saddled-debt.html>

Climate change: ‘Right to repair’ gathers force

By Paul Homewood, Not a Lot of People Know That, Jan 9, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/09/climate-change-right-to-repair-gathers-force/>

Questioning Green Elsewhere

Oregon begins killing sea lions harming population of endangered trout

By Margan Gstalter, The Hill, Jan 10, 2019

<https://thehill.com/policy/energy-environment/424850-oregon-begins-killing-sea-lions-harming-population-of-endangered>

[SEPP Comment: Which green group will sue under the 1972 Marine Mammal Protection Act?]

Non-Green Jobs

Steel Industry Being Crucified By High Energy Costs, Admits Claire Perry

By Paul Homewood, Not a Lot of People Know That, Jan 12, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/12/steel-industry-being-crucified-by-high-energy-costs-admits-claire-perry/>

Funding Issues

Funding the Climate-Industrial Complex

By Tom Tamarkin, Canada Free Press, Jan 10, 2019 [H/t Paul Driessen]

<https://canadafreepress.com/article/funding-the-climate-industrial-complex>

Disrupting Multilateral Climate Finance

By Håvard Halland and Justin Yifu Lin, Project Syndicate, Jan 10, 2019

<https://www.project-syndicate.org/commentary/mobilizing-private-institutional-investment-to-fight-climate-change-by-h-ward-halland-3-and-justin-yifu-lin-2019-01>

“If the world is to avert climate calamity, multilateral finance institutions must begin looking to large institutional investors as their partners and clients. The creation of a new global climate finance facility, appropriately ring-fenced from current financing initiatives, could help.”

[SEPP Comment: Do the authors understand that the greenhouse gas effect occurs in the atmosphere, which shows only modest warming?]

Fully Filling the Global Fund

By Jeffrey D. Sachs, Guido Schmidt-Traub and Vanessa Fajans-Turner, Project Syndicate, Jan 10, 2019

<https://www.project-syndicate.org/commentary/global-fund-aids-tb-malaria-replenishment-round-by-jeffrey-d-sachs-et-al-2019-01>

[SEPP Comment: These “sustainable development” experts ignore that one proven way of greatly reducing malaria in developing countries is indoor spraying of inhabited areas with DDT.]

UK’s Much Vaunted “Climate Aid” Is Just Recycled Aid.

By Paul Homewood, Not a Lot of People Know That, Jan 7, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/07/uks-much-vaunted-climate-aid-is-just-recycled-aid/>

Litigation Issues

Supreme Court rejects Exxon Mobil appeal in climate case

By Timothy Cama, The Hill, Jan 7, 2019

<https://thehill.com/policy/energy-environment/424133-supreme-court-rejects-exxon-appeal-in-climate-case>

[SEPP Comment: Another AG fishing trip.]

Cap-and-Trade and Carbon Taxes

Congress Introduces Carbon Tax

By Donn Dears, Power For USA, Jan 11, 2019

<http://ddears.com/2019/01/11/congress-introduces-carbon-tax/>

[SEPP Comment: Taxing your breath away?]

Irish Prime Minister Delays Carbon Tax After ‘Learning Lesson’ of Yellow Vests Protests

By Staff Writers, The Times, Via GWPF, Jan 8, 2018

<https://www.thegwpf.com/irish-prime-minister-delays-carbon-tax-after-learning-lesson-of-yellow-vests-protests/>

Fury as Green MP demands meat is TAXED to stop climate change

A GREEN MP has called on Parliament to impose a tax on meat to cut greenhouse gas emissions and reduce climate change.

By Laura O’Callaghan, Express, UK, Jan 5, 2019

<https://www.express.co.uk/news/politics/1067573/meat-tax-green-party-caroline-lucas-climate-change>

Subsidies and Mandates Forever

Massive Government Cash Giveaways Needed to Defeat Climate Change

Guest essay by Eric Worrall, Jan 11, 2019

<https://wattsupwiththat.com/2019/01/11/massive-government-cash-giveaways-needed-to-defeat-climate-change/>

Political Climate Change May Raise Ocean of Energy Costs

By Larry Bell, Newsmax, Jan 7, 2019

<https://www.newsmax.com/larrybell/btu-macron-rggi-rooney/2019/01/07/id/897104/>

EPA and other Regulators on the March

EPA’s Advisers Reflect Influence Of The ‘Deep State’

By Henry Miller, IBD, Jan 7, 2019

<https://www.investors.com/politics/commentary/epa-advisers-conflicts-deep-state/>

EPA: Mercury Rules for Coal, Oil Power Units Not ‘Appropriate and Necessary’

By Sonal Patel, Power Mag, Dec 28, 2018

https://www.powermag.com/epa-mercury-rules-for-coal-oil-power-units-not-appropriate-and-necessary/?mkt_tok=eyJpIjoiTVRNeE56Y3IzZell3TkRsbSIsInQiOiJRMDZwRmRVb3JGYU9rUXMrekNFMDNPcE41bndEY3VDekVmZ0xpMGZsUUhRUzVtaXJJeDI0c252WFfcLzRuOGZZOEw2VGdXSvIXTXVjRFwvT2daelh2WGNVemZNdlVsc1UzVVwvM3N5Tm5qdmZUNXFGbVVIQno3VFI3Um1cL296VHRqMGIifQ%3D%3D

[SEPP Comment: The major damage has already been done. The real issue is can EPA's made-up costs – without hard evidence – be used in the future. If not, then a repeat of excessive regulation may be avoided.]

Energy Issues – Non-US

Happy New Year! Green Energy Policies at Risk as UK Treasury Aims to Cut Energy Costs

By Staff Writers, The Times, Via GWPF, Jan 7, 2019

<https://www.thegwpf.com/happy-new-year-green-energy-policies-at-risk-as-uk-treasury-targets-cuts-in-energy-prices/>

Smart meters may not start to save households money for a decade

By Katie Morley, Telegraph, UK, Jan 9, 2019 [H/t Paul Homewood]

<https://www.telegraph.co.uk/news/2019/01/09/smart-meters-may-not-start-save-households-money-decade/>

Coal Power Exceeds Wind/Solar As High Pressure Reigns

By Paul Homewood, Not a Lot of People Know That, Jan 8, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/08/coal-power-exceeds-wind-solar-as-high-pressure-reigns/>

Energy & Environmental Newsletter: January 7, 2019

By John Droz, Jr., Master Resource, Jan 7, 2019

<https://www.masterresource.org/alliance-for-wise-energy-decisions/energy-environmental-newsletter-january-7-2019/>

Energy Issues – Australia

Crossbench senators wasted \$20 billion propping up renewables — Australia Institute, PR agency for renewables

By Jo Nova, Her Blog, Jan 8, 2019

<http://joannenova.com.au/2019/01/crossbench-senators-wasted-20-billion-propping-up-renewables-australia-institute-pr-agency-for-renewables/>

Report on Aug 25 blackouts shows how fragile our grid is (and the real cost of cheap solar panels).

By Jo Nova, Her Blog, Jan 11, 2019

<http://joannenova.com.au/2019/01/report-on-aug-25-blackouts-shows-how-fragile-our-grid-is-and-the-real-cost-of-cheap-solar-panels/>

“When cheap solar is expensive”

Energy Issues -- US

America Has Won The War Against OPEC's Price Gouging

By Jay Lehr and Tom Harris, IBD, Jan 11, 2019

<https://www.investors.com/politics/commentary/opec-u-s-innovation-fracking-gouging/>

One state is the center of war between natural gas and coal

By Steve Forbes, The Hill, Jan 3, 2019

<https://thehill.com/opinion/energy-environment/423718-one-state-is-the-center-of-war-between-natural-gas-and-coal>

[SEPP Comment: Does not discuss the costs of transporting US gas to Europe.]

Why the U.S. Imports LNG Despite Its Gas-Export Boom: QuickTake

By Naureen S. Malik, Bloomberg, January 3, 2019

https://www.washingtonpost.com/business/why-the-us-imports-lng-despite-its-gas-export-boom-quicktake/2019/01/03/aebada9e-0f4b-11e9-8f0c-6f878a26288a_story.html?utm_term=.62061ffac18

[SEPP Comment: If the winter becomes cold, will New England depend on Russian natural gas?]

Oil and Natural Gas – the Future or the Past?

Goldman cuts oil price forecasts, citing US shale resilience

Goldman Sachs Group Inc. cut its oil price forecasts for 2019, citing a re-emerging surplus of oil and resilient U.S. shale production.

By Staff Writers, Bloomberg, Jan 7, 2019 [H/t GWPF]

<https://www.energyvoice.com/oilandgas/189695/goldman-cuts-oil-price-forecasts-citing-us-shale-resilience/>

[SEPP Comment: Price forecast down by over 10% from previous estimate.]

Fracking, Energy Renaissance, and the Russian Resistance: Why does it Matter for Developing Countries?

By Vijay Jayaraj, Townhall, Jan 7, 2019

<https://townhall.com/columnists/vijayjayaraj/2019/01/07/fracking-energy-renaissance-and-the-russian-resistance-why-does-it-matter-for-developing-countries-n2538574>

'Realistic' new model points the way to more efficient and profitable fracking

By Emily Ayshford, Northwestern University, Phys.org, Jan 7, 2019 {H/t Toshio Fujita}

<https://phys.org/news/2019-01-realistic-efficient-profitable-fracking.html>

Link to paper did not work

Alternative, Green (“Clean”) Solar and Wind

El Hierro fourth quarter 2018 performance update

By Roger Andrews, Energy Matters, Jan 6, 2019

<http://euanmearns.com/el-hierro-fourth-quarter-2018-performance-update/#more-22934>

“In 4Q 2018 Gorona del Viento (GdV) supplied only 27.7 % of El Hierro’s electricity and 6.4% of its total energy consumption, down by a factor of almost three from the 74.2% and 17.1% recorded in 3Q 2018. Since project startup in June 2015 GdV has supplied 45.2.% of El Hierro’s electricity and 10.4% of its energy. During 2018 it supplied 56.6% of El Hierro’s electricity and 13.0% of its energy, up from 46.3% and 10.6% in 2017.”

[SEPP Comment: Still short of promised 100%.]

NREL details great potential for floating PV systems

By Staff Writers, Solar Daily, SPX, Jan 9, 2018

http://www.solardaily.com/reports/NREL_details_great_potential_for_floating_PV_systems_999.html

With Vineyard Wind, the U.S. Finally Goes Big on Offshore Wind Power

The 800-megawatt Vineyard Wind project is the first large offshore wind farm in the U.S. It won't be the last

By Jean Kumagal, IEEE Spectrum, Jan 1, 2019

<https://spectrum.ieee.org/energy/renewables/with-vineyard-wind-the-us-finally-goes-big-on-offshore-wind-power>

“The most remarkable thing about Vineyard Wind isn't its size or scope or the fact that it's a first for the United States. It's the 7.4 U.S. cents per kilowatt-hour price that Vineyard Wind has agreed to charge for the wind farm's electricity. In the project's second phase, the price will drop to just 6.5 cents, making it competitive with coal and natural gas, but without the carbon emissions.”

[SEPP Comment: For New England, the December wholesale rate ranged from \$40/MWh (cents/kWh) to \$110/MWh (11 cents/kWh) But that is for reliable electricity, will unreliable electricity be as affordable?]

The top five wind stories of 2018

By Michelle Froese, Windpower, Jan 3, 2019

<https://www.windpowerengineering.com/operations-maintenance/the-top-five-wind-stories-of-2018/>

[SEPP Comment: Who will pay for the successful bids for offshore wind when the wind fails?]

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

Swan Lake hydro's future awaits FERC decision

Comments collected for final environmental study

By Kurt Liedtke, Herald and News, Oregon, Jan 2, 2019

https://www.heraldandnews.com/news/local_news/swan-lake-hydro-s-future-awaits-ferc-decision/article_569832ea-28f2-5fd3-bc24-2d95978e8cc7.html

Description from Permitting Dashboard: Federal Infrastructure Projects

<https://www.permits.performance.gov/projects/swan-lake-north-pumped-storage-n>

“Swan Lake North Pumped Storage (Project No. 13318) is a proposal to construct an original, closed-loop pumped storage project that would provide 393 MW of generation capacity in Oregon. The proposed project would consist of, among other facilities, an upper and lower reservoir with active storage capacities of 2,562 and 2,581 acre-feet, respectively, a high-pressure penstock, three low-pressure penstocks, a powerhouse, a substation, and a 32.8-mile-long, 230-kilovolt transmission line.”

[SEPP Comment: Costs are not discussed.]

Utility scale solar power plus lithium ion storage cost breakdown

NREL has released an inaugural report highlighting utility scale energy storage costs with various methods of tying it to solar power: co-located or not, and DC- vs AC-coupled.

By John Weaver, PV Magazine, Jan 2, 2019

<https://pv-magazine-usa.com/2019/01/02/utility-scale-solar-power-plus-lithium-ion-storage-cost-breakdown/>

Link to report: 2018 U.S. Utility-Scale Photovoltaics Plus-Energy Storage System Costs

Benchmark

By Ran Fu, Timothy Remo, and Robert Margolis, National Renewable Energy Laboratory, Nov 2018

<https://www.nrel.gov/docs/fy19osti/71714.pdf>

Earlier report: U.S. Solar Photovoltaic System Cost Benchmark: Q1 2018
By Ran Fu, David Feldman, and Robert Margolis, NREL, Nov 2018
<https://www.nrel.gov/docs/fy19osti/72399.pdf>

Alternative, Green (“Clean”) Vehicles

EV Sales Continue To Disappoint

By Paul Homewood, Not a Lot of People Know That, Jan 10, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/10/ev-sales-continue-to-disappoint/>

Environmental Industry

As the Old Faiths Collapse, the Greens, Social Justice Warriors, and Techno-Futurists Aim to Fill the Void

Today’s “woke,” progressive churches would have much in common with the “awakened” who left the pagan world to join the church.

By Joel Kotkin, and Alicia Kurimska, Daily Beast, Dec 23, 2018 [H/tGWPF]

<https://www.thedailybeast.com/as-the-old-faiths-collapse-the-greens-social-justice-warriors-and-techno-futurists-aim-to-fill-the-void>

10 groups that will be key to combating climate change in 2019

By I Ling Thompson, Green Biz, Jan 7, 2019

<https://www.greenbiz.com/article/10-groups-will-be-key-combating-climate-change-2019>

Other Scientific News

German Karlsruhe Research Institute’s Awarding Winning Process For Producing Hydrogen Fuel From Methane

By P Gosselin, No Tricks Zone, Jan 9, 2019

<http://notrickszone.com/2019/01/09/german-karlsruhe-research-institutes-awarding-winning-process-for-producing-hydrogen-fuel-from-methane/>

[SEPP Comment: Using liquid tin heated to 1200 degrees Celsius. No description of energy costs.]

Other News that May Be of Interest

Lousy Water Management, Not Climate Change, Leading To Ecological Disaster In Iran

Why Teheran is sinking dangerously

(Press release translated/edited from the German by P. Gosselin), No Tricks Zone, Jan 5, 2019

<http://notrickszone.com/2019/01/05/lousy-water-management-not-climate-change-leading-to-ecological-disaster-in-iran/>

The Pros and Cons of No Deal

By Matt Ridley, HIs Blog, Jan 8, 2019

<http://www.rationaloptimist.com/blog/no-deal-brexite/>

Scare stories about Brexit without a withdrawal agreement are exaggerated

An expanded version of my recent Times article:

World Bank's Kim abruptly resigns to join infrastructure firm

By David Lawder, Reuters, Jan 7, 2019

<https://www.reuters.com/article/us-worldbank-kim/world-banks-kim-abruptly-resigns-to-join-infrastructure-firm-idUSKCN1P11OV>

BELOW THE BOTTOM LINE:

Green Weenie of the Week: Nuclear War Will Save Us!

By Steven Hayward, Power Line, Jan 4, 2019

<https://www.powerlineblog.com/archives/2019/01/green-weenie-of-the-week-nuclear-war-will-save-us.php?>

Oh noes!!! Government Shutdown Imperils Earth's Magnetic Field!!

Guest Ohhhhh Nooooo!!! by David Middleton, WUWT, Jan 10, 2019

<https://wattsupwiththat.com/2019/01/10/oh-noes-government-shutdown-imperils-earths-magnetic-field/>

Humor

Saving the planet one \$2,000 cat door at a time

By Jo Nova, Her Blog, Jan 9, 2019

<http://joannenova.com.au/2019/01/saving-the-planet-one-2000-cat-door-at-a-time/>

Climate change: Will insect-eating dogs help?

By Roger Harrabin, BBC, Jan 10, 2019

<https://www.bbc.com/news/science-environment-46811358#>

Shutdown Demonstrates How “Vital” Government Scientists Are... NOT

Guest laugh by David Middleton, WUWT, Jan 9, 2018

<https://wattsupwiththat.com/2019/01/09/shutdown-demonstrates-how-vital-government-scientists-are/>

More tipping points than a see saw

By Staff Writers, Climate Change Predictions.org, Jan 6, 2019

<http://climatechangepredictions.org/uncategorized/5956>

Link to paper: Tipping elements in the Earth System

By Hans Joachim Schellnhuber, PNAS, Dec 8, 2009

<https://www.pnas.org/content/106/49/20561>

Earth may be approaching its points of no return. As Arctic sea ice hits a record low, focus is turning to climate “tipping points” – a threshold that, once crossed, cannot be reversed and will create fundamental changes to other areas.

“It’s a trigger that leads to more warming at a regional level, but also leads to flow-on effects through other systems,” said Will Steffen, the chief adviser on global warming science to Australia’s Climate Commission. There are about 14 known “tipping elements”, according to a paper published by the US Proceedings of the National Academy of Sciences.

The Age (Australia), 23 Sep 2012

ARTICLES:

1. Have We Got a Carbon Tax ‘Dividend’ for You

Rent seekers, virtue signalers and green lobbyists will love it. Taxpayers not so much.

By Mark Mills, WSJ, Jan 8, 2019

https://www.wsj.com/articles/have-we-got-a-carbon-tax-dividend-for-you-11546992477?mod=hp_opin_pos1

SUMMARY: The senior fellow at the Manhattan Institute writes:

“This could be the year Congress tries to enact the mother of all taxes, a carbon tax—a levy on the use of oil, natural gas and coal. Everything that is fabricated, grown, operated or moved is made possible by hydrocarbons. That makes the carbon tax different from a mere consumption or excise tax. The latter is attached to purchasing—spend more, pay more. A carbon tax is a tax on existence, because all aspects of living require energy, and hydrocarbons provide 80% of America’s energy, more for the rest of the world. And hydrocarbons are used to create or build everything else that produces energy.

“Who would support such a tax? Four intersecting constituencies: those who embrace the idea as an essential step to “fixing” the climate; those agnostic about climate claims but eager to check the box for political expediency; those in search of some “grand bargain” on tax or regulatory reform; and those eager to find more ways to extract money from the economy. This mélange of motives covers a lot of political territory.

“Advocates say a carbon tax would reduce the use of hydrocarbons by creating a disincentive. The money collected could be used to subsidize alternative energy sources. Grand-bargainers want to split the carbon tax bounty to offset or eliminate other taxes or regulation they deem more onerous. Some conservatives claim a carbon tax is in theory a more efficient way than regulation to reduce carbon emissions.

“But the idea that a carbon tax is a painless, efficient way to reduce hydrocarbons fails for three reasons.

“First, cost aside, it would take decades—probably a century—to restructure America’s energy ecosystem. That means a carbon tax would be effectively permanent. The financial and physical scale of the energy infrastructure is so enormous that changing it isn’t, to use the popular analogy, like changing the course of a supertanker, but of a ship 1,000 times as large as a supertanker. The U.S. has already spent hundreds of billions of dollars on green subsidies with piddly results. Wind and solar combined, the favored alternatives to hydrocarbons, provide a mere 3% of the country’s energy.

“Second, citizens eventually react when governments raise the cost of living. The raison d’être for a carbon tax is to use price to shift consumer behavior. Ask France’s President Emmanuel Macron how that’s going—and he was shooting for a mere 5% fuel-tax hike. Even a 50% levy wouldn’t be enough to drive hydrocarbon consumption downward; it would only slow the rate of growth.

“We know this because the market has done the experiment. In the decade before the 2008 recession, when global economies were booming, world-wide demand for oil increased even as prices rose 200%. Oil use dropped only when the economy collapsed. History shows technology yielding a long-run average price for oil around \$50 a barrel. Thus it would take something like a 300% tax to reduce consumption. A carbon tax of, say, 10%, even if it proved politically tolerable, would only slow growth immeasurably in hydrocarbon demand, thus failing in its central goal.

“Third, the U.S. uses such enormous quantities of hydrocarbons that even a small carbon tax would add hundreds of billions of dollars to government coffers, stimulating a rent-seeking land rush. We can already see how the battle over this cash gusher would shape up.

One compromise, offered by former Secretaries of State James Baker and George Shultz and their Climate Leadership Council, claims to ‘unlock the political viability,’ in the words of two council members, by surreptitiously renaming the tax a ‘fee.’ They would then redistribute the proceeds to the citizenry as a ‘carbon dividend’ to offset the pain of higher daily costs. But the fee wouldn’t reduce hydrocarbon use unless it were exorbitant.

The Baker-Shultz plan would ratchet up the fee should consumers fail to behave. So far so good for the green camp, but the ‘dividend’ hits a roadblock in not subsidizing nonhydrocarbons and, worse, proposing simultaneously to eliminate carbon regulations that ‘are no longer necessary’ or are ‘too intrusive.’ For Washington’s green lobbyists, those are fighting words.

The author discusses the politics and modest fees on hydrocarbons cannot make wind and solar provide reliable energy, then concludes with:

“For rent-seekers, this would all be good. For virtue-signalers, it would be sufficient. For green lobbyists, it would be progress. For cynics—well, what do they care? Everyone would benefit—except taxpayers. And since energy is essential to everything physical and economic flowing through society, a carbon tax would finally enable Congress to achieve nirvana, succinctly lampooned by President Reagan: If it moves, tax it.”

America’s Electric Grid Has a Vulnerable Back Door—and Russia Walked Through It
A Wall Street Journal reconstruction of the worst known hack into the nation’s power system reveals attacks on hundreds of small contractors

By Rebecca Smith and Rob Barry, WSJ, Jan 10, 2019

https://www.wsj.com/articles/americas-electric-grid-has-a-vulnerable-back-doorand-russia-walked-through-it-11547137112?mod=hp_lead_pos7

SUMMARY: The reporters begin with:

“One morning in March 2017, Mike Vitello’s work phone lighted up. Customers wanted to know about an odd email they had just received. What was the agreement he wanted signed? Where was the attachment?

“Mr. Vitello had no idea what they were talking about. The Oregon construction company where he works, All-Ways Excavating USA, checked it out. The email was bogus, they told Mr. Vitello’s contacts. Ignore it.

“Then, a few months later, the U.S. Department of Homeland Security dispatched a team to examine the company’s computers. You’ve been attacked, a government agent told Mr. Vitello’s colleague, Dawn Cox. Maybe by Russians. They were trying to hack into the power grid.

“‘They were intercepting my every email,’ Mr. Vitello says. ‘What the hell? I’m nobody.’

“‘It’s not you. It’s who you know,’ says Ms. Cox.

“The cyberattack on the 15-person company near Salem, Ore., which works with utilities and government agencies, was an early thrust in the worst known hack by a foreign government into the nation’s electric grid. It set off so many alarms that U.S. officials took the unusual step in early 2018 of publicly blaming the Russian government.

“A reconstruction of the hack reveals a glaring vulnerability at the heart of the country’s electric system. Rather than strike the utilities head on, the hackers went after the system’s unprotected underbelly—hundreds of contractors and subcontractors like All-Ways who had no reason to be on high alert against foreign agents. From these tiny footholds, the hackers worked their way up the supply chain. Some experts believe two dozen or more utilities ultimately were breached.

“The scheme’s success came less from its technical prowess—though the attackers did use some clever tactics—than in how it exploited trusted business relationships using impersonation and trickery.

“The hackers planted malware on sites of online publications frequently read by utility engineers. They sent out fake résumés with tainted attachments, pretending to be job seekers. Once they had computer-network credentials, they slipped through hidden portals used by utility technicians, in some cases getting into computer systems that monitor and control electricity flows.

The Wall Street Journal pieced together this account of how the attack unfolded through documents, computer records and interviews with people at the affected companies, current and former government officials and security-industry investigators.

“The U.S. government hasn’t named the utilities or other companies that were targeted. The Journal identified small businesses such as Commercial Contractors Inc., in Ridgefield, Wash., and Carlson Testing Inc., in Tigard, Ore., along with big utilities such as the federally owned Bonneville Power Administration and Berkshire Hathaway’s PacifiCorp. Two of the energy companies targeted build systems that supply emergency power to Army bases.

“The Russian campaign triggered an effort by the Federal Bureau of Investigation and Homeland Security to retrace the steps of the attackers and notify possible victims. Some companies were unaware they had been compromised until government investigators came calling, and others didn’t know they had been targeted until contacted by the Journal.

“‘What Russia has done is prepare the battlefield without pulling the trigger,’ says Robert P. Silvers, former assistant secretary for cyber policy at Homeland Security and now a law partner at Paul Hastings LLP.

“The press office at the Russian Embassy in Washington didn’t respond to multiple requests for comment. Russia has previously denied targeting critical infrastructure.”

The journalists discuss at length other examples of this hacking which is continuing, if not expanding.