

The Week That Was: 2019-01-05 (January 5, 2019)

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The Science and Environmental Policy Project

Quote of the Week: *“The formulation of a problem is often more essential than its solution, which may be merely a matter of mathematical or experimental skill. To raise new questions, new possibilities, to regard old problems from a new angle requires creative imagination and marks real advances in science.”* – Albert Einstein

Number of the Week: 10% Less v. 50% Less

THIS WEEK:

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

20, 40, and 60 Years: The greenhouse gas effect occurs in the bulk atmosphere. Greenhouse gases cannot cause surface warming if the atmosphere is not warming, and the rate of surface warming caused by greenhouse gases cannot be greater than the rate of atmospheric warming. Physicist Will Happer has estimated that if greenhouse gases are causing surface warming, the rate of atmospheric warming must be 20% greater than the rate of surface warming.

Much of what is called greenhouse gas theory, or carbon dioxide-caused (CO₂) warming, was devised in the 1970s when numerical modeling became popular with the advent of improved computers. The concepts advanced in reports, such as the 1979 Charney report, projected that the small amount of warming caused by increasing CO₂, as observed in laboratory experiments, would be greatly enhanced, amplified, by an increase in water vapor, the dominant greenhouse gas. This was speculation, because there were no comprehensive measurements of atmospheric temperature trends at the time.

In 1990, Roy Spencer and John Christy published a method of using data collected by satellites to estimate temperature trends for the entire atmosphere except for the extreme polar regions. The data begin in December 1978 and are verified by independent measurements using instruments on weather balloons and, subsequently, weather reanalysis data. When revealed, small errors in the initial calculations were promptly corrected. We now have 40 years of comprehensive global atmospheric temperature trends of the atmosphere, the most rigorous global temperature data existing.

Roy Spencer, John Christy, and the Earth System Science Center (ESSC) at the University of Alabama in Huntsville have reported their findings of atmospheric temperature trends since 1979. For the last 20 years, there has been no statistically significant warming of the atmosphere. For the last 40 years, atmospheric warming has been modest and not dangerous (0.13°C/decade, 0.23°F/decade). For the last 60 years, atmospheric temperature trends over the tropics taken by weather balloons (which 1970s climate thinking expected to warm greatly) has warmed one-half as much as climate models project. The disparity between models and observations is increasing.

It is past time for the UN Intergovernmental Panel on Climate Change (IPCC), the US Global Change Research Program (USGCRP) and other government entities to abandon the 1970s

concepts, built into their models. Their thinking is no more scientifically current than the 1970s thinking that the US is about to run out of oil and natural gas.

No doubt the UN perceives that by creating a fear of CO₂-caused dangerous warming, it will be receiving \$100 Billion in new money it can control, thus it will not be responsive to changing scientific knowledge. However, the USGCRP and US government entities are accountable to Congress and the American public. The USGCRP web site states:

“The U.S. Global Change Research Program (USGCRP) is a Federal program mandated by Congress to coordinate Federal research and investments in understanding the forces shaping the global environment, both human and natural, and their impacts on society.”

The refusal by this program to discuss natural causes of climate change, to inflate human causes, and to exaggerate global warming is inexcusable. John Christy has testified before Congress that the models are failing, yet the USGCRP continues to use them. The failure to adjust models to ongoing advances in knowledge, facts, is a manifestation of bureaucratic science at its worst, becoming incompetent by mental stagnation. Specific issues will be more fully discussed in future TWTWs. See links under Challenging the Orthodoxy and <https://www.globalchange.gov/about>

Formulating the Problem: As Einstein states in the “Quote of the Week,” formulating the problem can be critical to understanding it. The issue of greenhouse gas warming has been poorly formulated by government entities. They focus on surface temperatures.

We cannot hope to understand the extent to which CO₂ may be warming the earth by examining surface temperatures. These temperatures vary naturally by the movement of two fluids (the oceans and the atmosphere) against each other and irregular land masses (above and below the seas). These fluids are placed into chaotic motion by uneven heating from a varying sun, as the globe rotates and orbits the sun. Claiming that CO₂ is the control knob of complex interactions is silly.

Understanding the changes in atmospheric temperatures is a necessary first step, but it is not sufficient. We have warming from increasing CO₂, which inhibits the cooling of the earth by slowing the flow of energy from the surface to space, we have warming from changing water vapor, the dominant greenhouse gas. A significant issue is how much of water vapor warming is natural as compared feedback from increased CO₂.

As can be seen from the atmospheric temperature trends, El Niños, which put a lot of water vapor into the atmosphere, can cause significant warming for months afterward, particularly in the Arctic. The summer highs in the Arctic are not increasing, but the temperatures during the winter and the shoulder months appear to be warming. This is probably from increasing water vapor, which can have a significant greenhouse gas effect, given that the Arctic is very cold and dry in the winter. To what extent is this increased water vapor caused by CO₂ warming?

For example, one of the issues that need to be sorted out is: does increasing CO₂ increase the frequency and intensity of El Niños, which have been observed from the 1500s and probably have been occurring for thousands of years. See links under Measurement Issues -- Atmosphere

Failing of NCA4: On her web site, Judith Curry reviews the Fourth National Climate Assessment (NCA4) by the USGCRP. Curry begins by countering a quote from NCA4:

“You can say I don’t believe in gravity. But if you step off the cliff you are going down. So we can say I don’t believe climate is changing, but it is based on science.” – Katherine Hayhoe, co-author of the 4th National Climate Assessment Report.

“So, should we have the same confidence in the findings of the recently published 4th (U.S.) National Climate Assessment (NCA4) as we do in gravity? How convincing is the NCA4?” – Judith Curry

TWTW would add that the report uses surface temperature data, which is about as valuable for finding the influence of CO2 as using calculations of earth’s gravity for gravity on the moon.

Curry goes on to write:

“I’ve just completed rereading Vol I of the NCA4. There is so much here of concern that it is difficult to know where to start. I have been very critical of the IPCC in the past (but I will certainly admit that the AR5 was a substantial improvement over the AR4). While the NCA4 shares some common problems with the IPCC AR5, the NCA4 makes the IPCC AR5 look like a relative paragon of rationality.

“Since the NCA4 is guiding the U.S. federal government in its decision making, not to mention local/state governments and businesses, it is important to point out the problems in the NCA4 Reports and the assessment process, with two objectives:

- *provide a more rational assessment of the confidence that should be placed in these findings*
- *provide motivation and a framework for doing a better job on the next assessment report.”*

In this, the first of several posts, Curry discusses the massive overconfidence in NCA4 (to TWTW it is arrogance from ignorance). Over confidence is a major problem in the global warming community. Curry concludes with:

“As a community, we need to do better — a LOT better. The IPCC actually reflects on these issues in terms of carefully considering uncertainty guidance and selection of a relatively diverse group of authors, although the core problems still remain. The NCA appears not to reflect on any of this, resulting in a document with poorly justified and overconfident conclusions.

“Climate change is a very serious issue — depending on your perspective, there will be much future loss and damage from either climate change itself or from the policies designed to prevent climate change. Not only do we need to think harder and more carefully about this, but we need to think better, with better ways justifying our arguments and assessing uncertainty, confidence and ignorance.

“Sub-personal biases are unavoidable, although as scientists we should work hard to be aware and try to overcome these biases. Multiple scientists with different perspectives can be a big help, but it doesn’t help if you assign a group of ‘pals’ to do the assessment. The issue of systemic bias introduced by institutional constraints and guidelines is of greatest concern.

“The task of synthesis and assessment is an important one, and it requires some different skills than a researcher pursuing a narrow research problem. First and foremost, the assessors need to do their homework and read tons of papers, consider multiple perspectives, understand sources of and reasons for disagreement, play ‘devil’s advocate’, and ask ‘how could we be wrong?’

“Instead, what we see in at least some of the sections of the NCA4 is bootstrapping on previous assessments and then inflating the confidence without justification.”

See links under Challenging the Orthodoxy

Changing Sahara: In his classic book, “Climate, History and the Modern World,” climate research pioneer H.H. Lamb wrote about the cooling and drying of the Sahara, and the need for more research on how climate change affected civilizations in the Indus Valley and China. It was important to understand how climate change can affect civilizations and cultures. Unfortunately, after he retired as the founder and first director of the Climatic Research Unit at the University of East Anglia, his successors became fixated on the influence of CO₂, rather than realizing that it plays a minor role in climate change.

In 2018, the International Union of Geological Sciences divided the Holocene, the current epoch beginning about 11,700 years ago, into three subsections: the Greenlandian (11,700 years ago to 8,300 years ago), Northgrippian (8,300 years ago to 4,200 years ago) and Meghalayan (4,200 years ago to the 1950). The International Union of Geological Sciences recognized that a cooling at the beginning of the Meghalayan severely affected cultures and civilizations at the time. This supports the findings of Lamb. Now, further research supports his work.

A new paper published by *Science Magazine* finds that the Sahara varied between a wet place, as Lamb showed for early in the Holocene, 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. Lamb suggested as much in his book.

The 2008 NIPCC report, “Nature, Not Human Activity, Rules the Climate,” edited by Fred Singer, presents data indicating that this variation may be due to changing solar activity as suggested in the Svensmark hypothesis. Cloudiness varies with changing galactic cosmic rays, which are moderated by the strength of the solar wind and solar magnetic field. The correlation between data from a cave in Oman, in the Intertropical Convergence Zone, and Oxygen-18 is exceptionally close over a period of over 3,000 years. (pp 11-13)

Further, the new study indicates that our species evolved during a period of significant climate change, and adaption is one of the characteristics of the human race. See links under Challenging the Orthodoxy – NIPCC, and Changing Climate

UK Electrical Costs: Writing in the Global Warming Policy Forum, John Constable expresses concern that electricity prices are increasing significantly in the UK without any significant increase in wholesale energy costs. The big increases in costs are from energy and climate policy. Constable writes:

Britain’s electricity suppliers are reported to be considering further increases in prices to consumers. Climate policies are largely responsible for such price increases, yet government is more than content to let private energy companies and their shareholders take the blame.

Intoxicated with subsidies, the electricity sector has hitherto colluded in this obfuscation of causes, but the introduction of the domestic electricity price cap may change this situation, encouraging energy suppliers and indeed all businesses, to name government as the guilty party.

The issue is similar to what was discussed in the December 15 TWTW, based on an article by Donn Dears and data from the US Energy Information Administration (EIA). From 2005 to 2017 US Electricity Net Generation went down by 0.5%. Yet in many states, electricity rates are going up significantly. This issue is government policies promoting wind and solar generation that is not needed and must be stabilized. In the US, the cost of stabilization falls on those providing transmission services and is paid by all.

It is becoming increasingly clear that wind and solar are unneeded, expensive forms of electricity generation – inferior goods. During times of war, producers of inferior goods are called war profiteers. Should promoters of wind and solar be called “green war profiteers”?

See December 15, 2018, TWTW and links under Questioning European Green

Sue the Government? Article # 2 is a review of ‘Judicial Fortitude’ by Peter Wallison. It gives an indication of how difficult it is to sue government agencies in federal court because the courts are biased toward the agencies. Facts are often irrelevant. See Article # 2.

Number of the Week: 10% Less v. 50% Less: Article # 1 from the Wall Street Journal, discusses how promoters overestimate returns from proposed oil and gas drilling operations. As the treasurer of one oil company said about projections of returns: ***‘It’s not a science,’ said Richard Robuck, the company’s treasurer. ‘It’s more of an art.’*** [Boldface added]

The article reported that a review of some 16,000 wells by 29 companies are producing 10% less oil and gas than forecasted.

Using established back-testing (hindcasting) methods, McKittrick and Christy found that over the 60-year record of weather balloon data from the tropics, the atmosphere has warmed some 50% less than the climate models predict. Yet, the USGCRP expects the public to believe its reports are based on physics when the models it uses overestimate atmospheric warming by 100%? See links under Challenging the Orthodoxy and Article #1.

NEWS YOU CAN USE:

Science: Is the Sun Rising?

Current Solar Cycle The 3rd Quietest In More Than 250 Years Of Observation

The sun in November 2018

By Frank Bosse and Prof. Fritz Vahrenholt, (Translated by P Gosselin), No Tricks Zone, Dec 26, 2018

<http://notrickszone.com/2018/12/26/current-solar-cycle-the-3rd-quietest-in-more-than-250-years-of-observation/>

Commentary: Is the Sun Rising?

92 New Papers (2018) Link Solar Forcing To Climate . . . Some Predict Solar-Induced Global Cooling By 2030!

By Kenneth Richard, No Tricks Zone, Dec 27, 2018

<http://notrickszone.com/2018/12/27/92-new-papers-link-solar-forcing-to-climate-some-predict-a-solar-induced-global-cooling-by-2030/>

Suppressing Scientific Inquiry

New doctrine threatens freedom of speech in universities

Bowing to fear of causing offence undermines fundamental principle of free enquiry

By William Reville, The Irish Times, Jan 2, 2018 [H/t GWPF]

<https://www.irishtimes.com/news/science/new-doctrine-threatens-freedom-of-speech-in-universities-1.3734531#.XC4uJuX5GG8>

Link to address: Free Speech and Universities

By Roger Scruton,

https://www.roger-scruton.com/images/Free_Speech_and_Universities_2.pdf

“A principal function of the university is to conduct rational enquiry in order to discover/create new knowledge. Rational enquiry is dependent on academic freedom, ie freedom of speech that allows full and free contest of ideas. Freedom of speech is so fundamental to rational argument that, if it is denied in a university, we no longer have a university.

“And, of course, inhibition of free enquiry would cripple science, most of which is carried out in universities.”

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/>

“The linear temperature trend of the global average lower tropospheric temperature anomalies from January 1979 through December 2018 remains at +0.13 C/decade.”

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>

National Climate Assessment: A crisis of epistemic overconfidence

By Judith Curry, Climate Etc. Jan 2, 2018

<https://judithcurry.com/2019/01/02/national-climate-assessment-a-crisis-of-epistemic-overconfidence/>

Chuck Todd Devotes an Hour to Attacking a Strawman

By Roy Spencer, His Blog, Jan 3, 2018

<http://www.drroyspencer.com/2019/01/chuck-todd-devotes-an-hour-to-attacking-a-strawman/>

“Significantly, it [warming of oceans] represents an imbalance in energy flows in and out of the climate system of only 1 part in 260. That’s less than 0.5%, and *climate science does not know any of the NATURAL flows of energy to that level of accuracy*. The tiny energy imbalance causing the warming is simply ASSUMED to be the fault of humans and not part of some natural cycle in the climate system. Climate models are adjusted in a rather *ad hoc* manner until their natural energy flows balance, then increasing CO2 from fossil fuels is used as the forcing (imposed energy imbalance) causing warming.

“That’s circular reasoning. Or, some might say, garbage in, garbage out.”

The Staggering Costs of Decreasing CO2 Emissions

By Alan Carlin, Carlin Economics and Science, Dec 28, 2018

<http://www.carlineconomics.com/archives/4738>

The overblown and misleading issue of global warming

By Anastasios Tsonis, The Washington Times, Jan 2, 2019 [H/t GWPF]

<https://www.washingtontimes.com/news/2019/jan/2/the-overblown-and-misleading-issue-of-global-warmi/>

“...we may form an opinion based on the existing scientific evidence in hand, current knowledge, possible theories and hypotheses. But we should be skeptical of claims that the science of a complicated and unpredictable system is settled.”

Defending the Orthodoxy

Claim: Indonesian Mountain Ranges are Responsible for the Current Ice Age

Guest essay by Eric Worrall, WUWT, Dec 29, 2018

<https://wattsupwiththat.com/2018/12/29/claim-indonesian-mountain-ranges-are-responsible-for-the-current-ice-age/>

Link to article in Science: Rise of carbon dioxide-absorbing mountains in tropics may set thermostat for global climate

By Paul Voosen, Science, Dec 28, 2018

<https://www.sciencemag.org/news/2018/12/rise-carbon-dioxide-absorbing-mountains-tropics-may-set-thermostat-global-climate>

Link to abstract: Plate Tectonic Driven Changes in Planetary weatherability as the Long-Term Control of Earth's Climate State

By Swanson-Hysell, Nicholas L., et al. GSA Annual Meeting, 2018

<https://gsa.confex.com/gsa/2018AM/webprogram/Paper317917.html>

[SEPP Comment: Assuming CO2 is the “control knob” of the earth's temperatures.]

Questioning the Orthodoxy

Are We Bored With Climate Change?

By Kalev Leetaru, real Clear Politics, Dec 21, 2018

https://www.realclearpolitics.com/articles/2018/12/21/are_we_bored_with_climate_change_138984.html

Climate Change -- Who Stands to Gain?

By Alexander G. Markovskiy, American Thinker, Jan 2, 2019

https://www.americanthinker.com/articles/2018/12/climate_change_who_stands_to_gain.html

Ice isn't melting in the Arctic and Antarctic, yet big insurance rate hikes on coastal properties loom for purported sea level rise

By Thomas Lifson, American Thinker, Dec 30, 2018

https://www.americanthinker.com/blog/2018/12/ice_isnt_melting_in_the_arctic_and_antarctic_yet_big_insurance_rate_hikes_on_coastal_properties_loom_for_purported_sea_level_rise_.html#ixz55bMax5cMb

Consensus? 500+ Scientific Papers Published In 2018 Support A Skeptical Position On Climate Alarm

By Kenneth Richard, No Tricks Zone, Jan 3, 2018

<http://notrickszone.com/2019/01/03/consensus-500-scientific-papers-published-in-2018-support-a-skeptical-position-on-climate-alarm/>

‘Meet The Press’ Preaches Climate Change

By Norman Rogers, American Thinker, Jan 1, 2019

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

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Climate Change and Socialism

By Donn Dears, Power For USA, Jan 4, 2019

<http://ddears.com/2019/01/04/climate-change-and-socialism/>

Climate Change: The Poetry of Dreams and the Prose of Reality

By Alexander G. Markovskiy, American Thinker, Dec 29, 2018

https://www.americanthinker.com/articles/2018/12/climate_change_the_poetry_of_dreams_and_the_prose_of_reality.html

After Paris!

The High Cost of Runaway Environmentalists

By Staff Writers, GWPF, From The Washington Times, Dec 24, 2018

<https://www.thegwpf.com/high-cost-runaway-environmentalists/>

Link to Report: The Road from Paris: China's Climate U-Turn

By Patricia Adams, Foreword by Harland Watson, GWPF, Dec 2018

<https://www.thegwpf.org/content/uploads/2018/12/China-U-Turn.pdf>

Turning over a new green leaf

Editorial, The Washington Times, Dec 18, 2018

<https://www.washingtontimes.com/news/2018/dec/18/editorial-the-high-cost-of-runaway-environmentalists/>

The UN Loss and Damage Scam Made Major Progress at Katowice without US Opposition

By Alan Carlin, Carlin Economics and Science, Dec 22, 2018

<http://www.carlineconomics.com/archives/4725>

German Commentary: The UN's Never-Ending String Of Failed Climate Conference Junkets

The senselessness of climate conferences

By Dr. Dietrich E. Koelle (German text translated/edited by P Gosselin), No Tricks Zone, Dec 22, 2018

<http://notrickszone.com/2018/12/22/german-commentary-the-uns-never-ending-string-of-failed-climate-conference-junkets/>

Climate Doom Ahead? Think Twice.

By Charles N. Steele, Real Clear Energy, Dec 26, 2018

https://www.realclearenergy.org/articles/2018/12/26/climate_doom_ahead_think_twice_110377.html

COP 24: Good news — The big moves failed at the UN climate summit

By David Wojick, CFACT, Dec 31, 2018

<http://www.cfact.org/2018/12/31/cop-24-good-news-the-big-moves-failed-at-the-un-climate-summit/>

Sorry BBC. The world isn't interested in the West's groupthink obsession with global warming

By Christopher Booker, The Telegraph, Via GWPF, UK, Dec 23, 2018

<https://www.thegwpf.com/sorry-bbc-the-world-isnt-interested-in-groupthink-obsession-with-global-warming/>

“The BBC may comfort itself with its make-believe that the rules are ‘key to the game’. But the real lesson of Katowice is that in reality the whole game is well and truly over. It’s time we all woke up to that fact.”

Change in US Administrations

Trump’s New Science Adviser Wants ‘All Points Of View’ On Climate Change

By Justin Wingerter, Climate Change Dispatch, Jan 3, 2019

<https://climatechangedispatch.com/trump-science-advisor-confirmed/>

Government Shutdown's Latest Victim: a Global Weather Conference

By Brian Sullivan, Bloomberg, Dec 28, 2018 [H/t WUWT]

<https://www.bloomberg.com/news/articles/2018-12-28/government-shutdown-s-latest-victim-a-global-weather-conference>

“The impact will be large, for all of us, if the partial shutdown prohibits the government folks from attending the meeting,’ Seitter said.” [Executive director of AMS]

[SEPP Comment: *There is nothing preventing government employees from attending on their own time, it is a matter who pays for it.*]

Problems in the Orthodoxy

EU Faces Time Crunch To Agree New CO2 Limits For Cars And Trucks

By Dave Keating, Forbes, Dec 26, 2018

<https://www.forbes.com/sites/davekeating/2018/12/26/eu-ends-2018-with-new-co2-limits-for-cars-and-trucks/#5f5680a753d6>

Seeking a Common Ground

2018 → 2019

By Judith Curry, Climate Etc. Dec 31, 2018

<https://judithcurry.com/2018/12/31/2018-2019/#more-24591>

Review of Recent Scientific Articles by CO2 Science

The Interactive Effects of Temperature, Ammonium and Ocean Acidification on a Coastal Seagrass

Egea, L.G., Jiménez-Ramos, R., Vergara, J.J., Hernández, I. and Brun, F.G. 2018. Interactive effect of temperature, acidification and ammonium enrichment on the seagrass *Cymodocea nodosa*. *Marine Pollution Bulletin* 134: 14-26. Jan 4, 2019

<http://www.co2science.org/articles/V22/jan/a3.php>

Elevated CO2 and Weed Herbicide Effectiveness

Waryszak, P., Lenz, T.I., Leishman, M.R. and Downey, P.O. 2018. Herbicide effectiveness in controlling invasive plants under elevated CO2: Sufficient evidence to rethink weeds management. *Journal of Environmental Management* 226: 400-407. Jan 2, 2019

<http://www.co2science.org/articles/V22/jan/a1.php>

The Interactive Effects of Elevated CO2 and Drought on Cassava

Cruz, J.L., LeCain, D.R., Alves, A.A.C., Filho, M.A.C. and Coelho, E.F. 2018. Elevated CO2 reduces whole transpiration and substantially improves root production of cassava grown under water deficit. *Archives of Agronomy and Soil Science* 64: 1623-1634. Dec 31, 2018

<http://www.co2science.org/articles/V21/dec/a15.php>

Combined Effects of Elevated CO₂ and Salinity on a C₃ Halophyte

Pérez-Romero, J.A., Idaszkin, Y.L., Barcia-Piedras, J.-M., Duarte, B., Redondo-Gómez, S., Cacador, I. and Mateos-Naranjo, E. 2018. Disentangling the effect of atmospheric CO₂ enrichment on the halophyte *Salicornia ramosissima* J. Woods physiological performance under optimal and suboptimal saline conditions. *Plant Physiology and Biochemistry* 127: 617-629. Dec 28, 2018

<http://www.co2science.org/articles/V21/dec/a14.php>

Ocean Acidification and Valve Gaping Behavior of Adult Eastern Oysters

Clements, J.C., Comeau, L.A., Carver, C.E., Mayrand, E., Plante, S. and Mallet, A.L. 2018. Short-term exposure to elevated pCO₂ does not affect the valve gaping response of adult eastern oysters, *Crassostrea virginica*, to acute heat shock under an *ad libitum* feeding regime. *Journal of Experimental Marine Biology and Ecology* 506: 9-17. Dec 27, 2018

<http://www.co2science.org/articles/V21/dec/a13.php>

Models v. Observations

New Science: A Main Tenet Of Anthropogenic Global Warming Has Been Falsified By Observations

By Kenneth Richard, No Tricks Zone, Dec 31, 2018

<http://notrickszone.com/2018/12/31/new-science-a-main-tenet-of-anthropogenic-global-warming-has-been-falsified-by-observations/>

“Climate models postulate that increasing CO₂ concentrations will intensify the Earth’s water cycle. This intensification is believed to eventually result in dangerous (3°C and up) global warming. Observational evidence has thus far falsified these IPCC-endorsed claims.”

Measurement Issues -- Surface

Tale Of Two Stations...Striking Contrast: Urban Tokyo Warms Strongly While Rural Island Station Shows No Warming

By Kirye in Tokyo, No Tricks Zone, Jan 1, 2019

<http://notrickszone.com/2019/01/01/tale-of-two-stations-striking-contrast-urban-tokyo-warms-strongly-while-rural-island-station-shows-no-warming/>

[SEPP Comment: Illustrating the problem of using surface land stations to extrapolate to other parts of the surface, including the oceans and polar regions.]

Reconstructing a dataset of observed global temperatures 1950-2016 from human and natural influences

By Frank Bosse, Climate Etc. Jan 3, 2019

<https://judithcurry.com/2019/01/03/reconstructing-a-dataset-of-observed-global-temperatures-1950-2016-from-human-and-natural-influences/#more-24605>

“A demonstration that multidecadal variation since 1950 leads to overestimation of the Transient Climate Response (TCR).”

Measurement Issues -- Atmosphere

UAH Global Temperature Update For Dec 2018

By Paul Homewood, Not a Lot of People Know That, Jan 4, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/03/uah-global-temperature-update-for-dec-2018/>

[SEPP Comment: Has a bar graph of the data, 1998 to 2018.]

2018 Global Temps Drop for Third Year In a Row

By Staff Writers, GWPF, from UAH Temperatures, Jan 3, 2018

<https://www.thegwpf.com/2018-global-temps-drop-for-third-year-in-a-row/>

Changing Weather

2018 will be first year with no violent tornadoes in U.S.

By Ian Livingston, Washington Post, AP, Dec 27, 2018 [H/t GWPF]

<https://www.concordmonitor.com/2018-will-be-the-first-year-with-no-violent-tornadoes-in-the-United-States-22408722>

Tornadoes Have Not Cooperated With Climate Alarmists in 2018

By James Murphy, New American, Dec 29, 2018 [H/t GWPF]

<https://www.thenewamerican.com/tech/environment/item/31048-tornadoes-have-not-cooperated-with-climate-alarmists-in-2018>

UK Climate Trends – 2018

By Paul Homewood, Not a Lot of People Know That, Jan 4, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/04/uk-climate-trends-2018/>

“It should be apparent from both the temperature and rainfall datasets that British climate is changing much less than we are led to believe.”

Another Beast From The East?

By Paul Homewood, Not a Lot of People Know That, Jan 4, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/04/another-beast-from-the-east/>

Forget El Nino, StormFest is about to Hit the West Coast

By Cliff Mass, Weather and Climate Blog, Jan 3, 2019

<http://cliffmass.blogspot.com/2019/01/forget-el-nino-stormfest-is-about-to.html>

Changing Climate

A “pacemaker” for North African climate

Study shows the Sahara swung between lush and desert conditions every 20,000 years, in sync with monsoon activity.

By Jennifer Chu, MIT News Office, Jan 2, 2018 [H/t GWPF]

<http://news.mit.edu/2019/study-regulating-north-african-climate-0102>

Link to paper: Monsoon-driven Saharan dust variability over the past 240,000 years

By C. Skonieczny, et al. Science Advances, Jan 2, 2019

<http://advances.sciencemag.org/content/5/1/eaav1887>

Sea levels, atmospheric pressure and land temperature during glacial maxima

By Alan Cannell, Climate Etc. Jan 4, 2019

<https://judithcurry.com/2019/01/04/sea-levels-atmospheric-pressure-and-land-temperature-during-glacial-maxima/>

The Discovery Of Tree Trunks Under Glaciers 600 Meters Atop Today’s Treeline Date To The Last ICE AGE

By Kenneth Richard, No Tricks Zone, Dec 24, 2018

<http://notrickszone.com/2018/12/24/the-discovery-of-tree-stumps-under-glaciers-600-meters-atop-todays-treeline-date-to-the-last-ice-age/>

Changing Seas

Coral Reefs Can Take the Heat, Unlike Experts Crying Wolf

By Peter Ridd, The Australian, Via GWPF, Dec 26, 2018

<https://www.thegwpf.com/coral-reefs-can-take-the-heat-unlike-experts-crying-wolf/>

Climatologist counters climate-disaster predictions with sea-level report

By Valerie Richardson, The Washington Time, Dec 27, 2018

<https://www.washingtontimes.com/news/2018/dec/27/judith-curry-sea-level-study-disputes-climate-disa/>

Link to report: Sea Level and Climate Change

By Judith Curry, Climate forecast Applications Network, Nov 25, 2018

<https://curryja.files.wordpress.com/2018/11/special-report-sea-level-rise3.pdf>

Changing Cryosphere – Land / Sea Ice

National Geographic 1967 : Solar Activity Controls Glaciers [in Alaska]

By Tony Heller, The Deplorable Climate Science Blog, Jan 4, 2019

<https://realclimatescience.com/2019/01/national-geographic-1967-solar-activity-controls-glaciers/>

Arctic Ice Volume Shames Climate Experts ...Antarctic Stations Show Cooling, Not Warming

By Kirye in Tokyo, No Tricks Zone, Dec 28, 2018

<http://notrickszone.com/2018/12/28/arctic-ice-volume-shames-climate-experts-antarctic-stations-show-cooling-not-warming/>

[SEPP Comment: Whipped around by winds and storms, even in the summer, the extent of sea ice is a poor indicator of carbon dioxide-caused “global warming.”]

Why all you've been told about these polar bears could be WRONG: Animals driven to the edge of their natural habitat by shrinking ice have become one of the defining images of climate change, but Inuits who know the predators have a very different story

By David Rose, Daily Mail, UK, Dec 30, 2018

<https://www.dailymail.co.uk/news/article-6539067/Why-youve-told-polar-bears-WRONG-Inuits-different-story.html>

Heads up Newfoundland & Labrador: polar bear season has begun

By Susan Crockford, Polar Bear Science, Jan 2, 2018

<https://polarbearscience.com/2019/01/02/heads-up-newfoundland-labrador-polar-bear-season-has-begun/>

Derocher admits Western Hudson Bay polar bear population may not be declining

By Susan Crockford, Polar Bear Science, Dec 30, 2018

<https://polarbearscience.com/2018/12/30/derocher-admits-western-hudson-bay-polar-bear-population-may-not-be-declining/#more-119576>

Agriculture Issues & Fear of Famine

Scientists engineer shortcut for photosynthetic glitch, boost crop growth by 40 percent

By Staff Writers, University of Illinois at Urbana-Champaign, Phys.org, Jan 3, 2019

<https://phys.org/news/2019-01-scientists-shortcut-photosynthetic-glitch-boost.html>

Link to paper: Synthetic glycolate metabolism pathways stimulate crop growth and productivity in the field

By P.F. South, et al. Science, Jan 4, 2019

<http://science.sciencemag.org/content/363/6422/32>

Lowering Standards

Forget Marble Bar, Oodnadatta, doesn't the BOM know the hottest day ever was in Albany?

By Jo Nova, Her Blog, Jan 3, 2018

<http://joannenova.com.au/2019/01/forget-marble-bar-oodnadatta-doesnt-the-bom-know-the-hottest-day-ever-was-in-albany/>

BBC's Want To Change Our Lifestyles

By Paul Homewood, Not a Lot of People Know That, Jan 4, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/05/bbcs-want-to-change-our-lifestyles/>

BBC's Climate Activist Page

By Paul Homewood, Not A Lot Of People Know That, Dec 28, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/12/28/bbcs-climate-activist-page/>

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

More Tornadoes? Capital Weather Gang Plug Flawed NOAA Study

By Paul Homewood, Not a Lot of People Know That, Jan 1, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/01/more-tornadoes-capital-weather-gang-plug-flawed-noaa-study/#more-37025>

Communicating Better to the Public – Make things up.

Top 12 Debunked Climate Scares of 2018

By Staff Writers, GWPF, Dec 31, 2018

<https://www.thegwpf.com/top-12-debunked-climate-scares-of-2018/>

Tim Osborn Prefers Spin To Facts

By Paul Homewood, Not a Lot of People Know That, Jan 5, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/05/tim-osborn-prefers-spin-to-facts/>

“Tim Osborn, Director of the Climatic Research Unit...”

Communicating Better to the Public – Go Personal.

Climate Skeptics: The Despised Minority

Vilifying climate heretics remains socially acceptable.

By Donna Laframboise, Big Picture News, Jan 2, 2019

<https://nofrackingconsensus.com/2019/01/02/climate-skeptics-the-despised-minority/>

Communicating Better to the Public – Use Propaganda

ASA Uphold Complaint Against Good Energy

By Paul Homewood, Not a Lot of People Know That, Jan 2, 2019

<https://notalotofpeopleknowthat.wordpress.com/2019/01/02/asa-uphold-complaint-against-good-energy/>

“The Advertising Standards Authority have upheld another complaint against Good Energy:”

Narcissistic or delusional? Former BBC reporter admits he did biased reporting

By Jo Nova, Her Blog, Jan 5, 2019

<http://joannenova.com.au/2019/01/narcissistic-or-delusional-former-bbc-reporter-admits-he-did-biased-reporting/>

Link to article: Time for politicians to make 'stark choices' over climate change

MPs must show leadership on issues such as meat production and air travel, says Clive Lewis

By Clive Lewis, The Guardian, Jan 1, 2019

<https://www.theguardian.com/politics/2019/jan/01/time-for-politicians-to-make-stark-choices-over-climate-change>

“I was able to use bias in my reports by giving less time to one than the other. I reported on both but the angle and words and the language I used — I know the pictures I used — I was able to project my own particular political positions on things in a very subtle way.” [Quoted in 2017 UK from current shadow treasurer minister Clive Lewis.

[SEPP Comment: Using photos of steam from power plants darkened by lighting conditions or camera lenses is particularly effective propaganda.]

Spain to see exploitation end in all coal mines

By Renzo Pipoli, Energy Daily, Jan 1, 2019

http://www.energy-daily.com/reports/Spain_to_see_exploitation_end_in_all_coal_mines_999.html

“Coal exploitations is set to end in Spain on Monday, trailing the closure of Germany's last black coal mine a week earlier, as part of a European Union plan aimed at improving the environment.”

[SEPP Comment: “Coal exploitations!” How do humans abuse, mistreat, or corrupt coal?]

Communicating Better to the Public – Use Propaganda on Children

Ninth Circuit Finally Hands Trump a Big Win Against Youth’s Global Warming Lawsuit

By Michael Bastasch, Daily Caller, Jan 2, 2018

<https://dailycaller.com/2019/01/02/trump-global-warming-youth-lawsuit/>

“Ninth Circuit Appeals Judge Michelle Friedland claims in her four-page dissent the lower court only approved the Trump administration’s appeal is because it “felt compelled” to by the Supreme Court’s November opinion.

“We could then resolve any novel legal questions if and when they are presented to us after final judgment,” Friedlander wrote in her dissent, which argues the climate lawsuit should go to trial.

[SEPP Comment: After years of propaganda, the advocates want a trial, not hard evidence.]

Questioning European Green

Coming Clean About UK Electricity Prices

By John Constable, GWPF, Dec 31, 2018

<https://www.thegwpf.com/coming-clean-about-uk-electricity-prices/>

After the worst year ever for energy price rises, households are set to suffer more hikes in January

Big Six weren’t the only offenders - smaller suppliers singled out as culprits too

Some £840m added to people’s energy bills in 2018 - £74 each home

Energy companies are racing to get their price hikes in ahead of cap by Ofgem

By Angelique Ruzika, This is Money, UK, Dec 28, 2018

<https://www.thisismoney.co.uk/money/bills/article-6532731/Worst-year-energy-bill-price-hikes-come.html>

Dominic Lawson: Britain's 'War-on-Plastic' Fiasco

By Dominic Lawson, The Times, Via GWPF, Dec 30, 2018

<https://www.thegwpf.com/dominic-lawson-britains-war-on-plastic-fiasco/>

Questioning Green Elsewhere

Meet our newsmaker of the year: the polar bear

A climate change emblem becomes a symbol of bitter conflict

By Jim Bell, Nunatsiaq News, Jan 2, 2018 [H/t Susan Crockford]

<https://nunatsiaq.com/stories/article/meet-our-newsmaker-of-the-year-the-polar-bear/>

[SEPP Comment: In the far north, native conservationists disagree with big green backed by government.]

Alexandria Ocasio-Cortez's 'Green New Deal' is more dangerous than you think

By Justin Haskins, Washington Examiner, Jan 3, 2019 [H/t Cooler Heads]

<https://www.washingtonexaminer.com/opinion/alexandria-ocasio-cortezs-green-new-deal-is-more-dangerous-than-you-think>

Can wind and solar replace fossil fuels?

By Richard Patton, WUWT, Jan 1, 2018

<https://wattsupwiththat.com/2019/01/01/can-wind-and-solar-replace-fossil-fuels/>

Funding Issues

Let's do follow the climate money!

By Paul Driessen, CFACT, Dec 30, 2018

<http://www.cfact.org/2018/12/30/lets-do-follow-the-climate-money/>

Litigation Issues

Thruway Authority sues maker of wind turbines that don't work

By Charles the moderator, WUWT, Dec 29, 2018

<https://wattsupwiththat.com/2018/12/29/thruway-authority-sues-maker-of-wind-turbines-that-dont-work/>

Cap-and-Trade and Carbon Taxes

Carbon Taxes at the Barricades

By Adair Turner, Project Syndicate, Dec 27, 2018

<https://www.project-syndicate.org/commentary/carbon-taxes-after-french-yellow-vest-movement-by-adair-turner-2018-12>

[SEPP Comments: Raise fuel taxes when the oil prices drop. Maybe the public will not catch on?]

Energy Issues – Non-US

Limit on Fracking Tremors Will Stop Shale Gas Development Says INEOS

By Staff Writers, The Times, Via GWPF Dec 26, 2018

<https://www.thegwpf.com/limit-on-fracking-tremors-will-stop-shale-gas-development-says-ineos/>

[SEPP Comment: Should truck traffic be stopped anytime a big rig comes by?]

Energy Issues – Australia

New Report: Renewables indirectly make electricity MORE expensive, so ABC tells Australia the opposite

By Jo Nova, Her Blog, Dec 24, 2018

<http://joannenova.com.au/2018/12/new-report-renewables-indirectly-make-electricity-more-expensive-so-abc-tells-australia-the-opposite/>

Link to: Final Report: 2018 Residential Electricity Price Trends Review

By Staff Writers, Australian Energy Market Commission, Dec 21, 2018

<https://www.aemc.gov.au/sites/default/files/2018-12/2018%20Price%20Trends%20-%20Final%20Report%20-%20CLEAN.PDF>

More wind and solar than SA can use — we threw away 10% of the generation

By Jo Nova, Her Blog, Jan 2, 2019

<http://joannenova.com.au/2019/01/more-wind-and-solar-than-sa-can-use-we-threw-away-10-of-the-generation/>

Link to report: Quarterly Energy Dynamics, Q 3 2018

By Staff Writers, Markets, AEMO, 2018

https://www.aemo.com.au/-/media/Files/Media_Centre/2018/QED-Q3-2018.pdf

Energy Issues -- US

Building Unnecessary Power Plants

By Donn Dears, Power For USA, Dec 14, 2018

<http://ddears.com/2018/12/14/building-unnecessary-power-plants/>

US fossil fuel exports spur growth, climate worries

By Michael Biesecker and Kim Tong-Hyung, Houma Today, Louisiana, Jan 1, 2019

<https://www.houmatoday.com/news/20190101/us-fossil-fuel-exports-spur-growth-climate-worries>

Washington's Control of Energy

Here Are Trump's Largest 'Energy Dominance' Actions of 2018

By Tim Pearce, Daily Caller, Dec 31, 2018

<https://dailycaller.com/2018/12/31/donald-trump-energy-dominance-2018/>

Oil and Natural Gas – the Future or the Past?

Oil Has Plunged More Than 40% Since 4-Year High in October

By Staff Writers, Fortune, Dec 26, 2018 [H/t GWPF]

<http://fortune.com/2018/12/26/oil-prices-brent-futures/>

Return of King Coal?

PJM Delineates the Value of Coal in America

By Jude Clemente, Real Clear Energy, Dec 27, 2018

https://www.realclearenergy.org/articles/2018/12/27/pjm_delineates_the_value_of_coal_in_america.html

U.S. Coal Mining Reaches 16-Month High

By Jim Efstathiou Jr, Bloomberg, Dec 27, 2018

<https://www.bloomberg.com/news/articles/2018-12-27/gas-s-pain-is-coal-s-gain-as-u-s-mining-reaches-16-month-high>

Oil Spills, Gas Leaks & Consequences

American Pipeline Security Only Begins With the TSA

By Steven Titch, Real Clear Energy, Dec 26, 2018

https://www.realclearenergy.org/articles/2018/12/26/american_pipeline_security_only_begins_wit_h_the_tsa_110375.html

Nuclear Energy and Fears

Plant Vogtle: More Bad News (Georgia Power's philosophic fraud, imprudence)

By Jim Clarkson, Master Resource, Jan 3, 2019

<https://www.masterresource.org/georgia-power-plant-vogtle/vogtle-political-capitalism/>

“Bottom line: Georgia does not need the Vogtle capacity. The Company, the staff and the Commissioners all know this. The series of Vogtle hearings are just regulatory theater.”

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

‘Sustainable’ Fuels Unlikely to Replace Hydrocarbons for Air Travel

By Steve Goreham, Master Resource, Jan 2, 2018

<https://www.masterresource.org/goreham-steve/sustainable-fuels-aviation/>

California Dreaming

Wealth, Poverty, and Flight: The Same Old State of California

By Victor Davis Hanson, National Review, Jan 1, 2019

<https://www.nationalreview.com/2019/01/california-coastal-elites-poor-immigrants-fleeing-middle-class/>

Health, Energy, and Climate

10 Worst Bogus Health Stories of 2018

By Alex Berezow, ACSH, Dec 27, 2018

<https://www.acsh.org/news/2018/12/27/10-worst-bogus-health-stories-2018-13688>

Oh Mann!

Joe Romm: UAH Temperature Update (Sept. 2017 vs. December 2018)

By Robert Bradley Jr. Master Resource, Jan 4, 2019

<https://www.masterresource.org/romm-joseph-climate-progress/romm-uah-temperature-update/>

“The signal of global warming has become so dominant that even the deniers’ own favorite cherry-picked datasets clearly now show it,” climatologist Michael Mann told ThinkProgress.” [in 2017]

[SEPP Comment: Comprehensive atmospheric data is “cherry-picked” according to Mr. Mann?]

Environmental Industry

Scrapping On The Cheap: GREENPEACE Caught Dumping Decommissioned “Rainbow Warrior 2” On Bangladeshi Beach!

By P Gosselin, No Tricks Zone, Dec 30, 2018

<http://notrickszone.com/2018/12/30/scrapping-on-the-cheap-greenpeace-caught-dumping-decommissioned-rainbow-warrior-2-on-bangladeshi-beach/>

BELOW THE BOTTOM LINE:

Green Party Leader Tells National Audience: “Average German Emits 9 BILLION Tonnes Of CO2 Annually!”

By P Gosselin, No Tricks Zone, Dec 29, 2018

<http://notrickszone.com/2018/12/29/green-party-leader-tells-national-audience-average-german-emits-9-billion-tonnes-of-co2-annually/>

“That figure of course sounded quite scary. But there’s only one problem: Baerbock was just a little off, by a factor of 1 billion! The average German citizen of course emits only 9 tonnes per year.”

Dark Age looms!

By Staff Writers, Climate Change Predictions.org, Jan 4, 2019

<http://climatechangepredictions.org/uncategorized/6170>

“Imagine a future in which humanity’s accumulated wisdom about Earth — our vast experience with weather trends, fish spawning and migration patterns, plant pollination and much more — turns increasingly obsolete.

“As each decade passes, knowledge of Earth’s past becomes progressively less effective as a guide to the future. Civilization enters a dark age in its practical understanding of our planet.

“To comprehend how this could occur, picture yourself in our grandchildren’s time, a century hence. Significant global warming has occurred, as scientists predicted.

“Nature’s longstanding, repeatable patterns — relied on for millenniums by humanity to plan everything from infrastructure to agriculture — are no longer so reliable. Cycles that have been largely unwavering during modern human history are disrupted by substantial changes in temperature and precipitation. William B Gail, in New York Times, 19 Apr 2016”

All bad news

By Staff Writers, Climate Change Predictions.org, Jan 3, 2019

<http://climatechangepredictions.org/uncategorized/7430>

“As floods once again hit parts of the UK, experts warn the incidence of gales and floods could increase over the next 50 years, when they predict temperatures will rise by up to two degrees centigrade. Experts even warn that malaria could return to large parts of the UK.

“They say the climate change could cause an extra 5,000 deaths from skin cancer every year – and 2,000 from heatwaves. The report published on Friday, by the Expert Group on Climate Change on Health, predicts more intense summer heatwaves, and an increased risk of winter floods and severe gales. BBC News, 9 Feb 2001”

Geoffrey Chaucer, died 1400 spoke of ague (malaria). Will the UK see a return of the climate of his time?

Keep off the grass!

By Staff Writers, Climate Change Predictions.org, Dec 30, 2018

<http://climatechangepredictions.org/uncategorized/6507>

“In Australia, where 11 million cattle range in Queensland alone, this call for livestock reform has been a whisper on the edges of the greenhouse debate. I became interested after reading a letter by animal rights activist Geoff Russell to climate-change campaigner Tim Flannery.

“In his letter, Russell quotes climate scientist James Hansen, who says meat reduction is the second-most important thing one can do to combat climate change (the most important is to elect a government committed to action). Russell then quotes the CSIRO, who ‘have tested Australian cattle on grass and grain – those on grass produce about three times more methane’.

“Could this be true? Could a fat corn-fed cow be better for the environment than one allowed to range over grass? Sydney Morning Herald, 17 Feb 2009”

1. Fracking's Secret Problem—Oil Wells Aren't Producing as Much as Forecast

Data analysis reveals thousands of locations are yielding less than their owners projected to investors; 'illusory picture' of prospects

By Bradley Olson, Rebecca Elliott and Christopher M. Matthews, WSJ, Jan 2, 2019

<https://www.wsj.com/articles/frackings-secret-problemoil-wells-arent-producing-as-much-as-forecast-11546450162>

SUMMARY: In criticizing the promotion of oil and gas wells the reporters state:

Thousands of shale wells drilled in the last five years are pumping less oil and gas than their owners forecast to investors, raising questions about the strength and profitability of the fracking boom that turned the U.S. into an oil superpower.

The Wall Street Journal compared the well-productivity estimates that top shale-oil companies gave investors to projections from third parties about how much oil and gas the wells are now on track to pump over their lives, based on public data of how they have performed to date.

Two-thirds of projections made by the fracking companies between 2014 and 2017 in America's four hottest drilling regions appear to have been overly optimistic, according to the analysis of some 16,000 wells operated by 29 of the biggest producers in oil basins in Texas and North Dakota.

Collectively, the companies that made projections are on track to pump nearly 10% less oil and gas than they forecast for those areas, according to the analysis of data from Rystad Energy AS, an energy consulting firm. That is the equivalent of almost one billion barrels of oil and gas over 30 years, worth more than \$30 billion at current prices. Some companies are off track by more than 50% in certain regions.

The shale boom has lifted U.S. output to an all-time high of 11.5 million barrels a day, shaking up the geopolitical balance by putting U.S. production on par with Saudi Arabia and Russia. The Journal's findings suggest current production levels may be hard to sustain without greater spending because operators will have to drill more wells to meet growth targets. Yet shale drillers, most of whom have yet to consistently make money, are under pressure to cut spending in the face of a 40% crude-oil price decline since October.

Companies whose wells appear to lag behind forecasts, according to the analysis, include Pioneer Natural Resources Co. and Parsley Energy Inc., two of the biggest oil and gas producers in the Permian Basin of West Texas and New Mexico. The Journal's review didn't include some leading producers, such as Exxon Mobil Corp., because they didn't make shale-well projections.

Pioneer, Parsley and several other companies disputed the findings, saying the third-party estimates used by the Journal differ from their forecasts on key points such as the likely lifespan of shale wells.

After discussing what would be a proper metric, standard of measurement, state:

"The production forecasts made by many companies were 'dangerous' because they were based on a small population of wells, and the performance of individual wells varies significantly, said Norman MacDonald, a natural-resource specialist at asset manager Invesco Ltd.

“Companies were able to high-grade the numbers, show those to Wall Street, and the stock price went up accordingly,” said Mr. MacDonald, a portfolio manager who has urged shale companies to prioritize profits over production growth. ‘Geology doesn’t line up with Excel spreadsheets too well, unfortunately.’

Pioneer, Parsley and several other companies disputed the findings, saying the third-party estimates used by the Journal differ from their forecasts on key points such as the likely lifespan of shale wells.

Some companies, including major North Dakota producer Whiting Petroleum Corp. acknowledged the forecasts can be unreliable and said they were moving away from providing such estimates.

*“Another North Dakota driller, Oasis Petroleum Inc., said the projections it provided in investor presentations were estimates made as it tested drilling in vast tracts, including areas it has since abandoned. **‘It’s not a science,’** said Richard Robuck, the company’s treasurer. **‘It’s more of an art.’** [Boldface added]*

2. ‘Judicial Fortitude’ Review: Time for Congress to Do Its Job

Imagine a world where the legislative branch actually legislates, courts interpret laws and executive agencies faithfully execute them. Yuval Levin reviews ‘Judicial Fortitude’ by Peter J. Wallison.

By Yuval Levin, WSJ, Jan 2, 2019

<https://www.wsj.com/articles/judicial-fortitude-review-time-for-congress-to-do-its-job-11546473182>

SUMMARY: In reviewing “Judicial Fortitude” the editor of National Affairs states:

“The American constitutional system is out of order. The basic shape of its dysfunction has been clear for decades, though its causes may seem obscure. At the core of the problem is the emergence, over the course of a century, of a fourth branch of government neither conceived by nor desired by the framers of the Constitution: a network of administrative agencies that combine legislative, executive and judicial powers and therefore threaten the integrity of the constitutional framework and the basic rights of the American people. This fourth branch was the brainchild of the early progressives and has generally advanced the agenda of the left, so conservatives have long been wary of it.

“But conservatives often misdiagnose the process by which the administrative state has arisen. We emphasize the hyperactivity of the executive and judicial branches, and these are certainly part of the problem. But hiding in plain sight is a deeper cause: the willful underactivity of the legislative branch. In an effort to avoid hard choices and shirk responsibility, Congress enacts vague statutes that express broad goals, empower executive agencies to fill in the practical details, and leave courts to clean up the ensuing mess. The result can look like executive overreach and judicial activism, but the root of the problem is legislative dereliction.

“To see that, however, is not yet to propose a solution. Congress is derelict because its members choose to be, so what can constitutionalist reformers do about it? Peter Wallison, a conservative legal scholar and senior fellow at the American Enterprise Institute, has stepped forward with a

persuasive answer, and at just the right time. His book ‘Judicial Fortitude’ argues that the dereliction of Congress is enabled by the failure of the courts to enforce the separation of powers, and so to insist that only Congress can make laws.

“Deference to the elected branches (and therefore to the will of the people) can be a judicial virtue. But in setting out the purpose of the courts, in Federalist 78, Alexander Hamilton argued that judges would also sometimes have to resist popular pressures that might deform the constitutional system. In the passage from which Mr. Wallison draws his title, Hamilton wrote that ‘it would require an uncommon portion of fortitude in the judges to do their duty as faithful guardians of the Constitution, where legislative invasions of it had been instigated by the major voice of the community.’ The particular crisis we now face can be hard to perceive because it takes the form of a delegation of legislative authority to administrative agencies. But it is no less a deformation of the system, because the courts acquiesce to this delegation.

“Mr. Wallison’s timely argument comes at the outset of what looks likely to be a period of conservative dominance of the federal courts—especially the Supreme Court. Yet conservatives have been divided over what originalist judges should prioritize. Should restraint be their watchword, so that courts allow public policy around disputed issues to be set by politicians answerable to voters? Or should originalist judges actively defend individual rights against encroachment by politicians who use public power to trample them?

“Mr. Wallison sidesteps that debate by insisting that a certain kind of judicial activism is actually a necessary precondition to judicial restraint and to any form of originalism: Judges must make sure that each branch of government does no more but also no less than the job the Constitution assigns it. ‘If Congress were permitted to delegate its exclusive legislative authority to the administrative agencies in the executive branch,’ he writes, ‘the separation of powers would be a nullity and the dangers to liberty envisioned by the Framers could become a reality.’ To avoid that, judges must insist that Congress engage in actual legislating by preventing it from handing over its power to regulatory agencies.

*“This would involve, in his telling, putting real teeth behind the doctrine of nondelegation, which the courts have sometimes articulated but never really enforced. And it would involve reversing a set of Supreme Court precedents—especially *Chevron v. Natural Resources Defense Council* (1984) and *Auer v. Robbins* (1997)—that require courts to defer to administrative-agency interpretations of statutes, even when those interpretations are dangerously vague and expansive. Rather than agencies deciding what laws mean in contested cases, Mr. Wallison insists, courts must decide, and in ways that compel Congress to pass statutes that are less vague and more prescriptive. In other words, Congress should actually legislate, courts should really interpret laws and executive agencies should faithfully execute them. Imagine that.*

*“Giving concrete form to this ‘nondelegation doctrine’ remains an implausible prospect—as Supreme Court majorities of every flavor over two centuries have failed to hand down such opinions. But curbing the deference to regulators granted by *Chevron* and *Auer* is not only imaginable but also downright likely given the Supreme Court’s new majority. In fact, the Court last month accepted for review a case that might open a path toward the reversal of *Auer* in 2019. *Kisor v. Wilkie* involves an obscure question about Veterans Affairs disability benefits, but the Court has clearly taken it up to reconsider the wisdom of *Auer*; and Mr. Wallison’s argument would strongly encourage the justices to take back the role of the courts as interpreters of law in a way that could move Congress to also reclaim its own proper role.*

“‘Judicial Fortitude’ is a wise, important and accessible manual for the badly needed revival of our constitutional system. The challenge Mr. Wallison describes is immense, but the appeal of his project is that it offers protections against both an overactive and an underactive Court. It sets out not policy goals but constitutional ones. It would respond to congressional dereliction not by having the Court take up an agenda Congress won’t advance but by pursuing the restoration of our constitutional architecture: Mr. Wallison offers up judicial fortitude as a way to recovering meaningful legislative responsibility.”