

The Week That Was: 2017-12-02 (December 2, 2017)
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The Science and Environmental Policy Project

Quote of the Week. *"Everyone takes the limits of his own vision for the limits of the world"* – Arthur Schopenhauer

Number of the Week: 1.3 Trillion barrels and 2 quadrillion cubic feet

THIS WEEK:

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

SEASON'S GREETINGS

Dear Reader of The Week That Was,

The Science & Environmental Policy Project (SEPP) is a 501-c-3 organization, incorporated in Virginia. Its Federal I.D. Number is 54-1645372 and donations are US tax deductible. Established in 1990 by S. Fred Singer to challenge government environmental policies based on poor science, SEPP does not receive support from industry or government. SEPP solicits support only from private individuals and occasionally receives small contributions from foundations.

Therefore, we can honestly claim that we are not beholden to anyone and that our writings are clear from any outside influence.

SEPP is frugal: no fancy offices, no employees, no salaries, etc. The total operating budget is less than one-half of the compensation paid to a single executive in many environmental organizations.

Yet, we continue to be very productive.

In collaboration with like-minded groups, we produce hard-hitting comments for the record and provide scientific testimony on proposed Federal climate and energy policy. We are actively attempting to eliminate or change the EPA's endangerments finding, which lacks hard evidence supporting it.

In 2007, SEPP established NIPCC (Non-governmental International Panel on Climate Change) to respond to the false claims of the UN-IPCC (Intergovernmental Panel on Climate Change), and its followers, that use of fossil fuels, and CO₂ emissions, will lead to climate disasters.

All the NIPCC reports and their Summaries are available at www.NIPCCreport.org. In 2013, the Chinese Academy of Sciences translated and published a book based on two NIPCC reports and organized a Workshop in Beijing.

The Heartland Institute, the publisher, has organized well-attended sessions of the International Conference on Climate Change, featuring many of the 50+ NIPCC authors.

Dr. S. Fred Singer, our founder and chairman, announced plans to retire as Chairman of the Board. We are seeking a suitable replacement. Ken Haapala continues as president and oversees general operations.

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38.5 Years of Data: Using atmospheric data collected by satellites from January 1979 to June 2017, John Christy and Richard McNider of the Earth System Science Center at the University of Alabama in Huntsville (UAH) estimate the maximum effect increasing carbon dioxide (CO₂) may have on atmospheric temperatures – an upper bound of climate sensitivity to increasing CO₂. They do this by using widely accepted statistical techniques to eliminate the effects of two well established natural types of occurrences have on atmospheric temperatures – volcanoes and the El Niño Southern Oscillation (ENSO).

Early in the 38.5-year atmospheric temperature record several volcanoes erupted emitting small particles and liquids, aerosols, which have a cooling effect. The major volcanoes were El Chichón (Mexico, 1982-3) and Mt. Pinatubo (Philippines, 1991). With the eruption, the highest point of Mount Pinatubo went from 1,745 meters (5,725 feet) to 1,486 meters (4,875 feet). This was a loss of 259 meters (850 feet) in elevation. The volcano released an estimated 22 million tons of sulfur dioxide, which caused a haze of sulfuric acid to form world-wide.

By contrast, ENSO events have a warming effect and appear with greater frequency later in the record. No one has been able to establish a relationship between ENSO and increasing atmospheric CO₂. Frequent ENSOs were dismissed by the UN Intergovernmental Panel on Climate Change (IPCC) as a possible cause for global warming appearing in the temperature record, because they were considered weather events, not influencing climate.

The net effect of volcanoes in the early part of the record and ENSOs in the latter part of the record was a warming trend unrelated to carbon dioxide, which Christy and McNider tried to eliminate. In their efforts, Christy and McNider used four different sets of satellite data (two from UAH, and two from Remote Sensing Systems (RSS)) and five different sets of radiosonde data from weather balloons. In addition, to better understand global temperatures, rather than one single global number, they divided the globe from 82.5 degrees South to 82.5 degrees North into 66 latitude-bands of 2.5 degrees latitude each.

Their research indicates that the atmosphere is not as sensitive to greenhouse gas warming as claimed by the IPCC and its followers. This lack of response includes both types of warming claimed in the 1979 Charney Report published by the National Academy of Sciences – the direct effect of modest warming from CO₂ as established in laboratory experiments, and the indirect effect of greater warming from increased water vapor as speculated by climate modelers.

Further, the research indicates that the latest types of models used by the IPCC greatly overestimate the influence of CO₂, in general. Averaging the results of these models creates nothing more than a general overestimate.

Christy-McNider work does not eliminate other natural influences on atmospheric temperatures, such as changes in total solar energy hitting the earth. But if it stands, it does eliminate two natural influences that can be seen when one examines the complete satellite temperature record. This is an important advance towards estimating the influence of greenhouse gases on atmospheric temperatures, where the greenhouse effect occurs.

The authors calculate that the warming over the 38.5-year record, after the adjustments, averages 0.096K (C) per decade. [Even when averaged to decadal trends, the precision of these numbers may not be justified by the temperature measurements.]

Secondarily, the current work supports earlier work of Christy and McNider published in 1994 using only 15 years of satellite temperature data. The earlier work also showed that the atmosphere is not warming due to increasing greenhouse gases as speculated by the IPCC, and others. At that time, they calculated a warming averaging 0.09K (°C) per decade, closely matching the current research. Several commentators focused on the 23-year time difference in the studies, claiming there is no acceleration in warming. This is correct, but to TWTW the most important item is the 38.5-year response of the atmosphere to increasing CO₂, or the lack thereof. See links under Challenging the Orthodoxy.

The Disagreement: The UK Daily News published comments by some who objected to the Christy-McNider paper. Of course, one of the objections is the fact that when minor errors in the early record were pointed out, the record was adjusted accordingly. This is how science works. Apparently, those who continue to raise this objection are perfect in everything they do.

One commentator called the Asia-Pacific Journal of Atmospheric Science, sponsored by the Korean Meteorological Service, a third-rate journal. If there is anything third-rate, it is the western journals that refuse to publish competent research that questions the official “party-line” of the IPCC, and other government entities, that claim carbon dioxide emissions are a dire threat to humanity.

In the article, the silliest comments came from “*Pieter Tans, lead scientist of NOAA's Global Greenhouse Gas Reference Network*” who reportedly said, “*that satellite observations, while good at measuring large temperature differences in the context of weather forecasts, are ‘not reliable for small decadal trends.’ ... ‘Bottom line,’ Tans wrote in an email to Dailymail.com, ‘do not trust satellite records for long term temperature trends.’*”

“*‘The relatively large spread of modeling predictions has zero impact on the conclusion, based on solid observations and established understanding of physics and chemistry that climate change is caused by human actions and that we are just seeing the beginnings of it,’ Tans told Dailymail.com.*”

“*‘The models will improve as we are able to test them with future observations of how climate change is actually unfolding in the next decades and centuries.’*”

Mr. Tans is identified as being in the carbon cycle and greenhouse gas group of the Global Monitoring Division, the Earth System Research Laboratory of NOAA, in Boulder Colorado. Perhaps he spoke before he understood a few points: 1) the greenhouse gas effect occurs in the atmosphere; 2) the research covered the entire atmospheric temperature record to June 2017; 3) coverage by the surface temperature data is poor; 4) the “established understanding of physics and chemistry” is the key issue; 5) if models cannot predict short-term trends, there is no logical reason to assume they can predict long-term trends and 6) if the models are based on “established understanding of physics and chemistry”, there are real problems with that understanding.

According its web site, the vision of the Global Monitoring Division is: *“A society that has access to and uses the best possible information on atmospheric constituents that drive climate change, stratospheric ozone depletion and baseline air quality.”*

Paul Homewood has other comments on the article in the Daily Mail. See links under Defending the Orthodoxy, which Homewood challenges.

Surface Temperature Data: In another post, Paul Homewood presents data on surface temperatures showing how poor the coverage is, especially before 1950. Yet, the IPCC and US government entities such as NOAA, NASA-GISS continue to use this spotty data to claim the dangers of CO2 emissions. Homewood links to a paper by Matthew Menne, published in 2012 by the American Meteorological Society

As one can observe from the various global graphs on covering stations, much of the world is not covered prior to 1950, and the coverage is spotty even in 2010. In a graph showing a time series of the number of stations with maximum and minimum temperature, precipitation, snowfall, and snow depth, we see that prior to 1940, there was very few stations outside of North America reported maximum and minimum temperatures. Even in 2010, only about 25% of these stations were outside of North America. This is just one of many reasons why TWTW is not impressed by surface temperature records.

In the first of several posts on a CATO blog, Patrick Michaels and Ryan Maue advocate using a surface temperature record, which they consider is superior to all other surface temperature records – the JRA-55 dataset. It is from the Japan Meteorological Office and the term refers to a 55-year “reanalysis” of data.

Michaels and Maue describe some of the problems with the surface data, including the data from Berkeley Earth. They briefly explain that the JRA-55 dataset is obtained using electronic thermometers calibrated twice a day, when weather balloons are released, globally. Such a procedure avoids many of the problems associated with surface measurements. Interestingly, prior to the 2015-16 El Niño, the JRA-55 data indicated an average 0.10 degrees C per decade, similar to that calculated by Christy and McNider.

The future posts on this dataset should be interesting. See links under Measurement Issues – Surface.

A Veneer of Certainty: Rupert Darwall wrote an essay on the “settled science” titled “A Veneer of Certainty Stoking Climate Alarm.” It focuses on the transcript of a 2014 climate workshop held by the American Physical Society and chaired by Steve Koonin. It included three climate scientists who support the climate change orthodoxy and three climate scientists who do not—all

of whom were questioned by a panel of physicists. Judith Curry participated in the workshop, and wrote the foreword to Darwall's essay. She regards Darwall's essay an elegant argument in support of a climate red team / blue team assessment. Darwall writes:

"EPA Administrator Scott Pruitt's proposal for red/blue team assessment is a logical progression from the workshop. The hostile reaction it elicited from leading consensus advocates strongly suggests that they fear debate. Climate scientists whose mission is to advance scientific understanding have nothing to fear and much to gain. Those who seek to use climate science as a policy battering ram have good reason to feel uncomfortable at the prospect. The biggest winner from a red/blue team assessment will be the public. If people are to buy into policies that will drastically alter their way of life, they should be fully informed of the consequences and justifications. To do otherwise would represent a subversion of democracy."

Reflecting on the workshop, in a post on Climate Etc. Curry writes:

"The thing that really clicked in my brain was this statement by Bill Collins:

We understand a lot of the physics in its basic form. We don't understand the emergent behavior that results from it. [Boldface in the original.]

Collins was a lead author on the Fourth and Fifth Assessment Reports of the IPCC. That sentence may summarize the entire issue, how is the atmosphere responding to increased CO₂? As discussed above, it is not warming as modelers claimed. See links under Challenging the Orthodoxy.

Tale of Two Journals: Since a UK member of the climate establishment attempted to smear the Asia-Pacific Journal of Atmospheric Science, sponsored by the Korean Meteorological Service, for publishing the work of Christy and McNider, it is timely to comment on an article defending the climate establishment published in BioScience, a publication of Oxford Academic. That article attempts to justify the listing of polar bears as "threatened" under the US Endangered Species Act. The listing was based on poorly tested models on what will happen to polar bears if the Arctic undergoes significant summer ice melt.

The BioScience article is little more than an attack on Susan Crockford, who has written extensively that the polar bears are thriving, despite recent years of significant summer ice melt. They fatten up in the late winter and spring, not in the summer, and have been doing so for hundreds of thousands of years. This period includes the last interglacial, when sea levels were higher than today, and the Arctic may have been considerably warmer, with less ice.

Saving the polar bear has been a strong money-raising icon of the World Wildlife Fund. In a post on *Fabius Maximus*, Larry Kummer demolishes the arguments by the climate establishment. See links under Defending the Orthodoxy and Questioning the Orthodoxy.

Number of the Week: 1.3 Trillion barrels and 2 quadrillion cubic feet: Writing in the Washington Times, economist and statistician Kevin Dayaratna states that the Institute for Energy Research estimates that the US has 1.3 trillion barrels of recoverable shale oil and more than 2 quadrillion cubic feet of natural gas. The exact numbers are not that important, but the extent is very important. (The 2017 BP Statistical Review put proven world oil reserves at about 1.7 trillion barrels.)

In the 1970s, using “state-of-the-art” computer models, in the “Limits of Growth”, the Club of Rome claimed that the world would run out of oil and other resources about the end of the 20th century. What subsequently became the Department of Energy created “state-of-the-art” computer models forecasting that the US would run out of natural gas and oil about the same time.

[Prior to about 1984, few people realized that computer models can be subject to the mathematics of "Chaos," and the predictions diverge when carried forward many years -- all due to tiny numerical differences in the initial conditions.]

Unfortunately, President Carter believed these forecasts, and US government policy was based on these false beliefs. The models included assumptions that lacked rigorous testing.

These mistakes exemplify why government policies should not be based on models that lack rigorous testing – testing which the IPCC models have never undergone.

NEWS YOU CAN USE:

Climategate Continued

US East Coast Sea Level Rise: An Adjustocene Hockey Stick

By Steve McIntyre, Climate Audit, Nov 25, 2017

<https://climateaudit.org/2017/11/25/us-east-coast-sea-level-rise-an-adjustocene-hockey-stick/>

[SEPP Comment: The word "adjustocene" seems to be a neologism coined by McIntyre.]

Challenging the Orthodoxy -- NIPCC

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

Challenging the Orthodoxy

Study: no acceleration in global warming, climate sensitivity to CO2 too high

By Anthony Watts, WUWT, Nov 29, 2017

<https://wattsupwiththat.com/2017/11/29/study-no-acceleration-in-global-warming-climate-sensitivity-to-co2-too-high/>

Link to Paper: Satellite Bulk Tropospheric Temperatures as a Metric for Climate Sensitivity

By John Christy and Richard McNider, Asia-Pacific Journal of Atmospheric Science, sponsored by the Korean Meteorological Service, Nov 30, 2018

<https://link.springer.com/article/10.1007/s13143-017-0070-z>

Another Global Warming Study Casts Doubt On Media's Climate Change Fairy Tale

Editorial, IBD, Dec 2017

<https://www.investors.com/politics/editorials/another-global-warming-study-casts-doubt-on-medias-climate-change-fairy-tale/>

STUDY: Satellites Show No Acceleration In Global Warming For 23 Years

By Michael Bastasch, Daily Caller, Nov 29, 2017

<http://dailycaller.com/2017/11/29/study-satellites-show-no-acceleration-in-global-warming-for-23-years/>

A Veneer of Certainty Stoking Climate Alarm

In Private, Climate Scientists Are Much less Certain than They Tell the Public

By Rupert Darwall, CEI, Nov 27, 2017

<https://cei.org/content/stoking-climate-action>

Link to full paper:

Foreword by Judith Curry, President of the Climate Forecast Applications Network and former Professor and Chair of the School of Earth and Atmospheric Sciences at the Georgia Institute of Technology

<https://cei.org/sites/default/files/Rupert%20Darwall%20-%20A%20Veneer%20of%20Certainty%20Stoking%20Climate%20Alarm.pdf>

A veneer of certainty stoking climate alarm

By Judith Curry, Climate Etc. Nov 29, 2017

<https://judithcurry.com/2017/11/29/a-veneer-of-certainty-stoking-climate-alarm/>

New Study Highlights Climate Science Uncertainty

By Richard Morrison, CEI, Nov 28, 2017 [H/t Cooler Heads]

<https://cei.org/blog/new-study-highlights-climate-science-uncertainty>

Why Are We Destroying Our Grid?

Why are we destroying the most efficient, reliable and least costly system ever devised for generating and distributing electricity?

By Donn Dears, Power For USA, Dec 1, 2017

<http://powerforusa.com/2017/12/01/why-are-we-destroying-our-grid/>

Defending the Orthodoxy

Notorious climate skeptic under fire for new paper that 'manipulates actual temperature measurement' to show the effects of CO2 emissions have been overplayed

By Cheyanne MacDonald, Daily Mail, Nov 30, 2017 [H/t Paul Homewood]

<http://www.dailymail.co.uk/sciencetech/article-5133897/Climate-skeptics-fire-new-paper.html>

[Above Rebutted]: Daily Mail Launches Dirty Attack To Smear John Christy

By Paul Homewood, Not a Lot of People Know That, Dec 1, 2017

<https://notalotofpeopleknowthat.wordpress.com/2017/12/01/daily-mail-launches-dirty-attack-to-smear-john-christy/#more-31095>

Internet Blogs, Polar Bears, and Climate-Change Denial by Proxy

By Jeffrey A. Harvey, et al (including Stephan Lewandowsky, Steven C. Amstrup, and Michael E. Mann), BioScience, Nov 29, 2017

<https://academic.oup.com/bioscience/advance-article/doi/10.1093/biosci/bix133/4644513#101575091>

Above Rebutted]: A new paper shows why the climate policy debate is broken

By Larry Kummer, Fabius Maximus, Nov 30, 2017

<https://fabiusmaximus.com/2017/11/30/new-study-about-climate-science-debate/>

Questioning the Orthodoxy

Why the IPCC never writes its own reports

(And why that matters)

By Bernie Lewin, Enthusiasm, Scepticism and Science, Nov 27, 2017

<https://enthusiasmscepticismscience.wordpress.com/2017/11/27/why-the-ipcc-never-writes-its-own-reports/#more-1954>

Mirrors and Mazes: A guide through the climate debate

By Anthony Watts, WUWT, Nov 27, 2017

<https://wattsupwiththat.com/2017/11/27/mirrors-and-mazes-a-guide-through-the-climate-debate/>

Link to book: Mirrors and Mazes: a guide through the climate debate

By Howard Brady, Amazon, Nov. 2017

https://www.amazon.com/Mirrors-Mazes-through-climate-debate-ebook/dp/B077NXZ8DV/ref=sr_1_1?s=books&ie=UTF8&tag=wattsupwithth-20&qid=1511819792&sr=1-1&keywords=Mirrors+and+Mazes+climate+debate

Polar bears refused to die as predicted and this is how the propheseers respond

By Susan Crockford, Polar Bear Science, Nov 29, 2017

<https://polarbearscience.com/2017/11/29/polar-bears-refused-to-die-as-predicted-and-this-is-how-the-propheseers-respond/>

Published essay: the conservation fiasco that is the ESA listing of polar bears

By Susan Crockford, Polar Bear Science, Nov 27, 2017

<https://polarbearscience.com/2017/11/27/published-essay-the-conservation-fiasco-that-is-the-esa-listing-of-polar-bears/>

After Paris!

China's Rising Coal Use Defies Forecasts

By Michael Lelyveld, Radio Free Asia, Nov 27, 2017 [H/t GWPF]

http://www.rfa.org/english/commentaries/energy_watch/chinas-rising-coal-use-defies-forecasts-11272017105607.html

China's first all-electric zero-emissions cargo ship is going to be used to transport coal

By Echo Huang, Quartz, Nov 23, 2017 [H/t Power Line]

<https://qz.com/1137026/chinas-first-all-electric-cargo-ship-is-going-to-be-used-to-transport-coal/>

Change in US Administrations

For a huge ‘peace dividend,’ end the war on fossil fuels

By Kevin Dayaratna, Washington Times, Nov 27, 2017

<https://www.washingtontimes.com/news/2017/nov/27/war-on-fossil-fuels-needs-to-be-ended/>

Draining the Swamp: Office of Science and Technology Policy Edition

Guest swamp analysis by David Middleton, WUWT, Nov 27, 2017

<https://wattsupwiththat.com/2017/11/27/draining-the-swamp-office-of-science-and-technology-policy-edition/>

Problems in the Orthodoxy

Good news about climate change from an amazing source!

By Larry Kummer, Fabius Maximus, Nov 26, 2017

<https://fabiusmaximus.com/2017/11/26/good-news-about-climate-change/>

Seeking a Common Ground

Forecasting versus reality

By Martin Livermore, The Scientific Alliance, Dec 1, 2017

<http://scientific-alliance.org/scientific-alliance-newsletter/forecasting-versus-reality>

Science, Policy, and Evidence

Reproducibility issues

By Richard Harris, Chemical & Engineering News, Nov 27, 2017 [H/t Howard Hayden]

<https://cen.acs.org/articles/95/i47/Reproducibility-issues.html>

“So what’s a careful scientist to do? First and foremost, be aware of the conditions around you that may increase the risk of irreproducible results, whether they are bad ingredients, dubious statistical traditions, or outside pressures that can shape behavior. Also take heart. This reproducibility “crisis” isn’t really a crisis at all. These are not new problems. Rather, I think of this moment as an awakening. And that’s a good thing, because we need to recognize that a problem exists before we can seek solutions.”

The Most Important Question In Science

By Alex Berezow, ACSH, Nov 28, 2017

<https://www.acsh.org/news/2017/11/28/most-important-question-science-12210>

“In a world of fake news, few questions are more important than, ‘How do you know what you claim to know?’ We should ask it often.”

Review of Recent Scientific Articles by CO2 Science

Large CO2-induced Growth Increases in a Fast-growing Evergreen Tree Species

Karthikeyan, A. 2017. Impact of elevated CO2 in *Casuarina equisetifolia* rooted stem cuttings inoculated with Frankia. *Symbiosis* 72: 89-94. Nov 28, 2017

<http://www.co2science.org/articles/V20/nov/a17.php>

Declining Heat-related Mortality in Three Northeast Asian Countries

Chung, Y., Noh, H., Honda, Y., Hashizume, M., Bell, M.L., Guo, Y-L. L. and Kim, H. 2017.

Temporal changes in mortality related to extreme temperatures for 15 cities in northeast Asia:

Adaptation to heat and maladaptation to cold. *American Journal of Epidemiology* 185: 907-913. Nov 27, 2017

<http://www.co2science.org/articles/V20/nov/a16.php>

“Chung *et al.*'s findings dispel two climate-alarmist claims - that global warming will enhance heat-related deaths and that the elderly population will suffer the most. In direct contradiction of these assertions, the results of this new study clearly demonstrate that (1) populations are *adapting* to heat-related deaths, as evidenced by declining trends in mortality risk over time, and (2) the elderly are not suffering a disproportionate number of heat-related deaths. Whereas trends in heat-related deaths were higher in the older populations at the beginning of the records, they have *disproportionately declined* and ‘converged to become similar among the three age groups in later years.’

“How could climate alarmists have gotten things so wrong!”

Models v. Observations

Climate models fail on seasonal and long term basis - should not be used for decision making

By Joseph D'Aleo, CCM, AMS Fellow, ICECAP, Nov 28, 2017

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

Measurement Issues -- Surface

Global Science Report: JRA-55—Better Than the BEST Global Surface Temperature History, and Cooler Than the Rest

By Patrick Michaels and Ryan Maue, Cato, Nov 29, 2017

<https://www.cato.org/blog/global-science-report-jra-55-better-best-global-surface-temperature-history-cooler-rest>

Link to paper: The JRA-55 Reanalysis: Representation of Atmospheric Circulation and Climate Variability

By Harada, Kamahori, Kobayashi, and Endo, Journal of the Meteorological Society of Japan, Feb 19, 2016

https://www.jstage.jst.go.jp/article/jmsj/94/3/94_2016-015/_pdf

“The warming rate in JRA-55 until the 2015–16 El Niño is 0.10°C/decade, or about 40% of what has been forecast for the era by the average of the UN's 106 climate model realizations.”

Global Temperature Trends Based On Non-Existent Data

By Paul Homewood, Not a Lot of People Know That, Nov 28, 2017

<https://notalotofpeopleknowthat.wordpress.com/2017/11/28/global-temperature-trends-based-on-non-existent-data/>

Link to paper: An Overview of the Global Historical Climatology Network-Daily Database

By Matthew J. Menne, AMS, July 1, 2012

<http://journals.ametsoc.org/doi/full/10.1175/JTECH-D-11-00103.1>

Measurement Issues -- Atmosphere

UAH Global Temperature Update for November 2017:+0.36 deg. C

By Roy Spencer, His Blog, Dec 1, 2017

<http://www.drroyspencer.com/2017/12/uah-global-temperature-update-for-november-20170-36-deg-c/>

[SEPP Comment: The current value is well below October 2017 value of +0.63 deg. C. Spencer is out of the office and the plot of data is unavailable until Dec 6.]

Changing Weather

Atlantic hurricane season ended today – the summary

By Anthony Watts, WUWT, Nov 30, 2017

<https://wattsupwiththat.com/2017/11/30/atlantic-hurricane-season-ended-today-the-summary/>

Causes and predictability of the exceptionally active 2017 Atlantic hurricane season

By Jim Johnstone and Judith Curry, Climate Etc, Nov 30, 2017

<https://judithcurry.com/2017/11/30/causes-and-predictability-of-the-exceptionally-active-2017-atlantic-hurricane-season/>

2017 Global Cyclone Energy Almost 20% Below Normal ...Southern Hemisphere Near Record Low!

By P Gosselin, No Tricks Zone, Nov 26, 2017

<http://notrickszone.com/2017/11/26/2017-global-cyclone-energy-almost-20-below-normal-southern-hemisphere-near-record-low/#sthash.1E8mSawI.dpbs>

Link to site: Global Tropical Cyclone Activity, 2017 Accumulated Cyclone Energy [ACE]

By Ryan Maue, Accessed Dec 1, 2017

<http://wx.graphics/tropical/>

Slow recovery in Puerto Rico threatens an important industry

By David Ferris, E&E News, Nov 29, 2017

<https://www.eenews.net/energywire/2017/11/29/stories/1060067531>

Changing Climate

Before 1960s-'70s Global Cooling Was Erased, It Caused Droughts, Crop Failures, Glacier Advance, Ice Age Threats

By Kenneth Richard, No Tricks Zone, Nov 27, 2017

<http://notrickszone.com/2017/11/27/before-1960s-70s-global-cooling-was-erased-it-caused-droughts-crop-failures-glacier-advance-ice-age-threats/#sthash.4G19Ovvu.dpbs>

North Atlantic variability and its links to European climate over the last 3000 years

By Paul Homewood, Not a Lot of People Know That, Nov 28, 2017

<https://notalotofpeopleknowthat.wordpress.com/2017/11/28/north-atlantic-variability-and-its-links-to-european-climate-over-the-last-3000-years/>

Link to paper: North Atlantic variability and its links to European climate over the last 3000 years

By Paola Moffa-Sánchez & Ian R. Hall, Nature Communications, Nov 23, 2017

<https://www.nature.com/articles/s41467-017-01884-8>

Homewood: “Climatologists have long been aware of these centennial events, and this paper adds a little more to the understanding of them.

“As we know, oceans play a key role in the Earth’s climate, because of their massive heat content, which dwarfs anything GHGs can do.”

Changing Seas

Hope for Great Barrier Reef with discovery of hardcore 100 able to withstand climate change

By Henry Bodkin, Telegraph, UK, Nov 28, 2017 [H/t GWPF]

<http://www.telegraph.co.uk/science/2017/11/28/hope-great-barrier-reef-discovery-hardcore-100-able-withstand/>

***Surprise* Great Barrier Reef has 112 tough spots that survive and replenish the rest**

By Jo Nova, Her Blog, Nov 29, 2017

<http://joannenova.com.au/2017/11/great-barrier-reef-has-112-special-spots-that-survive-and-replenish-the-rest-of-the-reef/#more-56108>

Link to paper: Connectivity and systemic resilience of the Great Barrier Reef

By Karlo Hock, Plos One – Biology, Nov 28, 2017

<http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.2003355>

Changing Cryosphere – Land / Sea Ice

2 More New Papers Affirm There Is More Arctic Ice Coverage Today Than During The 1400s

By Kenneth Richard, No Tricks Zone, Nov 30, 2017

<http://notrickszone.com/2017/11/30/2-more-new-papers-affirm-there-is-more-arctic-ice-coverage-today-than-during-the-1400s/#sthash.5i7MitF9.dpbs>

Changing Earth

Bali Volcano: Contributing to Global Warming, or Global Cooling?

By William Jasper, New American, Nov 30, 2017

<https://www.thenewamerican.com/tech/environment/item/27483-bali-volcano-contributing-to-global-warming-or-global-cooling>

Agriculture Issues & Fear of Famine

Global Warming: 2017 Sets New Record for Global Food Productions

By Staff Writers, GWPF, Dec 1, 2017

<https://www.thegwpf.com/global-warming-benefits-2017-sets-new-record-for-global-food-production/>

World Food Situation – FAO Cereal Supply and Demand Brief

By Staff Writers, Food and Agriculture Organization of the United Nations, (with data updated Nov 2, 2017)

<http://www.fao.org/worldfoodsituation/csdb/en/>

Beware the Fall Armyworm

By Matt Ridley, Rational Optimist, Nov 27, 2017

<http://www.rationaloptimist.com/blog/africa-needs-gm-crops/>

Un-Science or Non-Science?

Quinoa-sized mollusk stung by corrosive waters

By Staff Writers, Climate Wire, Nov 28, 2017

<https://www.eenews.net/climatewire/2017/11/28/stories/1060067385>

Link to paper: Reassessment of the life cycle of the pteropod *Limacina helicina* from a high resolution interannual time series in the temperate North Pacific

By Kang Wang, ICES Journal of Marine Science, April 11, 2017

<https://academic.oup.com/icesjms/article-abstract/74/7/1906/3589818>

“A new study, which was published in ICES Journal of Marine Science, has found the mollusk to be particularly vulnerable to acidity changes due to its breeding schedule. It breeds once in the spring and another time in the fall, which makes them susceptible to acidic conditions twice a year instead of once.”

[SEPP Comment: No discussion of pH, or any measurement of acidity.]

Lowering Standards

Climate Updates for The Royal Society (AKA The Alarmist's Inventive Inventory of More Bad News)

By Scepticus, Climate Scepticism, Nov 29, 2017 [H/t GWPF]

<https://cliscep.com/2017/11/29/climate-updates-from-the-royal-society-aka-the-alarmists-inventive-inventory-of-more-bad-news/>

Link to report: Climate updates: What have we learnt since the IPCC 5th Assessment Report?

By Staff Writers, The Royal Society, November 2017

<https://royalsociety.org/~media/policy/Publications/2017/27-11-2017-Climate-change-updates-report.pdf>

Link to references: Climate updates: What have we learnt since the IPCC 5th Assessment Report?

By Staff Writers, The Royal Society, November 2017

<https://royalsociety.org/~media/policy/Publications/2017/27-11-2017-Climate-change-updates-report-references-document.pdf>

[SEPP Comment: The Royal Society report ignores atmospheric temperature measurements.]

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

Joe Oliver: Ranting About Climate Isn't Good Policy, and Isn't Convincing Anyone

By Joe Oliver, Financial Post, Can., Nov 28, 2017

<http://business.financialpost.com/opinion/joe-oliver-ranting-about-climate-isnt-good-government-policy-and-isnt-convincing-anyone>

Nominee breaks with Trump: Humans are main cause of climate change

By Avery Anapol, The Hill, Nov 30, 2017

<http://thehill.com/homenews/administration/362535-trump-climate-pick-breaks-with-trump-humans-are-the-main-cause-of>

[SEPP Comment: Like the last Ice Age?]

Communicating Better to the Public – Make things up.

Your car causes volcanoes (and volcanoes release CO₂)

By Jo Nova, Her Blog, Nov 26, 2017

<http://joannenova.com.au/2017/11/your-car-causes-volcanoes-and-volcanoes-release-co2/>

“Dr Graeme Swindles, from the School of Geography at Leeds, said: ‘Climate change caused by humans is creating rapid ice melt in volcanically active regions. In Iceland, this has put us on a path to more frequent volcanic eruptions.’

“The findings, published today in the journal *Geology*, found there was a time lag of roughly 600 years between the climate event and a noticeable decrease in the number of volcanic eruptions.”

Communicating Better to the Public – Do a Poll?

Winning: grant applications for ‘climate change’ research are down 40%

By Anthony Watts, WUWT, Nov 29, 2017

<https://wattsupwiththat.com/2017/11/29/winning-grant-applications-for-climate-change-research-are-down-40/>

Questioning European Green

First Poland, Then Germany, Now Spain: Europe Rejects Coal Phase Out

By Staff writers, EurActiv, Via GWPF, Nov 26, 2017

<https://www.thegwpf.com/first-poland-then-germany-now-spain-europe-rejects-coal-phase-out/>

Green Madness: Ireland Faces [up to] €600 Million Fine for Missing EU Climate Targets

By Staff Writers, The Times, Via GWPF, Nov 28, 2017

<https://www.thegwpf.com/green-madness-ireland-faces-e600-million-fine-for-missing-eu-climate-targets/>

Green Lobby Defeated as Germany Swings EU Vote in Favour of Glyphosate

By Staff Writers, Deutsche Welle, Via GWPF, Nov 27, 2017

<https://www.thegwpf.com/green-lobby-defeated-as-germany-swings-eu-vote-in-favour-of-glyphosate/>

Bavarian Minister Kills Germany's Grand Coalition on Glyphosate

By Dirk Maxeiner, Achse des Guten, Via GWPF, Nov 28, 2017

<https://www.thegwpf.com/bavarian-minister-kills-germanys-grand-coalition-on-glyphosate/>

Grenfell: Fire Brigades Union 'shocked' by findings of Sky News investigation

By Gerard Tubb, and Nick Stylianou, Sky News, [H/t GWPF] Nov 27, 2017

<https://news.sky.com/story/long-read-grenfell-britains-fire-safety-crisis-11146108>

Green rules, profit, legal bullying drove the Grenfell disaster

By Jo Nova, Her Blog, Dec 1, 2017

<http://joannenova.com.au/2017/12/green-rules-profit-legal-bullying-drove-the-grenfell-disaster/>

Questioning Green Elsewhere

Green Lobbyists Are Scrambling To Save Their Subsidies From GOP Tax Reform

By Michael Bastasch, Daily Caller, Nov 30, 2017

<http://dailycaller.com/2017/11/30/green-lobbyists-are-scrambling-to-save-their-subsidies-from-gop-tax-reform/>

The Importance of Government Subsidies for EV Success

By Allen Brooks, Master Resource, Nov 30, 2017

<https://www.masterresource.org/electric-vehicles/importance-government-subsidies-ev-success/>

Funding Issues

Climate Scientists Watch Their Words, Hoping To Stave Off Funding Cuts

By Rebecca Hersher, NPR, Nov 29, 2017

<https://www.npr.org/sections/thetwo-way/2017/11/29/564043596/climate-scientists-watch-their-words-hoping-to-stave-off-funding-cuts>

"This is the biggest environmental challenge in human history," says Mote. "Absent political winds, I don't think researchers would avoid using the term 'climate change' to describe it." – Philip Mote, the director of the Oregon Climate Change Research Institute at Oregon State University

Subsidies and Mandates Forever

2017 Announcements for the Renewable Fuel Standard

Renewable Fuel Standard Program

Press Release, By Staff Writers, EPA, Nov 28, 2017

<https://www.epa.gov/renewable-fuel-standard-program/2017-announcements-renewable-fuel-standard>

EPA and other Regulators on the March

Scott Pruitt on a mission to change the culture of the EPA

By Ledyard King, USA Today, Nov 26, 2017

<https://www.usatoday.com/story/news/politics/2017/11/26/scott-pruitt-mission-change-culture-epa/889633001/>

Familiar Battle Lines Drawn at Clean Power Plan Public Hearing

By Abby Harvey, Power Mag, Nov 29, 2017

http://www.powermag.com/familiar-battle-lines-drawn-at-clean-power-plan-public-hearing/?mkt_tok=eyJpIjoiT1RsbE1tTXdNemt6WXpCaiIsInQiOiJCTWZUNkFGcW9uSVRpamVNaFBYVUIMSYzS3J3SjRucVRJRnphNk1YZ2JmMIFNXC9HVzN6UnZNSXcrTW1QdkNKb0dqa1wvSXFintJOSUxmc3c2dXpmWEpPbDZNYXdhMzJqZ3NWa3diQmc5czl1dW5YUVBUdFhvTktuZ1NOWsrZURzIn0%3D

Energy Issues – Non-US

Understanding Storage of Electricity, Quantities and Costs

By Donn Dears, Power For USA, Nov 28, 2017

<http://powerforusa.com/2017/11/28/understanding-storage-of-electricity-quantities-and-costs/>
[SEPP Comment: Sometimes TWTW becomes sloppy in its commentary in making the careful distinctions.]

World Energy Outlook, 2017 Executive Summary

By Staff Writers, EIA, Nov 2017

<https://www.iea.org/Textbase/npsum/weo2017SUM.pdf>

“The rapid deployment and falling costs of clean energy technologies; in 2016, growth in solar PV capacity was larger than for any other form of generation; since 2010, costs of new solar PV have come down by 70%, wind by 25% and battery costs by 40%.”

[SEPP Comment: How about electricity storage on a commercial scale?]

Germany’s National Power Grid Mess...Country Seeing Whopping 172,000 Power Outages Annually!

By P Gosselin, No Tricks Zone, Dec 1, 2017

<http://notrickszone.com/2017/12/01/germanys-national-power-grid-mess-country-seeing-whopping-172000-power-outages-annually/#sthash.TpKRm4US.dpbs>

German Public Media Finally Acknowledge Country’s Power Grid Now More Unstable Than Ever

By P Gosselin, No Tricks Zone, Nov 29, 2017

<http://notrickszone.com/2017/11/29/german-public-media-finally-acknowledge-german-power-grid-now-more-unstable-than-ever/#sthash.F6F3kS71.dpbs>

Wind power auction prices amended/ Wind power companies under pressure [Germany]

Maximum support rate for onshore wind raised to ensure continuous expansion

By Staff Writers, Clean Energy Wire, Nov 30, 2017

<https://www.cleanenergywire.org/news/wind-power-auction-prices-amended-wind-power-companies-under-pressure>

The United Kingdom’s Budget 2017 in Global Context

By John Constable, GWPF, Nov 25, 2017

<https://www.thegwpf.com/the-united-kingdoms-budget-2017-in-global-context/>

Link to energy report: World Energy Outlook, 2017

By Staff Writers, IEA, Nov 14, 2017

<https://www.iea.org/weo2017/>

Link to UK Budget: Autumn Budget 2017: documents

From: HM Treasury, UK Gov. Nov 22, 2017

<https://www.gov.uk/government/publications/autumn-budget-2017-documents>

Energy Issues – Australia

South Australia heads back 100 years to diesel (with battery back up)

The new SA rescue plan is more diesel than battery

By Jo Nova, Her Blog, Dec 2, 2017

<http://joannenova.com.au/2017/12/south-australia-heads-back-100-years-to-diesel-with-battery-back-up/>

The Role of Energy Storage in Australia’s Future Energy Supply Mix

By Bruce Godfrey, et al., The Australian Council of Learned Academies (ACOLA), Nov 2017

[H/t Energy Matters]

<http://acola.org.au/wp/wp-content/uploads/ENRG-final.pdf>

From Energy Matters: According to the report, “Australia can get 75% of its electricity from intermittent renewables with 105 gigawatt-hours of long-term storage, enough to cover demand for all of four hours.”

Energy Issues -- US

How America can dominate the world energy market

Tom Harris, The Washington Times, Nov 27, 2017

<https://www.washingtontimes.com/news/2017/nov/27/how-the-us-can-dominate-the-world-energy-market/>

Washington’s Control of Energy

Major conservation group blasts GOP tax bill for allowing Arctic drilling: 'Simply shameful'

By Brandon Carter, The Hill, Dec 2, 2017

<http://thehill.com/policy/energy-environment/362923-audubon-society-blasts-gop-tax-bill-for-allowing-arctic-drilling>

Trump administration approves Arctic Ocean oil exploration

By Devin Henry, The Hill, Nov 28, 2017

<http://thehill.com/policy/energy-environment/362203-trump-administration-approves-arctic-ocean-oil-exploration>

Oil and Natural Gas – the Future or the Past?

Mineral Resource Fixity and Boundary Effects

By Richard Sigman, Master Resource, Nov 28, 2017

<https://www.masterresource.org/fixitydepletion-view/resource-boundary-effects/>

[SEPP Comment: Oil, natural gas, mineral resources, etc. are not static, but a function of prices and technology.]

Return of King Coal?

Paris Agreement Architect Calls the End of Coal – in the Middle of a Coal Rush

Guest essay by Eric Worrall, WUWT, Nov 27, 2017

<https://wattsupwiththat.com/2017/11/27/paris-agreement-architect-calls-the-end-of-coal-in-the-middle-of-a-coal-rush/>

Nuclear Energy and Fears

Spiegel Interviews Hansen: “Exit From Nuclear Power Huge Mistake For The World”

By P Gosselin, No Tricks Zone, Nov 25, 2017

<http://notrickszone.com/2017/11/25/spiegel-interviews-hansen-exit-from-nuclear-power-huge-mistake-for-the-world/#sthash.QH1XP6mW.dpbs>

“More renewable energies? You’re joking. The subsidies set aside for renewable energies are forcing consumers to pay higher rates – a sort of invisible tax. The power bill keeps rising, but the customer does not know why.” – Hansen

Alternative, Green (“Clean”) Solar and Wind

The big slide in renewable energy tells the real story

No, renewables are not taking over the world anytime soon.

Guest essay by Bjørn Lomborg, WUWT, Nov 26, 2017

<https://wattsupwiththat.com/2017/11/26/the-big-slide-in-renewable-energy-tells-the-real-story/>

Energy & Environmental Newsletter: November 27, 2017

By John Droz, Jr., Master Resource, Nov 27, 2017

<https://www.masterresource.org/alliance-for-wise-energy-decisions/energy-environmental-newsletter-11-27-2017/>

Alternative, Green (“Clean”) Solar and Wind – Storage

Will solar panels and Tesla Powerwalls meet your home’s energy needs?

By Roger Andrews, Energy Matters, Nov 29, 2017

<http://euanmearns.com/will-solar-panels-and-tesla-powerwalls-meet-your-homes-energy-needs/#more-20334>

“One final question. How many Powerwalls would it take to allow the Bynum household to go completely off-grid? According to my calculations, approximately eighty.”

[SEPP Comment: If not sunny Tucson, AZ, forget the cloudy Northeast.]

Environmental Industry

Weedkiller vote poisons European politics

Decision in Brussels fails to lay EU debate on glyphosate to rest.

By Simon Marks and Giulia Paravicini, Politico, Nov 27, 2017

<https://www.politico.eu/article/glyphosate-renewal-shakes-germany-france-italy/>

[SEPP Comment: See links under Questioning European Green.]

Other Scientific News

For the UN’s cancer research agency, a chance to redeem itself?

By Richard Zuber, American Thinker, Nov 30, 2017 [H/t John Dunn]

http://www.americanthinker.com/blog/2017/11/for_the_uns_cancer_research_agency_a_chance_to_redeem_itself.html

Other News that May Be of Interest

Britain Should Give the EU £20 Billion Extra as an Act of Charity

By Matt Ridley, Rational Optimist, Nov 28, 2017

<http://www.rationaloptimist.com/blog/britain-should-give-the-eu-20-billion-extra-as-an-act-of-charity/>

BELOW THE BOTTOM LINE:

Electrical appliances force children to marry

By Jo Nova, Her Blog, Nov 28, 2017

<http://joannenova.com.au/2017/11/electrical-appliances-force-children-to-marry/>

Link to article: Why climate change is creating a new generation of child brides

As global warming exacerbates drought and floods, farmers' incomes plunge – and girls as young as 13 are given away to stave off poverty

By Gethin Chamberlain, The Guardian, Nov 26, 2017

<https://www.theguardian.com/society/2017/nov/26/climate-change-creating-generation-of-child-brides-in-africa>

MIT membrane produces fuel from CO2 emissions

By Paul Homewood, Not a Lot of People Know That, Nov 29, 2017

<https://notalotofpeopleknowthat.wordpress.com/2017/11/29/mit-membrane-produces-fuel-from-co2-emissions/>

“So, let me get this right.

- 1) You have to use an enormous amount of energy to heat the gases up to 990C, in order to trigger the process.
- 2) This new energy presumably won't grow on trees, which will therefore mean more fossil fuel burning. (CCGT plants already use waste heat, which rather destroys the argument that waste heat will work).
- 3) The process produces carbon monoxide, which if released to the atmosphere is simply oxidized to carbon dioxide again. (Which is just as well as we would all be dead otherwise!)
- 4) Therefore, the carbon monoxide has to be either stored or mixed with hydrogen to produce syngas.
- 5) Unfortunately, the only way to produce large amounts of hydrogen is steam reforming, which in turn produces large amounts of carbon dioxide.”

Is your crabgrass watching you?

By Staff Writers, Climate Change Predictions.org, Nov 5, 2017

<http://climatechangepredictions.org/uncategorized/1564>

Crabgrass will get a strong assist from global warming in its campaign to take over your lawn.

That's the unexpected finding of a study investigating a very different aspect of lawn biology:

Neeta S. Bijoor, her graduate advisor Diane E. Pataki of the University of California, Irvine, and two colleagues set out to determine how warming affects lawns' emission of nitrous oxide (N₂O), a greenhouse gas 300 times more powerful than carbon dioxide.

In contrast to fescue and most other crop plants, crabgrass and many other weeds photosynthesize with greater efficiency the warmer it gets, so they have been predicted to proliferate as temperatures rise.

[Live Science, 3 Dec 2008](#)

ARTICLES:

1. The Six Laws of Technology Everyone Should Know

Professor who summarized the impact of technology on society 30 years ago seems prescient now, in the age of smartphones and social media

By Christopher Mims, WSJ, Nov 26, 2017

<https://www.wsj.com/articles/the-6-laws-of-technology-everyone-should-know-1511701201>

SUMMARY: Citing Melvin Kranzberg, a professor of the history of technology at Georgia Institute of Technology who died in 1995, Mr Mims states the six laws are:

1. 'Technology is neither good nor bad; nor is it neutral' – it can be put to many purposes.
2. 'Invention is the mother of necessity.' – innovations drive creativity.
3. 'Technology comes in packages, big and small.' – innovation creates jobs as well as destroy them. Many innovations appear small, but become significant.
4. 'Although technology might be a prime element in many public issues, nontechnical factors take precedence in technology-policy decisions.' – politics often takes over.
5. 'All history is relevant, but the history of technology is the most relevant.' Humans adjust with technological innovation.
6. 'Technology is a very human activity.' – technology does nothing without human enterprise.

2. Alaska Drilling Dividend

The tax bill contains a growth bonus in new oil lease sales.

Editorial, WSJ, Nov 30, 2017

<https://www.wsj.com/articles/alaska-drilling-dividend-1512087777>

SUMMARY: The Senate version of the passed tax bill contains a provision for allowing oil and natural gas exploration and development on a small part of the Arctic Natural Wildlife Refuge (ANWR). After some introduction the editorial states:

“The arguments for Arctic drilling are as coldly obvious as the tundra ice, starting with the fact that ANWR offers a potentially large new supply of oil at minimal environmental cost. Alaska contains 192 million acres of parks, refuges, wilderness areas and nature preserves. ANWR makes up 19.5 million acres of this, and 92% of that 19.5 million can’t legally be touched.

“But as part of a deal to enlarge ANWR in 1980, a Democratic Senate set aside one barren, frozen strip of coastal land for exploration. Modern innovations such as horizontal drilling mean that only about 2,000 acres will even be necessary for drilling. That equals 0.0001% of the refuge and is a scant 60 miles away from the existing trans-Alaska pipeline.

“Green groups have misrepresented the ANWR debate, flashing posters of protected refuge mountains rather than the tiny, moon-like landscape where the drilling will take place. Alaskans hardly want to despoil the land, but they want the jobs and tax revenue that would come from more oil development. This is especially important to the state as drilling in current areas winds down.

“The U.S. Geological Survey estimates this sliver of land contains at least 10.4 billion barrels of recoverable oil and 8.6 trillion cubic feet of natural gas, and these estimates are probably conservative. By comparison, Alaska’s second-biggest oil field, Kuparuk, holds about 2.5 billion barrels. News of the ANWR lease proposals also comes amid a revival in global oil prices to more than \$60 a barrel. The Trump Administration will have to reassure oil and gas companies that the government will honor its contracts, especially after the Obama Administration’s shameful treatment of Shell in the Arctic Sea, but the first step is allowing the lease sales.”

Opponents are outraged because the tactic was to include the provision in a budget reconciliation bill that required only 51 votes, whereas prior efforts required 60 votes, which supporters could not quite obtain.

3. America’s New Energy Diplomacy

Liquefied natural gas exports weaken Russia’s regional influence.

Editorial, WSJ, Nov 27, 2017

<https://www.wsj.com/articles/americas-new-energy-diplomacy-1511827872>

SUMMARY: The editorial begins:

“Poland wants to reduce its reliance on Russian energy, and last week its state-owned oil and gas company, PGNiG , signed its first five-year deal to buy American liquefied natural gas. The agreement illustrates how the energy boom from the fracking revolution can serve U.S. national interests and deter the reach of dictators abroad.

“Moscow has long used its energy resources as a political weapon. Gazprom , the Kremlin-owned energy company, currently provides more than two-thirds of Poland’s gas, and other European nations also rely heavily on Russian energy. President Vladimir Putin has used that dependence as a diplomatic cudgel, threatening to cut off supplies. And on several occasions he has followed through.

“But Russia’s era of go-freeze-yourself foreign policy may be drawing to a close. In 2015—the year Moscow cut off gas supplies to Ukraine—the U.S. surpassed Russia as the world’s top natural-gas producer. By February 2016 major shipments of American LNG were headed abroad for the first time. Two months after U.S. LNG from the lower 48 states hit the export market, Poland’s PGNiG announced that it didn’t intend to renew its long-term agreement with Gazprom, which will expire in 2022.

“President Trump has built on that momentum. ‘America stands ready to help Poland and other nations diversify their energy supplies so that you can never be held hostage to a single supplier,’ he said during a July visit to Warsaw.”

The editorial concludes with some specifics and suggests that the modest beginning may grow.
