

The Week That Was: 2018-06-23 (June 23, 2018)

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The Science and Environmental Policy Project

Quote of the Week: “*Physics is just applied mathematics just like a car is applied wrenches.*” Professor emeritus of Physics Howard Hayden, responding to the June 9 TWTW discussing the problem of thinking that mathematics creates knowledge of the physical world.

Number of the Week: \$5 Billion per year

THIS WEEK:

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

Knowledge or Mathematical Exercise? “Climate denier” Richard Lindzen gave an interview to Mr. Grégoire Canlorbe on behalf of the French *L’association des Climatos-Réalistes*, the only climate-realist organization in France. In it Lindzen mentions his early work on providing an explanation of the Quasi-biennial Oscillation of the tropical stratosphere and a solution to the problem of tidal oscillations in surface pressure. Lindzen states “*the behavior of the atmosphere and oceans provides many interesting puzzles and I always enjoyed these puzzles.*”

Lindzen questions the doubtful “acceleration of sea level rise” promoted by NOAA and NASA.

*“Since 1979 we have been able to measure sea level itself with satellites. However, the accuracy of such measurements depends critically on such factors as the precise shape of the earth. While the satellites show slightly greater rates of sea level rise, the inaccuracy of the measurement renders the difference uncertain. What the proponents of alarm have done is to accept the tide gauge data until 1979, but assume that the satellite data is correct after that date, and that the difference in rates constitutes ‘acceleration.’ They then assume acceleration will continue leading to large sea level rises by the end of this century. **It is hard to imagine that such illogical arguments would be tolerated in other fields.**” [Boldface added]*

Among other topics, Lindzen asserts that there is a parallel between eugenics and the claim of anthropogenic global warming. Popular among the “educated classes” in the early 20th century, eugenics justified the Immigration Restriction Act of 1924. Though diminished after WW II, it continues with other anti-population movements. Eugenics is a clear example of the harm that can be caused by politicized science.

Lindzen briefly discusses the importance of recognizing the distinction between climate modeling and knowledge of the physical world:

*“While mathematics is the language of the physical sciences, mathematics is not simply the use of arbitrary algorithms. This is currently pretty much the situation with climate modeling. **Algorithms are used, but they do not represent valid solutions of underlying equations.** The models lack the resolution to deal with fundamental aspects of nature – some of which are insufficiently understood to even know what equations to use.” [Boldface added]* See links under Challenging the Orthodoxy.

Knowledge or Politicized Science? On June 23, 30 years ago, then-Senator Tim Wirth held a hearing on Capitol Hill which featured testimony by James Hansen, director of NASA's Goddard Institute for Space Studies (NASA-GISS), with principle offices on Broadway in New York City. Many commentators claim that his testimony galvanized those opposing fossil fuels by creating the fear of carbon dioxide. Certainly, an opponent of fossil fuels, Senator, (later Vice President), Al Gore used the fear of carbon dioxide (CO₂) to spur what is called climate science and seek alternatives to fossil fuels.

SEPP has listed government reports that show that, starting in 1993, the US government spent over \$40 Billion on what these reports identify as climate science. This amount does not include subsidies to alternative energies and other government expenditures prompted by the fear of CO₂, which are far over \$150 billion, more than the costs of the Apollo missions, in stabilized dollars. In recent years, the reports by the Government Accountability Office and the Congressional Research Service have not been forthcoming, so an updated accurate accounting using reasonably similar classifications is not available.

Reviewing Hansen's testimony are Bernie Lewin on his web site, who places the testimony in a historical context, and Patrick Michaels and Ryan Maue, analyzing the validity of Hansen's predictions in the Wall Street Journal, reproduced by Climate Depot. These and other links are found below.

However, Mr. Hansen's influence on climate science starts earlier. The pivotal 1979 "Report of an Ad Hoc Study Group on Carbon Dioxide and Climate" led by Jule Charney and published by the National Academy of Science demonstrates the influence of Mr. Hansen and NASA-GISS. The report states:

"In our review, we had access not only to the principal published studies relating to carbon dioxide and climate but also to additional unpublished results. For these contributions, we gratefully acknowledge the assistance of the following scientists:

A. Gilchrist, British Meteorological Office

J. Hansen, Goddard Institute for Space Studies, NASA

S. Manabe, R. T. Wetherald, and K. Bryan, Geophysical Fluid Dynamics Laboratory, NOAA " (Preface, p. x)

The report relies on simulation of the climate, rather than atmospheric temperature data. At that time, only small slivers of atmosphere temperature data were available, taken by weather balloons. Thus, surface temperatures were used because they were more complete, though sparse. Given the lack of atmospheric data, one could only speculate, not measure. The Summary and Conclusions begin with:

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

carbon cycle. These impose an uncertainty beyond that arising from our necessarily imperfect knowledge of the manifold and complex climatic system of the earth.

*“When it is assumed that the CO₂ content of the atmosphere is doubled and statistical thermal equilibrium is achieved, the more realistic of the modeling efforts predict a global surface warming of between 2°C and 3.5 °C, with greater increases at high latitudes. This range reflects both uncertainties in physical understanding and inaccuracies arising from the need to reduce the mathematical problem to one that can be handled by even the fastest available electronic computers. It is significant, however, **that none of the model calculations predicts negligible warming.** [Boldface added]*

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

“One of the major uncertainties has to do with the transfer of the increased heat into the oceans. It is well known that the oceans are a thermal regulator, warming the air in winter and cooling it in summer. The standard assumption has been that, while heat is transferred rapidly into a relatively thin, well mixed surface layer of the ocean (averaging about 70 m in depth), the transfer into the deeper waters is so slow that the atmospheric temperature reaches effective equilibrium with the mixed layer in a decade or so. It seems to us quite possible that the capacity of the deeper oceans to absorb heat has been seriously underestimated, especially that of the intermediate waters of the subtropical gyres lying below the mixed layer and above the main thermocline. If this is so, warming will proceed at a slower rate until these intermediate waters are brought to a temperature at which they can no longer absorb heat.” (pp. 1&2)

For purposes of TWTW, there are three critical points in the above: 1) that greenhouse gas warming (CO₂, water vapor, etc.) occurs in the atmosphere; 2) the warming of the atmosphere will cause a warming of the surface; and 3) that the oceans may delay a warming of the surface, but not appreciably slow a greenhouse gas warming of the atmosphere.

The five subsequent reports by the main promoter of the fear of carbon dioxide (CO₂), the UN Intergovernmental Panel on Climate Change (IPCC), and its followers, continue to use the findings of this report, and ignore atmospheric temperatures, which measure the actual greenhouse effect.

Also, the Charney report discusses the two types of models used: 1) “Models developed by S. Manabe and colleagues at the NOAA Geophysical Fluid Dynamics Laboratory, Princeton, N.J.”

(the M Series); and 2) “Models developed by J. Hansen and colleagues at the NASA Goddard Institute for Space Studies, New York, N.Y.” (the H series).

“At low latitudes, the predicted values of the mean surface AT for doubled CO2 concentration were slightly more than 1.5°C in the M series, 2.5°C in H1, and 3.0°C in H2. Both series predict larger AT at upper levels, primarily because of added heating by cumulus convection. The discrepancy in the surface AT may well be due to differences in the respective parameterizations of cumulus convection.” (p.15)

After further discussion of issues and inconsistency the report states:

“We believe, therefore, that the equilibrium surface global warming due to doubled CO2 will be in the range 1.5°C to 4.5°C, with the most probable value near 3°C.”

Basically, the upper bound of the estimates was taken from the H Series models (NASA-GISS), and the lower bound was taken from the M Series models (NOAA).

One can speculate why Mr. Hansen and NASA-GISS (Goddard Institute of Space Studies) have refused to recognize the calculation of comprehensive atmosphere temperatures from direct measurements by satellites. They have clung to indirect, sparse, surface measurements. Further, Mr. Hansen and NASA-GISS have claimed that surface warming is hiding in the oceans, ignoring the principle issue that the effect of greenhouse gases occurs in the atmosphere, where the effects should be more immediate.

On a side note, Roy Spencer, the co-developer of the method of calculating temperatures from atmospheric data, relates that a particle physicist and Nobel Laureate stated to him that climate policy will not move forward until old skeptics, such as Roy, die out. It is doubtful the gentleman recognizes that his “knowledge” depends on measurements taken in the wrong location. See links under Challenging the Orthodoxy, Defending the Orthodoxy. Questioning the Orthodoxy – and Hansen, and Problems in the Orthodoxy

Reaching Even Lower Standards? The flagship publication of the American Association for the Advancement of Science (AAAS), *Science Magazine*, published a report by the Environmental Defense Fund claiming that 13 million metric tons of methane, natural gas, is leaking from the gas supply chain, about 2.3% of total production. The EDF web site gave more details.

This appears to be part of an orchestrated media push to create fear of natural gas, which caught the Wall Street Journal. Under the headline: “Natural-Gas Boom Driving Methane Leaks, Study Finds; Higher levels of the potent greenhouse gas could pose challenge to efforts to slow global warming;” reporter Timothy Puko wrote:

The country’s natural-gas boom is putting much higher rates of the potent greenhouse gas methane into the atmosphere than government estimates suggest, a challenge for efforts to slow global warming, according to new research analysis published Thursday in the journal Science.

Methane leaks are a crucial element of the country’s gas boom because raw emissions can cancel out gains made by lowering carbon emissions created by burning other fuels. The new report suggests using more gas does have major benefits at limiting climate change over 100 years, but may not help in the short term.

That is because leaks and unplanned plumes vented from storage tanks and processing plants are likely larger than previously realized. They appear big enough to make a shift from coal to gas effectively meaningless over a 20-year time span, according to the assessment from about two dozen scientists working with the Environmental Defense Fund, a nonprofit environmental group.

The assessment estimates the U.S. energy industry is leaking about 2.3% of all the gas it produces directly into the atmosphere, meaning that enough greenhouse gasses are coming from the gas industry to equal roughly the 20-year climate impact from all the coal-fired power plants running nationwide in 2015.

Though not realizing it may be a media push, Ken Haapala sent the following to the reporter and posted it on the WSJ web site:

“Over a century of laboratory experiments demonstrate that methane absorbs radiation (electromagnetic energy) within narrow wavelengths. In the atmosphere, energy in these wavelengths is absorbed by water vapor, by far the dominant greenhouse gas. There is little remaining energy for methane to absorb and the calculations of enhanced greenhouse from methane are meaningless. “

SEPP Chairman Tom Sheahan states that methane will greatly increase temperatures should be dismissed. Based on experiments, with water vapor available, there are few photons for methane to absorb because water vapor has absorbed them. Even above altitudes where water freezes out, and in the polar regions, but the warming will be of no global significance, because water vapor is still more plentiful than methane.

Sheahan also points out that the “Global Warming Potential” is defined “*in terms of the ratio of the slopes of the absorption curves for two gases: specifically, the slope for the gas of interest divided by the slope for carbon dioxide.*”

However, absorption "saturates" and hence the absorption curves for all gases are logarithmic. The definition of GWP puts the very steep slope of the methane curve (at 1.8 ppm) in the numerator and the nearly-flat slope of the CO₂ curve (at 400 ppm) in the denominator. That causes the quotient (GWP) to blow up enormously, producing a meaningless number that is completely unrelated to the tiny amount of "forcing" caused by methane (CH₄).

Aside from embracing a dubious study with questionable measurements, it appears that the editors of *Science* have difficulty comprehending greenhouse gases theory and logarithmic functions. See links under Challenging the Orthodoxy and Defending the Orthodoxy.

Subsidy Success? Last week, TWTW discussed the Supreme Court brief by electrical engineers, energy economists and physicists on behalf of the Federal Energy Regulatory Commission (FERC). The brief explained that the electric power industry was divided into three categories — generation, transmission and local distribution – and that transmission incurs significant costs in making electricity stable. That is, the electricity supply must be reliable and resilient, expanding and contracting as needed. Thus, those involved in electrical generation do not bear the costs of making erratic electricity, such as solar and wind, stable.

An Wall Street Journal article discusses how, by using mandates and tax credits (subsidies), a Florida utility became the largest power company in the country. Among other things, it builds electrical generation facilities for utilities that have state mandates to generate part of the electricity with solar or wind.

What is not discussed is the total costs to consumers when transmission companies must stabilize electricity. In states such as California, New York, and in New England, power costs are rising rapidly for the consumers. As with politicians in Europe, many US politicians appear to be more concerned with ideological purity than with electrical reliability, resilience, and costs. See Article #1 and link under Subsidies and Mandates Forever.

Number of the Week: \$5 Billion per year. According to Article # 1: *“The U.S. government expects power companies to generate \$4.8 billion in renewable-energy tax credits this year, and NextEra is poised to be the largest generator of them, selling some to other corporations interested in lowering their tax bills and using the rest to shrink its own.”*

Electricity generated from solar and wind is unstable, an inferior good. Others (transmission organizations) must make it commercially viable, meaning they and their consumers bear the cost of inferior goods subsidized by the Federal government, and forced upon them by state and local governments. It is as if the Federal government subsidized inferior concrete for bridges and steel for high-rise buildings, and state and local governments required their use.

SEPP'S APRIL FOOLS AWARD THE JACKSON

SEPP is conducting its annual vote for the recipient of the coveted trophy, The Jackson, a lump of coal. Readers are asked to nominate and vote for who they think is most deserving, following these criteria:

- The nominee has advanced, or proposes to advance, significant expansion of governmental power, regulation, or control over the public or significant sections of the general economy.
- The nominee does so by declaring such measures are necessary to protect public health, welfare, or the environment.
- The nominee declares that physical science supports such measures.
- The physical science supporting the measures is flimsy at best, and possibly non-existent.

The six past recipients, Lisa Jackson, Barrack Obama, John Kerry, Ernest Moniz, John Holdren and Christiana Figueres aka Cruella de Ville are not eligible. Generally, the committee that makes the selection prefers a candidate with a national or international presence. The voting will close on July 30. Please send your nominee and a brief reason why the person is qualified for the honor to Ken@SEPP.org. Thank you. The award will be presented at the annual meeting of the Doctors for Disaster Preparedness in August.

NEWS YOU CAN USE:

Censorship

Can Universities Lawfully Bully Academics into Silence?

By Jennifer Marohasy, Her Blog, June 19, 2018

<https://jennifermarohasy.com/2018/06/can-universities-lawfully-bully-academics-silence/>

Challenging the Orthodoxy – In Memory

Vale Dr Vincent Gray

By Geoff Brown, Australian Climate Sceptics, June 19, 2018

<http://theclimatescepticsparty.blogspot.com/2018/06/vale-dr-vincent-gray.html>

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

A conversation with Prof. Richard Lindzen

Guest interview by Grégoire Canlorbe, WUWT, June 18, 2018

<https://wattsupwiththat.com/2018/06/18/a-conversation-with-prof-richard-lindzen/>

Link to Lindzen's publications: <http://www-eaps.mit.edu/faculty/lindzen/PublicationsRSL.html>

Link to Number Watch list: <http://www.numberwatch.co.uk/warmlist.htm>

Antarctic Ice Sheet Collapses, Nobel Prizes, and the Psychology of Catastrophism

By Roy Spencer, His Blog, June 17th, 2018

<http://www.drroyspencer.com/2018/06/antarctic-ice-sheet-collapses-nobel-prizes-and-the-psychology-of-catastrophism/>

Antarctic Ice Mass Controversies

By Steve McIntyre, Climate Audit, Dec 2, 2015 [H/t Climate Etc.]

<https://climateaudit.org/2015/12/02/antarctic-ice-mass-controversies/>

“The size of the GIA adjustment for GRACE gravity estimates is the same order of magnitude as the estimate of ice mass loss and, in many cases, is larger. These GIA adjustments have been dramatically reduced by specialists over the past decade and have concurrently reduced estimates of ice mass loss.

[SEPP Comment: The glacial isostatic adjustment (GIA) supposedly accounts for ocean basins getting slightly larger since the end of the last glacial cycle. It would be interesting to read a more recent discussion by McIntyre recognizing geothermal activity below West Antarctica.]

Methane: The Irrelevant Greenhouse Gas

Water vapor has already absorbed the very same infrared radiation that Methane might have absorbed.

Guest essay by Dr. Tom Sheahen, WUWT, April 11, 2014

<https://wattsupwiththat.com/2014/04/11/methane-the-irrelevant-greenhouse-gas/>

Climatic Distortions Due to Diminutive Denominators

Guest essay by Thomas P. Sheahen, WUWT, May 25, 2018

<https://wattsupwiththat.com/2018/05/25/climatic-distortions-due-to-diminutive-denominators/>

Dumb Energy

By Norman Rogers, American Thinker, June 17, 2018

https://www.americanthinker.com/articles/2018/06/dumb_energy.html

“Perhaps the idea is that if the grid is smart enough, the dumb energy will be canceled by the smart grid. That's actually what the smart grid people have in mind. The smart grid is supposed to be agile enough to fill in the gaps when the wind or solar is playing hooky...”

How the Obama Administration Undermined Federal Benefit-Cost Analysis to Justify Its Climate-related Regulations

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

<http://www.carlineconomics.com/archives/4486>

[SEPP Comment: It did not start with the Obama Administration, but bureaucratic cost-benefit analysis is often a travesty.]

Speech at the Financial Time Energy Summit

By John Constable: GWPF, June 20, 2018

<https://www.thegwpf.com/john-constable-speech-at-ft-energy-summit-lex-debate/>

“The text of my debate speech follows. I attended the Summit from 08.45 to 15.30, and was the only platform speaker to use the terms “physics”, “entropy”, or “thermodynamics”, or to raise these matters as relevant to the feasibility and pace of energy transitions. Economics, of all subjects, appears to have become a very spiritual matter.”

Defending the Orthodoxy

Carbon Dioxide and Climate: A Scientific Assessment

Report of an Ad Hoc Study Group on Carbon Dioxide and Climate

By Jule G Charney, et al., Climate Research Board, NAS, 1979

<https://www.nap.edu/read/12181/chapter/1>

Major studies reveal 60 percent more methane emissions

By Energy Experts: Mark Brownstein, Steven Hamburg, and Ramon Alvarez, Environmental Defense Fund, [No Date] [H/t WUWT]

<https://www.edf.org/climate/methane-studies>

Link to: Measuring Methane: A Groundbreaking Effort to Quantify Methane Emissions from the Oil and Gas Industry.

Coordinated by Environmental Defense Fund and conducted by more than 140 researchers from 40 institutions, this five-year set of studies of the U.S. oil and gas industry has set a new standard for measuring and mapping methane emissions worldwide.

<https://www.edf.org/sites/default/files/EDF-Methane-Science-Brochure.pdf>

Link to paper: Assessment of methane emissions from the U.S. oil and gas supply chain

By Ramón A. Alvarez, Science Mag, June 21, 2018

<http://science.sciencemag.org/content/early/2018/06/20/science.aar7204>

Untrustworthy claim: New study finds US oil & gas methane emissions 60 percent higher than estimated

By Anthony Watts, WUWT, June 22, 2018

<https://wattsupwiththat.com/2018/06/22/untrustworthy-claim-new-study-finds-us-oil-gas-methane-emissions-60-percent-higher-than-estimated/>

Link to article: Natural gas could warm the planet as much as coal in the short term

By Warren Cornwall, Science, June 21, 2018

<http://www.sciencemag.org/news/2018/06/natural-gas-could-warm-planet-much-coal-short-term>

Adapting to Climate Change Will Take More Than Just Seawalls and Levees

Our government's unconscionable policies are a scary precedent

By Kate Marvel, Scientific American, June 20, 2018

<https://blogs.scientificamerican.com/hot-planet/adapting-to-climate-change-will-take-more-than-just-seawalls-and-levees/>

'Carbon bubble' coming that could wipe trillions from the global economy

Demand for fossil fuels will decline in the near future with major macroeconomic and geopolitical consequences

By Staff Writers, Science Daily, June 4, 2018 [H/t Toshio Fujita]

<https://www.sciencedaily.com/releases/2018/06/180604121041.htm>

Link to paper: Macroeconomic impact of stranded fossil fuel assets

By J.F. Mercure, et al, Nature Climate Change, June 4, 2018

“Unlike current expectations, new research suggests that the prospects of the fossil-fuel industry are not bright, and that its demise may have profound economic and geopolitical consequences. Relying on ground breaking modelling techniques, researchers show that the consumption of fossil fuels will slow down or decline in the near future, as a result of ongoing technological change, potentially exacerbated by new climate policies.”

[SEPP Comment: Just like the 1970s state-of-the-art mathematical models by the Club of Rome that the world would run out of oil and other valuable resources in a few years?]

Seattle plastic straw ban to take effect next month

By Avery Anapol, The Hill, June 23, 2018

<http://thehill.com/policy/energy-environment/393773-seattle-plastic-straw-ban-to-take-effect-next-month>

[SEPP Comment: More “feel-good” regulation.]

Questioning the Orthodoxy

Ross McKittrick: All those warming-climate predictions suddenly have a big, new problem
Junk Science Week: Looking at the Equilibrium Climate Sensitivity measurements, it might not get as hot some people seem to think

By Ross McKittrick, Financial Post, June 20, 2018

<http://business.financialpost.com/opinion/ross-mckitrick-all-those-warming-climate-predictions-suddenly-have-a-big-new-problem>

Disequilibrium and relaxation times for species responses to climate change

By Craig Loehle, Ecological Modelling, June 6, 2018

<https://www.sciencedirect.com/science/article/pii/S0304380018302035>

History of the global warming scare 1980-2010

Guest blog by Prof Emeritus Cha-am Jamal Munshi, Thailand, The Reference Frame, June 16, 2018

<https://motls.blogspot.com/2018/06/history-of-global-warming-scare-1980.html>

Questioning the Orthodoxy – and Hansen

Remembering Hansen’s Congressional Testimony

With the Greenhouse scare turning thirty this summer, we remember the Congressional testimony that launched it in the USA.

By Bernie Lewin, Enthusiasm, Scepticism and Science, June 23, 2018

<https://enthusiasmscepticismscience.wordpress.com/2018/06/23/remembering-hansens-congressional-testimony/>

“...there is only a 1 percent chance of an accidental warming of this magnitude....[T]he greenhouse effect has been detected, and it is changing our climate now.’ James Hansen, 23 June 1988”

Scientists: 30 Years On, How Well Do Global Warming Predictions Stand Up?

By Marc Morano, Climate Depot, June 22, 2018

<http://www.climatedepot.com/2018/06/22/scientists-30-years-on-how-well-do-global-warming-predictions-stand-up/>

Presents: Thirty Years On, How Well Do Global Warming Predictions Stand Up?

James Hansen issued dire warnings in the summer of 1988. Today earth is only modestly warmer.

By Pat Michaels and Ryan Maue, WSJ, June 21, 2018

Hansen's testimony: 30th anniversary

By Luboš Motl, The Reference Frame, June 22, 2018

<https://motls.blogspot.com/2018/06/hansens-testimony-30th-anniversary.html#more>

NASA James Hansen: [Failure to take action on] Climate Change is Obama and Jerry Brown’s Fault

By Eric Worrall, WUWT, June 19, 2018

<https://wattsupwiththat.com/2018/06/19/nasa-james-hansen-climate-change-is-obama-and-jerry-browns-fault/>

After Paris!

Paris Accord Humiliation: 23 Of 28 EU States Graded “Poor” Or “Very Poor” On Achieving Climate Targets!

Not a single EU state is meeting its climate targets, a new analysis by CAN Europe finds.

By P Gosselin, No Tricks Zone, June 19, 2018

<http://notrickszone.com/2018/06/19/paris-accord-humiliation-23-of-28-eu-states-graded-poor-or-very-poor-on-achieving-climate-targets/>

Link to report: Off target: Ranking of EU countries' ambition and progress in fighting climate change

By Staff Writers, Climate Action Network Europe, June 2018

<http://www.caneurope.org/docman/climate-energy-targets/3357-off-target-ranking-of-eu-countries-ambition-and-progress-in-fighting-climate-change/file>

“The Good: Sweden, Portugal, France, the Netherlands and Luxembourg recognise the importance of ensuring EU climate policy is ‘Paris Agreement-proof’, and call for EU climate ambition to be in line with the Paris Agreement.

“The Bad: The ranking shows that Belgium, Denmark, Germany and the UK are no longer at the forefront of the fight against climate change and aim rather low despite their relative wealth. So far they have remained silent or vague on the need to accelerate the zero-carbon transition in the EU.

“The Ugly: Most Central and Eastern European countries remain unambitious when it comes to climate policies.”

Change in US Administrations

Nasa full of 'fear and anxiety' since Trump took office, ex-employee says

Those still at the agency fear climate science funding will be cut since it is now considered a ‘sensitive subject’

By Oliver Milman, The Guardian, May 30, 2018 [H/t WUWT]

<https://www.theguardian.com/science/2018/may/30/nasa-climate-change-sensitive-subject-since-trump-former-employee>

“Planned blogposts on coal plants being turned into solar plants, ‘reasons to be positive about Nasa’ and an interview with Gavin Schmidt, a senior Nasa climate scientist, were all either halted or scrapped due to interference from career staff nervous about provoking the new administration, according to Tenenbaum.”

[SEPP Comment: Coal plants being turned into solar plants? What are they smoking at NASA on Broadway?]

New disclosures show Pruitt spent nearly \$3K on 'tactical' pants and polos: report

By Julia Manchester, The Hill, June 20, 2018

<http://thehill.com/policy/energy-environment/393373-new-disclosures-show-pruitt-spent-nearly-3k-on-tactical-pants-and>

Outrageous?

Trump rescinds Obama policy protecting oceans

By Timothy Cama, The Hill, June 20, 2018

<http://thehill.com/policy/energy-environment/393213-trump-rescinds-obamas-policy-on-protecting-oceans>

“The order encourages more drilling and other industrial uses of the oceans and Great Lakes.”

Problems in the Orthodoxy

Ex-Nasa scientist: 30 years on, world is failing 'miserably' to address climate change

James Hansen, who gave a climate warning in 1988 Senate testimony, says real hoax is by leaders claiming to take action

By Oliver Milman, Guardian, June 19, 2018 [H/t WUWT]

<https://www.theguardian.com/environment/2018/jun/19/james-hansen-nasa-scientist-climate-change-warning>

“Hansen’s long list of culprits for this inertia are both familiar – the nefarious lobbying of the fossil fuel industry – and surprising. Jerry Brown, the progressive governor of California, and the German chancellor, Angela Merkel, are ‘both pretending to be solving the problem, while being unambitious and shunning low-carbon nuclear power, Hansen argues.”

Seeking a Common Ground

Environmental Ranking for Canada and the OECD.

By McKittrick, Ross R., Elmira Aliakbari and Ashley Stedman, Vancouver: Fraser Institute, April 2018

<https://www.fraserinstitute.org/sites/default/files/environmental-ranking-for-canada-and-the-OECD.pdf>

[SEPP Comment: Contesting the environmentally pure who claim Canada is a bottom-dweller.]

How Climate Change Exaggeration Can Hurt People and the Environment

By Cliff Mass, Weather and Climate Blog, June 23, 2018

<http://cliffmass.blogspot.com/2018/06/how-climate-change-exaggeration-can.html>

Pielke: Scientists as both experts and political myth-makers

By Larry Kummer. From the Fabius Maximus website, WUWT, June 14, 2018

<https://wattsupwiththat.com/2018/06/14/pielke-scientists-as-both-experts-and-political-myth-makers/>

Yesterday’s Climate Debate of the Decade: a summary from an attendee

By Anthony Watts, WUWT, June 13, 2018

<https://wattsupwiththat.com/2018/06/13/yesterdays-climate-debate-of-the-decade-a-summary-from-an-attendee/>

“Mann: Recent warming is unprecedented in totality of known climate record (the 30K – 40K year); 350 – 380ppm is ideal CO₂ level; No honest debate can be had about the basics of the science.”

[SEPP comment: Forget geology, it does not yield a climate record, climate modeling is the only true science?]

Scientists to study urban heat island effect using water tunnel [to study wind flow]

By Brooks Hays, UPI, June 18, 2018 [H/t Toshio Fujita]

https://www.upi.com/Science_News/2018/06/18/Scientists-to-study-urban-heat-island-effect-using-water-tunnel/9601529331411/

[SEPP Comment: Years ago, western towns planted trees to funnel summer winds through town to cool them.]

Review of Recent Scientific Articles by CO₂ Science

The Combined Effects of Elevated CO₂ and Water Supply on Three CAM Species

Wagner, K. and Zotz, G. 2018. Epiphytic bromeliads in a changing world: the effect of elevated CO₂ and varying water supply on growth and nutrient relations. *Plant Biology* 20: 636-640. June 19, 2018

<http://www.co2science.org/articles/V21/jun/a12.php>

“Most CO₂ enrichment studies to date have been conducted on plants that use the C₃ and C₄ carbon fixation pathways, while few are the studies that examine the impacts of rising atmospheric CO₂ on plants that utilize the CAM (crassulacean acid metabolism) method. Fewer still are studies that examine the interactions of elevated CO₂ with other factors, such as

temperature or light. In the present study, Wagner and Zotz (2018) thus add much new knowledge in this regard by examining the impacts of elevated CO₂ and water supply on three epiphytic *Aechmea* species (*Aechmea bracteata*, *Aechmea mexicana* and *Aechmea veitchii*).”

The Growth Trends of Merkus Pine Trees in Central Vietnam

Viet, H.D., Tu, K.N., Kwak, J.-H. and Choi, W.-J. 2018. Warming increased nitrogen availability and tree growth during the last five decades as revealed by annual ring data of *Pinus merkusii* in central Vietnam. *Communications in Soil Science and Plant Analysis* 49: 416-425. June 15, 2018
<http://www.co2science.org/articles/V21/jun/a9.php>

Changing Weather

New radar method makes weather forecasts right as rain

By Anthony Watts, WUWT, June 12, 2018

<https://wattsupwiththat.com/2018/06/12/new-radar-method-makes-weather-forecasts-right-as-rain/>

Link to paper: Accounting for rainfall evaporation using dual-polarization radar and mesoscale model data,

By Quinn Pallardy and Neil I. Fox, *Journal of Hydrology*, Feb 2018

<https://www.sciencedirect.com/science/article/pii/S0022169417308879>

Utility expects \$2.5B in costs from California wildfires

By Timothy Cama, *The Hill*, June 21, 2018

<http://thehill.com/policy/energy-environment/393449-utility-expects-25b-in-costs-from-california-wildfires>

See: *The Northern California Fires: Driven by the Diablo Winds That Were Predicted Days Before*

By Cliff Mass, *Weather and Climate Blog*, Oct 10, 2017

<http://cliffmass.blogspot.com/2017/10/the-northern-california-fires-driven-by.html>

[SEPP Comment: *Failure to act on predicted severe weather events is inexcusable.*]

Weather Info Today “80- 90% Nonsense”, Veteran Meteorologist Bemoans Media Hype/Nonsense

Top Swiss meteorologist Jörg Kachelmann blasts the quality of modern weather information in Germany, warning that 80-90% of weather stories found in the online media are “false information” or even “made-up nonsense”, and feels his field has become “a hoard of anarchy.”

By P Gosselin, *No Tricks Zone*, June 16, 2018

<http://notrickszone.com/2018/06/16/weather-info-today-80-90-nonsense-veteran-meteorologist-bemoans-media-hype-nonsense/>

Changing Climate

No. The Miocene is not an example of the “last time it was as warm as it’s going to get later this century”... Argh!

Guest ridicule by David Middleton, WUWT, June 19, 2018

<https://wattsupwiththat.com/2018/06/19/no-the-miocene-is-not-an-example-of-the-last-time-it-was-as-warm-as-its-going-to-get-later-this-century-argh/>

[SEPP Comment: *In addition, the Central American Seaway (or Caribbean Seaway) closed much later, about 5 million years ago, setting up the Gulf Stream and the thermohaline circulation.*]

Changing Seas

UK Sea Level Rise In 2017

By Paul Homewood, Not a Lot of People Know That, June 20, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/06/20/uk-sea-level-rise-in-2017/>

“The 120-month running totals show the enormous amount of variability, not just on a monthly or annual basis, but even over much longer periods.”

Scientists discover coral 'oases' where reefs thrive

Global news for coral reefs is not all bad

By Cheryl Dybas, NSF, June 19, 2018

https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=245645&WT.mc_id=USNSF_1

Link to paper: A framework for identifying and characterising coral reef “oases” against a backdrop of degradation

By James Guest, et al, Journal of Applied Ecology, June 18, 2018

<https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2664.13179>

The Great Barrier Reef Is Apparently Indestructible... But Still Doomed

Guest post by David Middleton, WUWT, May 29, 2018

<https://wattsupwiththat.com/2018/05/29/197687/>

Changing Cryosphere – Land / Sea Ice

Global Science Report: Greenland’s Resilience in the Face of Apocalyptic Hypotheses

By Patrick Michaels, CATO, June 21, 2018

<https://www.cato.org/blog/global-science-report-greenlands-resilience-face-apocalyptic-hypotheses-0>

Hudson Bay ice update: more thick first year ice habitat for polar bears in 2018 than 2004

By Susan Crockford, Polar Bear Science, June 21, 2018

<https://polarbearscience.com/2018/06/21/hudson-bay-ice-update-more-thick-first-year-ice-habitat-for-polar-bears-in-2018-than-2004/>

On the Impossibility of the Ultimate Climate Catastrophe

By Patrick Michaels, CATO, June 16, 2018

<https://www.cato.org/blog/impossibility-ultimate-climate-catasrophe>

“This week’s good news is that the East Antarctic Ice Sheet (EAIS), by far the world’s biggest ice mass, was largely intact during the entire Pliocene epoch. The Pliocene was slightly less than three million years in length, and preceded the Pleistocene, the epoch of the ice ages.”

[SEPP Comment: According to recent changes by the International Union of Geological Sciences on geological periods, the current period, the Quaternary period, is divided into the Pleistocene epoch and the Holocene epoch, the latter starting with the ending of the last major glaciation, about 11.7 thousand years ago.]

Study provides less gloom and doom about Antarctica

By Anthony Watts, WUWT, June 22, 2018

<https://wattsupwiththat.com/2018/06/22/study-provides-less-gloom-and-doom-about-antarctica/>

Link to article: Rising bedrock below West Antarctica could delay catastrophic ice sheet collapse

By Katie Langin, Science, June 21, 2018

<http://www.sciencemag.org/news/2018/06/rising-bedrock-below-west-antarctica-could-delay-catastrophic-ice-sheet-collapse>

Link to paper: Observed rapid bedrock uplift in Amundsen Sea Embayment promotes ice-sheet stability

By Valentina R. Barletta, et al., Science Mag, June 22, 2018

<http://science.sciencemag.org/content/360/6395/1335>

“Our finding requires an upward revision of ice mass loss from gravity data of 10% and increases the potential stability of the WAIS against catastrophic collapse.”

Claimed Antarctic Ice Loss An Artefact of Statistical Waterboarding...Fraught With Huge Uncertainty...

By P Gosselin, No Tricks Zone, June 17, 2018

<http://notrickszone.com/2018/06/17/claimed-antarctic-ice-loss-an-artefact-of-statistical-torture-fraught-with-huge-uncertainty/>

Changing Earth

New Study: Denmark Sea Level Was 11-12.5 Meters Higher Than Now During The Mid-Holocene

In a new paper, data from 57 sites along 17 km of coastal Denmark reveal that sea levels were 11 to 12.5 meters higher than they are today between 7,600 and 4,600 years ago.

By Kenneth Richard, No Tricks Zone, June 21, 2018

<http://notrickszone.com/2018/06/21/new-study-sea-level-was-11-12-5-meters-higher-than-now-during-the-mid-holocene/>

[SEPP Comment: How much is due to isostatic rebound, land rising after being depressed by thousands of feet of ice?]

Agriculture Issues & Fear of Famine

Famine Forecasts Foiled: Climate's Projected Food Production to Increase

By Gregory Wrightstone, CNS News, June 20, 2018 [H/t GWPF]

<https://www.cnsnews.com/commentary/gregory-wrightstone/famine-forecasts-foiled-climates-projected-food-production-increase>

Matt Ridley: My Speech on the Bee Population Scare

Viscount Ridley's speech in the House of Lords on the Bee Population Scare, 19 June 2018

By Matt Ridley, GWPF, June 20, 2018

<https://www.thegwpf.com/matt-ridley-my-speech-on-the-bee-population-scare/>

Lowering Standards

NASA's 'living planet' team thinks we only have one climate and one type of people on Earth

By Anthony Watts, WUWT, June 12, 2018

<https://wattsupwiththat.com/2018/06/12/nasas-living-planet-team-thinks-we-only-have-one-climate-and-one-type-of-people-on-earth/>

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

Read about the world of 2030 and see hidden truths

By Larry Kummer, Fabius Maximus, June 11, 2018 [H/t WUWT]

<https://fabiusmaximus.com/2018/06/11/forum-for-the-future-looks-at-climate/>

Link to: Climate futures: Responses to climate change in 2030,

By James Goodman, et al., Hewlett Packard Labs and Forum for the Future, October 2008

<https://www.forumforthefuture.org/sites/default/files/project/downloads/climate-futures.pdf>

Communicating Better to the Public – Make things up.

Actual science press release headline: ‘How to save Antarctica (and the rest of Earth too)’

By Anthony Watts, WUWT, June 15, 2018

<https://wattsupwiththat.com/2018/06/15/actual-science-press-release-headline-how-to-save-antarctica-and-the-rest-of-earth-too/>

Link to paper: Choosing the future of Antarctica

By R.S. Rintoui, Nature, June 13, 2018

<https://www.nature.com/articles/s41586-018-0173-4>

30 years ago, the first scientist spotted 'global warming.' But climate isn't the only thing changing now

By Nicky Forester, AP, June 19, 2018

https://www.stltoday.com/news/science/years-ago-the-first-scientist-spotted-global-warming-but-climate/article_b65db88b-3a99-5789-971b-91568de323c7.html

[SEPP Comment: Containing errors too numerous to mention including “dwindling population of polar bears of the Arctic.”]

Communicating Better to the Public – Do a Poll?

Are Americans Losing Interest in Global Warming?

By Cliff Mass, Weather and Climate Blog, June 16, 2018

<http://cliffmass.blogspot.com/2018/06/are-americans-losing-interest-in-global.html>

[SEPP Comment: According to google trends, 2004 to today, **the fear** of warming is diminishing.]

Communicating Better to the Public – Go Personal.

Al Gore's 1994 ABC News Nightline ‘Crooked Skeptics’ Name-Calling Failure

By Russell Cook, Gelbspan Files.com, June 15, 2018

<http://gelbspanfiles.com/?p=6997>

Expanding the Orthodoxy

Eye roller: ‘Climate Lawsuit Industry’ now has its own magazine

By Anthony Watts, WUWT, June 12, 2018

<https://wattsupwiththat.com/2018/06/12/eye-roller-climate-lawsuit-industry-now-has-its-own-magazine/>

Link to magazine, Climate Liability News

<https://www.climateliabilitynews.org/>

Pope Francis's Misguided War on Fossil Fuels

By H. Sterling Burnett, American Thinker, June 19, 2018

https://www.americanthinker.com/articles/2018/06/pope_francis_misguided_war_on_fossil_fuels.html

Investor LGIM seeks removal of eight company chairs over climate change inaction

By Simon Jessop, Reuters, June 10, 2018 [H/t WUWT]

<https://www.reuters.com/article/us-l-g-funds-climatechange/investor-lgim-seeks-removal-of-eight-company-chairs-over-climate-change-inaction-idUSKBN1J6133>

Questioning European Green

Record 1.4 bln euros to stabilise power grid/ Renewables goal in peril [Germany]

By Staff Writers, Clean Energy Wire, June 18, 2018 [H/t GWPF]

<https://www.cleanenergywire.org/news/record-14-blnc-euros-stabilise-power-grid-renewables-goal-peril>

German National Daily ‘Die Welt’ On CO2 Reduction: “Why Has It Been 5 To Midnight 30 Years Long?”

By P Gosselin, No Tricks Zone, June 20, 2018

<http://notrickszone.com/2018/06/20/german-national-daily-die-welt-on-co2-reduction-why-has-it-been-5-to-midnight-30-years-long/>

“If anything has changed because of ‘climate change’, it’s Germany’s electric power supply system. It’s gotten much more unstable and far more expensive because of all the volatile wind and solar power coming online.”

Germany’s “Ticking Time Bombs”...Technical Experts Say Wind Turbines Posing “Significant Danger” To Environment!

As much of Germany’s nearly 30,000 strong fleet of wind turbines approach 20 or more years in age, the list of catastrophic collapses is growing more rapidly. The turbines are now being viewed by technical experts as “ticking time bombs”.

By P Gosselin, No Tricks Zone, June 22, 2018

<http://notrickszone.com/2018/06/22/germanys-ticking-time-bombs-technical-experts-say-wind-turbines-posing-significant-danger-to-environment/>

Questioning Green Elsewhere

Renewables Fail: fossil fuels, coal, same dominance of our energy mix as 20 years ago

By Jo Nova, Her Blog, June 17, 2018

<http://joannenova.com.au/2018/06/renewables-fail-fossil-fuels-coal-same-dominance-of-our-energy-mix-as-20-years-ago/>

The Political Games Continue

GOP senators call for probe of federal grants on climate change

By Jacqueline Thomsen, The Hill, June 21, 2018

<http://thehill.com/policy/energy-environment/393421-gop-senators-call-for-probe-into-federal-grants-on-climate-change>

Litigation Issues

Climate Policy Should Be Set By Legislatures, Not Courts

By Donald Kochan, IBD, June 22, 2018

<https://www.investors.com/politics/commentary/climate-policy-litigation/>

“The expertise of judges is suited to police the Rule of Law and to decide actual cases based on concrete facts and identifiable, existing legal standards. And the duty of judges is to avoid the temptation to create new torts or assist the mutation of existing ones beyond recognition rather than leave that creative enterprise to the legislative branch.”

Court rejects greens’ climate case against federal coal mining

By Timothy Cama, The Hill, June 19, 2018

<http://thehill.com/policy/energy-environment/392988-court-rejects-greens-climate-case-against-federal-coal-mining>

“The judges said that the National Environmental Policy Act (NEPA) doesn’t compel a new environmental impact statement.”

Subsidies and Mandates Forever

Green Energy Corporate Welfare

By David Boaz, CATO, June 19, 2018 [H/t Cooler Heads]

<https://www.cato.org/blog/green-energy-corporate-welfare>

Green Loans Dry Up As Subsidies End

By Paul Homewood, Not a Lot of People Know That, June 19, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/06/19/green-loans-dry-up-as-subsidies-end/>

EPA and other Regulators on the March

Strengthening Transparency in Regulatory Science

EPA Comment Period closes Aug 16, 2018

<https://www.regulations.gov/docket?D=EPA-HQ-OA-2018-0259>

About 200,000 comments received by June 21, 2018

Final Rule: Definition of “Waters of the United States” – Addition of Applicability Date to 2015 Clean Water Rule

By Staff Writers, EPA, [No Date]

<https://www.epa.gov/wotus-rule/final-rule-definition-waters-united-states-addition-applicability-date-2015-clean-water>

EPA says no new rule needed on toxic waste spills

By Timothy Cama, The Hill, June 21, 2018

<http://thehill.com/policy/energy-environment/393520-epa-says-no-new-rule-needed-on-toxic-waste-spills>

Energy Issues – Non-US

The BP 2018 Statistical Review, electricity and CO2 emissions

By Roger Andrews, Energy Matters, June 21, 2018

<http://euanmearns.com/the-bp-2018-statistical-review-electricity-and-co2-emissions/#more-22223>

“In 2017 electricity generation accounted for probably less than a third of total global greenhouse gas emissions, which include CO₂, methane, NO_x etc. Targeting electricity sector emissions while ignoring emissions from other sectors is therefore pointless.”

The Beast From The East, coal, gas and the UK

By Roger Andrews, Energy Matters, June 18, 2018

<http://euanmearns.com/the-beast-from-the-east-coal-gas-and-the-uk/#more-22196>

[SEPP Comment: Andrews speculates what would happen if “The Beast From The East” hit the UK after 2025, after all coal-fired power plants are shut. He concludes: “the UK would not have been able to cover peak load deficits during much of the cold period owing to inadequate gas supplies and installed gas capacity.”

Energiewende hinges on unblocking the power grid

By Kerstine Appunn, Clean Energy Wire, Apr 10, 2018

<https://www.cleanenergywire.org/dossiers/energy-transition-and-germanys-power-grid>

EU Emissions Rise, While UK’s Fall.

By Paul Homewood, Not a Lot of People Know That, June 18, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/06/18/eu-emissions-rise-while-uks-fall/>

OPEC ministers agree to raise oil production but don't say by how much

OPEC ministers announced a deal on Friday that will increase oil supplies from the producer group.

Producers agreed to start pumping more so that they are no longer overshooting the production limits they agreed to in November 2016.

Analysts say the agreement is likely to add around 600,000 to 800,000 barrels a day to the market, helping to tame oil prices that have soared to multi-year highs recently.

By Sam Meredith, Patti Domm & Tom DiChristopher, CNBC, June 22, 2018

<https://www.cnbc.com/2018/06/22/opec-ministers-strike-deal-on-oil-production-levels.html>

Energy Issues – Australia

Intermittent electricity must be backed up by a reliable fossil-fuel generator.

By Geoff Brown, Australian Climate Sceptics Blog, June 19, 2018

<http://theclimatescepticsparty.blogspot.com/2018/06/intermittent-electricity-must-be-backed.html>

Link to article in Chinese news agency: Australian industry warns renewable energy cannot satisfy peak demand

By Staff Writers, Xinhuanet, June 15, 2018

http://www.xinhuanet.com/english/2018-06/15/c_137256145.htm

Junk generators: 2 million expensive solar panels cut Australian total CO2 emissions by 1%

By Jo Nova, Her Blog, June 22, 2018

<http://joannenova.com.au/2018/06/junk-generators-2-million-expensive-solar-panels-cut-australian-total-co2-emissions-by-1/>

“In terms of our national emissions, the real question is if we shut every solar panel in the nation would anyone notice?”

Energy Issues -- US

Natural Gas Is Next Target

By Donn Dears, Power For USA, June 19, 2018

<http://ddears.com/2018/06/19/natural-gas-is-next-target/>

America needs coal and nuclear power for energy diversity

By J. Winston Porter, Rockland County Times (NY), June 21, 2018

<http://www.rocklandtimes.com/2018/06/21/america-needs-coal-and-nuclear-power-for-energy-diversity/>

Oil and Natural Gas – the Future or the Past?

The shale revolution is a uniquely American story

By Kathleen Hartnett White, Washington Examiner, June 18, 2018 [H/t Cooler Heads]

<https://www.washingtonexaminer.com/opinion/the-natural-gas-revolution-is-a-uniquely-american-story>

“A study by PricewaterhouseCoopers showed that U.S. oil and natural gas industries supported 10.3 million jobs in 2015. In 2016, Texas shale industries accounted for more than 325,500 direct jobs with an average annual wage of \$130,000.”

IHS Markit: U.S. Natural Gas Production Could Grow Another 60 Percent over Next 20 Years

Ten years since start of U.S. “Shale Gale,” pace of production growth is only accelerating and continues to reshape the energy, economic and geopolitical landscape, new report finds
By Staff Writers, Business Wire, June 20, 2018

<https://www.businesswire.com/news/home/20180620005271/en/IHS-Markit-U.S.-Natural-Gas-Production-Grow>

Link to report (registration necessary): The Shale Gale Turns 10: A Powerful Wind at America’s Back

By Daniel Yergin and Sam Andrus, HIS Markit, June 2018

<https://ihsmarkit.com/Info/0618/shale-gale-turns.html>

Yergin: Permian oil production growth beats the whole world

Consultant group IHS Markit estimates, however, that infrastructure capacity will be the limiting factor in U.S. shale oil potential.

By Daniel J. Graeber, UPI, June 13, 2018 [H/t Toshio Fujita]

https://www.upi.com/Energy-News/2018/06/13/Yergin-Permian-oil-production-growth-beats-the-whole-world/870152889522/?utm_source=sec&utm_campaign=sl&utm_medium=2

The Biggest U.S. Oil Patch Is Near Its Limit

By Javier Blas, Bloomberg, June 20, 2018

<https://www.bloomberg.com/news/articles/2018-06-20/shale-giant-says-permian-oil-faces-shut-ins-on-pipeline-shortage>

“The biggest U.S. shale region will have to shut wells within four months because there aren’t enough pipelines to get the oil to customers, the head of one of the industry’s largest producers said.”

Where Will U.S. Frackers Drill Next?

By Tsvetana Paraskova., Oil Price.com, June 18, 2018

<https://oilprice.com/Energy/Crude-Oil/Where-Will-US-Frackers-Drill-Next.html>

Oil Spills, Gas Leaks Etc. & Consequences

Studies show groundwater holding own against drilling boom

By Michael Rubinkam, AP, June 18, 2018

<https://apnews.com/b3cecd15c46d4feb88974b17a033f892>

Link to paper: Big Groundwater Data Sets Reveal Possible Rare Contamination Amid Otherwise Improved Water Quality for Some Analytes in a Region of Marcellus Shale Development

By Tao Wen, et al. Environmental Science & Technology, May 22, 2018

<https://pubs.acs.org/doi/abs/10.1021/acs.est.8b01123?journalCode=esthag>

Alternative, Green (“Clean”) Solar and Wind

Exclusive: Tesla to close a dozen solar facilities in nine states – documents

By Nichola Groom, Salvador Rodriguez, & Kristina Cooke, Reuters, June 21, 2018

<https://www.reuters.com/article/us-tesla-solar-exclusive/exclusive-tesla-to-close-a-dozen-solar-facilities-in-nine-states-documents-idUSKBN1JI013>

Global wind-power capacity to increase nearly 3%, says MAKE

By Michelle Froese, Windpower Engineering, June 20, 2018

<https://www.windpowerengineering.com/business-news-projects/uncategorized/global-wind-power-capacity-increase-by-nearly-3-says-make-report/>

“MAKE forecasts the annual wind-power capacity additions to average more than 67 GW from 2018 to 2027, resulting in a compounded annual growth rate that exceeds 8% over the period.”

Energy & Environmental Newsletter: June 18, 2018

By John Droz, Jr., Master Resource, June 18, 2018

<https://www.masterresource.org/alliance-for-wise-energy-decisions/energy-environmental-newsletter-june-18-2018/>

Magical Wind Power: Illusions versus Reality

By John Droz, Jr., American Thinker, June 20, 2018

https://www.americanthinker.com/articles/2018/06/magical_wind_power_illusions_versus_reality.html

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

How Battery Chemistry Assumptions Distort Nickel And Cobalt Demand Forecasts

By Paul Homewood, Not a Lot of People Know That, June 19, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/06/19/how-battery-chemistry-assumptions-distort-nickel-and-cobalt-demand-forecasts/#more-34105>

Link to full article: How Battery Chemistry Assumptions Distort Nickel And Cobalt Demand Forecasts

By John Petersen, Seeking Alpha, Mar 1, 2018

<https://seekingalpha.com/article/4152035-battery-chemistry-assumptions-distort-nickel-cobalt-demand-forecasts>

“In general, increasing the nickel content in a cathode formulation will improve energy density but reduce stability, which means there’s a trade off between cost and safety.”

Cobalt & Lithium Prices Rising Fast

By Paul Homewood, Not a Lot of People Know That, June 17, 2018

<https://notalotofpeopleknowthat.wordpress.com/2018/06/17/cobalt-lithium-prices-rising-fast/>

[SEPP Comment: Will the Club of Rome produce a state-of-the-art mathematical model “proving” cobalt and lithium batteries are not sustainable?]

Alternative, Green (“Clean”) Vehicles

Infrastructure for Battery-Powered Vehicles

By Donn Dears, Power For USA, June 22, 2018

<http://ddears.com/2018/06/22/infrastructure-for-battery-powered-vehicles/>

[SEPP Comment: Reader Mark Krebs commented that according to the CEO of Southern California Gas: “A recent Black and Veatch analysis showed 100 percent renewable electricity could cost California \$3 trillion and require 900 square miles of solar panels and another 900 square miles of depletable and unrenowable battery storage.”]

Colorado joins states adopting stricter vehicle emissions standard

By Miranda Green, The Hill, June 19, 2018

<http://thehill.com/policy/energy-environment/393044-colorado-adopts-californias-stricter-vehicle-emissions-standard>

“The EPA has not yet announced its proposed rule, but many expect a draft to be released sometime this summer.”

[SEPP Comment: We don’t know what we are doing, but we will fight anyway!]

Carbon Schemes

Chinese set up a giant strawman carbon market twice size of EU

By Jo Nova, Her Blog, June 19, 2018

<http://joannenova.com.au/2018/06/chinese-set-up-a-giant-strawman-carbon-market-twice-size-of-eu/#more-59305>

California Dreaming

CPUC rejects \$639 million SDG&E pipeline project

By Rob Nikolewski, San Diego Union-Tribune, June 21, 2018

<http://www.sandiegouniontribune.com/business/energy-green/sd-fi-cpuc-pipelinevote-20180621-story.html>

[SEPP Comment: A new 36-inch pipeline replacing a 70-year old, 16-inch pipeline. Does the California Public Utilities Commission believe that electricity generated from wind and solar is reliable?]

Other News that May Be of Interest

Questioning Truth, Reality and the Role of Science

In an era when untestable ideas such as the multiverse hold sway, Michela Massimi defends science from those who think it hopelessly unmoored from physical reality.

By Philip Ball, Quanta, May 24, 2018

<https://www.quantamagazine.org/questioning-truth-reality-and-the-role-of-science-20180524/>

U.N. Report Faults Trump For Obama Poverty, Media Fall For It

Editorial, IBD, June 22, 2018

<https://www.investors.com/politics/editorials/u-n-poverty-report/>

Link to report: Report of the Special Rapporteur on extreme poverty and human rights on his mission to the United States of America

By Philip Alston, Special Rapporteur, Human Rights Council, May 4, 2018

<http://undocs.org/A/HRC/38/33/ADD.1>

“The truth is, U.S. gives about \$10 billion a year to the U.N., which often uses the money for explicitly anti-U.S. activities — such as funding the tendentious poverty study mentioned above, aiding terrorists in the Mideast, spending millions on useless "development" projects, and wasting hundreds of millions on do-nothing bureaucrats' salaries.”

[SEPP Comment: More reason to withdraw from the misguided UN Human Rights Council.]

BELOW THE BOTTOM LINE:

Man-made warming – on the moon!

By Anthony Watts, WUWT, June 12, 2018

<https://wattsupwiththat.com/2018/06/12/man-made-warming-on-the-moon/>

Hotter and meaner

By Staff Writers, Climate Change Predictions.org, June 17, 2018

<http://climatechangepredictions.org/uncategorized/6007>

“Naomi Klein, best selling author and social activist, said climate change would exacerbate social problems such as racism and inequality, predicting Australia would become ‘meaner’ as it gets hotter.

“You see that in Australia where the treatment of migrants is a profound moral crisis,’ she said. ‘It’s clear that as sea levels rise that this mean streak and open racism is going to become more extreme – climate change is an accelerant to all those other issues.’”

The Guardian, 17 Aug 2015

ARTICLES:

1. How a Florida Utility Became the Global King of Green Power

NextEra became a renewable-energy Goliath using tax subsidies to help finance projects around the country and avoiding debt—staying quiet about it all

By Russell Gold, WSJ, June 18, 2018

https://www.wsj.com/articles/how-a-florida-utility-became-the-global-king-of-green-power-1529331001?mod=hp_lead_pos9

SUMMARY: The opening paragraphs of the article are:

“Who is the world’s largest operator of wind and solar farms? It’s also America’s most valuable power company. Still stumped? It’s by design.

“That is a marketing problem...that we foster intentionally,’ Michael O’Sullivan, NextEra Energy Inc.’s head of renewable development, told University of Notre Dame students in 2015.

“The Florida company has grown into a green Goliath, almost entirely under the radar, not through taking on heavy debt to expand or by touting its greenness, but by relentlessly capitalizing on government support for renewable energy, in particular the tax subsidies that help finance wind and solar projects around the country. It then sells the output to utilities, many of which must procure power from green sources to meet state mandates.

“NextEra has been careful to build sites only after it has customers lined up, avoiding debt problems that sank rivals such as SunEdison Inc. And it has assiduously avoided the kind of claims of altruistic motives that are common among some green-energy companies.

‘They were focused on business fundamentals and not the Hollywood status’ that comes with being a champion of green power, said Andrew Hoffman, a University of Michigan business professor who was on a NextEra advisory board until 2012.

“NextEra, as America’s most valuable power company, has a market capitalization of \$74 billion. In 2001, the company, formerly Florida Power & Light, was the 30th largest U.S. power company, with a \$10.2 billion valuation. It said in 2017 federal filings it produced more megawatt-hours of electricity from wind and solar farms than any company in the world; regulatory documents suggest it is, indeed, a bigger wind and solar producer than its largest global competitors, in Europe and China.

“The way it captured the lead in the renewables market has allowed NextEra to grow despite the fact that the electricity industry has struggled with flat demand for power. The U.S. government expects power companies to generate \$4.8 billion in renewable-energy tax credits this year, and NextEra is poised to be the largest generator of them, selling some to other corporations interested in lowering their tax bills and using the rest to shrink its own.

The article goes on to explain that when states pass renewable energy mandates, the local utility companies do not know how to build such facilities and invite NextEra to build such power generators. "Today, 29 states covering 56% of electricity sales have mandates."

2. The Social Benefits of Fossil Fuels Far Outweigh the Costs

Inexpensive power enables technological marvels, and even global warming has positive effects.

By Joseph L. Bast and Peter Ferrara, WSJ, June 17, 2018

<https://www.wsj.com/articles/the-social-benefits-of-fossil-fuels-far-outweigh-the-costs-1529258294>

SUMMARY: The senior fellows at the Heartland Institute write:

"As several cities continue their suit against oil companies, The People of the State of California v. BP, Judge William Alsup has boiled the case down to its pivotal question. In March he ordered the legal counsels of both parties to help him weigh "the large benefits that have flowed from the use of fossil fuels" against the possibility that such fuels may be causing global warming.

"We sent the judge, and posted online, a 24-page document that answers his question. The benefits of oil, coal and gas are rarely acknowledged by environmental activists, who seek to regulate and tax these fuel sources out of existence. But an honest accounting shows that fossil fuels produce enormous social value that far outweighs their costs.

"First, fossil fuels are lifting billions of people out of poverty, and in turn improving health. "The most fundamental attribute of modern society is simply this," writes historian Vaclav Smil in his 2003 book on energy: "Ours is a high energy civilization based largely on combustion of fossil fuels."

"Fossil fuels, and coal in particular, provided the energy that powered the Industrial Revolution. Today, coal plants still produce most of the electricity that powers high-tech manufacturing equipment and charges mobile computing devices.

"The alternative energy sources environmental activists favor are generally more expensive. Energy economists Thomas Stacey and George Taylor calculate that wind power costs nearly three times as much as existing coal generation and 2.3 times as much as combined-cycle gas. There is a negative correlation between energy prices and economic activity. A 2014 survey of economic literature by Roger Bezdek calculates that a 10% increase in U.S. electricity prices would eliminate approximately 1.3% of gross domestic product.

"Cheap energy from fossil fuels also improves human well-being by powering labor-saving and life-protecting technologies, such as air-conditioning, modern medicine, and cars and trucks. Environmental activists often claim that prosperity speeds the depletion of resources and destruction of nature, but the opposite is true. As Ronald Bailey writes in "The End of Doom": "It is in rich democratic capitalist countries that the air and water are becoming cleaner, forests are expanding, food is abundant, education is universal, and women's rights respected."

"Fossil fuels have increased the quantity of food humans produce and improved the reliability of the food supply. The availability of cheap energy revolutionized agriculture throughout the world,

making it possible for an ever-smaller proportion of the labor force to raise food sufficient to feed a growing global population without devastating nature or polluting air or water.

“Fossil-fuel emissions create additional benefits, contributing to the greening of the Earth. A 2017 study published in Nature magazine found that the global mass of land plants grew 31% during the 20th century. African deserts are blooming thanks to fossil fuels.

“Finally, if fossil fuels are responsible for a significant part of the warming recorded during the second half of the 20th century, then they should also be credited with reducing deaths due to cold weather. Medical researchers William Richard Keatinge and Gavin Donaldson assessed this effect in a 2004 study. “Since heat-related deaths are generally much fewer than cold-related deaths, the overall effect of global warming on health can be expected to be a beneficial one.”

“They estimate the predicted temperature rise in Britain over the next 50 years will reduce cold-related deaths by 10 times the number of increased heat-related deaths. Other research shows climate change has exerted only a minimal influence on recent trends in vector-borne diseases such as malaria, dengue fever and diseases spread by ticks.

“Altogether, fossil fuels have produced huge benefits for mankind, many of which continue today. But advocates of alternative energy sources usually manage to omit or diminish many of these benefits when calculating fossil fuels’ ‘social cost.’”

The authors conclude by thanking the current administration for understanding the benefits of fossil fuels.
