The Week That Was: 2017-06-24 (June 24, 2017) Brought to You by SEPP (www.SEPP.org) The Science and Environmental Policy Project

Quote of the Week. "By denying scientific principles, one may maintain any paradox." – Galileo Galilei [H/t Campaign for Accuracy in Public Health Research]

Number of the Week: One per 148,500,000,000,000 molecules

THIS WEEK:

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

Upheaval in Washington: One can describe the election of Donald Trump and the beginning of his administration as an upheaval against establishment Washington, including both political parties. Certainly, those expressing dissatisfaction at the early steps taken by the Trump administration are from multiple political alliances. Some political groups are outraged by the administration's decision to leave the Paris Agreement (Accord), other groups are concerned that the Administration is moving too slowly. Each set has arguments that are, at least, partially right.

Some of those objecting to the US leaving the Parise agreement may have counted on lavish US spending on their pet schemes. As mentioned in June 10 TWTW, the Paris agreement involved side agreements that could be costly to the US taxpayer. For example, according to its defenders the Mission Innovation pact of 2015, involved a US commitment of over \$6 billion in 2017 and increasing to over \$12 billion in 2021. The purpose was to double expenditures on clean energy research and development, apparently without approval by Congress.

The question remains: how much of such funds can be used effectively? Financing posh international meetings on the scale of the UN Intergovernmental Panel on Climate Change (IPCC) is not effective use. The technological limits of solar and wind, as discussed by Mark Mills and others, indicate that no great breakthroughs can be expected using technologies now available.

One should not be confused by the breakthrough in extracting oil and gas from shale. Even in the 1970s, when the Carter administration was convinced that the world would run out of oil and the US out of natural gas by the end of the 20th century, the shale (source rock) holding vast oil and gas resources were known to exist. The difficulty was extracting oil and gas. It turned out that known technologies of hydraulic fracturing and directional drilling were combined and modified with great success, and a learning curve in that technology is still advancing.

Others argue that the Trump administration is moving far too slowly in filling critical political appointments in many agencies. As a result, senior bureaucrats are filling key positions and continuing the policies of the previous administration. For example, Patrick Michaels has a post on Judith Curry's blog, Climate Etc. discussing that "National Climate Assessment" version 4 is proceeding. Previous assessments included some outrageous exaggerations of what can be empirically determined. Currently, under the direction of the US Global Change Research Program (USGCRP), there is no logical reason to assume the new National Assessment will be based on observations rather than speculation.

Such activities will continue until Mr Trump appoints a new director of the Office of Science and Technology Policy and fills second and third level positions in key government agencies. See links under Challenging the Orthodoxy.

Lowering Standards: The American Meteorological Society (AMS) took a major step in demonstrating it has become a political organization without regard to objective scientific standards. Secretary of Energy Rick Perry was interviewed on CNBC and he asked whether he believed that carbon dioxide was "the primary control knob for the temperature of the Earth and for climate", Perry said that "No, most likely the primary control knob is the ocean waters and this environment that we live in."

Gavin Schmidt, the head of NASA-Goddard Institute for Space Studies (NASA-GISS), on Broadway, NYC, has written a paper that CO2 is the control knob of the earth's temperatures. From such language, one can assume that CO2 is the primary cause, all other possible causes are secondary – a view consistent with the last report of the IPCC, the Fifth Assessment Report.

The role of CO2 on temperatures is the subject of intense controversy. Laboratory experiments show that CO2 has a minor impact on temperatures. The theory, as expressed in the 1979 Charney Report, states that this influence will be amplified by an increase in water vapor which would cause significant warming. However, any amplification has not been empirically demonstrated. The warming trend of the atmosphere is centered about 10 km (33,000 feet) above the tropics is not found. This warming trend was called the "hot-spot" and incorrectly called "the distinct human fingerprint" by Benjamin Santer, and the UN IPCC.

Thus, Perry's comments are at odds with the IPCC assertions and NASA-GISS, but are consistent with many other scientists who do not, or no longer, participate in the IPCC process. Many consider that since the expressed goal of the IPCC is to identify the human influence on climate, it deliberately subordinates or ignores the natural influences on climate.

As things stood, Perry's comments would not be unusual. But Keith Seitter, the Executive Director of AMS wrote Perry a letter criticizing his views, stating that:

"While you acknowledged that the climate is changing and that humans are having an impact on it, it is critically important that you understand that emissions of carbon dioxide and other greenhouse gases are the primary cause."

It is the claim that CO2 as the primary cause that is the core of the issue, not if human emissions or other human activities such as building around airports are causing surface temperatures to rise. In the links below, Roy Spence, Anthony Watts, and Joseph D'Aleo rebut the views of Mr. Seitter. D'Aleo quotes his colleague Joe Bastardi about natural variation:

There is nothing irrational or radical about simple observational data of the past, which by the way has support from Greenland Ice cores and tree ring study. I have the sun, the oceans, stochastic events and the VERY DESIGN OF THE ENTIRE SYSTEM (land and ocean configuration, wobbles on its axis in an elliptical orbit around a somewhat inconsistent star dwarfs the effect of CO2 given the entire planetary history of CO2/temp.

It is the language used by Seitter that is interesting to TWTW. "In climate science unresolved questions remain—issues that currently lack conclusive evidence. However, there are also very solid conclusions that are based on decades of research and multiple lines of evidence."

The multiple lines of evidence argument is used in the EPA finding that carbon dioxide and other greenhouse gases endanger public health and welfare. But, there is no hard evidence offered. After the US government spending over \$40 billion on what it calls climate science since 1993, one would expect it would have hard evidence, not just a line of evidence, which could be a line to nowhere.

The EPA offers knowledge of greenhouse gas theory, a dubious study by Tom Karl et al., and climate models as lines of evidence. The amplification of laboratory tested effect of CO2, and other greenhouse gases (such as methane) by water vapor has not been found. The climate models greatly overestimate the warming of the atmosphere, where the theory states the greenhouse gas effect occurs. The "hot-spot" discussed above is not found. Even proponents of the concept that CO2 causes dangerous global warming have dropped discussion of Mr. Karl's paper.

Mr. Seitter stated: "Skepticism that fails to account for evidence is no virtue." The same can be said about speculative assertions from "scientific" organizations without hard evidence.

No wonder Joseph D'Aleo wrote:

"For a lifelong member of the AMS, a Fellow of the AMS, a CCM, former Chair of the Committee on Weather Analysis and Forecasting and the only private meteorologist to be elected by my peer[s] to be a councilor, it is a sad day to see a former Texas Governor to know more about the scientific method and the science of climate than the AMS Director. I dearly miss Ken Spengler more every day."

See links under Defending the Orthodoxy.

Statistical Games? Benjamin Santer, discussed above, is lead author of a new paper, which at first review, seems to support the view that global climate models greatly overestimate the warming of the atmosphere, where the greenhouse effect occurs. However, there seems to be an underlying issue that may become the dominant one. Which set of satellite data does one accept?

The two sources of satellite data, University of Alabama in Huntsville (UAH) and Remote Sensing Systems (RSS), show that climate models greatly overestimate the warming of the atmosphere. John Christy's testimony to Congress has been particularly devastating in this regard. It relies on UAH data, which Christy carefully limited his data to 50,000 feet or below to avoid any confusion with stratospheric cooling.

Since 1999 there has been an increasing separation between UAH data and RSS data. An article by Zeke Hausfather neatly illustrates the difference. There is the rub. According to Hausfather's report, Carl Mears, a co-founder of RSS and a co-author of the Santer paper, stated that:

"In general, I think that the surface datasets are likely to be more accurate than the satellite datasets. The between-research spreads are much larger than for the surface data, suggesting larger structural uncertainty."

What is meant by "The between-research spreads" is not clear. Satellite data is far more comprehensive than surface data. Due to changes in locations, types of instrument, lack of coverage, and outright manipulation, SEPP has great difficulty accepting that surface datasets are more accurate than satellite datasets. The entire effort may be a ruse to discredit Christy's testimony, similar to Santer's statistical tricks to try to re-establish the hotspot or those exposed during Climategate.

Endangerment Finding: Upon change in administrations, without fanfare, the Competitive Enterprise Institute (CEI) and the Science and Environmental Policy Project (SEPP) filed a petition to the EPA requesting reconsideration of the EPA endangerment finding, discussed above. The petition primarily cites new evidence, data, that calls into question that finding. The petition is identified as CEI/SEPP. Another group of seven individuals including Joseph D'Aleo and James Wallace filed a separate petition identified as CHECC. We have not received a response from the EPA or expect to receive one for some time.

Writing for the Climate Institute, Michael MacCracken outlined his objections to the petitions finding them "...seriously deficient and in no sense sufficient to justify a reconsideration of any of the findings in EPA's Endangerment Finding."

Mr. MacCracken is an established figure in Washington's scientific circles. According to his review of the petitions:

On April 2, 2007, just over ten years ago, the U.S. Supreme Court ruled 5 to 4 that the Environmental Protection Agency had the authority under the Clean Air Act to limit emissions of carbon dioxide (CO2). The majority opinion in Massachusetts versus EPA (549 U.S. 497, 2007) was written by Justice Stevens. As described in an early commentary by Climate Institute president John Topping, Justice Stevens granted standing to Massachusetts based in part on a declaration prepared by Dr. Michael MacCracken, the Climate Institute's Chief Scientist for Climate Change Programs. Among other impacts, MacCracken's brief described how sea level rise being caused by the warming of ocean waters and the melting of land-based glaciers and ice sheets was going to be taking the land of the Commonwealth of Massachusetts, and the state had turned over responsibility for defending its boundaries when it joined the Union.

Since SEPP has not had time to discuss the MacCracken paper with CEI, the strengths and weakness will not be discussed in this TWTW. But, it is valuable to assess the influence of the "Climate Institute: Catalyzing Climate Solutions." According to its web site under mission:

"Founded in 1986, the Climate Institute was the world's first organization focused solely on climate change. Since its founding, the Institute has been instrumental in moving climate change onto the international agenda, fostering collaboration between developing countries and richer nations, and in launching and implementing pioneering studies and initiatives on subjects such as environmental refugees, transforming the energy infrastructure of small island states, and catalyzing policymaker focus on the necessity of limiting emissions of black carbon and other short-lived climate forcers.

"Our mission is two-fold. We seek (1) to catalyze the implementation of innovative and practical solutions to climate change by supporting and collaborating with private, non-profit, and governmental organizations and (2) to provide non-partisan analysis of climate-related events, initiatives, and policies."

Its achievements include:

- "Moving Climate Protection Onto the International Agenda (1986-1992)
- Helping Lay the Groundwork for the Framework Convention on Climate Change (1986-1992)
- Catalyzing Climate Protection Efforts in Asia (1989-1995)
- Helping Spark a Cities for Climate Protection Effort (1991-2001)
- Empowering Island Nations and Vulnerable Peoples to Lead in Climate Protection (1991-Present)
- Promoting Win-Win Strategies and Focus on Short-Lived Climate Forcers to Avert Highly Disruptive Climate Change (2005-Present)
- Catalyzing Rapid Movement on Climate Protection in Mexico and Launching the Crispin Tickell Interactive Climate Network (1991- Present)"

The listed donors to the Climate Institute include: The Australian International Development Assistance Bureau (now AUSAID); BP, CH2M Hill; CS Mott Fund; Environment Canada; Ford Motor Company Fund; GE Foundation; Goldman Sachs; Government of Egypt, Government of Italy; Japan Environment Agencies; NASA, NOAA, National Science Foundation; PG&E Corporation; Rockefeller Brothers Fund; Shell Foundation; The Rockefeller Foundation; Toyota Motor Company; USAID; USDOE; USEPA; UK Department for International Development; UN Development Programme; UN Environment Programme; UN Foundation; UN Population Fund; US Army Corps of Engineers; US Department of State; World Bank; and World Resources Institute.

This partial list gives a good indication how intertwined many seemingly independent organizations are, and the possible extent of the opposition to any attempt to change the endangerment finding within government and outside of government. Also, the achievements help explain why certain small countries are most insistent in demanding action. See links under Defending the Orthodoxy.

Manichean Paradox: Roger Pielke Jr largely quit writing about climate issues when members of Congress called for his investigation after he showed that the data does not support the Obama administration's claim that global warming/climate change is causing increasing extreme weather events. Pielke will be giving a talk to the Global Warming Policy Foundation in London with the neat title: Climate Politics as Manichean Paranoia

Roughly described, Manichean Paranoia occurs when each side of a controversy is claiming: "Ours is the side of light, yours is the one of darkness." See links under Seeking a Common Ground.

Additions and Corrections: Last week, TWTW discussed the finding by Management Information Services Inc. that: "Over the past six years, 2011 through 2016, renewable energy received more than three times as much help in federal incentives as oil, natural gas, coal, and nuclear combined..." Management Information Services defined renewables as primarily wind,

solar, and biomass. A more careful examination of US energy consumption in 2016 by the EIA shows that biomass (including wood industries burning waste) accounts for 4.6% of US energy consumption; wind, 2.1% and solar 0.6%. [Primary production numbers were not broken out for wind and solar.] These data further indicate of how little importance wind and solar are to the US economy despite generous subsidies.

 $\underline{https://www.eia.gov/energyexplained/?page=us_energy_home}$

Number of the Week: One per 148,500,000,000,000 molecules. Writing in *The Spectator Australia*, geologist Ian Plimer amusingly calculates that assuming Australia emits 1.5% of global annual CO2 emissions, and if 3% are anthropogenic, then one in 6.6 million molecules of CO2 in the atmosphere are emitted by Australians. Using his rough numbers that the USA emits 14 times more CO2 then the USA human emissions amount to one in 471,000 molecules (dividing 6.6 million by 14)

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 five past recipients, Lisa Jackson, Barack Obama, John Kerry, Ernest Moniz and John Holdren 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:

Science: Is the Sun Rising?

Lowest Solar Activity In 200 Years Accompanied By High Northern Hemispheric Snow And Ice

By P Gosselin, No Tricks Zone, June 18, 2017

http://notrickszone.com/2017/06/18/lowest-solar-activity-in-200-years-accompanied-by-high-northern-hemispheric-snow-and-ice/#sthash.FDKCSlb4.dpbs

Commentary: Is the Sun Rising?

Indirect Effects of the Sun on Earth's Climate

Guest essay by Mike Jonas, WUWT, June 10, 2017

https://wattsupwiththat.com/2017/06/10/indirect-effects-of-the-sun-of-earths-climate/

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

Challenging the Orthodoxy

Climate notes, One lonely molecule

By Ian Plimer, The Spectator, Australia, June 2017

https://spectator.com.au/2017/06/climate-notes/

Or one in 275,000 for the US, or with a 2015 population of 321.4 million one per 88,385,000,000,000

Junk Science Week: The 'hiatus' in global warming is the hottest topic in climate science right now, whether alarmists like it or not

The global warming 'hiatus' is the most talked about and researched topic in climate science By David Whitehouse (of GWPF), Financial Post, CA, June 22, 2017

 $\frac{\text{http://business.financialpost.com/opinion/junk-science-week-the-hiatus-in-global-warming-is-the-hottest-topic-in-climate-science-right-now-whether-alarmists-like-it-or-not/wcm/477730dd-c684-4e66-bb8d-a16e70139b68}$

National Climate Assessment and the Trump administration

The National Climate Assessment must be redirected or terminated

By Patrick Michaels, Climate Etc. June 21, 2017

https://judithcurry.com/2017/06/21/national-climate-assessment-and-the-trump-administration/#more-23133

Scientific Papers Indicate Natural Processes Dominate Changes In Ozone Hole, Methane And CO2 Emissions

By Kenneth Richard, No Tricks Zone, June 19, 2017

http://notrickszone.com/2017/06/19/scientific-papers-indicate-natural-processes-dominate-changes-in-ozone-hole-methane-and-co2-emissions/#sthash.1od2XuWT.dpbs

Why I Spend So Much Time and Effort on Climate Skepticism

By Alan Carlin, Carlin Economics and Science, June 22, 2017 http://www.carlineconomics.com/archives/3697

Defending the Orthodoxy

On Challenges to EPA's Climate Change Endangerment Finding

By Michael MacCracken, Climate Institute, June 19, 2017

http://climate.org/on-challenges-to-epas-climate-change-endangerment-finding/

The AMS Scolds Rick Perry for Believing the Oceans are Stronger than Your SUV

By Roy Spencer, His Blog, June 22, 2017

 $\underline{\text{http://www.drroyspencer.com/2017/06/the-ams-scolds-rick-perry-for-believing-the-oceans-are-stronger-than-your-suv/}$

Link to AMS letter to Secretary Perry

https://www.ametsoc.org/ams/index.cfm/about-ams/ams-position-letters/letter-to-doe-secretary-perry-on-climate-change/

The American Meteorological Society @ametsoc falls into the consensus trap in a letter to Rick Perry

By Anthony Watts, WUWT, June 22, 2017

 $\underline{https://wattsupwiththat.com/2017/06/22/the-american-meteorological-society-ametsoc-falls-into-the-consensus-trap-in-a-letter-to-rick-perry/$

The American Meteorological Society @ametsoc falls into the consensus trap in a letter to Rick Perry

By Joseph D'Aleo, ICECAP, June 22, 2017

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

climate/the american meteorological society ametsoc falls into the consensus trap i/ [SEPP Comment: Praising the comments by Anthony Watts and following up with some of his own.]

Study: Why troposphere warming differs between models and satellite data

By Zeke Hausefather, Carbon Brief, June 21, 2017

https://www.carbonbrief.org/study-why-troposphere-warming-differs-between-models-and-satellite-data?

Link to paper: Causes of differences in model and satellite tropospheric warming rates

By Benjamin Santer, et al. Nature Geoscience, June 19, 2017

https://www.nature.com/ngeo/journal/vaop/ncurrent/full/ngeo2973.html

Republicans' favorite climate chart has some serious problems

As usual, cherry picking and misrepresentations are used to oppose climate policies By Dana Nuccitelli, The Guardian, Feb 19, 2017

https://www.theguardian.com/environment/climate-consensus-97-per-

cent/2016/feb/19/republicans-favorite-climate-chart-has-some-serious-problems

"The only reason to focus on the temperature of the atmosphere, most of which is far above where humans actually live, which we can't measure as accurately, and which only accounts for about 1-2% of overall global warming, is because it's the only data that seems to indicate that climate

models might not be accurate. That's called cherry picking. And even then, to make that argument requires presenting the data in a multiply flawed, misleading way."

[SEPP Comment: One of the "researchers" proclaiming 97% of climate scientists Where does the greenhouse effect occur – under the seas? The statements are so false it's appalling. The reason to focus on the temperature of the atmosphere is: that's where the cooling of the planet comes occurs. Doubtfully, anyone with the Guardian would understand that the UAH satellite data, published in in its entirety, is not cherry picking. Is this the caliber of the thinking of the others who claim 97%...?]

Questioning the Orthodoxy

Take A Look At The New 'Consensus' On Global Warming

By Michael Bastasch and Ryan Maue, Daily Caller, June 19, 2017 [H/t GWPF] http://dailycaller.com/2017/06/19/take-a-look-at-the-new-consensus-on-global-warming/

Why the IPCC Models are Wrong...

By Donn Dears, Power For USA, June 23, 2017 http://www.powerforusa.com/2017/06/23/why-the-ipcc-models-are-wrong/

Decades of Climate Hysteria Unsupported by Data

By Larry Bell, Newsmax, June 19, 2017 http://www.newsmax.com/LarryBell/ap-new-york-times-ice-age/2017/06/19/id/796842/

After Paris!

Outcome of the Paris Accord: a re-founding act of American democracy?

Interview with Drieu Godefridi, Belgian philosopher, jurist, author of "Le GIEC etMort; Vive le Science" (The IPCC is Dead: Long Live Science)

By Staff Writers, Friends of Science, Calgary, June 15, 2017 [H/t GWPF]

https://friendsofsciencecalgary.wordpress.com/2017/06/15/outcome-of-the-paris-accord-a-refounding-act-of-american-democracy/

Change in US Administrations

EU Divisions Hobble Bid to Lead Climate Deal

Bloc faces internal challenges in its effort to replace U.S. as Paris Agreement champion By Emre Peker, WSJ, Via GWPF, June 19, 2017

https://www.thegwpf.com/eu-deeply-divided-over-future-climate-targets/

[SEPP Comment: The GWPF summary leaves out an important paragraph in the WSJ article: "'EU member states seem unable to move from words to deeds,' said Caroline Westblom of Climate Action Network Europe, an advocacy group. 'Today's lack of real progress is at odds with the recent statements on the EU's unequivocal commitment to the Paris Agreement.'"]

Change in US Administrations – Favor

Marko, Soon, et al: To Put America First Is to Put Our Planet's Climate First By Willie Soon and Istvan Marko, Breitbart, June 16, 2017 http://www.breitbart.com/big-government/2017/06/16/america-first-climate/

Green Weenie of the Century: The Global Climate Treaties

By Steven Hayward, Power Line, June 17, 2017

 $\underline{http://www.powerlineblog.com/archives/2017/06/green-weenie-of-the-century-the-global-climate-treaties.php}$

Link to paper: Analyzing the effectiveness of international environmental policies: The case of the Kyoto Protocol

By Christian Almer and Ralph Winkler, Journal of Environmental Economics and Management, March 2017

http://www.sciencedirect.com/science/article/pii/S0095069616304296

Smith right about harmful, worthless climate accord

By Jeff Judson and Willie Soon, San Antonio Express-News, June 11, 2017 http://www.mysanantonio.com/opinion/commentary/article/Smith-right-about-harmful-worthless-climate-11209330.php

Change in US Administrations – Opposed

EPA axes 38 more science advisers, cancels panel meetings

By Sean Reilly, E&E News, Science, June 20, 2017

http://www.sciencemag.org/news/2017/06/epa-sheds-38-more-science-advisors

Problems in the Orthodoxy

No, Cities Are Not Actually Leading on Climate. Enough With the Mindless Cheerleading

Sam Brooks, a former director for the D.C. government's energy division, examines the "cities are leading on climate" myth.

By Sam Brooks, Green Tech Media, June 21, 2017

https://www.greentechmedia.com/articles/read/hard-truths-about-city-failures-with-clean-energy

Seeking a Common Ground

Roger Pielke, Jr.; Climate Politics as Manichean Paranoia

By Staff Writers, GWPF, June 19, 2017

https://www.thegwpf.com/roger-pielke-jr-climate-politics-as-manichean-paranoia/

"While the two sides of the contemporary US climate debate disagree on many things, they are firmly united in their Manichean paranoia."

What happened to the traditional role of skepticism in climate science?

Guest essay by Forrest M. Mims III, WUWT, June 22, 2017

 $\underline{https://wattsupwiththat.com/2017/06/22/what-happened-to-the-traditional-role-of-skepticism-in-climate-science/}$

"Unfortunately, skepticism has been deleted from the latest edition of 'On Being a Scientist,' a widely-read booklet published by the National Academies of Science."

Pielke on Climate #3

By Roger Pielke Jr. The Climate Fix, June 15, 2017

https://theclimatefix.wordpress.com/2017/06/15/pielke-on-climate-3/

Should Scientists and the Media Exaggerate Global Warming?

By Cliff Mass, Weather and Climate Blog, June 17, 2017

http://cliffmass.blogspot.com/2017/06/should-scientists-and-media-exaggerate.html

The effect of Atlantic internal variability on TCR estimation – an unfinished study

A guest article by Frank Bosse (posted by Nic Lewis), Climate Audit, June 19, 2017

 $\underline{https://climateaudit.org/2017/06/19/the-effect-of-atlantic-internal-variability-on-tcr-estimation-anunfinished-study/\#more-23233}$

Review of Recent Scientific Articles by CO2 Science

The Transgenerational Effects of Elevated CO2 on Winter Wheat

Li, Y., Li, X., Yu, J. and Liu, F. 2017. Effect of the transgenerational exposure to elevated CO2 on the drought response of winter wheat: Stomatal control and water use efficiency. *Environmental and Experimental Botany* **136**: 78-84. June 17, 2017 http://www.co2science.org/articles/V20/jun/a12.php

The Positive Responses of Three Marine Diatoms to Ocean Acidification

Hong, H., Li, D., Lin, W., Li, W. and Shi, D. 2017. Nitrogen nutritional condition affects the response of energy metabolism in diatoms to elevated carbon dioxide. *Marine Ecology Progress Series* **567**: 41-56. June 17, 2017

http://www.co2science.org/articles/V20/jun/a11.php

Ocean Acidification Alleviates Mercury Toxicity in a Marine Copepod

Li, Y., Wang, W.-X. and Wang, M. 2017. Alleviation of mercury toxicity to a marine copepod under multigenerational exposure by ocean acidification. *Scientific Reports* 7: 324, DOI:10.1038/s41598-017-00423-1. June 15, 2017

Models v. Observations

Recent Studies Find Climate Models (Used By Policymakers) Are Way Off The Mark

Climate models overstate global precipitation by almost a half By Dr. Sebastian Lüning and Prof. Fritz Vahrenholt

German text translated/edited By P Gosselin, No Tricks Zone, June 21, 2017

 $\frac{http://notrickszone.com/2017/06/21/recent-studies-find-climate-models-used-by-policymakers-are-way-off-the-mark/\#sthash.A019cu6B.dpbs}{}$

Measurement Issues -- Surface

What A Mess! Spiegel Reveals Scientists Don't Know Real Temperature Of The Planet

By P Gosselin, No Tricks Zone, June 17, 2017

 $\frac{http://notrickszone.com/2017/06/17/what-a-mess-spiegel-reveals-scientists-dont-know-real-temperature-of-the-planet/\#sthash.SsFfsStL.dpbs$

"From the Germany-based European Institute For Climate and Energy (EIKE)"

Changing Weather

Hottest Day of the Year Map

By Cliff Mass, Weather and Climate Blog, June 21, 2017

http://cliffmass.blogspot.com/2017/06/hottest-day-of-year-map.html

Heat in the southwest presages the southwest monsoon rains

By Joseph D'Aleo, CCM, AMS Fellow, WeatherBELL Analytics.com, ICECAP, June 23, 2017 http://icecap.us/index.php/go/joes-

blog/heat in the southwest presages the southwest monsoon rains1/

New Study: Scientists Find Recent UK Flooding Is Not Unprecedented

By Staff Writers, GWPF, June 17, 2017

https://www.thegwpf.com/new-study-scientists-find-recent-uk-flooding-not-unprecedented/

Link to paper: High-magnitude flooding across Britain since AD 1750

By Neil Macdonald and Heather Sangster, Hydrology and Earth System Sciences, Mar 20, 2017

http://www.hydrol-earth-syst-sci.net/21/1631/2017/hess-21-1631-2017.pdf

Surprise! Despite High CO2, 2017 Accumulated Cyclone Energy "Remains At Record Low Levels"

B P Gosselin, No Tricks Zone, June 20, 2017

http://notrickszone.com/2017/06/20/surprise-despite-high-co2-2017-accumulated-cyclone-energy-remains-at-record-low-levels/#sthash.EbVZrI9s.dpbs

Changing Climate

Now that was "climate change" 8200 years ago — California lashed by 150 years of storms By Jo Nova, Her Blog, June 22, 2017

 $\frac{http://joannenova.com.au/2017/06/now-that-was-climate-change-8200-years-ago-california-lashed-by-150-years-of-storms/\#more-53968$

Changing Earth

These 7 Quake-Resistant Buildings Are Designed to Withstand the Next Big Shockwave By Dallion Adams, Digital Trends, June 15, 2017 [H/t Toshio Fujita] https://www.digitaltrends.com/cool-tech/earthquake-resistant-buildings/

Agriculture Issues & Fear of Famine

Reuters Investigation: IARC Chair Ignored Data, Compromising Scientific Integrity of Findings

By Staff Writers, Campaign for Accuracy in Public Health Research, No Date http://campaignforaccuracyinpublichealthresearch.com/reuters-investigation-iarc-chair-ignored-

data-compromising-scientific-integrity-of-findings/

Link to report: Cancer agency left in the dark over glyphosate evidence

By Kate Kelland, Reuters, June 14, 2017

http://www.reuters.com/investigates/special-report/glyphosate-cancer-data/

Roundup Cover Up? Glyphosate Funny Business At IARC

By Josh Bloom, ACSH, June 15, 2017

http://www.acsh.org/news/2017/06/15/roundup-cover-glyphosate-funny-business-iarc-11426

Lowering Standards

The Bank of England's Response to Climate Change Policies

By John Constable, GWPF, June 18, 2017

https://www.thegwpf.com/the-bank-of-englands-response-to-climate-change-policies/

The Heathrow Tarmac Strikes Again!

By Paul Homewood, Not a Lot of People Know That, June 23, 2017

https://notalotofpeopleknowthat.wordpress.com/2017/06/23/the-heathrow-tarmac-strikes-again/

Communicating Better to the Public - Make things up.

Children of the Green Revolution

By Andrew Montford, GWPF, June 6, 2017

https://www.thegwpf.com/children-of-the-green-revolution/

[SEPP Comment: Challenging the Jacobsen, et al. paper claiming US energy needs can be met by solar, wind, and hydro, without significant costs.]

Experts Published A Scathing Rebuttal To The Left's Favorite Green Energy Study

By Michael Bastasch, Daily Caller, June 19, 2017

 $\frac{http://dailycaller.com/2017/06/19/experts-published-a-scathing-rebuttal-to-the-lefts-favorite-green-energy-study/$

Evaluation of a proposal for reliable low-cost grid power with 100% wind, water, and solar By Christopher "Clack, et al. PNAS, June 19, 2017

http://www.pnas.org/content/early/2017/06/16/1610381114

[SEPP Comment: See link immediately above.]

Questioning European Green

The Future of Renewable Energy

By Martin Livermore, The Scientific Alliance, June 23, 2017

http://scientific-alliance.org/scientific-alliance-newsletter/future-renewable-energy

Decarbonization poses risks to Europe's grid operators says Moody's

By Kelvin Ross, PEI, June 15, 2017 [H/t GWPF]

http://www.powerengineeringint.com/articles/2017/06/decarbonization-poses-risks-to-europe-s-grid-operators-says-moody-s.html

Questioning Green Elsewhere

Shocking electricity price rises coming in Australia: Not a failure of energy policy but a complete "success"

By Jo Nova, Her Blog, June 22, 2017

http://joannenova.com.au/2017/06/shocking-electricity-price-rises-coming-in-australia-not-a-failure-of-energy-policy-but-a-complete-success/

The Finkel Report: MADNESS!

By Geoff Brown, The Australian Climate Scheptics Blog, June 18, 2017 http://theclimatescepticsparty.blogspot.com.au/2017/06/the-finkel-report-madness.html

Funding Issues

France pledges \$34 mln for foreign climate experts

By Staff Writers, Paris (AFP), June 17, 2017

http://www.terradaily.com/reports/France_pledges_34_mln_for_foreign_climate_experts_999.htm

[SEPP Comment: Would Richard Lindzen be eligible?]

The Political Games Continue

The dishonest HONEST Act

By David Michaels, Thomas Burke, Science, June 9, 2017 http://science.sciencemag.org/content/356/6342/989.full

Cap-and-Trade and Carbon Taxes

Brexit Costs: EU Commissioner Proposers EU-Wide Climate Tax

By Staff Writers, Spiegel Online, Via GWPF, June 22, 2017

https://www.thegwpf.com/brexit-costs-eu-commissioner-proposes-eu-wide-climate-tax/

Subsidies and Mandates Forever

Shocker: Government mandated trillions in global renewable investment tally

But — wind and solar provide only 1% of 2015 world energy

Guest essay by Larry Hamlin, WUWT, June 17, 2017

 $\frac{https://wattsupwiththat.com/2017/06/17/shocker-government-mandated-trillions-in-global-renewable-investment-tally/$

Why Bad Things Happen to Clean-Energy Startups

New technologies for storing power from wind and solar farms will be key to a clean-energy future. But Aquion Energy's recent bankruptcy shows the market challenge of making that happen.

By James Temple, MIT Technology Review, June 19, 2017

https://www.technologyreview.com/s/608059/why-bad-things-happen-to-clean-energy-startups/

[SEPP Comment: The author fails to recognize affordable, commercial-scale storage of electricity has been a problem for one hundred years. Instead, he calls for more government subsidies.]

Energy Issues – Non-US

BP Energy Review 2017

By Paul Homewood, Not a Lot of People Know That, June 19, 2017

https://notalotofpeopleknowthat.wordpress.com/2017/06/19/bp-energy-review-2017/

Link to the review: http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html

"Surely it must slowly be dawning on even the most ardent advocates for renewable energy, that it will remain little more than an expensive sideshow for a long while to come yet."

[SEPP Comment: In 2016, 85% of Global Primary Energy Consumption was fossil fuels.]

The quest for 100% renewables – can curtailment replace storage?

By Roger Andrews, Energy Matters, June 23, 2017

 $\underline{\text{http://euanmearns.com/the-quest-for-100-renewables-can-curtailment-replace-storage/\#more-18666}$

Blowout Week 181

By Roger Andrews, Energy Matters, June 17, 2017 http://euanmearns.com/blowout-week-181/#more-18661

"This week's Blowout features energy storage reporting, which has become almost totally divorced from reality. The lead article goes into raptures about a giant battery (inset), a lithiumion gargantuan that's the missing piece in the renewable energy revolution. But it's only capable of powering 170 homes for a single day."

Hinkley Nuclear Deal 'Cost Public £15Billion More Than It Should Have'

By Ben Webster, The Times, Via GWPF, June 23, 2017

https://www.thegwpf.com/hinkley-nuclear-deal-cost-public-15billion-more-than-it-should-have/

World's Largest Coal Company [Coal India] Will Shut 37 Coal Mines That Are Not Economically Viable

By Saurabh Mahapatra, Clean Technica, June 22, 2017

https://cleantechnica.com/2017/06/22/worlds-largest-coal-company-will-shut-37-coal-mines-not-economically-viable/

Energy Issues -- US

Why We Fight (Part I: AEA Is "Big Liberty," Not "Big Oil")

By Robert Bradley, Jr. Master Resource, June 20, 2017

https://www.masterresource.org/american-energy-alliance-ier/aea-big-liberty/

Why We Fight (Part II: "A Free-Market Energy Vision")

By Robert L. Bradley, Jr. Master Resource, June 21, 2017

 $\underline{https://www.masterresource.org/institute-for-energy-research-american-energy-alliance/free-market-energy-vision-ii/}$

LEDs, Energy Saving Marvels – Part 2

By Donn Dears, Power For USA, June 20, 2017

 $http: \underline{//www.powerforusa.com/2017/06/20/leds-energy-saving-marvels-part-2/2017/06/20/leds-energy-saving-part-2/2017/06/20/leds-energy-saving-part-2/2017/06/20/leds-energy-saving-part-2/2017/06/20/le$

"No other technology can improve the nation's efficient use of electricity as much as LEDs."

LED lights are taking over households at a meteoric rate, but some are slow to make the switch

By Brandon Dixon, Pittsburg Post-Gazette, June 16, 2017

http://powersource.post-gazette.com/powersource/consumers-powersource/2017/06/16/led-light-bulbs-savings-consumer-federation-of-america-department-of-energy/stories/201706070195

[SEPP Comment: Donn Dears stated it took at least 60 years of research to make LED bulbs a marketable replacement – producing white light. When Congress banned incandescent bulbs, LED's were just becoming available, contrary to what this article asserts. See link immediately above.]

Utility Regulation: The Rate Case (opportunities to game)

By Jim Clarkson, Master Resource, June 16, 2017

https://www.masterresource.org/public-utility-regulation/utility-regulation-rate-case-2/

Washington's Control of Energy

Lawyer: 'No timeframe' for new Dakota Access environmental review

By Devin Henry, The Hill, June 21, 2017

http://thehill.com/policy/energy-environment/338828-lawyer-no-timeframe-for-new-dakota-access-environmental-review

Pipeline oil, and protests, keep flowing at Dakota Access pipeline

Judge orders more hearings on Dakota Access review

By Staff Writer, Reuters, The Gazette, Iowa, June 22, 2017

http://www.thegazette.com/subject/news/nation-and-world/pipeline-oil-and-protests-keep-flowing-at-dakota-access-pipeline-20170621

Oil and Natural Gas – the Future or the Past?

Norway To Carry On Drilling

By Paul Homewood, Not a Lot of People Know That, June 22, 2017

 $\underline{https://notalotofpeopleknowthat.wordpress.com/2017/06/22/norway-to-carry-on-drilling/2017/06/2017$

[SEPP Comment: Graph showing 67% of Norway's primary energy consumption is hydro.]

Return of King Coal?

Don't be so quick to dismiss Trump's coal mining initiative

By Salena Zito, New York Post, June 17, 2017

http://nypost.com/2017/06/17/dont-be-so-quick-to-dismiss-trumps-coal-mining-initiative/

Global Demand for Coking Coal Set to Revive UK Coal Mining

By Staff Writers, Financial Times, Via GWPF, June 19, 2017

https://www.thegwpf.com/global-demand-for-coking-coal-set-to-revive-uk-coal-mining/

Nuclear Energy and Fears

Chinese Reactor Is Ahead of Schedule as U.S. Nuclear Projects Flounder

By Aaron Larson, Power Mag, May 26, 2017

http://www.powermag.com/chinese-reactor-is-ahead-of-schedule-as-u-s-nuclear-projects-flounder/?mkt_tok=eyJpIjoiTkRZeFlUSTFaakl6TWpVeiIsInQiOiJ0OFwvTVVCRzRtVllQeG9XUHFcL2h0UXgwVm5VNFwvclBkanBtcGhkS0hLRzlCS0Uxd2FkcHF1eEh5SEJcL1BDd3R6MHgwXC9lRUNYenp2QTlCNEJKbDFYall6Tk5JY3lkN09KYjdqTHliUFh3bnF0RVRUYXpsOWY0TU5Yb1wvbHB3V2hUVSJ9

Exelon Announces Three Mile Island Nuclear Plant to Close in 2019

By Aaron Larson, Power Mag, May 30, 2017

http://www.powermag.com/exelon-announces-three-mile-island-nuclear-plant-to-close-in-2019/?mkt_tok=eyJpIjoiTkRZeFlUSTFaakl6TWpVeiIsInQiOiJ0OFwvTVVCRzRtVllQeG9XUHFcL2h0UXgwVm5VNFwvclBkanBtcGhkS0hLRzlCS0Uxd2FkcHF1eEh5SEJcL1BDd3R6MHgwXC9lRUNYenp2QTlCNEJKbDFYall6Tk5JY3lkN09KYjdqTHliUFh3bnF0RVRUYXpsOWY0TU5Yb1wvbHB3V2hUVSJ9

Alternative, Green ("Clean") Solar and Wind

A highly misleading article on solar power

By Roger Andrews, Energy Matters, June 19, 2017

http://euanmearns.com/a-highly-misleading-article-on-solar-power/

[SEPP Comment: The storage requirements in the southern Arizona desert are staggering. Graph # 3 is very informative. In summer (June 22, 2016), solar facility achieved 50% capacity about 10:30 am and fell below 50% capacity after 3:30 pm – for a total of five hours of 50% capacity. Winter was worse. For both summer and winter, max capacity was just above 60%]

AWEA Transmission Study: The Rest of the Story

By Robert Bradley Jr. Master Resource, June 22, 2017

https://www.masterresource.org/windpower-penetration/awea-transmission-study/

Link to report: Electricity Markets, Reliability and the Evolving U.S. Power System

By Hibbard, Tierney, and Franklin, The Analysis Group, June 2017

http://www.analysisgroup.com/uploadedfiles/content/insights/publishing/ag_markets_reliability_f inal_june_2017.pdf

[SEPP Comment: In addition to Bradley's comments, the report largely ignores the issue of dispatchability: can the generation be turned on, off, and adjusted upon demand?]

Are we headed for a solar waste crisis?

By Jemin Desai and Mark Nelson, Environmental Progress, June 21, 2017 [H/t Cooler Heads] http://www.environmentalprogress.org/big-news/2017/6/21/are-we-headed-for-a-solar-waste-crisis

[SEPP Comment: A useful warning that proper disposal of solar panels is a concern. But, not all toxins are the same.]

Six Things You Didn't Know About the Offshore Wind Power Sector

By Sonal Patel, Power Mag, June 1, 2017

http://www.powermag.com/six-things-you-didnt-know-about-the-offshore-wind-power-sector/?mkt_tok=eyJpIjoiTkRZeFlUSTFaakl6TWpVeiIsInQiOiJ0OFwvTVVCRzRtVllQeG9XUHFcL2h0UXgwVm5VNFwvclBkanBtcGhkS0hLRzlCS0Uxd2FkcHF1eEh5SEJcL1BDd3R6MHgwXC9lRUNYenp2QTlCNEJKbDFYall6Tk5JY3lkN09KYjdqTHliUFh3bnF0RVRUYXpsOWY0TU5Yb1wvbHB3V2hUVSJ9

[SEPP Comment: The article does not address: have dropping capital costs lowered consumer utility bills? Provided reliable electricity?]

Wind News Update: Catastrophic Failures Jump; Maryland Gets Serious (June 19, 2017)

By Lisa Linowes, Master Resource, June 19, 2017

https://www.masterresource.org/wind-news-insight-linowes/wind-insight-6-19-17/

Alternative, Green ("Clean") Energy -- Other

Oxygen: The Jekyll and Hyde of Biofuels

Scientists are devising ways to protect plants, biofuels and, ultimately, the atmosphere itself from damage caused by an element that sustains life on earth.

By Kristin Manke, DOE, June 19, 2017

https://science.energy.gov/news/featured-articles/2017/06-19-17/

Carbon Schemes

First-of-Its-Kind Clean Coal Plant May Not Burn Coal at All

By Jim Poison, Bloomberg, June 21, 2017

https://www.bloomberg.com/news/articles/2017-06-21/a-first-of-its-kind-clean-coal-plant-mayend-up-burning-no-coal

Switzerland's Carbon Capture Plant Is a Giant Waste of Money

By Spencer P. Morrison, American Thinker, June 18, 2017 [H/t Timothy Wise] http://www.americanthinker.com/articles/2017/06/switzerlands-carbon-capture-plant-is-a giant-waste-of-money.html

California Dreaming

Oklahoma Officials, Others Dispute California Climate Claim

Officials from Oklahoma and several other states are asking California's insurance commissioner to stop pressing companies to publicly disclose fossil fuel investments and divest from the coal industry.

By Ken Miller and Kathleen Ronayne, AP, June 21, 2017

 $\underline{https://www.usnews.com/news/best-states/california/articles/2017-06-21/oklahoma-officials-others-dispute-california-climate-claim$

Environmental Industry

Matt Ridley: Gove Needs to Watch Out for the Green Lobby

By Matt Ridley, The Times, Via GWPF, June 19, 2017

https://www.thegwpf.com/matt-ridley-gove-needs-to-watch-out-for-the-green-lobby/

BELOW THE BOTTOM LINE:

Some Fun with IPCC Texts

Guest essay by Leo Goldstein, WUWT, June 22, 2017

https://wattsupwiththat.com/2017/06/22/some-fun-with-ipcc-texts/

What is the sound of a dying planet?

By Jo Nova, Her Blog, June 20, 2017

http://joannenova.com.au/2017/06/what-is-the-sound-of-a-dying-planet/

In search of a gender neutral glacier

By Staff Writers, Climate Change Predictions.org, June 23, 2017 http://climatechangepredictions.org/uncategorized/8341

"A critical but overlooked aspect of the human dimensions of glaciers and global change research is the relationship between gender and glaciers.

"While there has been relatively little research on gender and global environmental change in general (Moosa and Tuana, 2014; Arora-Jonsson, 2011), there is even less from a feminist perspective that focuses on gender (understood here not as a male/female binary, but as a range of personal and social possibilities) and also on power, justice, inequality, and knowledge production in the context of ice, glacier change, and glaciology.

"Through a review and synthesis of a multi-disciplinary and wide-ranging literature on human-ice relations, this paper proposes a feminist glaciology framework to analyze human-glacier dynamics, glacier narratives and discourse, and claims to credibility and authority of glaciological knowledge through the lens of feminist studies.

"Feminist glaciology asks how knowledge related to glaciers is produced, circulated, and gains credibility and authority across time and space. Glaciers, gender, and science: A feminist glaciology framework for global environmental change research, Mark Carey, M Jackson, Alessandro Antonello, Jaclyn Rushing – Progress in Human Geography 1–24, January 10, 2016"

ARTICLES:

1. Big Oil Steps Up Support for Carbon Tax

Exxon Mobil, BP and General Motors, among others, join group that advocates taxing carbon; see a way to reduce environmental regulations in the process By Timothy Puko, WSJ, June 20, 2017

https://www.wsj.com/articles/big-oil-steps-up-support-for-carbon-tax-1497931202

SUMMARY: The articles states:

"General Motors Co., Exxon Mobil Corp. and BP PLC are among almost a dozen companies joining the Climate Leadership Council, a new organization that advocates replacing many environmental regulations with a simplified tax on businesses that release carbon into the atmosphere. The plan proposes directly paying out this money to all citizens to defray the likely costs from rising energy prices.

"A group of influential Republicans, including former secretaries of State George Shultz and James Baker, have spearheaded the group's efforts, which are at odds with many in their own party.

"Since winning control of the White House and Congress last year, Republican lawmakers have worked to roll back Democratic policies aimed at reducing greenhouse gas emissions, culminating with President Donald Trump's decision to withdraw the U.S. from the Paris climate accord.

"Several business leaders criticized that decision, and some of the companies joining the group, which officially launched in February, have advocated more aggressive policies to address rising temperatures and air pollution. Exxon, GM and the other corporations are joining alongside astrophysicist Stephen Hawking, hedge-fund magnate Ray Dalio, Harvard economist and former Obama economic adviser Larry Summers and others.

"Exxon Chief Executive Darren Woods used his first blog post in that role this February to say a 'revenue-neutral carbon tax' would be a 'sensible approach' to cutting carbon emissions.

It can promote energy efficiency and incentivize low-carbon energy sources without 'further burdening the economy,' he wrote.

"We have been encouraged by the proposal put forth by the Climate Leadership Council as it aligns closely with our longstanding principles," Mr. Woods said in a statement Monday.

After further discussion of claimed benefits of the tax the article concluded with:

2. The Charade of the Paris Treaty

The real problem with the global accord on climate change is that it would make no real difference

By Bjorn Lomborg, WSJ, June 16, 2017 https://www.wsj.com/articles/the-charade-of-the-paris-treaty-1497623798

SUMMARY: The op-ed begins:

"Environmentalists were aghast when President Donald Trump withdrew the U.S. from the Paris climate treaty, with some declaring that the very survival of our civilization was at stake. But is the Paris accord really all that stands between the planet and the worst of climate change? Certainly not.

"This is not to deny that President Trump's announcement was problematic. He failed to acknowledge that global warming is real and wrongly claimed that China and India are the "world's leading polluters." (China and the U.S. are the largest emitters of carbon dioxide, and the U.S. is the biggest per capita.) It was far-fetched for him to suggest that the treaty will be "renegotiated." Worse, the White House now has no response to climate change.

"But the global consensus about the Paris treaty is wrongheaded too. It risks wasting huge resources to do almost nothing to fix the climate problem while shortchanging approaches that promise the most transformative results.

"Consider the Paris agreement's preamble, which states that signatories will work to keep the rise in average global temperature "well below" 2 degrees Celsius and even suggests that the increase could be kept to 1.5 degrees. This is empty political rhetoric. Based on current carbon dioxide emissions, achieving the target of 1.5 degrees would require the entire planet to abandon fossil fuels in four years.

"But the treaty has deeper problems. The United Nations organization in charge of the accord counted up the national carbon-cut pledges for 2016 to 2030 and estimated that, if every country met them, carbon dioxide emissions would be cut by 56 gigatons. It is widely accepted that restricting temperature rises to 2 degrees Celsius would require a cut of some 6,000 gigatons, that is, about a hundredfold more.

"The Paris treaty is not, then, just slightly imperfect. Even in an implausibly optimistic, best-case scenario, the Paris accord leaves the problem virtually unchanged. Those who claim otherwise are forced to look beyond the period covered by the treaty and to hope for a huge effort thereafter."

The op-ed continues with political game playing and concludes:

"Acknowledging the Paris treaty's flaws does not mean endorsing the Trump administration's apparent intention to ignore climate change. Real progress in reducing carbon emissions and global temperatures will require far-reaching advances in green energy, and that will mean massive investment in research and development—an annual global commitment of some \$100 billion, according to analysis by the Copenhagen Consensus. When green energy is economically competitive, the whole world will rush to use it.

"The real misfortune for the planet isn't that Mr. Trump withdrew the U.S. from the Paris treaty. Rather, it is that his administration has shown no interest in helping to launch the green-energy revolution that the world so urgently needs."

Mr. Lomborg is the president of the Copenhagen Consensus Center and the author of "The Skeptical Environmentalist" and "Cool It."