The Week That Was: 2019-06-15 (June 15, 2019)
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The Science and Environmental Policy Project

Quote of the Week: “Our experience during the early days of manned spaceflight proved the importance of this motto: “In God we trust, all others bring data.” —The Right Climate Stuff

Number of the Week: Zero

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

The Right Climate Stuff: Manned space flight to the moon fifty years ago was a hallmark of human imagination, science, and engineering. With calculations done mostly with slide rules and tables, and models primitive by today’s standards, the professionals on the Apollo team accomplished what many considered impossible – placing a lunar lander on the uneven surface of the moon, which has a gravity about one-sixth that of the earth.

There were no textbooks, blueprints, etc. that could be relied upon to design the lander. Only repeated testing of various concepts could be used to create a design that might work. The entire mission was a triumph of imagination and rigorous testing. A bold tribute to human scientific ability.

About the middle of this decade, retired veterans of the Apollo Mission, and other early manned spaceflight missions, voluntarily came together to apply their engineering and scientific skills to conduct an objective, independent assessment of the Anthropogenic (Human-Cause) Global Warming (AGW) alarm and the possibility of an actual threat.

Applying their proven skills in problem identification and specification, root cause analysis, and rational decision-making, they reviewed hundreds of reports and technical papers relevant to the issue and discussed the key issues with experts on all sides of the controversy. Based on Conservation of Energy principles, they designed their own model of AGW using greenhouse gas data and earth’s surface temperature from 1850 to 2017. Unlike the UN Intergovernmental Panel on Climate Change (IPCC), and its followers, they validated their model.

Using this validated model, they made projections of AGW to 2150. They forecast that a warming caused by human emissions of carbon dioxide (CO2) would be small and non-harmful. Also, unlike the IPCC, they recognized the benefits of increased CO2 to plant life, thus to the environment and to humanity. They found that their projections “do not justify the extent to which the UN and others propose to manipulate and likely devastate the various major economies of the world through mandating drastic reductions in the use of fossil fuels.”

Will Happer, the noted physicist in the field that applies to the greenhouse effect, Atomic, Molecular, and Optical Physics, who is on the National Security Council, reached out to some of the members of The Right Climate Stuff team, namely highly accomplished engineer Hal Doiron and meteorologist Thomas Wysmuller. On June 14, the Associated Press (AP) published a report
implying there is something unseemly about consulting such experts, and that The Heartland Institute has been involved in financing such efforts. The article stated that Wysmuller is of the Heartland Institute, which is false. According to the article, either Happer or Wysmuller is applying pressure on NASA head Jim Bridenstine to change his views about global warming.

According to the report: “Bridenstine a year ago told reporters that after reading Defense Department briefings on global warming, he became convinced it is a serious national security problem…” If the quotation is accurate, it is unfortunate. TWTW considers the recent Defense Department reports on global warming / climate change it has reviewed contain glaring errors, confuse evidence with projections from unvalidated models, and are contradicted by the best available observational data. Perhaps, Bridenstine was misunderstood, or, perhaps, he has abandoned the scientific and engineering discipline that put man on the moon in favor of Washington’s current fad.

Such incidents demonstrate that the climate establishment is fearful of the team Will Happer can put together to debate the fear of human-caused global warming. The establishment recognizes something is clearly wrong with its work and its assumptions, which have been falsified. Human-caused global warming / climate change has become political movement, without hard evidence to sustain a claim of science. Please note Doiron, Happer, and Wysmuller are friends with SEPP chairman emeritus Fred Singer and know Ken Haapala. See links under Defending the Orthodoxy and Questioning the Orthodoxy.

The Greenhouse Effect – Importance: Using Excel, Roy Spencer created a simple model calculating how temperature would vary over the course of a day, by latitude, if there were no greenhouse effect. The earth’s climate is extremely complex, so to give a rough estimate of the importance of the greenhouse effect for life on this planet, Spencer eliminated much of the complexity including: the transport of heat energy by convection in the oceans and atmosphere; the storage of heat energy in the oceans; the difference in heat absorption by land and water; changing albedo, reflection of light or radiation by the earth’s surface with changing surface conditions; differences in elevation; a varying sun; and clouds.

Although the model is highly simplified, it does illustrate the importance of the greenhouse effect. Daytime warming starts around 7 am, daytime cooling starts around 5 pm. It is only in a relatively narrow band, latitude less than 35 degrees north or south, that afternoon temperatures exceed the freezing point of water. Assuming no influence from oceans, in Eurasia, latitudes above northern Morocco and extreme South Korea remain below freezing. In the US, latitudes above South Carolina and northern Los Angles remain below freezing. In the Southern Hemisphere, latitudes below Buenos Aires and New South Wales remain below freezing.

This is not to say that lands that become warmer than freezing can be cultivated. Based on Spencer’s model the entire world is below freezing for part of the day. Spencer’s model demonstrates how important the greenhouse effect is for life on this planet. Yet, routinely, a slight increase in the greenhouse effect is being condemned as a threat to humanity – often without any thought as to its benefits.

Spencer concludes his efforts with:

“I hope this will help convince some who are still open-minded on this subject that even intense tropical sunshine cannot explain real-world tropical temperatures. The atmospheric greenhouse
Effect must also be included. The temperature (of anything) is not determined by the rate of energy input (say, the intensity of sunlight, or how fast your car engine burns gas); it is the result of a balance between energy gain and energy loss. The greenhouse effect reduces the rate of energy loss at the surface, thus causing higher temperatures than if it did not exist. [Boldface are italics in the original.] See links under Challenging the Orthodoxy.

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Sea Level Rise: The Heartland Institute published a new policy brief evaluating the data on sea level rise based on prior work published in Climate Change Reconsidered II. The policy brief found:

“Contrary to the IPCC’s statement that it is ‘very likely’ sea-level rise is accelerating, the highest quality coastal tide gauges from around the world show no evidence of acceleration since the 1920s.”

“Local and regional sea levels continue to exhibit typical natural variability, unrelated to changes in the global average sea level.”

“Local sea-level trends vary considerably because they depend not only on the average global trend, but also on tectonic movements of adjacent land.”

SEPP directors Craig Idso, David Legates, and SEPP chairman emeritus Fred Singer were editors and Ken Haapala contributed. See link under Challenging the Orthodoxy – NIPCC.

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A Trillion Here, Ten Trillion There: UK Prime Minister Theresa May, who resigned, pending the selection of a successor, is leaving her office in a certain style – On June 12, the “conservative” leader announced she is proposing legally-binding legislation to cut UK greenhouse gases to “net zero” by 2050 – no carbon dioxide emissions permitted. Among other things it would mean no natural gas for home heating, and no fuel for cars, requiring a shift to electric vehicles, walking and cycling. What it will do for aviation is unclear.

Her office stated:

“(…)the move would boost public health, air quality and nature and will make the UK a leader on climate action, as the first G7 group of major economies to put a net zero target into law.”

“But it was ‘imperative’ other countries follow suit, so there will be a review within five years to ensure other nations are taking similarly ambitious action, and that British industries are not facing unfair competition.”

It is wonderful to leave with such a bold “feel-good” gesture, provided someone else pays for it. There is no reliable substitute for fossil fuels and nuclear for electricity, and no proven substitute for transportation. The costs for providing the necessary raw materials for electric vehicles, such as rare earths, could be staggering. No doubt, using the procedures and models used by the Club of Rome to predict exhaustion of raw materials such as oil, one can forecast that rare earths will be exhausted almost immediately.

Initial estimates of the costs began at £1trillion. But, as Andrew Montford writes, this figure can be a great underestimate – no one really knows.
In the US, one reporter asked the latest fad among politicians Representative Alexandria Ocasio-Cortez how much her Green New Deal would cost. Her response:

“I think we really need to get to $10 trillion to have a shot.”

What seems to be lacking in any of these “exciting” new ideas is there is no pressing need to replace the existing system of electricity generation and distribution, except for the perceived needs of the politicians. Replacing reliable electricity generation with unreliable electricity generation will not make the electrical system more reliable, only more expensive because two systems must be maintained. Despite constant claims of breakthroughs, they have not appeared on a commercial scale.

Replacing reliable electricity generation with unreliable electricity generation will not increase productivity. Currently, the US economy does not need a jobs program. Unemployment rate is below 4%, with wages increasing, particularly among the lower income groups and the hard-to-employ, such as those without a high school degree or with a criminal record. Adding a massive “jobs program” will not increase productivity but may reduce it, and also foster recession. Venezuela is an extreme example of government programs creating shortages. People wait for days to buy gasoline in the country with the greatest proven reserves of oil. See links under Defending the Orthodoxy, Questioning European Green, and Green Jobs.

CO2 Disappearing: Jo Nova wrote an essay on research done by fellow Australian Tom Quirk on the varying carbon dioxide levels around New Zealand and Tasmania. Each March, CO2 levels start rising around New Zealand, about a month before the rise begins around Tasmania. Around September, early spring, the CO2 levels drop earlier around New Zealand. Apparently, trees do not explain the difference.

Searching satellite data for chlorophyll in the ocean, Quirk found a possible cause for the spikes and, more importantly, the sudden drops in CO2. Phytoplankton are doing what cyanobacteria and other simple organisms have been doing for about 3.5 billion years. They use energy from the sun to break down CO2 and water to create food (carbohydrates) and oxygen. (The consumption of CO2 during photosynthesis raises pH, making the local ocean more alkaline—further from acidic.) From this process multicellular plants and all animals emerged. Perhaps the life-giving property of CO2 is the reason the EPA regards it as a pollutant?

For a further description of what is occurring off New Zealand, see Jo Nova post under Social Benefits of Carbon Dioxide.

Trilobites: Trilobites are arthropods, invertebrate animals with an exoskeleton which they molt, similar to lobsters, horseshoe crabs, etc. They are first found in the fossil record about 520 million years ago, although they must have appeared earlier because they are highly diverse at that time. It is estimated that a major diversification of multicellular organisms began about 540 million years ago, the Cambrian explosion. A giant trilobite fossil, about 12 inches long (30 cm), was found on Australia’s Kangaroo Island and was estimated to be about 500 million years old.

This is particularly interesting because estimates of CO2 concentrations for about 500 million years ago are above 4000 ppm, about 10 times the current concentrations. So, the trilobites had no difficulty in growing in what many CO2 alarmists are calling highly acidic conditions. The alarm is a false one. See link under Acidic Waters.
**EPA’s Secret Science:** One of the more disturbing aspects of the EPA was its lack of transparency. It announced findings that allowed the EPA to regulate industries or products based on a science that was not publicly available, thus not subject to review. The current administration has announced plans to dismiss researchers who don’t make their data public.

The EPA’s Science Advisory Board, largely from the previous administration, is pushing back, some members calling requiring public disclosure “censored science.” The real question is why should the public accept studies that do not permit disclosure of data? See link under EPA and other Regulators on the March.

**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 seven past recipients, Lisa Jackson, Barrack Obama, John Kerry, Ernest Moniz, John Holdren, Gena McCarthy and Jerry Brown are not eligible. Generally, the committee that makes the selection prefers a candidate with a national or international presence. The voting will close on June 30. Please send your nominee and a brief reason why the person is qualified for the honor to Ken@SEPP.org. Thank you.

**Number of the Week:** Zero. According to reports, the number of major carbon dioxide emitting countries that are meeting their pledges to reduce carbon dioxide emissions under the Paris Agreement is ZERO. Should that be a surprise? Of course, the failure to act is being called as a threat to humanity. China and India seem to be impervious to such claims. See links under After Paris!

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**NEWS YOU CAN USE:**

**Commentary: Is the Sun Rising?**

Our Sun's Mysterious 11-Year Cycle Appears to Be Driven by Alignment of The Planets

By Michelle Starr, Science Alert, June 1, 2019


Link to paper: A Model of a Tidally Synchronized Solar Dynamo

By Stefani, Giesecke and Weier, Solar Physics, May 22, 2019

Solar activity forecast for next decade favorable for exploration
By Staff Writers, Moffett Field CA (SPX), Jun 13, 2019

**Challenging the Orthodoxy – NIPCC**

Climate Change Reconsidered II: Physical Science
Idso, Carter, and Singer, Lead Authors/Editors, Nongovernmental International Panel on Climate Change (NIPCC), 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](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, Nongovernmental International Panel on Climate Change (NIPCC), 2014
http://climatechangereconsidered.org/climate-change-reconsidered-ii-biological-impacts/
*Summary:* [https://www.heartland.org/media-library/pdfs/CCR-IIb/Summary-for-Policymakers.pdf](https://www.heartland.org/media-library/pdfs/CCR-IIb/Summary-for-Policymakers.pdf)

Climate Change Reconsidered II: Fossil Fuels
By Multiple Authors, Bezdek, Idso, Legates, and Singer eds., Nongovernmental International Panel on Climate Change (NIPCC), April 2019
http://store.heartland.org/shop/ccr-ii-fossil-fuels/
Download with no charge:

**Why Scientists Disagree About Global Warming**
The NIPCC Report on the Scientific Consensus
By Craig D. Idso, Robert M. Carter, and S. Fred Singer, Nongovernmental International Panel on Climate Change (NIPCC), Nov 23, 2015
http://climatechangereconsidered.org/
Download with no charge:

**Nature, Not Human Activity, Rules the Climate**
S. Fred Singer, Editor, NIPCC, 2008

**Global Sea-Level Rise: An Evaluation of the Data**
By Craig D. Idso, David Legates, and S. Fred Singer, Heartland Policy Brief, May 20, 2019
https://www.heartland.org/_template-assets/documents/publications/SeaLevelRiseCCRII.pdf

**Challenging the Orthodoxy**
A Simple “No Greenhouse Effect” Model of Day/Night Temperatures at Different Latitudes
By Roy Spencer, His Blog, June 7, 2019
http://www.drroyspencer.com/2019/06/a-simple-no-greenhouse-effect-model-of-day-night-temperatures-at-different-latitudes/

CO2, Global Warming, Climate and Energy
By Allan M.R. MacRae, ICECAP, June 13, 2019
http://icecap.us/index.php/go/political-climate/sciences_untold_scandal_the_lockstep_march_of_professional_societies_to_pro/

Extremes
By Judith Curry, Climate Etc. June 13, 2019
https://judithcurry.com/2019/06/13/extremes/

A Warmer Earth Saves Lives, and Makes the World More Prosperous
By David Simon, Real Clear Markets, June 4, 2019
https://www.realclearmarkets.com/articles/2019/06/04/a_warmer_earth_saves_lives_and_makes_the_world_more_prosperous_103771.html

Gautam Kalghatgi: Is There an ‘Existential Crisis’ and a ‘Climate emergency & Can the World be ‘Carbon Neutral’ by 2030? 
By Gautam Kalghatgi, Visiting Professor, Oxford University (Engineering Science), Via GWPF, June 6, 2019

“Again incidentally, I have heard many people talking about CO2 as a pollutant or even a poison but the concentration of CO2 in one’s nostril when one breathes out is around 40,000 ppm or 100 times that in the atmosphere; in a closed lecture room it is around 1000 ppm. So how can it be a poison? Without CO2, no photosynthesis and no green plants.”

Extreme Politics: The Roger Pielke Jr. Story
Rabid dog climate enforcers will destroy you without conscience or regret.
By Donna Laframboise, Big Picture News, June 10, 2019

Defending the Orthodoxy
Theresa May introduces legally-binding 'net zero' emissions target despite warnings it will cost £1trillion
By Staff Writers, Daily Telegraph, Via GWPF, June 12, 2019

Ocasio-Cortez: $10 trillion needed for effective climate plan
By Niv Elis, The Hill, June 5, 2019

Emails: Trump official pressed NASA on climate science
By Ellen Knickmeyer and Seth Borenstein, AP, June 14, 2019
https://apnews.com/4ec9affd55a345d582a4cc810686137e

“Hundreds of scientific assessments by leading researchers and institutions the last few decades have looked at all the evidence and been ‘extremely credible and routinely withstand intense scrutiny,’ said Keith Seitter, executive director of the American Meteorological Society.”
[SEPP Comment: What Bureaucratic Science! Why does AMS pay not attention to actual atmospheric temperature trends?]
Emails show Trump official consulting with climate change deniers to challenge scientific findings: report
By Chris Mills Rodrigo, The Hill, June 14, 2019

Paris climate agreement can avert thousands of heat-related deaths in US: researchers
By Chris Mills Rodrigo, The Hill, June 5, 2019
Link to paper: Increasing mitigation ambition to meet the Paris Agreement’s temperature goal avoids substantial heat-related mortality in U.S. cities
By Y.T. Eunice Lo, et al, Science Advances, June 5, 2019
https://advances.sciencemag.org/content/5/6/eaau4373
[SEPP Comment: No discussion of cold related deaths that could be averted by warming.]

Questioning the Orthodoxy
The cost of this net zero madness? Even a trillion is an underestimate
By Andrew Montford, The Conservative Woman, Via GWPF, June 14, 2019
[SEPP Comment: Government spending does not always promote productivity. With expensive, foolish gestures, it can create negative productivity. Venezuela is an extreme case.]

Theresa May is about to spend £1 trillion on a pointless policy. This climate madness has to end
By Bjorn Lomborg, His Blog, June 10, 2019
https://www.lomborg.com/news/theresa-may-is-about-to-spend-ps1-trillion-on-a-pointless-policy-this-climate-madness-has-to

Why Socialism Is a Bad Alternative to Capitalism for Natural Resource Development and Environmental Protection
By Alan Carlin, Carlin Economics and Science, June 2, 2019
http://www.carlineconomics.com/archives/5009

Populations are not declining and food webs are not collapsing at the Luquillo Experimental Forest
By Charles the moderator, WUWT, June 8, 2019
Link to paper: Populations are not declining and food webs are not collapsing at the Luquillo Experimental Forest
By M.R. Willig, et al., PNAS, May 29, 2019
https://www.pnas.org/content/early/2019/05/16/1820456116

A Remedial Lesson in Climate Education
By Greg Williams, Quadrant, June 13, 2019
[SEPP Comment: Good questions to students from a mathematics teacher.]
Climate disasters are less costly, less deadly, and corporate warnings are just $1T of hot air
By Jo Nova, Her Blog, June 7, 2019

Climate Change: What Can’t It Do?
By John Hinderaker, Power Line, June 8, 2019

Dirty Rotten Climate Scandals
By Tony Thomas, Quadrant, June 5, 2019

Swiss Meteorologist Exposes Shocking Lack Of Fundamental Science Knowledge By Climate Scientists
By P Gosselin, No Tricks Zone, June 9, 2019

After Paris!
The major emitters that are meeting their Paris Agreement pledges
By Staff Writers, Axios, June 1, 2019 [H/t GWPF]
https://www.axios.com/paris-agreement-countries-meeting-pledges-1261f497-3ec7-4192-ba21-83ae339762be.html
“Why it matters: Even if every country that's adopted the Paris Agreement were to meet their pledges, it would not avert the worst effects of climate change.”
[SEPP Comment: Glaciers thousands of meters (feet) thick on top of what are now major populated areas in North America and Eurasia would be the “worst effects of climate change.”]

China And India Will Watch The West Destroy Itself
By Jo Nova, Her Blog, June 6, 2019
“China is currently building hundreds of new, coal-fired power plants. To counter China, “India has 589 coal-fired power plants, they are building 446 more, bringing their total to 1,036.” These figures are after both governments signed the Paris Climate Agreement, and touted their green credentials.”

Change in US Administrations
Forget Paris: On the Second Anniversary of Trump’s Pullout
By Robert Murphy, IER, May 3, 2019
https://www.instituteforenergyresearch.org/international-issues/forget-paris-on-the-second-anniversary-of-trumps-pullout/

Trump directs agencies to cut advisory boards by 'at least' one-third
By Miranda Green and Rebecca Beitsch, The Hill, June 14, 2019
White House May demand That Federal Scientists Accept Critical Scrutiny
By Staff Writers, E & E News, Via GWPF, June 6, 2019
https://www.thegwpf.com/white-house-may-demand-that-federal-scientists-accept-critical-scrutiny/

Trump’s Green Re-Election Strategy Takes Shaper
By Staff Writers, E & E News, Via GWPF, June 14, 2019
https://www.thegwpf.com/trumps-green-re-election-strategy-takes-shape/

Trump Administration Should Review Undue Influence of Foundations Funding Tar Sands Campaign says Friends of Science Society
By Charles the moderator, WUWT, June 11, 2019

Social Benefits of Carbon Dioxide
New finding: Phytoplankton are much bigger players in CO2 levels than realized
By Jo Nova, Her Blog, June 2, 2019

“Tom Quirk both finds a mystery and solves it.
“Carbon dioxide is a “well mixed gas” yet CO2 levels over New Zealand start rising there each year in March — a whole month before we see it CO2 start to rise over Tasmania.
“So the most important question remains unanswered — just how much of the yearly rise and fall of CO2 globally is driven by plankton?”

Save the children, save the environment
By Jo Nova, Her Blog, June 13, 2019

Seeking a Common Ground
Analyzing’ The Future – The Tug of War Between Politics and Economics
By Robert Lyman, Friends of Science, Calgary, May 29, 2019

“’He who lives by the crystal ball soon learns to eat ground glass.’ – Edgar Fiedler”

Why we do nothing to prepare for climate change
By Larry Kummer, Fabius Maximus, June 13, 2019 [H/t WUWT]

“Perhaps worst of all was the deliberate misrepresentation of the policy debate. Activist scientists said that skeptics ‘denied’ the existence of climate change (which is false, and mad), or that they ‘denied’ the existence of anthropogenic global warming and climate change (true only for an extreme fringe). The key questions were and are about the timing and magnitude of anthropogenic climate change – and its future.”

On the Flat Earth Rants of Joe Postma
By Roy Spencer, His Blog, June 4, 2019
[SEPP Comment: Use of two-dimensional graphs does not mean flat-earth belief.]

**Heartland Institute Responds to AP Story on Will Happer**
This is hardly a scoop, let alone a scandal.
By Jim Lakely, Heartland Institute, June 14, 2019

**Tornadoes and climate change: what does the science say?**
By Zeke Hausfather, Carbon Brief, May 31, 2019

**Review of Recent Scientific Articles by CO2 Science**

**Analyzing the Effects of Temperature on Human Mortality in China**
http://www.co2science.org/articles/V22/jun/a6.php

“In considering the above findings, clearly, cold weather events represent a much greater threat to human health than warm weather events, and those threats are magnified in poorer regions where citizens do not have as many resources or technological capabilities to adequately prepare for and endure such potentially deadly weather events.”

**A Two-century-long PSDI Reconstruction for the Fen River of North China** [Palmer Drought Severity Index (PSDI)]
http://www.co2science.org/articles/V22/jun/a4.php

**Projections of Future Rice Yields in the Northeast China Plain**
http://www.co2science.org/articles/V22/jun/a3.php

**The Ability of a Seagrass to Buffer the Impacts of Ocean Acidification on a Calcifying Alga**
http://www.co2science.org/articles/V22/jun/a2.php

**Models vs. Observations**
New Study Shows Climate Models Not Even Close To Be Useful For Policymaking.
“Precipitation Remains The Achilles’ Heel “
By P Gosselin, No Tricks Zone, June 8, 2019

**Model Issues**
It’s a tech-wreck: models now use human moods and fashions as a climate forcing
By Jo Nova, Her Blog, June 8, 2019
Link to paper: Charting pathways to climate change mitigation in a coupled socio-climate model
By Bury, Bauch and Anand, Computation Biology, June 6, 2019
https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1007000
Nova: “How many climate marches does it take to stop a storm?”

Julian Morris on ‘Fat Tails’ Climate Activism (MIT’s Pindyck reconsidered)
By Robert Bradley Jr. Master Resource, June 6, 2019
[SEPP Comment: Some economists have no concept of the logarithmic relationship between CO2 and temperatures, thus wail about fat tails.]

Judith Curry on Taylor’s “Fat Tails” Argument for CO2 Pricing
By Robert Bradley Jr. Master Resource, June 5, 2019
https://www.masterresource.org/taylor-jerry/judith-curry-on-taylors-fat-tails-argument-for-co2-pricing/

Measurement Issues -- Surface
UNH Researchers Find Slowdown in Earth’s Temps Stabilized Nature’s Calendar
Press Release by Staff Writers, University of New Hampshire, June 3, 2019 [H/t GWPF]
‘‘Over the past decades we have experienced longer growing seasons, with spring coming earlier and fall coming later, but this wasn’t the situation from 1998 to 2012 in the northern hemisphere.’
“The scientists admit that the time period they studied, where the Earth’s air temperature rate slowed down, may seem to contrast with other research on global warming but they emphasize that even during this period the Earth’s temperatures continued to rise.”

Measurement Issues -- Atmosphere
UAH Global Temperature Update for May, 2019: +0.32 deg. C
By Roy Spencer, His Blog, June 3, 2019

Global Temperature Report, May 2019
By Staff, Earth System Science Center, University of Alabama in Huntsville, June 2019
https://www.nsstc.uah.edu/climate/
Map: https://www.nsstc.uah.edu/climate/2019/may2019/201905_map.png
Graph: https://www.nsstc.uah.edu/climate/2019/may2019/tlt_201905_bar.png

Electric-blue night clouds are invading the U.S.
By Roy Spencer, His Blog, June 11, 2019
http://www.drroyspencer.com/2019/06/electric-blue-night-clouds-are-invading-the-u-s/

Changing Weather
2019 Atlantic hurricane forecast
Forecasts in late May are driven by the needs of the reinsurance industry. Circulation patterns of relevance to Atlantic hurricanes generally are in place by the end of June. In a few months, we will know which forecasting group has read the tea leaves correctly.”

Politics Distorts the Science of Floods
Guest post by Jim Steele, WUWT, June 14, 2019
https://wattsupwiththat.com/2019/06/14/politics-distorts-the-science-of-floods/

Changing Climate
New Studies: Northeastern China Was 7-10°C Warmer 9000 Years Ago – And 1.7°C Warmer In The 1800s!
By Kenneth Richard, No Tricks Zone, June 6, 2019
https://notrickszone.com/2019/06/06/new-studies-northeastern-china-was-7-10c-warmer-9000-years-ago-and-1-7c-warmer-in-the-1800s/

Changing Climate – Cultures & Civilizations
Humans used northern migration routes to reach eastern Asia
By Staff Writers, SPX, Jun 03, 2019
http://www.terradaily.com/reports/Humans_used_northern_migration_routes_to_reach_eastern_Asia_999.html
Link to paper: Heading north: Late Pleistocene environments and human dispersals in central and eastern Asia
By Feng Li, et al., Plos One, May 29, 2019
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0216433

Changing Seas
Multiple Recent Papers Dispel Gulf Stream Collapse, Alarming The Climate Alarmism Industry
No Reason For Panic: The Oscillating Gulf Stream
By Die kalte Sonne, (German text translated/edited by P Gosselin), June 10, 2019

Changing Cryosphere – Land / Sea Ice
National Park Removed Warning Glaciers ‘Will All Be Gone’ By 2020 After Years of Heavy Snowfall
By Michael Bastasch, The Daily Caller, June 7, 2019

Climate Scientists Astounded…No Arctic Ice Loss In 13 Years… Early June Arctic Ice Growing!
Modelled data by the Danish Meteorological Institute (DMI) show that Arctic sea ice stopped shrinking 13 years ago, defying earlier predictions made by climate scientists and models.
By Kirye and Pierre Gosselin, No Tricks Zone, June 4, 2019
Acidic Waters
Giant trilobite fossil found on Australia's Kangaroo Island
By Brooks Hays, Washington (UPI), Jun 13, 2019
http://www.terradaily.com/reports/Giant_trilobite_fossil_found_on_Australias_Kangaroo_Island_999.html

Lowering Standards
Climate change poses 'high risk' to federal spending: GAO
By Niv Elis, The Hill, June 11, 2019
Link to Testimony: Climate Change: Opportunities to Reduce Federal Fiscal Exposure
Statement of J. Alfredo Gómez, Director, Natural Resources and Environment, June 11, 2019
“This is consistent with the recent findings of the U.S. Global Change Research Program’s Fourth National Climate Assessment, which concluded, among other things, that the continued increase in the frequency and extent of high-tide flooding due to sea level rise threatens America’s trillion-dollar coastal infrastructure.”

Will Climate Change Drive a Million Species Extinct?
By Vijay Jayaraj, Townhall, June 3, 2019
https://townhall.com/columnists/vijayjayaraj/2019/06/03/will-climate-change-drive-a-million-species-extinct-n2547174?utm_source=thdaily&utm_medium=email&utm_campaign=nl&newsletterad=06/03/2019&bcid=600713400c5e414103c69dc935baaf47&recip=4143601

Communicating Better to the Public – Make things up.
A Cult Based On Misinformation
By Tony Heller, The Deplorable Climate Science Blog, June 13, 2019
https://realclimatescience.com/2019/06/a-cult-based-on-misinformation/
“Planet is entering ‘new climate regime’ with ‘extraordinary’ heat waves intensified by global warming, study says” – Washington Post

No Coal Power For Two Weeks? We Imported It Instead!
By Paul Homewood, Not a Lot of People Know That, June 8, 2019
https://notalotofpeopleknowthat.wordpress.com/2019/06/08/no-coal-power-for-two-weeks-we-imported-it-instead/

Climate change on track to reduce ocean wildlife by 17%
By Marlowe Hood, Paris (AFP), June 12, 2019
http://www.terradaily.com/reports/Climate_change_on_track_to_reduce_ocean_wildlife_by_17_999.html
“Shallow-water corals, which harbour 30 percent of marine life, are forecast to disappear almost entirely under these conditions.”

Communicating Better to the Public – Do a Poll?
Many Americans Say Made-Up News Is a Critical Problem That Needs To Be Fixed
Politicians viewed as major creators of it, but journalists seen as the ones who should fix it
By Amy Mitchell, et al. Pew Research Center, June 5, 2019
Communicating Better to the Public – Go Personal.
Ross McKitrick: This scientist proved climate change isn’t causing extreme weather — so politicians attacked
And so, many scientists who have the facts and know the truth remain silent
By Ross McKitrick, Financial Post, June 7, 2019
“The bottom line is there’s no solid connection between climate change and the major indicators of extreme weather, despite Trudeau’s claims to the contrary. The continual claim of such a link is misinformation employed for political and rhetorical purposes. Powerful people get away with it because so few people know what the numbers show.”

Questioning European Green
Leading scientists set out resource challenge of meeting net zero emissions in the UK by 2050
By Paul Homewood, Not a Lot of People Know That, June 5, 2019
Link to press release: Leading scientists set out resource challenge of meeting net zero emissions in the UK by 2050
By Richard Herrington, et al. Natural History Museum, June 5, 2019
“The metal resource needed to make all cars and vans electric by 2050 and all sales to be purely battery electric by 2035. To replace all UK-based vehicles today with electric vehicles (not including the LGV and HGV fleets), assuming they use the most resource-frugal next-generation NMC 811 batteries, would take 207,900 tonnes cobalt, 264,600 tonnes of lithium carbonate (LCE), at least 7,200 tonnes of neodymium and dysprosium, in addition to 2,362,500 tonnes copper. This represents, just under two times the total annual world cobalt production, nearly the entire world production of neodymium, three quarters the world’s lithium production and at least half of the world’s copper production during 2018. Even ensuring the annual supply of electric vehicles only, from 2035 as pledged, will require the UK to annually import the equivalent of the entire annual cobalt needs of European industry.”

EU Energy Dis-Union?
By Professor Emeritus Øystein Noreng, Norwegian Business School, Via GWPF, June 10, 2019
https://www.thegwpf.com/oystein-noreng-eu-energy-dis-union/
LEAK: EU’s five-year plan doubles down on protecting borders
By Sam Morgan, EURACTIV.com, June 10, 2019
“EU leaders want to focus on migration and protection of external borders, or the “integrity of our physical space”, over the next five years, according to a draft of the so-called strategic agenda obtained by EURACTIV. Economy and climate action rank second and third.”
**Curiouser and Curiouser**  
By Andrew Montford, GWPF, June 7, 2019  
Link to report: Net Zero – The UK’s contribution to stopping global warming  
By Staff Writers, Committee on Climate Change, May 2, 2019  
“Independent advice to government on building a low-carbon economy and preparing for climate change”

**Europe’s Green Slide Toward Irrelevance**  
By Jakub Grygiel, American Interest, Via GWPF, June 4, 2019  

**Gambit claim: UK discusses 10 hour working week for global climate control**  
By Jo Nova, Her Blog, June 13, 2019  
“If people work only one-day-a-week, they will need to spend the other six days growing food and feeding the chickens in their own back yards.”

**UK Households Conned about ‘Green Energy’**  
By Staff Writers, The Times, Via GWPF, June 10, 2019  
“An analysis of 54 dual-fuel deals with a green component has found that only one in five comes from 100 per cent renewable sources. More than half have no renewable gas component at all and most of the rest offer only carbon offset schemes that have been criticised as ineffective and open to exploitation.”

**Questioning Green Elsewhere**  
**Labor anger over Green New Deal greets 2020 contenders in California**  
By Carla Marinucci and Debra Kahn, Politico, June 1, 2019  

**The great hundred billion dollar+ renewable energy fleecing of American taxpayers & energy users**  
Guest essay by Larry Hamlin, WUWT, June 13, 2019  

**Green Jobs**  
**On The Promise Of "Green Jobs"**  
By Francis Menton, Manhattan Contrarian, June 12, 2019  
[https://www.manhattancontrarian.com/blog/2019-6-12-on-the-promise-of-green-jobs](https://www.manhattancontrarian.com/blog/2019-6-12-on-the-promise-of-green-jobs)  

**Non-Green Jobs**  
**Climate Change Policies Threaten Millions of Car Workers Worldwide**  
By Staff Writers, NYT, Via GWPF, June 7, 2019  
Australia Faces Energy Crisis as Manufacturers Threaten to Exit Green Madness
By Staff Writers, WSJ, Via GWPF, June 7, 2019

Shutting down middle and blue-collar America
Guest post by Paul Diriessen, WUWT, June 13, 2019

Industrial production in euro zone drops
Falling car output main driver
By Staff Writers, Irish Times, June 13, 2019 [H/t GWPF]

We can now get moving on mine: Adani
By Tracey Ferrier, News 7, AU, June 13, 2019 [H/t GWPF]
“LNP mines spokesman Dale Last says 19,000 people have applied for the 1500 direct jobs Adani says the project will create during construction.”

Funding Issues
Global warming a ‘fear campaign’ by scientists ‘hooked on government grants’: Greenpeace founder
By Patrick Moore, ICECAP, June 5, 2019 (Mar 11, 2019)
http://icecap.us/index.php/go/joes-blog/global_warming_a_fear_campaign_by_scientists_hooked_on_government_grants_gr/

The Political Games Continue
Democrats have set themselves a major ‘climate trap’
By Rich Lowry, New York Post, June 13, 2019
https://nypost.com/2019/06/13/democrats-have-set-themselves-a-major-climate-trap/

Why Won’t the Democrats Hold a Climate Change Debate?
Democratic National Committee faces backlash after it rejects calls to highlight climate crisis
By Andy Kroll, Rolling Stone, June 10, 2019

Conservative leadership challengers split over Philip Hammond's £1trillion zero emissions warning
By Christopher Hope, Telegraph UK, Via GWPF, June 7, 2019
https://www.thegwpf.com/conservative-leadership-challengers-split-over-1trillion-zero-emissions-warning/

Litigation Issues
Massachusetts Attorney General Sued Over Use of Bloomberg-Funded Attorneys
By William Allison, Energy in Depth, June 5, 2019
https://eidclimate.org/massachusetts-attorney-general-sued-over-use-of-bloomberg-funded-attorneys/

Cap-and-Trade and Carbon Taxes
75 Conservative Groups Oppose ‘Any Carbon Tax’ Days After Mitt Romney Was Reportedly ‘Looking At’ One
By Michael Bastasch, Daily Caller, June 10, 2019
https://dailycaller.com/2019/06/10/conservative-groups-carbon-tax-romney/

Trudeau’s ‘climate emergency’ meets his national muddle of malfunctioning carbon taxes
Opinion: Ideally, carbon pricing should be economically efficient, low cost, socially benign and administratively simple. In Canada it is none of these
By Robert Lyman, Financial Post, Can, June 5, 2019

Subsidies and Mandates Forever
EIA data shows wind & solar met 3% of U.S. energy after $50 billion in subsidizes
Guest essay by Larry Hamlin, WUWT, June 6, 2019
Link to report: Annual Energy Outlook, 2019
By Staff Writers, EIA, Jan 20, 2019
https://www.eia.gov/outlooks/aeo/
Hamlin: “About 98% of the combined industrial, commercial, residential and transportation sectors energy needs are supplied by non-renewable energy resources.”

Solar Energy: A Sudden U.K Market Collapse Is a Warning to Other Nations
British home installs have rapidly dropped.
By Mike Brown, Inverse, June 5, 2019 [H/t GWPF]

UK withdraws life support for Solar Industry and 94% of orders disappear
By Jo Nova, Her Blog, June 7, 2019

Wind Energy Woes: German Expansion “Collapses To Near Zero” …”2019 Threatens To Be A Disaster”
By P Gosselin, No Tricks Zone, June 11, 2019

EPA and other Regulators on the March
Battle over science roils EPA
By Rebecca Beitsch, The Hill, June 6, 2019
EPA issues guidance critics say would limit state's authorities over pipeline projects  
By Rebecca Beitsch, The Hill, June 10, 2019  

US regulator urges review of financial risk posed by climate change  
By Staff Writers, New York (AFP), June 12, 2019  

Energy Issues – Non-US  
The pace shifts: global demand for fossil fuels goes up so much people wonder if “peak coal” is yet to come?  
By Jo Nova, Her Blog, June 14, 2019  
By Staff Writers, BP Energy, 2019  
“The Energy Outlook explores the forces shaping the global energy transition out to 2040 and the key uncertainties surrounding that transition.”  
“The Outlook considers a number of different scenarios. These scenarios are not predictions of what is likely to happen or what BP would like to happen. Rather, they explore the possible implications of different judgements and assumptions by considering a series of ‘what if’ experiments. The scenarios consider only a tiny sub-set of the uncertainty surrounding energy markets out to 2040; they do not provide a comprehensive description of all possible future outcomes.”

BP Energy Review 2018  
By Paul Homewood, Not a Lot of People Know That, June 14, 2019  
https://notalotofpeopleknowthat.wordpress.com/2019/06/14/bp-energy-review-2018/#more-39959  
Link to: Statistical Review of World Energy  
By Staff Writers, BP Energy, 2019  

Erratic weather boosts energy demand: BP  
By Ron Bousso, Australian Associated Press, June 12, 2019  

May To Commit To Net Zero Plan  
By Paul Homewood, Not a Lot of People Know That, June 12, 2019  
https://notalotofpeopleknowthat.wordpress.com/2019/06/12/may-to-commit-to-net-zero-plan/

Ambrose Evans-Pritchard’s £1 Trillion Delusion  
By Paul Homewood, Not a Lot of People Know That, June 13, 2019
“Perhaps I am expecting too much of Ambrose Evans-Pritchard. As one of his commenters put it, he has forecast five of the world’s last two recessions! “It rather sums up his credibility in economic matters.”

**Energy Issues – Australia**

There’s a myth that Old Coal plants are failing and can’t handle summer heat  
By Jo Nova, Her Blog, June 10, 2019  

After Election Defeat, Bruised Labor Party Embraces Coal  
By Staff Writers, The Australian, Via GWPF, June 3, 2019  

Air conditioning reduces indoor air pollution — give me cheap electrons  
By Jo Nova, Her Blog, June 8, 2019  

**Energy Issues -- US**

America’s Most Important Natural Gas Export Market  
By Robert Rapier, Oil Price.com, June 13, 2019  

Renewables in Retreat? Ohio Democrats Vote to Support Nuclear and Coal Power.  
By Eric Worrall, WUWT, June 3, 2019  

Oil and Natural Gas – the Future or the Past?  
America's oil boom will break more records this year. OPEC is stuck in retreat  
By Matt Egan, CNN Business, June 11, 2019  

Return of King Coal?  
How China Is Improving Coal Technology  
By Sonal Patel, Power Mag, June 6, 2019  
[https://www.powermag.com/how-china-is-improving-coal-technology/](https://www.powermag.com/how-china-is-improving-coal-technology/)

Nuclear Energy and Fears  
'I'm no hero' says Chernobyl diver portrayed in hit TV series  
By Oleksandr Savochenko with Dmytro Gorshkov in Chernobyl, AFP, June 14, 2019  
[http://www.terradaily.com/reports/Im_no_hero_says_Chernobyl_diver_portrayed_in_hit_TV_series_999.html](http://www.terradaily.com/reports/Im_no_hero_says_Chernobyl_diver_portrayed_in_hit_TV_series_999.html)

Why HBO's "Chernobyl" Gets Nuclear So Wrong
By Michael Shellenberger, Forbes, June 6, 2019

Democrats’ Curious Disdain for Nuclear Power
By Robert Bryce, National Review, May 30, 2019
https://www.nationalreview.com/2019/05/democrats-curious-disdain-for-nuclear-power/

Alternative, Green (“Clean”) Solar and Wind
Hornsea Offshore Wind Farm Opens—At Huge Cost To Energy Customers
By Paul Homewood, Not a Lot of People Know That, June 6, 2019
https://notalotofpeopleknowthat.wordpress.com/2019/06/06/hornsea-offshore-wind-farm-opens-at-huge-cost-to-energy-customers/

“This year it will receive a guaranteed payment of £158.75/MWh for every unit of electricity it can produce, compared to the current market price of £45/MWh:

“Hornsea’s total capacity of 1.2GW, due on stream in the next two year, can expect to receive annual subsidies of £430m for the next fifteen years, all index linked, and all on top of the revenue for the electricity they actually sell.

“It’s certainly a good deal for someone, but not the poor suffering consumers who will end up footing the bill.”

The World’s Largest Offshore Wind Farm Just Came Online
By Brian Kahn, Gizmodo, June 3, 2019
https://earther.gizmodo.com/the-worlds-largest-offshore-wind-farm-just-came-online-1835215479

[See link immediately above.]

Another Study Proves Wind and Solar Cost More
By Donn Dears, Power For USA, June 11, 2019

By P Gosselin, No Tricks Zone, June 12, 2019

“The Bavarian 10H rule forbids the installation of any wind turbine within a distance equaling 10 times the height of the turbine from any residential area.”

Chill wind of reality blows through the green power lobby
By Andrew Montford, The Conservative Woman, Via GWPF, June 6, 2019

“The International Renewable Energy Agency (IRENA) has poured cold water on the idea of rapid cost reductions for offshore wind farms.”

“In recent weeks, some observers of the energy scene have been wondering if the long honeymoon of the renewables industry might finally have come to an end. EU renewables capacity additions have been falling for years, and have now declined to less than half of their 2010 peak. Meanwhile, a wave of insolvencies is sweeping the wind industry as a result of the sharp scaling back of subsidies.”
**Alternative, Green (“Clean”) Energy -- Storage**

Scottish Power’s “Vast New Battery”
By Paul Homewood, Not a Lot of People Know That, June 11, 2019

“Given that Whitelee’s wind farm is rated at 539 MW, the new storage could replace Whitelee’s full capacity for the equivalent of just 3 minutes, in the event that the wind stopped blowing.

“Even based on the wind farm’s average power utilisation of 30%, the figure would only rise to 12 minutes.

“In simple terms, the battery is utterly irrelevant, even just for storing Whitelee’s power overnight, for use at peak times during the next day.

“To put the numbers into perspective, to store enough power to cover a week’s loss of wind power at Whitelee, you would need 27048 MWh, assuming the average of 30% utilisation.

“That’s 845 new batteries of this size.

“According to Wind Power Monthly, Whitelee’s new battery will cost £20m. I some how doubt that Scottish Power will be prepared to spend £16.9bn on 845 of the things!”

**Alternative, Green (“Clean”) Vehicles**

A Hydrogen Fantasy
By Donn Dears, Power For USA, June 14, 2019
[https://ddears.com/2019/06/14/a-hydrogen-fantasy/](https://ddears.com/2019/06/14/a-hydrogen-fantasy/)

Hydrogen Station Explodes, Toyota Halts Sales Of Fuel Cell Cars — Is This The End?
By Paul Homewood, Not a Lot of People Know That, June 13, 2019

How diesel backlash is plunging Euro car industry into crisis
By Alex Brummer, Industry News, June 3, 2019 [H/t GWPF]

“There is another practical issue: how the switch to electric will put a huge strain on world electricity suppliers, when wind and solar power are yet to prove themselves as 100 percent reliable 24/7 suppliers, and nuclear energy is so very expensive. That’s notwithstanding the ongoing power crises in South Africa.”

**California Dreaming**

PG&E wins court case allowing it to renegotiate $34 billion in renewable energy contracts
Guest essay by Larry Hamlin, WUWT, June 11, 2019

L. A. Times article on excess California solar incredibly misleading
Guest essay by Larry Hamlin, WUWT, June 7, 2019

Labor anger over Green New Deal greets 2020 contenders in California
By Carla Marinucci and Debra Kahn, Politico, June 1, 2019
Other News that May Be of Interest

“Enron Ascending: The Forgotten Years” (Book Review)
By John Olson, Master Resource, June 2, 2019
https://www.masterresource.org/enron-ascending/olson-enron-ascending/

PC insanity may mean the end of American universities
By Roger Kimball, New York Post, May 31, 2019
https://nypost.com/2019/05/31/pc-insanity-may-mean-the-end-of-american-universities/
“Once upon a time, universities were institutions dedicated to the pursuit of truth and the transmission of the highest values of our civilization. Today, most are dedicated to the destruction of those values. It is past time to call them to account.”

The most important weather forecast of all-time: D-Day, June 6, 1944
By Paul Dorian, Vencore, Inc., June 5, 2019 [H/t GWPF]
https://www.perspectaweather.com/blog/2017/6/5/1030-am-the-most-important-weather-forecast-of-all-time-d-day-june-6-1944
“There were no computer forecast models, no satellites, radar was in its infancy and being used primarily for military purposes only, and yet General Dwight “Ike” Eisenhower wanted a definitive weather forecast for the planned invasion of Normandy, France with no “ifs”, “maybes” or “possibles” attached to the wording. With definitive forecast information required and thousands of lives on the line, it is an underestimate to say that the task was daunting for chief meteorologist, Group Captain James Martin Stagg, of the British Royal Air Force who was actually a geophysicist by training.”

BELOW THE BOTTOM LINE:

UN Chief Poses for Time cover Off ‘Sinking’ Pacific Island National that’s Actually Growing in Size
By Michael Bastasch, Daily Caller, June 13, 2019
https://dailycaller.com/2019/06/13/un-chief-time-magazine-cover/
[SEPP Comment: Is he buying a water-front apartment there?]

Buggy Weather Radar
Guest Essay by Kip Hansen, WUWT, June 14, 2019
https://wattsupwiththat.com/2019/06/14/buggy-weather-radar/

Bitcoin, Las Vegas have the same size carbon footprint
By Brooks Hays, Washington (UPI), Jun 13, 2019
http://www.spacedaily.com/reports/Bitcoin_Las_Vegas_have_the_same_size_carbon_footprint_999.html

Oreskes Discovers It’s Hot In India
By Paul Homewood, Not a Lot of People Know That, June 11, 2019
[SEPP Comment: The monsoon clouds and rain are late.]
ARTICLES

1. U.S. Oil, Gas Hit Record Production Levels in 2018
World-wide energy demand grew at its fastest rate since 2010
By Sarah McFarlane, WSJ, June 11, 2019

SUMMARY: Without the statistics, the article reads:
“The shale revolution powered U.S. oil and gas production in 2018 to the largest annual increases ever recorded by any country, according to energy giant BP PLC.

“Surging global energy demand is fueling the production boom, even as oil and gas prices rise and economic growth slows, said BP’s annual statistical review published Tuesday.

“World-wide demand for energy grew 2.9% in 2018, its fastest rate since 2010.

“Unusual weather spurred some of the stronger-than-expected growth, as a greater number of extremely hot and cold days drove up air conditioning and heating use around the world, particularly in China, the U.S. and Russia, the company said.

The 2018 growth of US gas consumption is roughly the total gas consumption of the UK.

“China also saw exceptional growth in energy use, with gas consumption rising 18%, according to the report. The Chinese government has been striving to switch away from coal and toward gas because of air-quality concerns, resulting in the country’s gas consumption rising by one-third over the past two years.

“Global demand for renewable energy, including wind and solar, rose 14.5% last year. However, this was below the average pace of growth of the past decade of 16.4%.

“Renewable energy accounted for around 4% of the global energy mix in 2018, greatly overshadowed by fossil fuels at 85%, although the data showed oil and coal are slowly losing ground to renewables and natural gas.”

The article concludes that it appears that the goals of the Paris Agreement will not be met.

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2. ‘Power Trip’ Review: Giving a Push to Civilization
Americans use vast amounts of energy, though not always wisely. Bottled water is at least 1,000 times as energy-intensive as water from the tap.
By John Steele Gordon, WSJ, June 3, 2019
https://www.wsj.com/articles/power-trip-review-giving-a-push-to-civilization-11559602810

SUMMARY: The article begins:
“Nothing sets us humans off from other animals more than that we routinely employ energy that is not generated by our own bodies. It’s an old story. More than a million years ago, humans began using fire to cook food and protect against predators. Today energy from a vast array of sources pervades modern society, prompting feelings of guilt, it seems, more than triumph. But energy makes civilization possible, as Michael E. Webber, a professor of mechanical engineering at the University of Texas, shows in ‘Power Trip.’ The more energy in circulation, the more complex—and wealthy—a civilization becomes.

“The Romans had only draft animals, falling water and wind to add force to their own exertions, and premodern societies generally, for more than a millennium, discovered little more. Then, in the 18th century, engineers learned how to turn the heat-energy of fire into work-doing energy via the steam engine—and the Industrial Revolution moved into high gear. Late 19th-century engineers learned how to turn heat-energy (and falling water) into electricity, which, it turned out, could power all sorts of things, including these days the microprocessors found in smartphones and high-end toothbrushes.

“The average global per capita use of energy, Mr. Webber says, is now an astounding 75 million British thermal units a year, enough to bring the water in a good-size swimming pool to the boil. Individual Americans use about four times that amount, adding up, collectively, to 100 quadrillion BTUs a year. Not that all the energy is wisely allocated. Mr. Webber observes, for instance, that bottled water—billions of gallons of it are sold every year in the U.S.—is at least 1,000 times as energy-intensive as water from the tap and offers few if any benefits.

‘Power Trip’ tells the story of the human use of energy both endogenous (we need about 2,000 calories a day just to stay alive) and exogenous: in our cars, our workplaces, our heated and cooled homes. Mr. Webber’s command of the facts is impressive to say the least and allows him to offer more than a few telling details. Lamb in the United Kingdom, he says, is either home-grown or imported from New Zealand 10,000 miles away. Yet the British who consume New Zealand lamb are, comparatively speaking, conserving energy: British lamb is grain-fed—requiring the cultivation of crops—and transported by truck. New Zealand lamb is grass-fed and transported by (more fuel-efficient) ships.

“Food in general, Mr. Webber notes, is energy-intensive. In the United States about 10% of the country’s energy consumption is used to grow, process, package and ship food, compared with 3%-5% for keeping the lights on. And food production creates more greenhouse gases than transportation. Transportation is itself a big energy consumer, but it also makes wealth creation easier. The Erie Canal, completed in 1825, reduced freight rates between Buffalo, N.Y., and New York City by 95%. Commerce that once had to be channeled down the Mississippi to New Orleans began to flow across the Northeast and to New York City, which became the greatest boomtown in history.

“The automobile, though maligned these days, was a ‘power trip’ achievement of historic proportions, transforming the American 20th century geographically—with the spread of suburbs after World War II—and economically. By 1955, seven of the 10 largest companies in the United States were automobile-related, Mr. Webber says. Successive waves of better and faster modes of transportation—from railroads to cars to jet airplanes—have made humans more mobile and generated remarkable commercial dynamism, but they have also, as we know, created their own problems. Mr. Webber notes that whenever German public transportation goes on strike and car driving increases, admissions to hospitals for respiratory problems increase as well.
“Strict regulations have reduced air pollution over the past 50 years, but more could be done, Mr. Webber believes. Better mass transit would cut pollution further, as would an effort to move more freight by rail. In the U.S., trucks move 29% of freight ton-miles but produce 77% of the freight sector’s pollution. Railroads move 40% but produce only 8% of polluting emissions. Of course, dramatic shifts in freight hauling—or people hauling, for that matter—require more than aspiration, and changes in infrastructure, politics, investment and mere habit are hard to bring about.

“Writing on energy these days often devolves into climate-change polemics. Happily, “Power Trip” doesn’t. While fossil fuels are reviled by the climatistas, Mr. Webber notes that in the 19th century coal saved the forests from destruction and, later, oil saved the whales. Reducing meat consumption would indeed, as environmentalists claim, reduce the greenhouse-gas emissions and energy use, but unintended effects are always possible. 'If meat production ceased to exist,' he observes, 'fertilizers would need to be manufactured by some other means, and such manufacture might itself disturb the environment.'

The reviewer corrects a few errors, Pittsburg was a center for steel before the 20th century and the Franklin stove was used for heating, the continues:

“Tracing one of the many energy-related conceptual breakthroughs in history, Mr. Webber writes that ‘it was not until the twentieth century that inventors realized that the key to flight wasn’t to make aircraft light, but fast.’ Really, it was both. The Wright Brothers were greatly helped by an engine block made of (lighter) aluminum instead of steel, and they grasped that airplanes, unlike boats and cars, must steer in three dimensions, not two: For the purpose, they developed wings that could change their shape. One can’t help thinking that, someday, a conceptual breakthrough will ease the anxieties of climate watchers, too.”