

The Week That Was: 2020-10-17 (October 17, 2020)

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The Science and Environmental Policy Project

Quote of the Week: *"It is well known that [scientific] reputation is hard to build and easy to lose; however, it is even harder to rebuild."*-- Professor Leonid Tsybeskov, New Jersey Institute of Technology (*Physics Today*, October 2020, page 10) [H/t George Hacken]

Number of the Week: 99%

THIS WEEK:

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

Nobel Prize: Last week TWTW reviewed *The Looming Energy Crisis: Are Blackouts Inevitable?* by Donn Dears. Dears discussed how day-before auctions for electricity generation are distorting the market for electricity, in that the auctions favor non-dispatchable, unreliable, subsidized forms of energy generation over dispatchable, reliable forms. The primary forms of unreliable, subsidized forms emphasized are wind and solar (for brevity, wind will be used here). In the US, when daily weather forecasts show winds will be favorable industrial wind can bid as low as they wish, but they will be paid the highest successful bid amount – the market clearing price.

If the winds will be unfavorable, industrial wind need not bid. The responsibility for providing electricity will fall on others, usually at great expense to the consumer. In short, a reliable electrical grid is being undermined by flexibility of industrial wind to bid when winds are favorable with no consequences when winds are unfavorable. This undermining of a reliable grid is an unintended consequence of the auction system.

This week, the Nobel Prize of Economic Sciences was given to two Americans for their work on how auction designs have unintended consequences. The auction format influences both the available information and different bidding strategies. For example, if electricity auctions were held two weeks in advance of delivery date, industrial wind would be cautious in its bidding – weather forecasts are not that good.

The work of the economists is unrelated to the energy markets, but the concept applies. The unintended consequences of using day-ahead auctions for determining which electricity bids will be accepted may yield the lowest costs to the consumer for that day. But such an auction format may cost the consumer dearly over time. Writing in *Master Resource*, Bill Peacock expresses concerns that Texas may experience blackouts similar to those in California. He labels the system of pricing wind as “Predatory Pricing.” See Article #1, *Subsidies and Mandates Forever* and <https://www.nobelprize.org/prizes/economic-sciences/2020/press-release/>

No Wind Today: Thanks to the “feel-good” 2008 Climate Change Act, the UK is far further along to an electricity crisis than the US. The Act mandates an overall 80% cut in greenhouse gas emissions by 2050 as defined by the UN Kyoto Protocol.

“The Kyoto basket encompasses the following six greenhouse gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and the so-called F-gases (hydrofluorocarbons and

perfluorocarbons) and sulfur hexafluoride (SF6). Each gas is weighted by its global warming potential and aggregated to give total greenhouse gas emissions in CO2 equivalents.”

Note that water vapor, the most abundant greenhouse gas, is missing from the Kyoto list. This is one reason why UN climate science is highly questionable, and all subsequent calculations of global warming potential are misleading.

Last week, UK Prime Minister Boris Johnson proclaimed that every home in the UK, will be powered by offshore wind by 2030, a quadrupling of wind capacity in ten years. Initial estimates by Gordon Hughes, who has studied the economics of wind power, show this task could cost consumers £27 Billion A Year. There appears to be no costs too great for citizens to suffer when self-righteous politicians go green. Hughes has promised a more complete study in the near future. A September 2020 report by Hughes and John Constable stated:

“The dramatically falling costs of renewables are now a political, a media, and conversational cliché. However, the claim is demonstrably false. Audited accounts show that far from getting cheaper, wind power is actually becoming more expensive. The failure of the British civil service to detect this fact and, hence, to protect the consumer and taxpayer from the consequences of the looming failure of the renewables sector raises important questions about the analytic competence of the Whitehall machine.”

Although the UK pricing system is different than the US system, the failure to account for needed backup is a common problem with those claiming wind costs are going down. Further, since the costs of offshore wind are mostly capital costs, the so-called green jobs will go mostly to the countries that manufacture wind turbines and firms that use the concrete and steel needed for massive foundations.

Nature quickly showed that Johnson is only fooling himself and those who believe him. On October 14, the National Grid, which operates the UK Grid, reported that due to a lack of wind there may be a shortage of electrical power for the next several days. As John Constable has written, the UK’s grid is fragile and is becoming increasingly so.

See links under Questioning European Green, Alternative, Green (“Clean”) Solar and Wind
[https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Kyoto_basket#:~:text=The%20Kyoto%20basket%20encompasses%20the,sulphur%20hexafluoride%20\(SF6\).](https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Kyoto_basket#:~:text=The%20Kyoto%20basket%20encompasses%20the,sulphur%20hexafluoride%20(SF6).)

UN’s Weaponization of Weather: Last week TWTW linked to a review by Anthony Sadar of Joe Bastardi’s new book, *The Weaponization of Weather in the Phony Climate War: Maybe 'extreme weather' is just weather*. As if to promote Bastardi’s new book, the UN Office for Disaster Risk Reduction has declared that climate disasters have doubled over the past 20 years (2000-2019). The report claims:

“In the period 2000 to 2019, there were 7,348 major recorded disaster events claiming 1.23 million lives, affecting 4.2 billion people (many on more than one occasion) resulting in approximately US\$2.97 trillion in global economic losses.

“This is a sharp increase over the previous twenty years. Between 1980 and 1999, 4,212 disasters were linked to natural hazards worldwide claiming approximately 1.19 million lives and affecting 3.25 billion people resulting in approximately US\$1.63 trillion in economic losses.”

It goes on to say:

“Asia suffered the highest number of disaster events. In total, between 2000 and 2019, there were 3,068 disaster events in Asia, followed by the 1,756 events in the Americas and 1,192 events in Africa.

“In terms of affected countries globally, China (577 events) and the USA (467 events) reported the highest number of disaster events, followed by India (321 events), Philippines (304 events), and Indonesia (278 events). These countries all have large and heterogenous landmasses and relatively high population densities in at-risk areas.

“Overall, eight of the top 10 countries by disaster events are in Asia.”

Economic improvements will increase the costs of disasters, but not deaths. Apparently, the authors have no knowledge of the massive deaths from famine, droughts, and floods that repeatedly hit China, India, and other countries before 1980. The worst drought the USA suffered was in the 1930s.

As stated in the December 28, 2019 TWTW, Our World In Data reported massive declines in the numbers of people living in extreme poverty. Prior to COVID-19, deaths from extreme poverty were declining rapidly. Use of fossil fuels were providing sanitary conditions, safe drinking water, access to electricity and other clean fuels for cooking, increases in health, education, and living standards, greatly improved nutrition, better health care, etc.

The current claims are among the worst of UN reports that have been released recently. One can assert that the UN is so focused on establishing its \$100 Billion per year Green Climate Fund, that it will report anything, no matter how poorly substantiated. See links under Defending the Orthodoxy, Questioning the Orthodoxy Communicating Better to the Public – Make things up, December 28, 2019 TWTW, and <https://ourworldindata.org/>

Changing Objectives: The International Energy Agency is a Paris-based autonomous intergovernmental organization established in the framework of the Organization for Economic Co-operation and Development in 1974 in the wake of the 1973 oil crisis. At one time it was needed to counter OPEC and the fear that the world would soon run out of oil. IEA was a useful reporting agency on international energy issues.

Now, it is obvious that the fear of running out of oil was, at best, premature. Unfortunately, IEA has gone into advocacy of wind and solar power and its reports are less than stellar. For example, it has reported that solar is or about to become the cheapest source of electricity. The claim is pure nonsense. Civilization does not stop when the sun fades and disappears. The question becomes what is the cost of solar power at midnight? IEA’s work has been heavily slanted by the political leanings of its leaders, as such the work must be approached with caution, like the work of the UN. See links under Communicating Better to the Public – Make things up.

Another Methane? At room temperature, Nitrous oxide (N₂O), also known as laughing gas, is a colorless non-flammable gas, with a pleasant, slightly sweet odor and taste. It is used in surgery and dentistry as an anesthetic. Also, it is produced in agriculture and from fertilizer. Based on a study in the journal Nature, it is claimed to be 300 times more powerful as a greenhouse gas than carbon dioxide. The “science” referenced in the abstract of the paper is the UN Intergovernmental Panel for Climate Change (IPCC) Assessment Report 5 (AR 5, 2013). Herein lies a major problem with the work.

The IPCC modelers do not include the effect of water vapor on the total effect of greenhouse gases until after calculations are complete. Then, water vapor is added in. Thus, the calculated greenhouse potential of various gases is distorted because water vapor is present in the earth’s atmosphere. This is similar to the problem of calculating the greenhouse potential of methane in the absence of water vapor. As described in the September 12 & 19 TWTWs, the existence of water vapor eliminates the greenhouse potential of methane. For Nitrous oxide, water vapor virtually eliminates its greenhouse potential. See links under Communicating Better to the Public – Make things up.

Number of the Week: 99%. In criticizing California governor Gavin Newsom’s executive order to eliminate the sale of cars powered by the internal combustion engine, Frank Macchiarola, the Senior Vice President of Policy, Economics and Regulatory Affairs at the American Petroleum Institute, states:

“In fact, according to the U.S. Environmental Protection Agency, over the last 30 years, research and development propelled manufacturers to reduce internal combustion engine emissions of criteria pollutants by 99% to comply with EPA emissions standards. The U.S. Department of Energy also found that research and development have led to improvements in engine performance and efficiency.”

If 99% is close to accurate, then the progress made by automobile engineers and oil companies on the internal combustion engine is remarkable. See links under California Dreaming.

NEWS YOU CAN USE:

Commentary: Is the Sun Rising?

Low Solar Activity Points To Colder Than Normal 2020/21 European Winter

By P Gosselin, No Tricks Zone, Oct 16, 2020

<https://notrickszone.com/2020/10/16/low-solar-activity-points-to-colder-than-normal-2020-21-european-winter/>

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: https://www.heartland.org/_template-assets/documents/CCR/CCR-II/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>

Climate Change Reconsidered II: Fossil Fuels

By Multiple Authors, Bezdek, Idso, Legates, and Singer eds., Nongovernmental International Panel on Climate Change, April 2019

<http://store.heartland.org/shop/ccr-ii-fossil-fuels/>

Download with no charge:

<http://climatechangereconsidered.org/wp-content/uploads/2019/01/Climate-Change-Reconsidered-II-Fossil-Fuels-FULL-Volume-with-covers.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, Nongovernmental International Panel on Climate Change (NIPCC), Nov 23, 2015

<http://climatechangereconsidered.org/>

Download with no charge:

<https://www.heartland.org/policy-documents/why-scientists-disagree-about-global-warming>

Nature, Not Human Activity, Rules the Climate

S. Fred Singer, Editor, NIPCC, 2008

http://www.sepp.org/publications/nipcc_final.pdf

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

UN Disasters Report Is A Huge Blunder And Embarrassment

Press Release, GWPF, Oct 12, 2020

<https://www.thegwpf.com/un-disasters-report-is-a-huge-blunder-and-embarrassment/>

UN Claim “Staggering Rise In Climate Emergencies Since 2000”

By Paul Homewood, Not a Lot of People Know That, Oct 13, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/10/13/un-claimstaggering-rise-in-climate-emergencies-since-2000/>

Link to the UN report: Human cost of disasters: An overview of the last 20 years 2000-2019

By Staff: Centre for Research on the Epidemiology of Disasters (CRED), UN Office for Disaster Risk Reduction (UNDRR), 2020

<https://reliefweb.int/sites/reliefweb.int/files/resources/Human%20Cost%20of%20Disasters%2000-2019%20Report%20-%20UN%20Office%20for%20Disaster%20Risk%20Reduction.pdf>

Half the Corals Dead – But Not in Real Life

By Jennifer Marohasy, Her Blog, Oct 15, 2020

<https://jennifermarohasy.com/2020/10/half-the-corals-dead-but-not-in-real-life/>

Link to questionable paper: Long-term shifts in the colony size structure of coral populations along the Great Barrier Reef

By Andreas Dietzel, Michael Bode, Sean R. Connolly and Terry P. Hughes, Proceedings of the Royal Society B, Oct 14, 2020

<https://royalsocietypublishing.org/doi/10.1098/rspb.2020.1432>

From the Abstract: “Declines were particularly pronounced in the northern and central regions of the Great Barrier Reef, following mass coral bleaching in 2016 and 2017.”

[SEPP Comment: Long-term ends in three years?]

Half the Reef destroyed but they won't release the data

By Jo Nova, Her Blog, Oct 16, 2020

<http://joannenova.com.au/2020/10/half-the-reef-destroyed-but-they-wont-release-the-data/>

[SEPP Comment: See link immediately above.]

Climate ‘Weeds’ versus ‘High Altitude’ Survey

By Rud Istvan, WUWT, Oct 13, 2020

<https://wattsupwiththat.com/2020/10/13/climate-weeds-versus-high-altitude-survey/>

The West Intends Energy Suicide: Will It Succeed?

By Tilak Doshi, Forbes, Oct 10, 2020 [H/t GWPF]

<https://www.forbes.com/sites/tilakdoshi/2020/10/10/the-west-intends-energy-suicide-will-it-succeed/#12c88044490e>

“The jury is in: modern economic growth has not shown a single instance of a country successfully developing without the concomitant use of fossil fuels, and ordinary people across the world are fully aware of this.”

A Brief Note on Airplane, Clouds, and Global Warming

By Patrick Michaels, CEI, Oct 15, 2020

<https://cei.org/blog/brief-note-airplane-clouds-and-global-warming>

Link to paper: The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018

By D.S. Lee, et al. Atmospheric Environment, Sep 3, 2020

<https://www.sciencedirect.com/science/article/pii/S1352231020305689?via%3Dihub#!>

What the Pandemic Has Taught Us About Science

By Matt Ridley, Rational Optimist, Oct 9, 2020

<http://www.rationaloptimist.com/blog/what-the-pandemic-has-taught-us/>

[SEPP Comment: Full post of Ridley's essay published in the Wall Street Journal and discussed in last week's TWTW.]

Defending the Orthodoxy

UN Warns Climate Disasters Doubled in the Last 20 Years

By Eric Worrall, WUWT, Oct 13, 2020

<https://wattsupwiththat.com/2020/10/13/un-warns-climate-disasters-doubled-in-the-last-20-years/>

[SEPP Comment: Good review of the outrageous UN report.]

Carry On Doctor!

By Paul Homewood, Not a Lot of People Know That, Oct 16, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/10/16/carry-on-doctor/>

Link to report: Delivering a ‘Net Zero’ National Health Service

By Staff, NHS, October 2020

<https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2020/10/delivering-a-net-zero-national-health-service.pdf>

From the report: “The NHS also needs to respond to the health emergency that climate change brings, which will need to be embedded into everything we do now and in the future.”

“The NHS also needs to respond to the health emergency that climate change brings, which will need to be embedded into everything we do now and in the future.”

[SEPP Comment: And how many will die in operating rooms and intensive care facilities when electricity fails?]

EU Parliament Votes For Economic Suicide

By Paul Homewood, Not a Lot of People Know That, Oct 12, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/10/12/eu-parliament-votes-for-economic-suicide/>

EU leaders divided over new climate goals for 2030

By Samuel Petrequin , AP, Via Washington Post, Oct 15, 2020

https://www.washingtonpost.com/business/eu-leaders-divided-over-new-climate-goals-for-2030/2020/10/15/55142d54-0ece-11eb-b404-8d1e675ec701_story.html

SSE Chief Praises Wind Power!

By Paul Homewood, Not a Lot of People Know That, Oct 16, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/10/12/sse-chief-praises-wind-power/>

From the company website: “SSE Renewables is a leading developer and operator of renewable energy across the UK and Ireland.”

Protesters be Damned...German Bill Aims To Elevate Unstable Green Energies To Status Of “National Security”!

By Jouwatch, (Translated/edited by P. Gosselin), No Tricks Zone, Oct 13, 2020

<https://notrickszone.com/2020/10/13/protesters-be-damned-german-bill-aims-to-elevate-unstable-green-energies-to-status-of-national-security/>

Questioning the Orthodoxy

Experts say

By John Robson, Climate Change Nexus, Oct 14, 2020

<https://climatediscussionnexus.com/2020/10/14/experts-say/>

“As for predictions beforehand, well, what are they, scientists testing hypotheses against subsequent data, or just scientists who say?”

UN on Disasters: Those Who Can’t Do, Scold

By Donna Laframboise, Big Picture News, Oct 14, 2020

<https://nofrackingconsensus.com/2020/10/14/un-on-disasters-those-who-cant-do-scold/>

A Geological Perspective of Polar Bears

By David Middleton, WUWT, Oct 11, 2020

<https://wattsupwiththat.com/2020/10/11/a-geological-perspective-on-polar-bears/>

Peak Climate Religion: UN says Earth to become Uninhabitable Hell

By Jo Nova, Her Blog, Oct 14, 2020

<http://joannenova.com.au/2020/10/peak-climate-religion-un-says-earth-to-become-uninhabitable-hell/>

[SEPP Comment: The UN no longer believes its own numbers.]

This game is hard

By John Robson, Climate Change Nexus, Oct 14, 2020

<https://climatediscussionnexus.com/2020/10/14/this-game-is-hard/>

“Because... all impacts of climate change are bad.”

After Paris!

Europe Admits Paris Accord Will Fail

By Donn Dears, Power For USA, Oct 14, 2020

<https://ddears.com/2020/10/14/europe-admits-paris-accord-will-fail/>

Why Prolong the Pain? Countries Must End Harmful Allegiance to Paris Agreement

By Vijay Jayaraj, WUWT, Oct 17, 2020

<https://wattsupwiththat.com/2020/10/17/why-prolong-the-pain-countries-must-end-harmful-allegiance-to-paris-agreement/>

Social Benefits of Carbon Dioxide

Warming Nights, Longer Growing Seasons, and a Greener Planet

By Patrick Michaels, CEI, Oct 15, 2020

<https://cei.org/blog/warming-nights-longer-growing-seasons-and-greener-planet>

Link to paper: Global variation in diurnal asymmetry in temperature, cloud cover, specific humidity and precipitation and its association with leaf area index

By Daniel T. C. Cox, et al. Global Change Biology, Sep 30, 2020

<https://onlinelibrary.wiley.com/doi/10.1111/gcb.15336>

Seeking a Common Ground

Sir Samuel Brittan (1933-2020)

By Staff, GWPF & The Spectator, Oct 12, 2020

<https://www.thegwpf.com/sir-samuel-brittan-1933-2020-why-we-must-dare-to-debate/>

Do Your Own Research?

By Kip Hansen, WUWT, Oct 12, 2020

<https://wattsupwiththat.com/2020/10/12/do-your-own-research/>

[SEPP Comment: Prior to Matt Ridley's essay an article in Forbes claimed that it is too hard to do your own research. This essay reviews both arguments.]

Question everything, except you-know-what

By John Robson, Climate Change Nexus, Oct 14, 2020

<https://climatediscussionnexus.com/2020/10/14/question-everything-except-you-know-what/>

Science, Policy, and Evidence

A New Approach to Covid-19

Letter from 12 Conservative peers to The Times:

Posted by Matt Ridley, Rational Optimist, Oct 10, 2020

<http://www.rationaloptimist.com/blog/a-new-approach-to-covid-19/>

“If lockdown were a treatment undergoing a clinical trial, the trial would be halted because of the side effects.”

Energexit

By John Robson, Climate Change Nexus, Oct 14, 2020

<https://climatediscussionnexus.com/2020/10/14/energexit/>

That governments pay attention to constituents is also the whole point of public choice theory, because people in government respond to incentives just as those in the private sector do. But the incentives are inherently different, being primarily about power and votes rather than profits, and far easier to get wrong. Yet we continue to devise one program after another on the assumption that it won't happen, that pure motives will brush aside self-interest. They won't.

Review of Recent Scientific Articles by CO2 Science

The Resilience of Sea Urchin Larval Settlement Under Ocean Acidification

Espinel-Velasco, N., Agüera, A., Lamare, M. 2020. Sea urchin larvae show resilience to ocean acidification at the time of settlement and metamorphosis. *Marine Environmental Research* 159: 104977. Oct 16, 2020

<http://www.co2science.org/articles/V23/oct/a7.php>

Carbon Dioxide and Salinity Interactions on Four Sorghum Genotypes

Keramat, S., Eshghizadeh, H.R., Zahedi, M. and Nematpour, A. 2020. Growth and biochemical changes of sorghum genotypes in response to carbon dioxide and salinity interactions. *Cereal Research Communications* 48: 325-332. Oct 14, 2020

<http://www.co2science.org/articles/V23/oct/a6.php>

How Dangerous (or uncommon) is a Temperature Rise of 2°C above Preindustrial Values?

Margaritelli, G., Cacho, I., Catala, A., Barra, M., Bellucci, L.G., Lubritto, C., Rettori, R. and Lirer, F. 2020. Persistent warm Mediterranean surface waters during the Roman period. *Scientific Reports* 10: 10431, doi.org/10.1038/s41598-020-67281-2. Oct 12, 2020

<http://www.co2science.org/articles/V23/oct/a5.php>

Models v. Observations

Massive Ozone Hole Over Antarctica Raises Doubts About Recovery Claims

By Staff, GWPF & Sky News, Oct 11, 2020

<https://www.thegwpf.com/massive-ozone-hole-over-antarctica-raises-doubts-about-recovery-claims/>

[SEPP Comment: 2016 video questioning the “healing” of the ozone hole over the Antarctic.]

Are climate scientists being too cautious when linking extreme weather to climate change?

By Hannah Hickey, University of Washington, Oct 14, 2020

<https://phys.org/news/2020-10-climate-scientists-cautious-linking-extreme.html>

Link to paper: Can the Issuance of Hazardous-Weather Warnings Inform the Attribution of Extreme Events to Climate Change?

By Dale Durrán, BAMS, Sep 2, 2020

<https://journals.ametsoc.org/bams/article/101/8/E1452/345616/Can-the-Issuance-of-Hazardous-Weather-Warnings>

[SEPP Comment: Assumes all the increase in surface temperatures is from greenhouse gases – a false premise.]

Measurement Issues -- Surface

New Video: Alterations To The US Temperature Record (Part 2)

By Tony Heller, His Blog, Oct 12, 2020

<https://realclimatescience.com/2020/10/new-video-alterations-to-the-us-temperature-record-part-2/>

GHCN Unadjusted Data Show Durban, A City Of KwaZulu-Natal Province, In South Africa Has Seen A Cooling Trend Since 1885!

By Kirye, Tony Heller's Blog, Oct 12, 2020

<https://realclimatescience.com/2020/10/gchn-unadjusted-data-show-durban-a-city-of-kwazulu-natal-province-in-south-africa-has-seen-a-cooling-trend-since-1885/>

Changing Weather

David Simon: "Let's Be Serious, More CO2 Isn't Making the Earth 'Uninhabitable'"

By Robert Bradley, Jr. Master Resource, Oct 22, 2020

<https://www.masterresource.org/simon-julian/david-simon-co2-habitable/>

"And EM-DAT (The International Disaster Database) data show that since 1920, the number of people killed by natural disasters has declined from almost 55,000 per year to less than 10,000 per year."

Fires Of 1910

By Tony Heller, His Blog, Oct 12, 2020

<https://realclimatescience.com/2020/10/fires-of-1910/>

Video: Great Fires Of 1910

By Tony Heller, His Blog, Oct 13, 2020

<https://realclimatescience.com/2020/10/great-fires-of-1910/>

[SEPP Comment: No support for the claim forest and prairie fires are increasing.]

Our Mornings Have Been Warm: Blame the Blob!

By Cliff Mass, Weather Blog, Oct 14, 2020

<https://cliffmass.blogspot.com/2020/10/our-mornings-have-been-warm-blame-blob.html>

Changing Climate

Climate change likely drove early human species to extinction, modeling study suggests

News Release, Cell Press, Oct 15, 2020 [H/t WUWT]

https://www.eurekalert.org/pub_releases/2020-10/cp-ccl100720.php

Link to paper: Past Extinctions of Homo Species Coincided with Increased Vulnerability to Climatic Change

By Pasquale Raia, et al, One Earth, Oct 15, 2020

[https://www.cell.com/one-earth/fulltext/S2590-3322\(20\)30476-0?utm_source=EA](https://www.cell.com/one-earth/fulltext/S2590-3322(20)30476-0?utm_source=EA)

[SEPP Comment: Just makes one realize how unique H. sapiens are! They can take the cold and the heat.]

Changing Seas

Unheralded Global Ocean 2000-Year Temperature Reconstruction Reveals Embarrassingly Small Modern Changes

By Kenneth Richard, No Tricks Zone, Oct 12, 2020

<https://notrickszone.com/2020/10/12/unheralded-global-ocean-2000-year-temperature-reconstruction-reveals-embarrassingly-small-modern-changes/>

Link to paper: Robust global ocean cooling trend for the pre-industrial Common Era
By Helen V. McGregor, et al. Nature Geoscience, Aug 17, 2015
<https://www.nature.com/articles/ngeo2510>

Changing Cryosphere – Land / Sea Ice

Greenland and the 1950s Climate Consensus

By Jim Steele, Landscapes and Cycles, Oct 13, 2020

<http://landscapesandcycles.net/greenland-and-the-1950s-climate-consensus--.html>

New Study: East Antarctica Was Up To 6°C Warmer Than Today During The Medieval Warm Period

By Kenneth Richard, No Tricks Zone, Oct 15, 2020

<https://notrickszone.com/2020/10/15/new-study-east-antarctica-was-up-to-6c-warmer-than-today-during-the-medieval-warm-period/>

Link to second paper: Thermal legacy of a large paleolake in Taylor Valley, East Antarctica as evidenced by an airborne electromagnetic survey

By Krista Myers, et al. The Cryosphere, Sep 25, 2020

<https://tc.copernicus.org/preprints/tc-2020-241/tc-2020-241.pdf>

Lowering Standards

Nature abandons science and embraces uniformitarian totalitarianism

By Christopher Monckton of Brenchley, WUWT, Oct 17, 2020

<https://wattsupwiththat.com/2020/10/17/nature-abandons-science-and-embraces-uniformitarian-totalitarianism/>

Communicating Better to the Public – Use Yellow (Green) Journalism?

Climate change a factor in most of the 7,000 natural disasters over last 20 years: UN report

By Rebecca Beitsch, The Hill, Oct 12, 2020

<https://thehill.com/policy/energy-environment/520651-climate-change-a-factor-in-most-of-the-7000-natural-disasters-over>

Study finds ocean warming has killed half the coral in Great Barrier Reef

By Justine Coleman, The Hill, Oct 10, 2020

<https://thehill.com/policy/energy-environment/520933-study-finds-ocean-warming-has-killed-half-the-coral-in-great>

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

Climate change has a cow and worm problem

Scientists spotted a troubling feedback loop

By Justine Calma, The Verge, Oct 7, 2020

<https://www.theverge.com/21505736/climate-change-cattle-livestock-infectious-disease-methane>

Link to paper: Infectious Diseases, Livestock, and Climate: A Vicious Cycle?

By Vanessa Ezenwa, Trends in Ecology & Evolution, Oct 7, 2020

[https://www.cell.com/trends/ecology-evolution/fulltext/S0169-5347\(20\)30227-5](https://www.cell.com/trends/ecology-evolution/fulltext/S0169-5347(20)30227-5)

From the paper: “Methane is a greenhouse gas with an effect on global warming 28–36 times more potent than CO₂. In the last decade, atmospheric methane concentrations have increased rapidly and approximately half of this rise is associated with emissions from agricultural animals, particularly ruminant livestock [2]. Here we argue that ongoing changes in climate not only

increase animal infectious diseases [1], but pathogens, in turn, can exacerbate animal methane production, resulting in a potentially vicious climate–disease cycle”

[SEPP Comment: The opening sentence applies only to artificially dried, laboratory air. Few cows live in artificially dried laboratories.]

Communicating Better to the Public – Make things up.

Solar is now ‘cheapest electricity in history’, confirms IEA

By Multiple Authors, Carbon Brief, Oct 13, 2020

https://www.carbonbrief.org/solar-is-now-cheapest-electricity-in-history-confirms-iea?utm_campaign=Carbon%20Brief%20Weekly%20Briefing&utm_content=20201016&utm_medium=email&utm_source=Revue%20newsletter

[SEPP Comment: How much of this cheap electricity can you buy at midnight for a million dollars?]

New UN Climate Row: Alarming Report Contradicts Its Own Data

By Edwin Timmer, De Telegraaf, Trans GWPF, Oct 14, 2020

<https://www.thegwpf.com/new-un-climate-row-alarming-report-contradicted-by-its-own-data/>

New UN Climate Row: Alarming Report Contradicts Its Own Data–De Telegraaf

By Paul Homewood, Not a Lot of People Know That, Oct 15, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/10/15/new-un-climate-row-alarming-report-contradicts-its-own-data-de-telegraaf/>

[SEPP Comment: Homewood bring out the exponential curve describing “Occurrence of natural disasters reported in EMDAT: 1900 – 2003.”]

Booker & The BBC’s Endless Bias

By Paul Homewood, Not a Lot of People Know That, Oct 13, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/10/13/booker-the-bbcs-endless-bias/>

“Misuse of the EM-DAT disaster database is not confined to the corrupt UN. Readers may recall an IPPR report, trumpeted by Roger Harrabin, which ludicrously claimed that ‘since 2005, the number of floods across the world has increased by 15 times, extreme temperature events by 20 times, and wildfires seven-fold.’”

Claims Of Dramatic Loss Of Great Barrier Reef Corals Are False

Corals expert hits out at media reports

Press Release, GWPF, Oct 15, 2020

<https://www.thegwpf.com/claims-of-dramatic-loss-of-great-barrier-reef-corals-are-false%e2%80%a8/>

Claim: New research: nitrous oxide emissions 300 times more powerful than CO₂ are jeopardising Earth’s future

By Charles Rotter, WUWT, Oct 12, 2020

<https://wattsupwiththat.com/2020/10/12/new-research-nitrous-oxide-emissions-300-times-more-powerful-than-co%e2%82%82-are-jeopardising-earths-future/>

Link to paper: A comprehensive quantification of global nitrous oxide sources and sinks

By Hanqin Tian, et al. Nature, Oct 7, 2020

<https://www.nature.com/articles/s41586-020-2780-0>

Communicating Better to the Public – Do a Poll?

India, China and the US are the biggest climate sceptics, new survey

By Pippa Neill, Environmental Journal, Oct 15, 2020

<https://environmentjournal.online/articles/india-china-and-the-us-are-the-biggest-climate-sceptics-new-survey/>

[SEPP Comment: What percentage of those surveyed live at a subsistence level?]

Communicating Better to the Public – Use Propaganda

Carbon dioxide emissions may not surpass 2019 levels until 2027: analysis

By Rachel Frazin, The Hill, Oct 13, 2020

<https://thehill.com/policy/energy-environment/520776-carbon-dioxide-emissions-may-not-surpass-2019-levels-until-2027>

[SEPP Comment: Photo of invisible CO2 causing rose-colored skies.]

Communicating Better to the Public – Protest

Protest Stunt By Nine German Tree-Hugger “Idiots” Lead To Huge Highway Traffic Jam, One “Horror Crash”

By P Gosselin, No Tricks Zone, Oct 14, 2020

<https://notrickszone.com/2020/10/14/protest-stunt-by-nine-german-tree-hugger-idiot-lead-to-huge-highway-traffic-jam-one-horror-crash/>

Expanding the Orthodoxy

Just the made-up facts, sir

By John Robson, Climate Change Nexus, Oct 14, 2020

<https://climatediscussionnexus.com/2020/10/14/just-the-made-up-facts-sir/>

“In urging NATO to fight climate change, its Secretary General Jens Stoltenberg began an Op Ed “Growing up in Norway, I learnt in school that temperatures in Svalbard, arctic home of the polar bear, would hardly ever rise above freezing.” If so he should have gotten a D, or different teachers, because in point of fact the average summer temperatures in Svalbard, arctic home of the polar bear, have routinely been above freezing since 1910.”

“Although Stoltenberg, who interestingly enough was never a soldier but was recruited into peace activism by his communist sister and had a KGB code-name while working for the Norwegian government, did say “NATO must also be prepared to react to climate-related disasters just as we have during the COVID-19 crisis.”

[SEPP Comment: The head of NATO, from Norway doesn't know the history of the Arctic? Doubt he understands the CO2 effect on either climate change or military strategy.]

Questioning European Green

Green Con: Britain's Energy Giants Label Their Dirty Fuel As Green

By Staff, The Sunday Times, Via GWPF, Oct 10, 2020

<https://www.thegwpf.com/green-con-britains-energy-giants-label-their-fossil-fuel-as-green/>

“No matter what tariff you are on, every household in the country gets exactly the same energy from the National Grid. So even if you have signed up for a 100 per cent green energy supplier, what you get is 40.6 per cent gas, 2.1 per cent coal and 17.3 per cent nuclear. Just 37.1 per cent comes from renewables, which includes wind, solar and bioenergy.”

Boris Johnson's Pledge Of Wind Power For Every Home 'Could Cost Consumers £27 Billion A Year'

By Staff, The Sunday Telegraph, Via GWPF, Oct 11, 2020

<https://www.thegwpf.com/boris-johnsons-pledge-of-wind-power-for-every-home-could-cost-consumers-27-billion-a-year/>

Lack Of Wind Sparks UK Energy Alert

By Staff, Daily Telegraph, Via GWPF, Oct 15, 2020

<https://www.thegwpf.com/lack-of-wind-sparks-national-grid-energy-alert/>

“The news comes just a week after Boris Johnson pledged to quadruple British offshore wind capacity to 40GW within the decade, part of a so-called green industrial revolution that the Prime Minister believes could create millions of jobs over the next 10 years.”

Media Finally Wakes Up To The Problems With Wind Power

By Paul Homewood, Not a Lot of People Know That, Oct 10, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/10/10/media-finally-wakes-up-to-wind-power-problems/>

Windfarm farce that blew £1.4billion of YOUR money! As Boris Johnson trumpets his vision of powering every home with turbines, we reveal the botched scheme that will inflate bills for 20 YEARS

Boris Johnson has declared that wind power is the future of Britain's energy

But an investigation has revealed turbine owners are being paid over the odds

Civil servants set subsidy rate so high it's been branded 'licence to print money'

By Sam Greenhill, Daily Mail, Oct 9, 2020

<https://www.dailymail.co.uk/news/article-8824707/Windfarm-farce-blew-1-4billion-taxpayers-money.html>

Questioning Green Elsewhere

The other boot falls

By John Robson, Climate Change Nexus, Oct 14, 2020

<https://climatediscussionnexus.com/2020/10/14/the-other-boot-falls/>

“If it sounds like pork now comes in green, well, you’re starting to get the idea.” Canada

The Political Games Continue

Climate science and the Supreme Court

By Judith Curry, Climate Etc. Oct 16, 2020

<https://judithcurry.com/2020/10/16/climate-science-and-the-supreme-court/#more-26663>

Litigation Issues

Supreme Court Nominee Barrett in Senate Testimony Alarms Climate Alarmists

By Myron Ebell, CEI, Oct 16, 2020

<https://cei.org/blog/supreme-court-nominee-barrett-senate-testimony-alarms-climate%C2%A0alarmists>

State of Delaware v. BP America Inc, et al.

By Russell Cook, The Gelbspan Files.org, Oct 13, 2020

<http://gelbspanfiles.com/?p=10896>

[SEPP Comment: Some law firms believe there is no reason to substantiate their accusations – if they are out to save the world.]

Supreme Court Resolving Frivolous Climate Suits

By Craig Richardson, Real Clear Energy, Oct 13, 2020

https://www.realclearenergy.org/articles/2020/10/12/the_supreme_court_is_takingcriticalstep_towards_resolving_frivolous_climate_suits_580452.html

Maui Joins Climate Litigation Campaign

By William Allison, EID, Oct 13, 2020

<https://eidclimate.org/maui-joins-climate-litigation-campaign-as-plaintiffs-attorneys-seek-to-gain-from-disgorgement-of-profits/>

Subsidies and Mandates Forever

Wind Subsidies and ‘Predatory Pricing’ in Texas (Part III: Time for Regulators to Investigate Predatory Pricing in Texas?)

By Bill Peacock, Master Resource, Oct 15, 2020

<https://www.masterresource.org/windpower-problems/regulators-predatory-pricing-texas-iii/>

“It turns out that consumers are the ones being hunted down by the pricing practices of the renewable industry, aided and abetted by government. And no one in government seems to care.”
[SEPP Comment: *The PUC is the Public Utility Commission of Texas.*]

Wind Subsidies and ‘Predatory Pricing’ in Texas (Part II: Harming ERCOT)

By Bill Peacock, Master Resource, Oct 14, 2020

<https://www.masterresource.org/windpower-problems/ercot-harmed-predatory-renewables-ii/>

“Market prices tend to go negative when there is low consumer demand and the thermal generators that have chosen to remain online cannot be backed down further to allow the available, lower-cost wind generation to serve consumer demand. In situations like this, some wind generators will be curtailed to balance generation with load. In these cases, since wind is the marginal generation, it sets the market price, which may be low or negative. In 2017, system-wide negative pricing occurred during 64 hours; in 2018, as of August, during 30 hours.”

Energy Issues – Non-US

IEA: energy investment to drop by 18% in 2020

World Energy Outlook 2020 report calls for faster structural changes but hails solar the 'new king' of electricity

By Dominic Ellis, Energy, Oct 14, 2020

<https://www.energydigital.com/oil-and-gas/iea-energy-investment-drop-18-2020>

Link to World Energy Outlook 2020

By Staff, IEA, Oct 2020

<https://www.iea.org/reports/world-energy-outlook-2020#>

How is Britain’s most efficient windfarm doing?

By Andrew Montford, GWPF, Oct 14, 2020

<https://www.thegwpf.com/how-is-britains-most-efficient-windfarm-doing/>

“What we can therefore say, with some certainty, is that the offshore wind fleet is, as a whole, destroying wealth at a remarkable pace.”

[SEPP Comment: *By Orwellian logic, politicians call throwing public money at a loser “investment.”*]

UK to Power Every Home With Offshore Wind by 2030

By Charles Kennedy Oil Price.com, Oct 6, 2020

<https://oilprice.com/Latest-Energy-News/World-News/UK-Looks-To-Power-Every-Home-With-Offshore-Wind-Energy-By-2030.html>

See link immediately above.

Energy Issues – Australia

Extension cord to rescue renewable South Australia will now cost \$2.4 billion

By Jo Nova, Her Blog, Oct 10, 2020

<http://joannenova.com.au/2020/10/extension-cord-to-rescue-renewable-south-australia-will-now-cost-2-4-billion/>

Energy Issues -- US

We Need Blackouts

By Donn Dears, Power For USA, Oct 16, 2020

<https://ddears.com/2020/10/16/we-need-blackouts/>

Solar Power Costs 2-3 Times As Much As Wind, Fossil Fuels and Nuclear

By David Middleton, WUWT, Oct 13, 2020

<https://wattsupwiththat.com/2020/10/13/solar-power-costs-2-3-times-as-much-as-wind-fossil-fuels-and-nuclear/>

[SEPP Comment: Comparing claims with data, such as U.S. average wholesale electricity prices by generating technology (2019)]

Exposing the Eco-Activists' 'Greening' of Pennsylvania in 2020

By Hayden Ludwig & Kevin Mooney, Real Clear Energy, Oct 14, 2020

https://www.realclearenergy.org/articles/2020/10/14/exposing_the_eco-activists_greening_of_pennsylvania_in_2020_580648.html

Washington's Control of Energy

Congress Proposes More Big Government Intervention in Energy Markets

By H. Sterling Burnett, The Heartland Institute, Oct 15, 2020

<https://www.heartland.org/news-opinion/news/special-edition-on-energy-legislation--congress-proposes-more-government-intervention-in-energy-markets>

Federal Energy Regulatory Commission Calls for Carbon Pricing

By Marlo Lewis, Jr. CEI, Oct 16, 2020

<https://cei.org/blog/federal-energy-regulatory-commission-calls-carbon-pricing>

Oil and Natural Gas – the Future or the Past?

OPEC rejects projection that global demand for oil has peaked

Cartel of oil-exporting nations expects demand to continue rising until late 2030s

By Jillian Ambrose, The Guardian, Oct 8, 2020

<https://www.theguardian.com/business/2020/oct/08/opec-rejects-projection-that-global-demand-for-oil-has-peaked>

[SEPP Comment: Forty years ago, OPEC rejected the projections that the world would run out of oil around the year 2000!]

Alternative, Green ("Clean") Solar and Wind

Blow for UK's power supply: National Grid warns lack of wind could plunge Britain into darkness

By Francesca Washtell, Daily Mail, Oct 15, 2020 [H/t GWPF]

<https://www.thisismoney.co.uk/money/article-8844697/National-Grid-warns-lack-wind-plunge-Britain-darkness.html>

Link to: The Brink of Darkness: Britain's fragile power grid

By John Constable, GWPF, 2020

<https://www.thegwpf.org/content/uploads/2020/06/Constable-Brink-of-Darkness.pdf>

[SEPP Comment: Will Climate Change be blamed?]

Hywind, low economics: the cost of floating offshore wind power

By Andrew Montford, GWPF, Oct 16, 2020

<https://www.thegwpf.com/hywind-low-economics/>

“Unfortunately, according to Hywind’s most recent accounts, this improved performance comes at a cost. At £264 million, its paltry 30MW of capacity cost its backers £8.8m per megawatt. This compares to £3.5m for fixed offshore wind (which operates at much lower load factor) , and £0.6 million for gas turbines (which can operate at much higher ones). So the projects backers are paying three times the price of fixed offshore wind, for marginally higher output.”

“All this means that the underlying economics of the project are appalling. Hywind only managed to clock up £5 million of electricity sales, and its underlying position is a loss of £15 million or so. Still, the developers will not be overly worried; subsidies from the government brought in another £29 million of income, and so they are sitting pretty on a profit of £13 million.”

Floating windfarm to sink backers?

By Andrew Montford, GWPF, Oct 15, 2020

<https://www.thegwpf.com/floating-windfarm-to-sink-backers/>

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

Hydrogen Future Would Triple Energy Bills

By Paul Homewood, Not a Lot of People Know That, Oct 16, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/10/16/hydrogen-future-would-triple-energy-bills/>

California Dreaming

California's Failed Climate Change Policy

By Daniel Kolkey, Real Clear Energy, Oct 15, 2020

https://www.realclearenergy.org/articles/2020/10/15/californias_failed_climate_change_policy_580860.html

California's Energy Dreamin'

Frank Macchiarola Real Clear Energy October 14, 2020

https://www.realclearenergy.org/articles/2020/10/13/california_energy_dreaming_580493.html

BELOW THE BOTTOM LINE

UN warns that world risks becoming 'uninhabitable hell' for millions unless leaders take climate action

By Helen Regan, CNN, Oct 13, 2020

https://www.cnn.com/2020/10/13/world/un-natural-disasters-climate-intl-hnk/index.html?utm_content=2020-10-13T12%3A19%3A04&utm_term=link&utm_source=twCNN&utm_medium=social

Climate Reparations

By Charles Rotter, WUWT, Oct 14, 2020

<https://wattsupwiththat.com/2020/10/14/climate-reparations/>

Naomi Oreskes: Exxon Misled the Public about Climate Change

By Eric Worrall, WUWT, Oct 16, 2020

<https://wattsupwiththat.com/2020/10/16/naomi-oreskes-exxon-misled-the-public-about-climate-change/>

[SEPP Comment: More from “No Evidence” Oreskes.]

ARTICLES

1. Nobel Prize in Economic Sciences Is Awarded to U.S. Academics

The prize was shared by two Americans for invention of new auction formats

By Paul Hannon, WSJ, Oct 12, 2020

https://www.wsj.com/articles/nobel-prize-in-economic-sciences-is-awarded-to-u-s-academics-for-invention-of-new-auction-formats-11602496403?mod=hp_lead_pos10

TWTW Summary: the reporter writes:

“U.S. academics Paul R. Milgrom and Robert B. Wilson have been awarded the Nobel Prize in Economic Sciences for new insights into how auctions work, and how different auction designs can help buyers and sellers meet their goals.

“The announcement Monday gave the U.S. a clean sweep of this year’s Nobel Prizes, with at least one American citizen winning in each of the five categories for which individuals were selected.

“‘There has been an enormous investment in research in the U.S., and that has paid off,’ said Göran K. Hansson, secretary-general of the Royal Swedish Academy of Sciences, which awards the prize in economics.

“Auctions play a big part in setting the price of many of the goods and services people use every day, although their reach isn’t always appreciated, even by those who have spent decades studying them.”

After discussing a personal statement, the article continues:

“The application of the insights and new designs developed by Drs. Milgrom and Wilson have been particularly significant for allocating public goods, such as radio spectrum, fishing quotas and airport landing slots.

“While governments and taxpayers want to maximize their revenues from selling those goods, the danger is that they will be too successful, and force the winner to pay so much that delivery of the

associated service—such as mobile phone connections or flights—is impaired. Understanding how auction formats match complex objectives helps avoid such outcomes.

“Their insights could also help hospitals and governments trying to secure protective equipment during a pandemic from competing against each other and bidding up the price, as happened this year when a shortage of personal protective equipment and ventilators led to high prices, said Dr. Milgrom in a press conference arranged by Stanford University, where both winners are professors.

“Their theory has benefited ‘buyers, sellers, taxpayers, end users and society as a whole,’ said Tommy Andersson, a member of the Nobel Economics Committee.

“Dr. Wilson, who was born in Geneva, Neb., got his first taste of auctions as a boy when he would attend cattle auctions Saturday mornings, watching the cows being sold one by one.

“The auctions he later developed, however, are much more complicated. For instance, a bidder in a radio-spectrum auction might want two licenses, covering separate areas. If the licenses are sold one at a time, the bidder could end up buying the first license at too high a price, leaving him unable to afford the second and then having no use for the first.

““Our auction was intended to enable the assembly of efficient packages,’ said Dr. Wilson. ‘This isn’t the kind of problem you run into with cattle being paraded one by one in the local ring. These are not single-item things that don’t have complementarities.’

“Thanks in part to the work of the two economists, auctions now play a big part in setting the price of many everyday goods and services.”

The article concludes with more personal issues.

2. Science, Uncertainty and Pandemic Response

Science fixes mistakes as science advances.

Letters, WSJ, Oct 16, 2020

https://www.wsj.com/articles/science-uncertainty-and-pandemic-response-11602887080?mod=opinion_major_pos16

Matt Ridley’s essay ‘What the Pandemic Has Taught Us About Science’ (Review, Oct. 10) is flawed. Science fixes mistakes as science advances. In citing the errors of some scientists, Mr. Ridley ignores studies done by highly credible scientific institutions such as the National Academies of Sciences, Engineering, and Medicine that produce expert, objective, nonpolitical, independent, public assessments of scientific knowledge relevant to important issues. Such institutions have a responsibility to accurately say what is known from science, what isn’t known and what the uncertainties are.

TWTW agrees that science fixes mistakes as science advances. However, given that in addressing the Greenhouse Effect they ignore what is being measured in the atmosphere TWTW strongly questions the statement that: “highly credible scientific institutions such as the National Academies of Sciences, Engineering, and Medicine that produce expert, objective, nonpolitical, independent, public assessments of scientific knowledge relevant to important issues.”

Mr. Ridley touts Sweden's experience during the pandemic and fails to mention Finland. Here are recent data with Finland listed first and Sweden second: deaths per 100,000 (6 vs. 58), total cases per 100,000 (210 vs. 967). Also, the economic performance of Finland during the pandemic has been better than that of Sweden.

Using science in a crisis is essential even when there are large uncertainties in science and uncertainties in what people and countries will do. Science can advise on what is working and not working as decisions are being made and actions taken. Scientific knowledge about SARS-CoV-2 and Covid-19 has expanded rapidly, and new knowledge should be informing decisions.

E. William Colglazier, Ph.D.
American Association for the Advancement of Science
McLean, Va.

"Mr. Ridley admonishes us that the only way to be absolutely sure that one scientific pronouncement is reliable is to examine the evidence yourself. I would be interested to know how he would propose the layperson goes about preparing herself or himself to parse and review such medical information."

James Wilbur Mimbs, M.D.
Edgefield, S.C.

"To all the yard signs claiming that 'Science is real,' I would like to add 'and complicated.'"

Jim Mayhall
Lake Bluff, Ill.

"Mr. Ridley's essay should be required reading for all pundits and governors. Science can't determine should or shouldn't. It only informs our choices, which must ultimately be based on values and preferences. There is no one 'right' balance between freedom and prudence, and the rules that strike that balance must be worked out by negotiation and compromise. This makes it all the more frustrating when leaders refer to 'the science' as justification for long-term suspension of our democratic process, as if it makes their decisions somehow objective and therefore unarguable. It is equally frustrating when the public accepts this abuse of science and allows itself to be disenfranchised."

Theodore Zachary
Detroit
