

The Week That Was: 2020-08-22 (August 22, 2020)

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The Science and Environmental Policy Project

Quote of the Week: *“Private corporations and persons that own, operate, control, or manage a line, plant, or system for ... the production, generation, transmission, or furnishing of heat, light, water, power, ... directly or indirectly to or for the public, and common carriers, are public utilities subject to control by the Legislature.”* – Section 3, Article XII Public Utilities, California Constitution, added Nov 5, 1974

Number of the Week: 10% of 27,695 MW Equals Zero

THIS WEEK:

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

I’m shocked! Shocked! To protect the energy system which provides electric power for most of the state, the California Independent System Operator (CAISO) was forced to create rolling blackouts during unusually hot days this past week. Immediately the chief executive of the state, Governor Gavin Newsom began blaming others for these needed actions, sending a letter to CAISO and the Public Utility Commission. According to the state constitution, the Commission *“consists of 5 members appointed by the Governor and approved by the Senate, a majority of the membership concurring, for staggered 6-year terms.”* CAISO has no authority over the Commission.

Newsom’s letter claimed: *“These blackouts, which occurred without prior warning or enough time for preparation, are unacceptable and unbefitting of the nation’s largest and most innovative state,”* and he later declared *“This cannot stand.”*

For years, CAISO has been warning anyone who will listen of the dangers of relying too heavily on unreliable renewables, particularly solar power, which requires rapid increases in reliable power in the late afternoon of sunny days when the sun goes down. These power outages are a result of legislative and executive errors from failure to recognize the serious damage that relying on untrustworthy power will do.

To illustrate the risks involved, CAISO used its Duck Chart [presented in the links below] showing the risk of overgeneration from solar power during the middle of the day as compared with the net load and the rapid ramp-up needed to meet the net load in the early evening. From 2012 to 2020, each year the belly of the beast descended, showing the overgeneration risk increased, and the ramp-up needed from reliable generation increased. As estimated on March 31, for 2020 the ramp need was about 13,000 megawatts in three hours – about one-half of the maximum net load (consumption or demand) which occurs around 8 pm.

Providing such ramp-up is highly inefficient. If realized in time, hydro-electric can do it, but the cost is excessive wear on heavy turbines. Pumped hydro storage can do it, but the power needs to be replenished daily, something that cannot be assured if the primary sources of power are unreliable solar or wind. The likely choice is gas turbines which can ramp-up in about 15 minutes. But these are far less efficient than modern natural gas combined cycle (NGCC). Straight gas turbines have about 35% to 44% efficiency, depending on the model, its age, and the amount of

ramping up and down it has to do. The efficiency diminishes when run at variable speeds. Thanks to continued innovation, the efficiency of NGCC is exceeding 60% Thanks to continued innovation, the efficiency of NGCC is exceeding 60%.

Blackouts in California have provided a stark example of how green ideology has so blinded some government officials that they ignore stark warnings that their policies are leading to economic disasters. There is no magic technology or pixie dust that can make unreliable solar and wind reliable. Government officials who claim the problems have been solved are irresponsible.

While the California officials have been congratulating themselves on green power, as Steve Goreham notes, from 2008 to 2017 the state had the most power outages of any state, 4297, more than 2.5 times the number of the next highest state, Texas. And, as Robert Bryce notes some of the highest electricity rates in the country, “19.2 cents per kilowatt-hour, which is 47% higher than the national average of about 13 cents per kilowatt-hour.”

[As a side-note, in discussing the Duck Curve, the web site of The National Renewable Energy Laboratory (NREL), a laboratory of DOE includes the curve and states:

“So, fear not: the duck curve doesn’t spell doom for variable renewables. In the U.S., PV deployment is approaching the highest levels of solar studied in the 2008 report by Denholm et al. And thanks to more than 10 years of forward-looking grid integration analyses from NREL, grid planners and operators have access to a wealth of data, analysis, and tools to help get their proverbial ducks in row to manage it.”

Thus far, NREL has failed to get the ducks in a row.]

See links under Energy Issues – US, California Dreaming and <https://www.energy.gov/fe/how-gas-turbine-power-plants-work#:~:text=A%20simple%20cycle%20gas%20turbine,of%2060%20percent%20or%20more.>

Destabilizing Wind: As discussed above, the Duck Curve illustrates how overreliance on solar power can destabilize the grid, especially on hot, sunny days with evening approaching. The question is, does wind power have similar weaknesses? In a presentation titled “The Storage Delusion” at the annual meeting of the Doctors for Disaster Preparedness (DDP) physics Professor emeritus Howard Hayden shows that it does and explains why.

Wind power can ramp up and down very quickly and unpredictably, based on wind speed and unrelated to time of day. This can destabilize the grid without warning. Thus, a grid with a high percentage of wind power is subject to not only sudden drops in power, but also rapid increases requiring equally rapid decreases in conventional power. It is exceedingly difficult to keep the grid stable with a lot of wind power on it.

To illustrate the weaknesses of solar and wind, Hayden asks, Can you buy electricity from it at midnight or when the wind does not blow? The answers are obvious. But usually advocates claim you can store it, or the wind is blowing somewhere. The latter response is foolish, one cannot build wind turbines everywhere, and the cost of providing transmission lines to carry it to wherever it may be needed is prohibitive.

In addressing storage, Hayden shows that the only proven storage on a utility scale is pumped-hydro storage. As for other types, most hydrogen comes from natural gas, creating CO₂, which contradicts the goal of avoiding creating CO₂. Compressed air has been tried but has not been well received. The earliest system, Huntort CAES was created in Germany in 1978.

As Hayden states, flywheels just spin and are excellent for brief backup in data centers and electronic manufacturing such as computer chips until other generating systems such as diesel can be brought online. They are certainly not grid scale. Capacitors are unsuitable on a grid scale, and a solar/molten-salt scheme has been tried in Nevada and failed.

All backup and storage systems involve a loss in energy. Hayden uses an estimate of the loss from pumped storage which was based on a dated (not clear) table by the US Energy Information Administration (EIA). EIA's most recent estimate of loss in a closed system where water is pumped uphill is from 15 to 30%. Discussed in the June 13 TWTW, the largest pumped-storage facility in the world, Bath County Pumped Storage Station, in Virginia, reports an operating loss of 20%.

As presented by Hayden, wind and solar cannot be considered reliable forms of electricity generation, and except for pumped-hydro storage, energy storage is a delusion. Electricity storage is only in batteries which are not feasible on a utility scale. Until this problem is addressed, deployment of wind and solar will continue to be unreliable and a waste of resources. Please note that Howard Hayden is a director of SEPP.

[Interestingly a severe line of thunderstorms, known as a Derecho, went through eastern Iowa and northwest Illinois on August 10 with wind speeds up to 100 to 130 miles per hour. TWTW found reports on the damage, but nothing on what happened to wind power except the turbines were not significantly damaged. Turbines shut off automatically when wind speeds exceed 25 meters per second (56 mph).

See links under Challenging the Orthodoxy, Changing Weather and <https://www.eia.gov/todayinenergy/detail.php?id=41833>

Going the Wrong Way: As discussed in the Aug 8 TWTW, we have 12 different datasets of atmospheric temperature trends as well as the HITRAN molecular spectroscopic database that can be used to estimate the interaction between greenhouse gases and infrared radiation from surface of the earth to space. Calculations from these databases confirm calculations by The Right Climate Stuff team that an appropriate upper bound for possible increase in temperatures from a doubling of carbon dioxide should be no greater than 1.5°C or about 3°F. Any increase from increasing CO₂ may be far less. There is no climate emergency.

This week, using the latest models acceptable to the UN Intergovernmental Panel on Climate Change (IPCC) called CMIP6, a modeling group sponsored by the EU lowered the latest upper bound of prior IPCC reports but raised the lower bound and suggested a warming ranging between 1.9–3.4 K (°C). This compares with a range of 1.5 to 4.5 K (°C) in prior UN IPCC reports.

In short, it appears that the modeling community is going further away from the physical (observed) world and deeper into the imaginary (modeling) world. Writing in Judith Curry's Climate Etc., mathematician Nic Lewis address some of the issues in these new estimates. One

must ask How can greenhouse gases in the atmosphere cause a greater warming of the surface than occurs in the atmosphere? See links under Challenging the Orthodoxy and Defending the Orthodoxy.

No Trends: Researchers Craig Loehle and Erica Staehling have found no increasing trends in the 167-year record of hurricanes hitting the US. The abstract states:

“Hurricane and major hurricane landfall counts exhibited no significant overall trend over 167 years of available data, nor did accumulated cyclone energy over the continental USA over 119 years of available data, although shorter-term trends were evident in all three datasets.”

See links under Challenging the Orthodoxy.

April Fools Winner: The voting for the 2020 April Fools Award is over. Initially, it appeared the Greta Thunberg would easily win. Her message of doom resonated with the IPCC and its followers, who apparently prefer expressions of teenage angst to reasoned judgement.

But in the end, it was the clear example of why modeling should not be used for government policy unless the models have been thoroughly tested against the finest databases possible that swayed the day in favor Neil Ferguson of Imperial College, London. He demonstrated to political leaders who care to learn that mathematically models might produce interesting and alarming results but should be used as the basis of government policy very carefully and as the data changes the policies must change. Otherwise the results can be disastrous.

Number of the Week: 10% of 27,695 MW Equals Zero. The Bonneville Power Administration (BPA) is the largest operator of hydroelectric power in the country. As of Sep 24, 2019, 80.1% of its 27,695 MW nameplate capacity is hydro (22,180 MW), 10% is wind (2770 MW). This week BPA was generating up to 12,000 MW of hydropower while the regional demand was only up to 8,000 MW. The balance is being sent to California via the Pacific Intertie.

Many times, this week, wind power was zero (0), as it is as this is being written. What California will do when the 2256 MW Diablo Canyon Power Plant, the only remaining nuclear plant in California, is shut down in 2024 & 2025 remains to be seen. Previously, BPA sent power south in the summer when it was needed for air conditioning and received power from the nuclear plants in the winter when it was needed for heating. What will happen to this arrangement remains to be seen. See links under Energy Issues – US.

NEWS YOU CAN USE:

Censorship

My Firing at KNKX

By Cliff Mass, Weather Blog, Aug 13, 2020

<https://cliffmass.blogspot.com/2020/08/my-firing-at-knkx.html>

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

The Storage Delusion

Video, Howard Hayden, Doctors for Disaster Preparedness Meeting, Aug 15, 2020

<https://www.youtube.com/watch?v=cN2cs1oOD1Q&list=PL3XZC6AmQVLGa8pHOQjmh664RGNeeQYEe&index=8&t=0s>

Emergent constraints on TCR and ECS from historical warming in CMIP5 and CMIP6 models

By Nic Lewis, Climate Etc. Aug 19, 2020

<https://judithcurry.com/2020/08/19/emergent-constraints-on-tcr-and-ecs-from-historical-warming-in-cmip5-and-cmip6-models/>

McIntyre on Kaufman et al 2020

By Steven McIntyre, via WUWT, Aug 12, 2020

<https://wattsupwiththat.com/2020/08/12/mcintyre-on-kaufman-et-al-2020/>

Death Valley Update

By Paul Homewood, Not a Lot of People Know That, Aug 20, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/08/20/death-valley-update/>

[SEPP Comment: Death Valley is hot, just like it has been for 150 years, and the new block/concrete building and the extensive paved parking lots next to the weather station drive the mercury even higher!]

Hurricane trend detection

By Charles Rotter, WUWT, Aug 15, 2020

<https://wattsupwiththat.com/2020/08/15/hurricane-trend-detection/>

Link to paper: Hurricane trend detection

By Craig Loehle & Erica Staehling, Natural Hazards, Aug 11, 2020

<https://link.springer.com/article/10.1007%2Fs11069-020-04219-x>

No Trend In Hurricane Activity In 167 Years, New Empirical Study Shows

By Craig Loehle & Erica Staehling, Natural Hazards, Via GWPF, August 2020

<https://www.thegwpf.com/no-trend-in-hurricane-activity-in-167-years-new-empirical-study-shows/>

[SEPP Comment: Key graphs included.]

Don't Panic over Climate Change, Says Bjørn Lomborg

By H. Sterling Burnett, Liberty and Ecology Blog, Aug 20, 2020

<https://www.libertyandecology.org/dont-panic-over-climate-change-says-bjorn-lomborg/>

How Climate Alarmism Hijacked Environmentalism: Michael Shellenberger

By Jan Jekielek and Irene Luo, The Epoch Times, Aug 11, 2020 [H/t Bernie Kepshire]

https://www.theepochtimes.com/how-climate-alarmism-hijacked-environmentalism-michael-shellenberger_3455337.html

Indefensible Climate Fear

By Donn Dears, Power For USA, Aug 18, 2020

<https://ddears.com/2020/08/18/indefensible-climate-fear/>

“Note that institutions that we should be able to trust have violated that trust.”

“No child should ever say, ‘I’ll die of climate change,’ or ‘What do we do when the Earth ends?’”

Shellenberger: Do We Have to Destroy the Earth to Save It?

Video, PragerU, via WUWT, Aug 10, 2020

<https://wattsupwiththat.com/2020/08/10/shellenberger-do-we-have-to-destroy-the-earth-to-save-it/>

The Prophets of Doom

By John Robson, Climate Discussion Nexus, Aug 19, 2020

<https://climatediscussionnexus.com/videos/prophets-of-doom/>

[SEPP Comment: Recognition of failed predictions and references to Extinctionclock.org.]

Defending the Orthodoxy

Recent global warming trends are inconsistent with very high climate sensitivity

News Release by University of Exeter, Aug 18, 2020 [H/t Bernie Kepshire]

<https://phys.org/news/2020-08-global-trends-inconsistent-high-climate.html>

Link to paper: Emergent constraints on transient climate response (TCR) and equilibrium climate sensitivity (ECS) from historical warming in CMIP5 and CMIP6 models

By Femke J. M. M. Nijse, Peter M. Cox, and Mark S. Williamson, Earth System Dynamics, Aug 17, 2020

<https://esd.copernicus.org/articles/11/737/2020/>

Earth's anthropogenic carbon dioxide increase is unprecedented

News Release by University of Bern, Aug 20, 2020 [H/t Bernie Kepshire]

<https://phys.org/news/2020-08-earth-anthropogenic-carbon-dioxide-unprecedented.html>

Link to paper: Abrupt CO₂ release to the atmosphere under glacial and early interglacial climate conditions

By C. Nehrbass-Ahles, et al. Science, Aug 21, 2020

<https://science.sciencemag.org/content/369/6506/1000.abstract>

[SEPP Comment: The human contribution may be unprecedented, but that does not mean that the CO₂ concentration is unprecedented.]

False Alarm by Bjorn Lomborg [and] Apocalypse Never by Michael Shellenberger – review

Two prominent ‘lukewarmers’ take climate science denial to another level, offering tepid manifestos at best

By Bob Ward, The Guardian, Aug 9, 2020 [Bernie Kepshire]

<https://www.theguardian.com/books/2020/aug/09/false-alarm-by-bjorn-lomborg-apocalypse-never-by-michael-shellenberger-review>

Falling Behind: COVID, Climate Change, and Chaos

By Mel Gurtov, Professor Emeritus of Political Science at Portland State University, The Skanner, Aug 4, 2020

<https://www.theskanner.com/opinion/skanner-editorials/30324-falling-behind-covid-climate-change-and-chaos>

“‘Normal’ isn’t good, as in the following warning in November 2019: ‘we declare, with more than 11,000 scientist signatories from around the world, clearly and unequivocally that planet Earth is facing a climate emergency.’”

The Secret To Successfully Closing Down Coal Plants

By Leonard Hyman & William Tilles, Oil Price.com, Aug 15, 2020

<https://oilprice.com/Energy/Coal/The-Secret-To-Successfully-Closing-Down-Coal-Plants.html>

[SEPP Comment: Blaming the utilities because no reliable alternative has been found except petroleum and nuclear.]

Questioning the Orthodoxy

Are tipping points suitable concepts for developing environmental policies?

Large data analysis reveals pitfalls of focusing on abrupt ecosystem changes

News Release, University of Oldenburg, Aug 17, 2020

https://www.eurekaalert.org/pub_releases/2020-08/uoo-atp081320.php

“Using detailed statistical analyses of published results from more than 4,600 field experiments, the scientists found little evidence for thresholds. When focussing on tipping points, scientists and policy makers may thus risk overlooking the negative impact of gradual changes on ecosystems - with potentially disastrous consequences.”

Large Increase In Number Of Sunshine Hours Likely Behind Warming, Glacier Retreat In Alps Since 1980

By P Gosselin, No Tricks Zone, Aug 9, 2020

https://notrickszone.com/2020/08/09/large-increase-in-number-of-sunshine-hours-likely-behind-warming-glacier-retreat-in-alps-since-1980/?utm_source=rss&utm_medium=rss&utm_campaign=large-increase-in-number-of-sunshine-hours-likely-behind-warming-glacier-retreat-in-alps-since-1980

Extensively-Referenced Study Of Past Scientists' Global Temperature Estimates Suggests 'No Change' In 100 Years

By Kenneth Richard, No Tricks Zone, Aug 13, 2020

<https://notrickszone.com/2020/08/13/extensively-referenced-study-of-past-scientists-global-temperature-estimates-suggests-no-change-in-100-years/>

Link to paper: Meridional Distributions of Historical Zonal Averages and Their Use to Quantify the Global and Spheroidal Mean Near-Surface Temperature of the Terrestrial Atmosphere

By Gerhard Kramm, et al. Natural Science, March 11, 2020

https://www.scirp.org/pdf/ns_2020031013452917.pdf

[SEPP Comment: How does something that has been roughly estimated for a hundred-fifty years suddenly become a matter of great precision under the UN?]

Exploding stars may have caused mass extinction on Earth, study shows

News Release by University of Illinois at Urbana-Champaign, Aug 18, 2020

https://www.eurekalert.org/pub_releases/2020-08/uoia-esm081820.php

Link to paper: Supernova triggers for end-Devonian extinctions

By Brian Fields, PNAS, Aug 18, 2020

<https://www.pnas.org/content/early/2020/08/17/2013774117>

[SEPP Comment: An alternative hypothesis to global warming causing mass extinction.]

After Paris!

Trump exiting Paris accord will harm US economy – LSE research

Economists say falling cost of clean energy and growing climate risks strengthen case for cutting CO2 emissions

By Fiona Harvey, The Guardian, Aug 13, 2020 [H/t Bernie Kepshire]

<https://www.theguardian.com/environment/2020/aug/13/trump-exiting-paris-accord-will-harm-us-economy-lse-research>

Policy Brief: The economic case for the United States to remain in the Paris Agreement on climate change

By Alex Bowen, et al. Grantham Institute for Climate Change, Imperial College of London, August 2020

<https://www.imperial.ac.uk/grantham/publications/the-economic-case-for-the-united-states-to-remain-in-the-paris-agreement-on-climate-change.php>

https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2020/08/GRI_The-economic-case-for-the-United-States-to-remain-in-the-Paris-Agreement-on-climate-change.pdf

Change in US Administrations

New EPA Methane Rule Is the Right Decision for Americans and the Environment

By Jason Isaac, Real Clear Energy, Aug 18, 2020

https://www.realclearenergy.org/articles/2020/08/18/new_epa_methane_rule_is_the_right_decision_for_americans_and_the_environment_574436.html

The Trump-Administration Reforms Obama's Misguided Methane-Emissions Rule

Despite what critics of the move say, the rule imposed sizable costs on the fossil-fuel industry while providing almost no environmental benefits.

By Benjamin Zycher, National Review, Aug 18, 2020

<https://www.nationalreview.com/2020/08/obama-administration-methane-emissions-rules-costly-wasteful/>

Social Benefits of Carbon Dioxide

Fossil leaves show high atmospheric carbon spurred ancient 'global greening'

A unique New Zealand deposit opens insights into how modern climate change may proceed

News Release, Earth Institute at Columbia University, Aug 20, 2020 [H/t WUWT]

https://www.eurekalert.org/pub_releases/2020-08/eiac-fls081720.php

Seeking a Common Ground

Why Mumbai Floods Year After Year

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

<https://notalotofpeopleknowthat.wordpress.com/2020/08/10/why-mumbai-floods-year-after-year/>

Max Planck Institute For Meteorology Director Not Worried About Climate Tipping Points... Worried About Panic

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

<https://notrickszone.com/2020/08/14/max-planck-institute-for-meteorology-director-not-worried-about-climate-tipping-points-worried-about-panic/>

MIT: Five Grand Thermal Challenges to Decarbonise the Global Economy

By Eric Worrall, WUWT, Aug 17, 2020

<https://wattsupwiththat.com/2020/08/17/mit-five-grand-thermal-challenges-to-decarbonise-the-global-economy/>

[SEPP Comment: Problem # 1 – Storage!]

Science, Policy, and Evidence

CSIRO: An Entire Covid-19 Lockdown Worth Of Cumulative CO2 Emission Cuts Required Each Year

By Eric Worrall, WUWT, Aug 14, 2020

<https://wattsupwiththat.com/2020/08/14/the-conversation-an-entire-covid-19-lockdown-worth-of-cumulative-co2-emission-cuts-required-each-year/>

Review of Recent Scientific Articles by CO2 Science

44 Years of Precipitation Change in the Peruvian Altiplano

Huerta, A. and Lavado-Casimiro, W. 2020. Trends and variability of precipitation extremes in the Peruvian Altiplano (1971-2013). *International Journal of Climatology* DOI: 10.1002/joc.6635.

Aug 14, 2020

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

Soil Respiration Under a Combination of CO2, Nitrogen and Cd Treatments in a Model Forest

Yao, B., Hu, Q., Zhang, G., Yi, Y., Xiao, M. and Wen, D. 2020. Effects of elevated CO₂ concentration and nitrogen addition on soil respiration in a Cd-contaminated experimental forest microcosm. *Forests* 11: 260, doi:10.3390/f11030260. Aug 12, 2020

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

The Interactive Effects of CO₂ and Arbuscular Mycorrhizal Fungi on Oregano

Saleh, A.M., Abdel-Mawgoud, M., Hassan, A.R., Habeeb, T.H., Yehia, R.S. and AbdElgawad, H. 2020. Global metabolic changes induced by arbuscular mycorrhizal fungi in oregano plants grown under ambient and elevated levels of atmospheric CO₂. *Plant Physiology and Biochemistry* 151: 255-263. Aug 10, 2020

<http://www.co2science.org/articles/V23/aug/a4.php>

“In summing up these several favorable findings, the authors write eCO₂ and AMF application are ‘reliable techniques that can be used to improve growth and the nutritive and medicinal values of oregano, however their synchronous application is much more beneficial.’ Such a conclusions, they add, is ‘supported by the improved photosynthesis, nutrients uptake, biomass production and higher accumulation of primary (sugars, amino acids, fatty acids and organic acids) and secondary (phenolic acids and flavonoids) metabolites.’

“With studies like this, it is easy to recognize the undeniable fact that atmospheric CO₂ is not a pollutant, but an important aerial fertilizer capable of enhancing both the quantity and quality of Earth's vegetation.”

Recent Greening Trends in the Grasslands of the Northern Great Plains

Brookshire, E.N.J., Stoy, P.C., Currey, B. and Finney, B. 2020. The greening of the Northern Great Plains and its biogeochemical precursors. *Global Change Biology* DOI: 10.1111/gcb.15115. Aug 21, 2020

<http://www.co2science.org/articles/V23/aug/a9.php>

“Close to four decades ago our organization's emeritus President, Dr. Sherwood Idso, predicted that rising atmospheric CO₂ concentrations would significantly enhance Earth's vegetative productivity via its aerial fertilization effects that (1) stimulate plant growth and yield, (2) improve water use efficiency, and (3) help plants better withstand resource limitations and environmental stresses. His bold predictions stood in stark contrast to those of the climate alarmist movement, which instead predicted widespread plant *declines* and *extinctions* would result from unfavorable climatic change impacts caused by so-called CO₂-induced global warming.”

Insights into Coral Resilience Following a Major Bleaching Event

Schoepf, V., Jung, M.U., McCulloch, M.T., White, N.E., Stat, M. and Thomas, L. 2020. Thermally variable, macrotidal reef habitats promote rapid recovery from mass coral bleaching. *Frontiers in Marine Science* 7: 245, doi: 10.3389/fmars.2020.00245. Aug 19, 2020

<http://www.co2science.org/articles/V23/aug/a8.php>

A Long-term Rise in Schrenk Spruce Water Use Efficiency in Northwest China

Qin, L., Yuan, Y., Shang, H., Yu, S., Liu, W. and Zhang, R. 2020. Impacts of global warming on the radial growth and long-term intrinsic water-use efficiency (iWUE) of Schrenk spruce (*Picea schrenkiana* Fisch. Et Mey) in the Sayram Lake basin, northwest China. *Forests* 11: 380, doi:10.3390/f11040380. Aug 17, 2020

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

Model Issues

New Study: The Post-Pause Global Warming After 2013 Was Not Caused By CO2, But Shortwave Radiation Forcing

By Kenneth Richard, No Tricks Zone, Aug 17, 2020

<https://notrickszone.com/2020/08/17/new-study-the-post-pause-global-warming-after-2013-was-not-caused-by-co2-but-shortwave-radiation-forcing/>

Link to one paper: The Pause End and Major Temperature Impacts during Super El Niños are Due to Shortwave Radiation Anomalies

By Antero Ollila, Physical Science International Journal, Mar 13, 2020

<https://journalpsij.com/index.php/PSIJ/article/view/30174/56612>

From the abstract: "...The climate change factors have been shortwave (SW) radiation changes, changes in cloudiness and ENSO (El Niño Southern Oscillation) events assessed as the ONI (Oceanic Niño Index) values and anthropogenic climate drivers. The results show that a simple climate model assuming no positive water feedback follows the satellite temperature changes very well, the mean absolute error (MAE) during the period from 2001 to July 2019 being 0.073°C and 0.082°C in respect to GISTEMP. The IPCC's simple climate model shows for the same period errors of 0.191°C and 0.128°C respectively."

Scientists: It's 'Impossible' To Measure Critical Cloud Processes...Observations 1/50th As Accurate As They Must Be

By Kenneth Richard, No Tricks Zone, Aug 20, 2020

<https://notrickszone.com/2020/08/20/scientists-its-impossible-to-measure-critical-cloud-processes-observations-1-50th-as-accurate-as-they-must-be/>

Link to one paper: Confronting the Challenge of Modeling Cloud and Precipitation Microphysics

By Hugh Morrison, et al. Journal of Advances in Modeling Earth Systems, May 11, 2020

<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2019MS001689>

Policymakers Mised...New Nature Study "Casts Doubt On Forecasts Of Regional Climate Change"

Paper in Nature Criticizes NAO Hole: Medium-Term Climate Far More Predictable Than Climate Models Suggest

By Die kalte Sonne (German text translated/edited by P. Gosselin), No Tricks Zone, Aug 18, 2020

<https://notrickszone.com/2020/08/18/policymakers-mised-new-nature-study-casts-doubt-on-forecasts-of-regional-climate-change/>

Measurement Issues -- Surface

Exact climate data from the past

News Release by Goethe University Frankfurt am Main, Aug 10, 2020 [H/t Bernie Kepshire]

<https://phys.org/news/2020-08-exact-climate.html>

Link to paper: Dual clumped isotope thermometry resolves kinetic biases in carbonate formation temperatures

By David Bajnai, et al. Nature Communications, Aug 10, 2020

<https://www.nature.com/articles/s41467-020-17501-0>

Media hypes new 130°F Death Valley Temperature – but it's still short of the 134°F record

By Anthony Watts, WUWT, Aug 17, 2020

<https://wattsupwiththat.com/2020/08/17/media-hypes-new-130f-death-valley-temperature-but-its-still-short-of-the-134f-record/>

New Video: Climate Collusion And Fraud (Part 1)

By Tony Heller, His Blog, Aug 19, 2020

<https://realclimatescience.com/2020/08/new-video-climate-collusion-and-fraud-part-1/>

New Video: Climate Collusion And Fraud (Part 2)

By Tony Heller, His Blog, Aug 29, 2020

<https://realclimatescience.com/2020/08/new-video-climate-collusion-and-fraud-part-2/>

[SEPP Comment: Getting rid of unsavory data.]

Measurement Issues -- Atmosphere

Disparities in a common air pollutant are visible from space

By Staff Writers, Washington DC (SPX), Aug 07, 2020

https://www.terraviva.com/reports/Disparities_in_a_common_air_pollutant_are_visible_from_space_999.html

Link to paper: Observing Nitrogen Dioxide Air Pollution Inequality Using High-Spatial-Resolution Remote Sensing Measurements in Houston, Texas

By Mary Angelique G. Demetillo, et al. Environmental Science & Technology, Aug 5, 2020

<https://pubs.acs.org/doi/abs/10.1021/acs.est.0c01864>

Changing Weather

Midwest Derecho - August 10, 2020, Updated: 8/20/20 11 am

By Staff, National Weather Service, Accessed Aug 20, 2020

https://www.weather.gov/dvn/summary_081020

The Year of the Weeniecane May Be Ending

By Patrick J. Michaels, CEI, Aug 17, 2020

<https://cei.org/blog/year-weeniecane-may-be-ending>

Are California's Heatwaves Getting Worse?

By Paul Homewood, Not a Lot of People Know That, Aug 20, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/08/20/are-californias-heatwaves-getting-worse/>

“We can see a gradual rise from the 1960s, but recent years still don’t hit the peaks seen in the 1930s and 40s.”

[SEPP Comment: Homewood relies on data from the U.S. Historical Climatology Network (USHCN). <https://www.ncdc.noaa.gov/data-access/land-based-station-data/land-based-datasets/us-historical-climatology-network-ushcn>]

A lightning barrage puts the western U.S. on fire

By Cliff Mass, Weather Blog, Aug 19, 2020

<https://cliffmass.blogspot.com/search?updated-max=2020-08-20T22:40:00-07:00&max-results=2>

A Five-Decade Analysis of Tropical Cyclone Trends in the South China Sea

By John Robson, Climate Discussion Nexus, Aug 19, 2020

<https://climatediscussionnexus.com/2020/08/19/a-five-decade-analysis-of-tropical-cyclone-trends-in-the-south-china-sea/>

Changing Climate

Tree Lines Creeping Back Up In Rockies

By Paul Homewood, Not a Lot of People Know That, Aug 18, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/08/18/tree-lines-creeping-back-up-in-rockies/>

“Fortunately, the world has warmed up slightly since the 19thC, but tree lines are still much lower than in the past.”

This just in: CO2 doesn't drive temperature

By John Robson, Climate Discussion Nexus, Aug 19, 2020

<https://climatediscussionnexus.com/2020/08/19/this-just-in-co2-doesnt-drive-temperature/>

Changing Seas

The Oceans Won't Suffocate

By Jim Steele, Landscapes and Cycles, Aug 12, 2020

<http://landscapesandcycles.net/oceans-wont-suffocate.html>

“Changing oxygen concentrations is determined by the balance between oxygen addition versus consumption. Oxygen is only added at the surface, via diffusion from the atmosphere or via photosynthesis. The chemical wizardry of photosynthesis uses sunlight to break apart water molecules and generate new oxygen while creating organic matter. Although this organic matter forms the base of the ocean food web, its digestion and decay consumes oxygen. Paradoxically, wherever the surface ocean food web is most bountiful, the waters below lose the most oxygen.”

Algorithms in Ocean Chemistry: a review

By Rud Istvan, WUWT, Aug 21, 2020

<https://wattsupwiththat.com/2020/08/21/algorithms-in-ocean-chemistry-a-review/>

Link to e-book: Algorithms in Ocean Chemistry: The ocean as seen by a Chemist: algorithms for unlocking the mysteries within

By Daniele Mazza, Former Professor of Chemistry and Materials Science at Politecnico di Torino, Accessed Aug 21, 2020

https://www.academia.edu/43859654/Algorithms_in_Ocean_Chemistry

Florida Current is weaker now than in the past century

New method tracks strength of near-shore ocean currents using measurements made at the coast
News Release, NSF, Aug 10, 2020

https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=301030&WT.mc_id=USNSF_1

Link to paper: Likely weakening of the Florida Current during the past century revealed by sea-level observations

By Christopher G. Piecuch, Nature Communications, Aug 7, 2020

<https://www.nature.com/articles/s41467-020-17761-w>

[SEPP Comment: Highly question the conclusions. From the abstract: “Here I reconstruct Florida Current transport during 1909–2018 using probabilistic methods and principles of ocean physics applied to the available transport data and longer coastal sea-level records. Florida Current transport likely declined steadily during the past century. Transport since 1982 has likely been weaker on average than during 1909–1981.”]

Over Four Decades of Coral Reef Resilience in the Eastern Tropical Pacific

By John Robson, Climate Discussion Nexus, Aug 19, 2020

<https://climatediscussionnexus.com/2020/08/19/over-four-decades-of-coral-reef-resilience-in-the-eastern-tropical-pacific/>

Changing Cryosphere – Land / Sea Ice

Arctic ocean moorings shed light on winter sea ice loss

News Release University of Alaska – Fairbanks, Aug 21, 2020 [H/t WUWT

https://www.eurekaalert.org/pub_releases/2020-08/uoaf-aom082120.php

Link to paper: Weakening of Cold Halocline Layer Exposes Sea Ice to Oceanic Heat in the Eastern Arctic Ocean

By Igor V. Polyakov, et al. Journal of Climate, Aug 20, 2020

<https://journals.ametsoc.org/jcli/article/33/18/8107/353233/Weakening-of-Cold-Halocline-Layer-Exposes-Sea-Ice>

Few bears on the ice off Western Hudson Bay at 14 August but will be onshore soon

By Susan Crockford, Polar Bear Science

<https://polarbearscience.com/2020/08/15/few-bears-on-the-ice-off-western-hudson-bay-at-14-august-but-will-be-onshore-soon/>

Greenland’s Summer Melt Season Set To Be Shortest For Years

By Paul Homewood, Not a Lot of People Know That, Aug 11, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/08/11/greenlands-summer-melt-season-set-to-be-shortest-for-years/>

New study warns: We have underestimated the pace at which the Arctic is melting

News Release by Niels Bohr Institute, Aug 10, 2020 [H/t Bernie Kepshire]

<https://phys.org/news/2020-08-underestimated-pace-arctic.html>

Link to paper: Past perspectives on the present era of abrupt Arctic climate change

By Eystein Jansen, et al. Nature Climate Change, July 29, 2020

<https://www.nature.com/articles/s41558-020-0860-7>

Study Suggests Greenland’s Ice Sheet Has Melted Beyond Return

By Paul Homewood, Not a Lot of People Know That, Aug 18, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/08/18/study-suggests-greenlands-ice-sheet-has-melted-beyond-return/>

See links immediately above.

Satellite record gives unprecedented view of Antarctic ice shelf melt pattern over 25 years

News Release by Robert Monroe, University of California - San Diego, Aug 13, 2020 [H/t Bernie Kepshire]

<https://phys.org/news/2020-08-satellite-unprecedented-view-antarctic-ice.html>

Link to paper: Interannual variations in meltwater input to the Southern Ocean from Antarctic ice shelves

By Susheel Adusumilli, et al. Nature Geoscience, Aug 10, 2020

<https://www.nature.com/articles/s41561-020-0616-z>

Changing Earth

Younger Dryas caused by a volcano after all?

By Jo Nova, Her Blog, Aug 10, 2020

<http://joannenova.com.au/2020/08/younger-dryas-caused-by-a-volcano-after-all/>

[SEPP Comment: The temperatures shown of the graph of the Greenland GISP2 Ice Core indicate the temperatures peaked at about -32°C, roughly the same as now, 12520 BP, declined sharply, went up, and declined again to -50 °C 10716 BP, rose sharply to -36 °C about 9529 BP,

fell and rose sharply about 9213 BP, when it rose gradually to -30 °C about 7674 BP. It has been between roughly -29 °C and -32 °C since. The net change is about 20 °C (35 °F). Note that the Greenland ice cores have greater variation than Vostok or EPICA DomeC in Antarctica.]

Agriculture Issues & Fear of Famine

Global Warming Crop Resilience? Aussie Farmer Helps CSIRO Develop Long Coleoptile Wheat

By Eric Worrall, WUWT, Aug 20, 2020

<https://wattsupwiththat.com/2020/08/20/global-warming-crop-resilience-aussie-farmer-helps-csiro-develop-long-coleoptile-wheat/>

[SEPP Comment: The new strain permits deeper planting where the soil is more moist.]

Media Claim California Crop Crisis, as Farmers Complain About TOO HIGH Crop Yields

By James Taylor, Climate Realism, Aug 16, 2020

<https://climaterealism.com/2020/08/media-claim-california-crop-crisis-as-farmers-complain-about-too-high-crop-yields/>

Media Falsely Claim Ethiopian Climate Crisis as Crop Yields Set Records

By H. Sterling Burnett, Climate Realism, Aug 20, 2020

<https://climaterealism.com/2020/08/media-falsely-claim-ethiopian-climate-crisis-as-crop-yields-set-records/>

Lowering Standards

More carbon in the oceans can lead to smaller fish

Scientists tested two CO₂ levels: Present-day, and worst-case scenario in 300 years

As the ocean continues to absorb more carbon from human activity, fish may be affected.

News Release, NSF, Aug 10, 2020

https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=301028&WT.mc_id=USNSF_1

Are long-term growth responses to elevated pCO₂ sex-specific in fish?

Christopher S. Murray and Hannes Baumann Plos One, July 17, 2020

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0235817>

[SEPP Comment: Somehow large fish evolved with CO₂ concentrations far higher.]

German ZDF Public Television Under Fire For Use Of Deceptive, Fudged Hockey Stick Chart

By P Gosselin, No Tricks Zone, Aug 11, 2020

<https://notrickszone.com/2020/08/11/german-zdf-public-television-under-fire-for-use-of-deceptive-fudged-hockey-stick-chart/>

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

Climate change, not hunters, may have killed off woolly rhinos

Ancient DNA indicates the creatures' numbers stayed mostly constant long after people showed up

By Bruce Bower, Science News, Aug 13, 2020

https://www.sciencenews.org/article/woolly-rhinos-extinction-climate-change?utm_source=email&utm_medium=email&utm_campaign=latest-newsletter-v2&utm_source=Latest_Headlines&utm_medium=email&utm_campaign=Latest_Headlines

Link to paper: Pre-extinction Demographic Stability and Genomic Signatures of Adaptation in the Woolly Rhinoceros

By Edana Lord, Current Biology, Aug 13, 2020

[https://www.cell.com/current-biology/fulltext/S0960-9822\(20\)31071-X](https://www.cell.com/current-biology/fulltext/S0960-9822(20)31071-X)

[SEPP Comment: Strongly doubt the conclusion because the species survived the Eemian Interglacial (115-130 thousand years before present). An alternative explanation can be a sudden drop in food supply by the extreme cold of the Younger Dryas rather than the warm period which preceded it.]

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

Rejoice! We Have Millions of Whales

By Donna Laframboise, Big Picture News, Aug 19, 2020

<https://nofrackingconsensus.com/2020/08/19/rejoice-we-have-millions-of-whales/>

Climate change sours French winemakers' bitter harvest

By Alexandre Peyrille and Fiachra Gibbons Rivesaltes, France (AFP) Aug 14, 2020

https://www.seeddaily.com/reports/Climate_change_sours_French_winemakers_bitter_harvest_999.html

[SEPP Comment: Without credible temperature trends, a more plausible explanation of earlier harvests is: increasing carbon dioxide is promoting earlier ripening.]

Last decade was Earth's hottest on record as climate crisis accelerates

2019 was second or third hottest year ever recorded

Average global temperature up 0.39C in 10 years

By Oliver Milman, The Guardian, Aug 12, 2020 [H/t WUWT]

<https://www.theguardian.com/us-news/2020/aug/12/hottest-decade-climate-crisis-2019>

Insect apocalypse? Not so fast, at least in North America

By Charles Rotter, WUWT, Aug 12, 2020

<https://wattsupwiththat.com/2020/08/12/insect-apocalypse-not-so-fast-at-least-in-north-america/>

Communicating Better to the Public – Make things up.

Warming Greenland ice sheet passes point of no return

Even if the climate cools, study finds, glaciers will continue to shrink

News Release, Ohio State University, Aug 13, 2020 [H/t WUWT]

https://www.eurekalert.org/pub_releases/2020-08/osu-wgi081320.php

Link to paper: Dynamic ice loss from the Greenland Ice Sheet driven by sustained glacier retreat

By Michalea D. King, Nature Communications, Earth & Environment, Aug 13, 2020

<https://www.nature.com/articles/s43247-020-0001-2>

[SEPP Comment: Point of no return nonsense. Comparing 1985 to 1999 with 2000 and 2005, then assuming the comparison will continue for 80 years? Using this reasoning, how could the ice return after the last interglacial?]

Facebook's "Offshore Drilling" Mishap

By David Middleton, WUWT, Aug 14, 2020

<https://wattsupwiththat.com/2020/08/14/facebooks-offshore-drilling-mishap/>

“Are people really so ignorant that they think frac’ing and drilling are the same thing? Rhetorical question.”

Claim: Past evidence supports complete loss of Arctic sea-ice by 2035

News Release, British Antarctic Survey, Via WUWT, Aug 11, 2020

<https://wattsupwiththat.com/2020/08/11/claim-past-evidence-supports-complete-loss-of-arctic-sea-ice-by-2035/>

Link to paper: Sea-ice-free Arctic during the Last Interglacial supports fast future loss

By Maria-Vittoria Guarino, Nature Climate Change, Aug 10, 2020

<https://www.nature.com/articles/s41558-020-0865-2>

Canadian Wildlife Federation: Lying With Pictures to Raise Cash

By Donna Laframboise, Big Picture News, Aug 17, 2020

<https://nofrackingconsensus.com/2020/08/17/canadian-wildlife-federation-lying-with-pictures-to-raise-cash/>

Cold weather kills more people than hot weather because... global warming.

By David Middleton, WUWT, Aug 19, 2020

<https://wattsupwiththat.com/2020/08/19/cold-weather-kills-more-people-than-hot-weather-because-global-warming/>

Communicating Better to the Public – Do a Poll?

Exclusive Poll: Amid Covid-19, Americans Don't Care About Climate Change Anymore

By Will Johnson, Fortune, Via GWPF, Aug 10, 2020

<https://www.thegwpf.com/exclusive-poll-amid-covid-19-americans-dont-care-about-climate-change-anymore/>

Communicating Better to the Public – Go Personal.

The Climate Left Attacks Nobel Laureate William D. Nordhaus

By Benjamin Zycher, AEI, July 2020

<https://www.aei.org/wp-content/uploads/2020/07/The-Climate-Left-Attacks-Nobel-Laureate-William-D.-Nordhaus.pdf>

Communicating Better to the Public – Use Propaganda

Got 'Climate Grief'? Australia's ABC Wants To Know If You're Suffering

By James MacPherson, Climate Change Dispatch, Aug 20, 2020

<https://climatechangedispatch.com/got-climate-grief-australias-abc-wants-to-know-if-youre-suffering/>

Global Warming Tick Scares Are Back

By Eric Worrall, WUWT, Aug 11, 2020

<https://wattsupwiththat.com/2020/08/11/global-warming-tick-scars-are-back/>

“Low-Fact Propaganda”: Spiegel's Alarmism Exposed (Again), Greenland Ice Not “Doomed”

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

<https://notrickszone.com/2020/08/16/low-fact-propaganda-spiegels-alarmism-exposed-again-greenland-ice-not-doomed/>

Communicating Better to the Public – Use Children for Propaganda

Greta Thunberg's Message Of Doom Is Religion, Not Reality

By Paul Homewood, Not a Lot of People Know That, Aug 11, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/08/11/greta-thunbergs-message-of-doom-is-religion-not-reality/#more-45872>

From Iain Martin of The Times:

“I doubt that hardline climate campaigners will for one second allow this [projections of significant population decline] to dilute the purity of their doom-laden message, though. They have founded a religion and anything that distracts from it is heresy.

Greta Thunberg ‘Losing Relevance’ In Wake Of Global Pandemic

Video by Staff, Sky News, Via GWPF, Aug 15, 2020

<https://www.thegwpf.com/greta-thunberg-losing-relevance-in-wake-of-global-pandemic/>

Communicating Better to the Public – Protest

Climate Anarchy Spreads Across Germany As Protesters Attempt To Disrupt, Block Airports

By P Gosselin, No Tricks Zone, Aug 19, 2020

<https://notrickszone.com/2020/08/19/climate-anarchy-spreads-across-germany-as-protesters-attempt-to-disrupt-block-airports/>

Expanding the Orthodoxy

Forest of Dean Council To Save The World!!

By Paul Homewood, Not a Lot of People Know That, Aug 11, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/08/11/forest-of-dean-council-to-save-the-world/>

Questioning European Green

Is the EU’s 30% climate budget greenwashing?

By Leonie Kijewski, Gulf Times, Aug 5, 2020 [H/t GWPF]

<https://gulf-times.com/story/670001/Is-the-EU-s-30-climate-budget-greenwashing>

Nottingham Council Loses Millions On Green Energy Venture

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

<https://notalotofpeopleknowthat.wordpress.com/2020/08/13/nottingham-council-loses-millions-on-green-energy-venture/>

“Which all rather goes to prove that ‘affordable and greener energy’ is a contradiction in terms!”

Questioning Green Elsewhere

Why California’s Climate Policies Are Causing Electricity Blackouts

By Michael Shellenberger, Forbes, Aug 15, 2020

<https://www.forbes.com/sites/michaelshellenberger/2020/08/15/why-californias-climate-policies-are-causing-electricity-black-outs/#700a6c9c1591>

Green New Deal disruption and destruction

By David Wojick and Paul Driessen, CFACT, Aug 21, 2020

<https://www.cfact.org/2020/08/21/green-new-deal-disruption-and-destruction/>

Paul Tice: If You Like Lockdowns, You’ll Love the Carbon-Free Future

Giving up fossil fuels would mean severe limits on mobility and economic activity—permanently.

By Paul Tice, WSJ, Via GWPF, Aug 19, 2020

<https://www.thegwpf.com/paul-tice-if-you-like-lockdowns-youll-love-the-carbon-free-future/>

What Is The Cause Of The Recent Power Blackouts In California?

By Francis Menton, Manhattan Contrarian, Aug 16, 2020

<https://www.manhattancontrarian.com/blog/2020-8-16-h7249j4l4p0o64aod9n6qltzirm6i>

Opinion: So Many Problems – So Many Simple and Effective Solutions

By Gordon Fulks, The Northwest Connection, Aug 8, 2020

<http://www.nw-connection.com/?p=6662>

Ross McKittrick: Ditch the fashionable green recovery plans

Green technologies that were known money-losers before the pandemic are still money-losers today

By Ross McKittrick, Financial Post, Aug 19, 2020

<https://financialpost.com/opinion/ross-mckittrick-ditch-the-fashionable-green-recovery-plans>

Natural Gas Bans Will Worsen California’s Poverty Problem

By Robert Bryce, Real Clear Energy, August 09, 2020

https://www.realclearenergy.org/articles/2020/08/09/natural_gas_bans_will_worsen_californias_poverty_problem_501330.html

Study On Gas Appliances Misleads Californians, Exemplifies Public’s Misconceptions

By Steve Goreham, The American Oil & Gas Reporter, August 2020

<https://www.aogr.com/magazine/markets-analytics/study-on-gas-appliances-misleads-californians-exemplifies-publics-misconceptions>

Funding Issues

An Industry Out of Control: 13 Major Climate Reports in 2020, and 42 Minor Reports

By Eric Worrall, WUWT, Aug 21, 2020

<https://wattsupwiththat.com/2020/08/21/an-industry-out-of-control-13-major-climate-reports-in-2020-and-42-minor-reports/>

“Given the apparent willingness of private groups to fund major climate reports, I don’t see why reporting on climate change needs so much taxpayer funding.”

The Political Games Continue

Biden vs. Trump: The Battle Over American Energy Policy And Its Consequences

By Tilak Doshi, Forbes, Aug 8, 2020

<https://www.forbes.com/sites/tilakdoshi/2020/08/08/biden-vs-trump-the-battle-over-us-energy-policy-and-its-consequences/#6c878012bcc2>

Climate Change Isn’t a One-Party Issue Anymore

By Carine Hajjar, National Review, Aug 17, 2020

<https://www.nationalreview.com/2020/08/climate-change-conservatives-propose-innovative-solutions/>

Litigation Issues

After Multiple Failed Efforts, Climate Litigation Campaign Tries a New Strategy of Branding

By William Allison, Energy in Depth, Aug 7, 2020

<https://eidclimate.org/after-multiple-failed-efforts-climate-litigation-campaign-tries-a-new-strategy-and-branding/>

RELEASE: GAO Asks Court to Force State Dept. to Stop Stonewalling on Paris Climate Treaty

By Chris Horner, Government Accountability & Oversight, [Not US GAO], Aug 18, 2020 [H/t WUWT]

<https://govoversight.org/release-gao-asks-court-to-force-state-dept-to-stop-stonewalling-on-paris-climate-treaty/>

Cap-and-Trade and Carbon Taxes

Conservative Carbon Tax: Bad Politics, Bad Policy

By Marlo Lewis, Jr., CEI, Aug 21, 2020

<https://cei.org/blog/conservative-carbon-tax-bad-politics-bad-policy>

Subsidies and Mandates Forever

Understanding Industrial Wind's Production Tax Credit (Part I: Introduction)

By Lisa Linowes, Master Recourse, Aug 17, 2020

<https://www.masterresource.org/production-tax-credit-ptc/wind-ptc-linowes-i/>

Part II: 2020 Status

<https://www.masterresource.org/production-tax-credit-ptc/wind-ptc-linowes-ii/>

Part III: The Future

<https://www.masterresource.org/production-tax-credit-ptc/wind-ptc-linowes-iii/>

Bernie scolds Elon Musk for taking subsidies Sanders made possible

Exclusive: Steve Goreham notes the irony of senator's tweet over bill to add new tax on billionaires

By Steve Goreham, WND, Aug 12, 2020

<https://www.wnd.com/2020/08/bernie-scolds-elon-musk-taking-subsidies-sanders-made-possible/>

[SEPP Comment: Only the rich can afford some of the tax subsidies.]

EPA and other Regulators on the March

Overview of Greenhouse Gases [2018]

By Staff, EPA, Accessed Aug 18, 2020

<https://www.epa.gov/ghgemissions/overview-greenhouse-gases>

[SEPP Comment: EPA ignores the dominant greenhouse gas – water vapor. The EPA makes calculations using laboratory air (dry air) that does not exist in nature.]

Energy Issues – Non-US

Local Govt's Blueprint To Ban Petrol and Diesel Cars

By Paul Homewood, Not a Lot of People Know That, Aug 9, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/08/09/local-govts-blueprint-to-ban-petrol-and-diesel-cars/>

“As for research into the establishment of a hydrogen distribution network, this would surely make the billions spent on EVs redundant?”

Energy Issues -- US

Attacking the Grid

By Donn Dears, Power For USA, Aug 11, 2020

<https://ddears.com/2020/08/11/attacking-the-grid/>

Green California has the nation's worst power grid

By Steve Goreham, Washington Examiner, Aug 18, 2020

<https://www.washingtonexaminer.com/opinion/op-eds/green-california-has-the-nations-worst-power-grid>

Risk to Alaskan polar bear cubs from oil exploration in coastal Wildlife Refuge is small

By Susan Crockford, Polar Bear Science, Aug 18, 2020

<https://polarbearscience.com/2020/08/18/risk-to-alaskan-polar-bear-cubs-from-oil-exploration-in-coastal-wildlife-refuge-is-small/>

[SEPP Comment: Crockford exposes the hype behind efforts to stop oil development in the Alaska National Wildlife Refuge.]

BPA Balancing Authority Load and Total Wind, Hydro, Fossil/Biomass, and Nuclear Generation, Near-Real-Time

By Staff, BPA, Accessed Aug 23, 2020

<https://transmission.bpa.gov/business/operations/Wind/baltwg.aspx>

Oil and Natural Gas – the Future or the Past?

Death of Shale Postponed... Again

By David Middleton, WUWT, Aug 19, 2020

<https://wattsupwiththat.com/2020/08/19/death-of-shale-postponed-again/>

[SEPP Comment: Middleton brings up the real concerns of damage caused by temporally shutting off production of wells in shale as compared with speculation by financial writers.]

A Happy Ending for Shale Shut-Ins

By Stephen Rassenfoss, Journal of Petroleum Technology, Aug 18, 2020

<https://pubs.spe.org/en/jpt/jpt-article-detail/?art=7491>

BP And Chevron: A Difference In Style Or Substance?

By Tilak Doshi, Forbes, Aug 18, 2020 [H/t WUWT]

<https://www.forbes.com/sites/tilakdoshi/2020/08/18/bp-and-chevron-a-difference-in-style-or-substance/#29f9720e712c>

Chevron's Answer to Climate Change: Drill, Baby, Drill!

By David Middleton, WUWT, Aug 18, 2020

<https://wattsupwiththat.com/2020/08/18/chevrons-answer-to-climate-change-drill-baby-drill/>

U.S. LNG Exports: Here's Why The Left Is Concerned About LNG

By Valerie Volcovici, Reuters, Aug 18, 2020 [H/t Paul DeWitt]

<https://gcaptain.com/u-s-lng-exports-heres-why-the-left-is-concerned-about-lng/>

Return of King Coal?

Clean coal: the commonsense answer to Africa's energy crisis

By Dr Rosemary Falcon, Conservative Woman, August 10, 2020 [H/t WUWT]

<https://conservativewoman.co.uk/clean-coal-the-commonsense-answer-to-africas-energy-crisis/>

Nuclear Energy and Fears

Nuclear to Replace Wind and Solar

By Norman Rogers, American Thinker, Aug 13, 2020

https://www.americanthinker.com/articles/2020/08/nuclear_to_replace_wind_and_solar.html

Alternative, Green (“Clean”) Solar and Wind **Subsidy-Free Wind Farm Planned in North Sea**

By Marla Keene, Power Mag, Aug 11, 2020

<https://www.powermag.com/subsidy-free-wind-farm-planned-in-north-sea/>

“Dutch utility company Eneco and Shell have been chosen by the Dutch Ministry of Economic Affairs and Climate Policy to develop a radical new offshore wind farm incorporating technologies such as floating solar, short-duration battery storage, and green hydrogen production.”

[SEPP Comment: At least this is a test facility before implementing on a large scale.]

A trick of the tale

By Andrew Montford, GWPF, Aug 17, 2020

<https://www.thegwpf.com/a-trick-of-the-tale/>

“With the data now showing unequivocally that the cost of offshore wind is not in precipitous decline, I found myself wondering about all those (ahem) colourful characters who have spent the last ten years trying to persuade everyone that it is.”

Offshore Wind: Definitely Expensive

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

<https://notalotofpeopleknowthat.wordpress.com/2020/08/12/offshore-wind-definitely-expensive/>

BEIS is the Department for Business, Energy & Industrial Strategy - GOV.UK

Wind generation falls over 40% in July; initial assessment blames low wind speed

Overall renewable energy generation is 24% less than July last year.

By Sarita C Singh & Shashwat Mohanty, Energy World, India, Aug 12, 2020

<https://energy.economictimes.indiatimes.com/news/renewable/wind-generation-falls-over-40-in-july-initial-assessment-blames-low-wind-speed/77496934>

Wind and solar energy is steadily replacing coal

But not fast enough

By Justine Calma, The Verge, Aug 13, 2020

<https://www.theverge.com/2020/8/13/21366373/wind-solar-power-electricity-doubled-paris-climate-change-agreement>

“Solar and wind power as a share of global electricity has doubled since 2015, according to a new report by climate-focused think tank Ember. It now makes up about a tenth of the global power mix, reaching close to the same amount of energy generated by nuclear power plants.”

[SEPP Comment: Capacity is not the ability to deliver.]

California Fish and Game Commission again punts on Joshua tree protection vote

By Mark Olalde, Palm Springs Desert Sun, Aug 20, 2020 [H/t Cooler Heads]

<https://www.desertsun.com/story/news/environment/2020/08/20/california-fish-and-game-commission-punts-joshua-tree-protection-vote/3355592001/>

“In a surprise decision potentially spurred by late arriving opposition from the solar and wind industries, the western Joshua tree will have to wait at least another month to receive legal protection under the California Endangered Species Act. The California Fish and Game Commission on Thursday chose, for the second meeting in a row, to continue the discussion instead of giving the item an up-or-down vote.”

Solar panels are starting to die. What will we do with the megatons of toxic trash?

By Maddie Stone, Grist, Aug 13, 2020

<https://grist.org/energy/solar-panels-are-starting-to-die-what-will-we-do-with-the-megatons-of-toxic-trash/>

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

Power and Gas Research Giants EPRI and GTI Join Forces to Explore Hydrogen Pathways

By Sonal Patel, Power Mag, Aug 12, 2020

<https://www.powermag.com/power-and-gas-research-giants-epri-and-gti-join-forces-to-explore-hydrogen-pathways/>

“Our recent interview [MIT Technology Review] with Steven Chu, the U.S. secretary of energy, seems to have raised the hackles of hydrogen-fuel-cell supporters. In the interview, Chu said that there are four ‘miracles’ that need to happen before hydrogen fuel cells can be practical. Basically, he says, we need better ways to produce, distribute, and store hydrogen, and we need better, cheaper fuel cells. ‘If you need four miracles, that’s unlikely: saints only need three miracles,’ he said.”

Innovative Byproduct-Hydrogen Fuel Cell Power Plant Completed

By Aaron Larson, Power Mag, Aug 13, 2020

<https://www.powermag.com/innovative-byproduct-hydrogen-fuel-cell-power-plant-completed/>

“The only byproducts from this reaction are heat and **water vapor**, making hydrogen fuel cells an appealing way to cut carbon emissions, according to Hanwha Energy.” [Boldface added]

[SEPP Comment: Someday the “experts” may discover that water vapor is the earth’s dominant greenhouse gas!]

UNSW Academic Repeats Tired “Dams will Never Fill” Climate Change Myth

Guest essay by Eric Worrall, WUWT, Aug 16, 2020

<https://wattsupwiththat.com/2020/08/16/uns-w-academic-repeats-tired-dams-will-never-fill-climate-change-myth/>

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

National Infrastructure Commission: Renewables could meet two-thirds of UK’s energy demand by 2030

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

<https://notalotofpeopleknowthat.wordpress.com/2020/08/13/national-infrastructure-commission-renewables-could-meet-two-thirds-of-uks-energy-demand-by-2030/>

“So in 2050, when we are reliant on renewables for 80% of our electricity, we will have storage capacity available of 55.7 GWh.

“The plan by then is that we will need 596 TWh of generation a year, or 1.63 TWh a day. When the wind does not blow and the sun does not shine, we would therefore have enough storage to last us 49 minutes.

“Heaven knows what we are supposed to do for the rest of the winter.”

Running Heavy-Duty Transport on Batteries

By Gautam Kalghatgi, Real Clear Energy, August 11, 2020

https://www.realclearenergy.org/articles/2020/08/11/running_heavy-duty_transport_on_batteries_501650.html

Solar, Storage Among New Projects in Texas

By Darrell Proctor, Power Mag, Aug 19, 2020

<https://www.powermag.com/solar-storage-among-new-projects-in-texas/>

[SEPP Comment: The reporter does not give the time duration of the storage systems.]

Alternative, Green (“Clean”) Vehicles

California’s Rolling Blackouts Cast Further Doubt on Electric Vehicles’ Future

By Ben Lieberman, CEI, Aug 20, 2020

<https://cei.org/blog/california%E2%80%99s-rolling-blackouts-cast-further-doubt-electric-vehicles%E2%80%99-future>

Hyperion launches futuristic hydrogen-fueled car

By Peter Grad, Tech Xplore, Aug 13, 2020 [H/t Bernie Kepshire]

<https://techxplore.com/news/2020-08-hyperion-futuristic-hydrogen-fueled-car.html>

Hydrogen cars won’t overtake electric vehicles because they’re hampered by the laws of science

By Tom Baxter, The Conversation, Via Techxplore, June 3, 2020

<https://techxplore.com/news/2020-06-hydrogen-cars-wont-electric-vehicles.html>

Widespread electric vehicle adoption would save billions of dollars, thousands of lives

News Release, by Northwestern University, Aug 17, 2020 [H/t Bernie Kepshire]

<https://phys.org/news/2020-08-widespread-electric-vehicle-billions-dollars.html>

Link to paper: Public Health and Climate Benefits and Tradeoffs of U.S. Vehicle Electrification

By D. R. Peters, GeoHealth, Aug 13, 2020

<https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2020GH000275>

[SEPP Comment: Uses questionable PM2.5 calculations, does not consider the harm from reduced photosynthesis, and from mining cobalt and lithium for batteries.]

California Dreaming

California Constitution

https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=CONS&division=&title=&part=&chapter=&article=XII

California's Blackouts Prelude to Green New Deal for America

By Larry Bell, Newsmax, Aug 21, 2020

<https://www.newsmax.com/larrybell/rolling-gas-green-natural/2020/08/21/id/983375/>

Thanks to Green Energy Mandates, California’s Electric Grid Is Near Collapse

By Anthony Watts, The Heartland Institute, Aug 18, 2020

<https://www.redstate.com/diary/heartlandinstitute/2020/08/18/thanks-to-green-energy-mandates-california%E2%80%99s-electric-grid-is-near-collapse/>

Editorial: California’s Green Blackouts

Editorial, WSJ, Via GWPF, Aug 20, 2020

<https://www.thegwpf.com/editorial-californias-green-blackouts/>

California’s Blackout Warning

If you eliminate fossil fuels, power shortages are inevitable.

Editorial, WSJ, Via GWPF, Aug 17, 2020

<https://www.thegwpf.com/californias-blackout-warning/>

The Year the Lights Went Out in California

By Christopher Horner, The Pipeline, Aug 18, 2020 [H/t Cooler Heads]

<https://the-pipeline.org/the-year-the-lights-went-out-in-california/>

‘Gaps’ In Renewable Energy Led To Blackouts For Millions Of Californians, Gov Newsom Says

By Chris White, Daily Caller, Aug 17, 2020

<https://dailycaller.com/2020/08/17/california-blackouts-renewable-energy-california-gavin-newsom/>

Blackouts Expose Perils And Costs Of California’s ‘Electrify Everything’ Push

By Robert Bryce, Forbes, Aug 18, 2020

<https://www.forbes.com/sites/robertbryce/2020/08/18/blackouts-expose-perils-and-costs-of-californias-electrify-everything-push/#58e1e56d7a01>

CAISO President: California Power Grid teetering close to the edge of collapse

By Charles Rotter, WUWT, Aug 18, 2020

<https://wattsupwiththat.com/2020/08/18/operators-fighting-with-politicians-to-keep-grid-from-collapse/>

Gizmodo Blames Natural Gas for California’s Rolling Black Outs

By David Middleton, WUWT, Aug 21, 2020

<https://wattsupwiththat.com/2020/08/21/gizmodo-blames-natural-gas-for-californias-rolling-black-outs/>

[SEPP Comment: Empty watts from solar power don't work in the evening.]

Rolling Blackouts in California? Who could have guessed?

By Charles Rotter, WUWT, Aug 15, 2020

<https://wattsupwiththat.com/2020/08/15/rolling-blackouts-in-california-who-could-have-guessed/>

Wildfires, Blackouts And High Gas Prices: Californians Fight Familiar Foes Amid Pandemic

By Chris White, Daily Caller, Aug 19, 2020

<https://dailycaller.com/2020/08/19/california-blackouts-wildfires-gas-prices-coronavirus/>

Ten Years of Analyzing the Duck Chart

How an NREL Discovery in 2008 Is Helping Enable More Solar on the Grid Today

By Staff, NREL, Feb 26, 2018

<https://www.nrel.gov/news/program/2018/10-years-duck-curve.html>

Californian Wildfires–Due To Climate Change?

By Paul Homewood, Not a Lot of People Know That, Aug 21, 2020

<https://notalotofpeopleknowthat.wordpress.com/2020/08/21/californian-wildfires-due-to-climate-change/#more-46060>

California Water Efficiency Standards: Peter Gleick vs. Trump

By Wayne Lusvardi, Master Resource, Aug 10, 2020

<https://www.masterresource.org/california-water-policy/california-water-efficiency-standards-peter-gleick-bested-by-donald-trump/>

[SEPP Comment: "Saving water" with changes in plumbing fixtures are miniscule.]

Other Scientific News

Microbes living on air a global phenomenon

By Staff Writers, Sydney, Australia (SPX), Aug 20, 2020

https://www.spacedaily.com/reports/Microbes_living_on_air_a_global_phenomenon_999.html

Link to paper: Soil Microbiomes With the Genetic Capacity for Atmospheric Chemosynthesis Are Widespread Across the Poles and Are Associated With Moisture, Carbon, and Nitrogen Limitation
By Angelique E. Ray, et al. *Frontiers in Microbiology*, Aug 12, 2020

<https://www.frontiersin.org/articles/10.3389/fmicb.2020.01936/full>

Global Wave Discovery Ends 220-Year Search

An 18th-century physicist first predicted the existence of a chorus of atmospheric waves that swoop around Earth. Scientists have finally found them.

By Charlie Wood, *Quanta Magazine*, Aug 13, 2020 [H/t John McClaughry]

<https://www.quantamagazine.org/weather-data-reveals-long-predicted-pressure-waves-20200813/>

A method has been developed to study extreme space weather events

News Release, Skolkovo Institute of Science and Technology (SKOLTECH), Aug 14, 2020 [H/t WUWT]

https://www.eurekalert.org/pub_releases/2020-08/sios-amh081420.php

Discovering new penguin colonies from space

By Staff Writers, Paris (ESA), Aug 07, 2020

https://www.spacedaily.com/reports/Discovering_new_penguin_colonies_from_space_999.html

Link to paper: Discovery of new colonies by Sentinel2 reveals good and bad news for emperor penguins

By Peter T. Fretwell and Philip N. Trathan, *Remote Sensing in Ecology and Conservation*, Aug 4, 2020

<https://zslpublications.onlinelibrary.wiley.com/doi/full/10.1002/rse2.176>

Other News that May Be of Interest

The next invasion of insect pests will be discovered via social media

By Charles Rotter, WUWT, Aug 15, 2020

<https://wattsupwiththat.com/2020/08/15/the-next-invasion-of-insect-pests-will-be-discovered-via-social-media/>

BELOW THE BOTTOM LINE:

Digital content on track to equal half Earth's mass by 2245

If verified, the mass-energy-information equivalence principle will show that information is a physical, dominant, fifth state of matter, and digital bits will outnumber atoms on Earth -- it's just a matter of time.

News Release, American Institute of Physics, Aug 11, 2020 [H/t WUWT]

https://www.eurekalert.org/pub_releases/2020-08/aiop-dco080620.php

Link to paper: The information catastrophe

By Melvin Vopson, AIP Advances, Aug 11, 2020
<https://aip.scitation.org/doi/10.1063/5.0019941>
[SEPP Comment: Can't wait to see it happen.]

Kiribati's president's plans to raise islands in fight against sea-level rise

Exclusive: Taneti Maamau says Kiribati will seek support from China and other allies to elevate islands from the sea, partly through dredging

By Christopher Pala, The Guardian, Aug 9, 2020

<https://www.theguardian.com/world/2020/aug/10/kiribatis-presidents-plans-to-raise-islands-in-fight-against-sea-level-rise>

Monday Mirthiness – Follow The #COVID19 Science You Like

By Anthony Watts, WUWT, Aug 10, 2020

<https://wattsupwiththat.com/2020/08/10/monday-mirthiness-follow-the-covid19-science-you-like/>

The dark side of California – the sunshine state

By Anthony Watts, WUWT, Aug 18, 2020

<https://wattsupwiththat.com/2020/08/18/the-dark-side-of-california-the-sunshine-state/>

ARTICLES

An Alaska Oil Opening, at Last

Interior opens ANWR for oil leases, after only 30 years of trying.

Editorial, WSJ, Aug 17, 2020

https://www.wsj.com/articles/an-alaska-oil-opening-at-last-11597707908?mod=opinion_lead_pos4

TWTW Summary: The editorial states:

“Who says American democracy is hard? It only took 30 years to open up Alaska’s Arctic National Wildlife Refuge for oil drilling, and on Monday the Interior Department opened the largely barren acreage to oil leases.

“Congress created ANWR way back in 1980 with a mandate to study its potential for oil and gas. In the 2017 Tax Cuts and Jobs Act, a Republican House and Senate finally mandated that the federal government establish a plan for energy development. The environmental lobby opposed any drilling, but native communities in the region and Alaskans have long supported it as an economic boon with little risk to the land or grazing caribou of popular nature photography.

“Some 92% of ANWR will remain untouched under the Interior plan, and the rest should be protected with extensive drilling protocols. Accidents can happen, but the leases and drilling could provide thousands of new jobs and revenue for Alaska and the federal government. The U.S. Geological Survey believes the ANWR coastal plain is the largest source of onshore oil reserves in North America. Alaskans are especially pleased because the flow of oil from current drilling sites is slowing down, and the pipeline to the lower 48 states needs new supplies. Alaskans also count on royalties from oil drilling for their state and personal coffers.”

TWTW adds that the Trans-Alaska Pipeline System (TAPS) needs more oil production in Alaska to keep operating. After discussing some political issues, the editorial concludes by addressing a rollback by a Biden White House.

That would be a shame because, barring some technological breakthrough, America will need oil and gas for electric power and transportation for decades to come. Might as well let Americans benefit from producing it.
