The Week That Was: 2019-07-13 (July 13, 2019)
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The Science and Environmental Policy Project

Quote of the Week: “The interesting thing about the Green New Deal,” he said, “is it wasn’t originally a climate thing at all. ... Do you guys think of it as a climate thing? ... Because we really think of it as a how-do-you-change-the-whole-economy thing.” – Rep. Alexandria Ocasio-Cortez chief of staff Saikat Chakrabarti to Governor Jay Inslee’s climate director Sam Ricketts, as reported by David Montgomery of the Washington Post.

Number of the Week: Between 11 and 48,000 deaths

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

Groupthink or Bureaucratic Science: The death of exceptional journalist Christopher Booker is an unfortunate loss for those who dare think on their own. As his friend Andy Shaw relates, Booker was working on a book on Groupthink, which was based on work by psychologist Irving Janis. Booker was greatly expanding his paper on groupthink and climate change, which was published by the Global Warming Policy Foundation (GWPF). Fortunately, we have that paper, the executive summary of which states:

“The purpose of this paper is to use the scientific insights of a professor of psychology at Yale back in the 1970s to show the entire story of the alarm over global warming in a remarkable new light. The late Professor Irving Janis analysed what happens when people get caught up in what he termed ‘groupthink’, a pattern of collective psychological behaviour with three distinctive features, that we can characterise as rules.

• A group of people come to share a particular view or belief without a proper appraisal of the evidence.

• This leads them to insist that their belief is shared by a ‘consensus’ of all rightminded opinion.

• Because their belief is ultimately only subjective, resting on shaky foundations, they then defend it only by displaying an irrational, dismissive hostility towards anyone daring to question it.

This paper begins by showing how strongly all these three symptoms were in evidence, right from the start, when, in the late 1980s, the belief that a rise in carbon dioxide levels was causing the earth dangerously to warm was first brought to the world’s attention.

It shows how the rules of groupthink continued to be in evidence when, during the period around the first report of the UN Intergovernmental Panel on Climate Change (IPCC) in 1990 and the Rio ‘Earth Summit’ of 1992, global warming became adopted as an international scientific and political ‘consensus’.
“The presence of groupthink was confirmed at Kyoto in 1997, when practical steps were first agreed to slow down the rise in world temperatures, by means that would require the richer, developed nations of the West to reduce their carbon dioxide emissions, while allowing the still ‘developing’ nations, such as China and India, to continue increasing them until their economies had caught up with the West. Eventually, as the paper will show, this division between the West and the rest of the world would turn out to be the crux of the whole story,“

After discussion of the 1998 El Niño Booker continues:

“But then came the ‘hockey stick’ controversy, which first drew charges that, to make their case seem more plausible, supporters of the ‘consensus’ – strongly endorsed by the IPCC – were having to manipulate crucial scientific evidence. Their response to these allegations was further evidence of Janis’s third rule, that any attempt to challenge the ‘consensus’ must be ignored, rejected and suppressed.” [Boldface added]

Booker has many useful observations in his 100-page paper.

TWTW has termed groupthink, adopted by government entities supposedly producing objective science, as Bureaucratic Science. The consequences of Groupthink can be malevolent, evidenced by the adoption of the UK’s Climate Change Act 2008, prompted by distorted science and statistics; the UN’s declaration of the eminent extinction of one million species, prompting children to declare the Extinction Rebellion; or the recent announcement by Prince Charles that “We have 18 months to save world.”

As can be seen in the above Quote of the Week, groupthink gives an opportunity for those who wish to change the world without requiring serious thought of the consequences. Students of the American Revolution realize the decision to declare independence was thoughtfully debated and evaluated by delegates of the 13 colonies as to its consequences at the second Continental Congress and before. (New York formally joined in mid-July.) See links under Challenging the Orthodoxy, Defending the Orthodoxy, and Below the Bottom Line.

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Groupthink Extended: Writing for the Wall Street Journal, columnist Holman Jenkins discusses how the media focus on worst-case scenarios and how these become the center of debate on climate policy, regardless of how unlikely the extreme, the worst-case scenario may be. Mr. Jenkins begins:

It’s hard to credit people who say they care about climate change when they don’t bother to know anything about the subject. Or when they applaud proposals that would be extraordinarily expensive yet have no effect on the alleged problem and can only teach the public to become cynical about those who come bearing climate-related proposals.

But that’s the world we live in. Certainly, politicians do not volunteer to deliver more truth than we are willing to hear.

Where fraudulence is the norm, Joe Biden’s climate plan needs to be acknowledged for its slightly less fraudulent mien. It doesn’t ignore the rest of the world, as the Green New Deal does.

His conclusion needs emphasizing:
“I mean every word of the following: Ignore climate-science reporting in major U.S. news organs. The press has given up wrestling with the limits of knowledge or accurately relaying the caveats tied to highly abstract computer models. If a worst-case scenario materializes, humanity will have recourse to relatively cheap geoengineering solutions to attempt to mitigate warming. In the meantime, there is no reason to believe the world will forcibly wean itself off fossil fuels. At the same time, the relentless hunt for efficiency and progress of technology will continue to reduce the carbon intensity of our industrial civilization. It’s even possible to think of cost-effective, pro-growth policies that would accelerate this progress. Unfortunately, these lack the faux-heroic scale and price tags that excite the virtuous left nowadays.

“The media, for whatever reason, has chosen a role for itself as a cheerleader for climate boondoggles. And the more specialized the media—the website Inside Climate News is your example here—the more completely it will devote itself to misleading the public about the true nature of the climate challenge in our democracy.”

The only issue that needs further emphasis is that the UN Intergovernmental Panel on Climate Change (IPCC) and the US Global Change Research Program (USGCRP) are political organizations, not scientific ones. They create worst-case scenarios even when their unvalidated models are contradicted by observations. They have lost scientific integrity and scientific credibility. They are leaders in groupthink, as described by Christopher Booker, above. See links under Challenging the Orthodoxy.

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The Greenhouse Effect – The Libraries: Proxy measurements or proxy variables stand in when something cannot be directly measured. A proxy measurement may actually measure something other than what it is purported to measure. For example, Bristlecone Pine tree ring width measurements taken in the arid White Mountains of California and Nevada were initially used to measure carbon dioxide fertilization, then were claimed by the IPCC (SPM, AR3, 2001 p.3) to measure increasing temperatures, without comparing them to actual thermometer measurements. Tree rings can also measure moisture or rainfall. The problem of identifying exactly what a proxy measures leads researchers to use direct measurements wherever possible – except for the climate establishment such as the IPCC and the USGCRP.

Led by John Christy, the Earth System Science Center, The University of Alabama in Huntsville (UAH), has 40 years of direct measurement of atmospheric temperature trends, yet the IPCC and others cling to surface measurements with very poor global coverage, with data contaminated by the urban heat-island effect. The IPCC ignores atmospheric data, where the greenhouse effect occurs. Based on their 40-years’ worth of worldwide data, the UAH group has estimated, in a published paper, that a doubling of carbon dioxide (CO2) will result in an increase in temperatures of about 1.1°F or 2°F.

As discussed in the previous two TWTWs, physicist William van Wijngaarden and his colleagues, using measurements of the effects of greenhouse gases without the effects of clouds, have found that a doubling of CO2 (from 400 parts per million to 800 parts per million), Methane (CH4), Nitrous Oxide (N2O) with a 6% increase in the dominant greenhouse gas, water vapor, will result in an increase in temperatures of about 1 to 1.5°C or 2 to 3°F. The lowest value the IPCC projects is 1.5°C, which is the highest value of what van Wijngaarden projects. The highest value of the IPCC is 4.5°C, far higher than van Wijngaarden.
The work of van Wijngaarden is based on libraries compiled by Harvard-Smithsonian Center for Astrophysics Atomic and Molecular Physics, the updating of which is discussed in a recent paper published in the Journal of Quantitative Spectroscopy and Radiative Transfer. Unlike data from some groups, the data are not a secret and can be explored using the internet and a laptop computer. Those who wish to do so need to realize certain terms may be confusing. For example, species and Isotopologues refer to different isotopes of an atom, resulting in variants of the same molecule. For example, Except for extreme cases in laboratories, hydrogen has 3 isotopes depending on the number of neutrons. The most common form of hydrogen has no neutrons.

Reviewing the tutorials available at the website, and the calculations involved in developing the data may be reminiscent of the issues in developing artillery range tables or developing the trajectories of rockets and satellites in the US space program. For the latter, many human calculators were employed, mostly women. See links under Challenging the Orthodoxy and Seeking a Common Ground.

Microbes and Methane: Microbes form an important part of life on earth. About 3.5 billion years ago, simple, one-cell, cyanobacteria began using the energy of the sun to break down the molecules of CO2 and water to produce food, the simple sugar, glucose, forming the bases of other carbohydrates, with oxygen as a byproduct. This process of photosynthesis may have resulted in multicellular life and animal life. Yet the UN groupthink about global warming now claims that increasing photosynthesis will cause species extinction, especially when global warming is helped along by methane.

As discussed in the October 20, 2018, TWTW, Jock Allison and Thomas Sheahen presented calculations by van Wijngaarden and Will Happer of the six natural greenhouse gases, based on the data from HITRAN, that on a per-molecule basis, the capability of methane to absorb photons (radiative energy, heat) is less than one fourth that of CO2 both at the top of the atmosphere and in the troposphere. As they state:

“Table 2 shows that the capability of the individual molecules to absorb heat (radiative forcing) is of the same order of magnitude. This seems reasonable since the molecular structure of the four molecules is not enormously different.”

This analysis contradicts many foolish statements such as: “Take the greenhouse gas methane, whose molecules heat the planet by 86 times as much as carbon dioxide over a 20-year period.” The source of 86 times over 20 years is unknown and meaningless. The article referenced a paper in “Nature” stating:

“Human activities and their effects on the climate and environment cause unprecedented animal and plant extinctions, cause loss in biodiversity and endanger animal and plant life on Earth. Losses of species, communities and habitats are comparatively well researched, documented and publicized.”

Publicized, yes; but not well researched and documented with evidence. See links under Challenging the Orthodoxy and Un-Science or Non-Science?

Medieval Warm Period and Little Ice Age: The German website, Die Kalte Sonne, reports a paper on The Medieval Climate Anomaly in Antarctica published in Palaeogeography, Palaeoclimatology, Palaeoecology. This is providing further evidence that the warm period,
followed by the Little Ice Age occurred in the Southern Hemisphere as well as the Northern Hemisphere, contradicting the hockey-stick published by the IPCC in its Third Assessment Report (AR3, 2001, discussed above). See links under Challenging the Orthodoxy.

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ICCC-13: The Thirteenth International Conference on Climate Change, organized by The Heartland Institute, will occur on July 25 at the Trump International Hotel, at 1100 Pennsylvania Avenue, NW, Washington, DC. The full day schedule features many speakers who reject groupthink and think for themselves.

SEPP will be honored to present its 2019 Fredrick Seitz Memorial Award for Exceptional Courage in the Quest for Knowledge to Richard S. Lindzen, Alfred P Sloan Professor, Emeritus, Department of Earth, Atmospheric and Planetary Sciences at MIT. See links under Challenging the Orthodoxy – Conference.

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Clouds Again: The varying roles of clouds create many difficulties in the understanding climate and climate change. Some cause warming, others cooling. The mechanisms for their formation are poorly understood. Two physicists from the University of Turku, Finland, just published a paper suggesting that the role of human emissions of CO2 on climate is very small. The professor, Jyrki K. Kauppinen, had published a paper on High Resolution Gas Phase IR Spectroscopy Instrumentation. Lubos Motl of The Reference Frame reported: “

“I was greatly skeptical about any meaningful content in the article...But many of my doubts disappeared after I read the text. If you look at the Figures 3, 4, you will see quite some impressive correlation. Between what? Between the low cloud cover and the global mean temperature.”

After a brief digression he states:

“The influence of clouds on the precipitation rate as well as temperature is obvious. These two Finns chose the low cloud cover, tried to optimally explain the global mean temperature since 1970s or so, and determined that

• the CO2 climate sensitivity is just 0.24 °C per doubling of the gas that we call life, an order of magnitude below the IPCC estimates (which still have a huge error margin, however)
• the reduced low cloud cover adds some 1.1 °C whenever 10% of the clouds are removed (almost equivalently, they translate it to 1.5 °C per 10% decrease of humidity measured somewhere)

“So, the warming since the beginning of the industrial revolution may be explained simply by the 10% or slightly smaller decrease of the low cloud cover. The contribution of the humans is below 10% of the observed temperature change, which is zero within the error margins, and may be neglected.”

Of course, the paper is being strongly attacked, but it will be interesting to see if it has lasting value. See links under Science: Is the Sun Rising?

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Groupthink in Agriculture: A clear example of foolish thinking is a report from a “Senior scientist, University of Minnesota” discussing an:
“empirical model connecting crop yield to weather variations at each location, we could use it to assess how much yields had changed from what we would have expected to see if average weather patterns had not changed.”

What’s more, we found that decreases in consumable food calories are already occurring in roughly half of the world’s food insecure countries, which have high rates of undernourishment, child stunting and wasting, and mortality among children under age 5 due to lack of sufficient food. For example, in India annual food calories have declined by 0.8% annually and in Nepal they have fallen by 2.2% annually.

Reductions are also occurring in southern African countries, including Malawi, Mozambique and Zimbabwe.

If they had bothered looking at hard data instead of their model, they may have discovered something odd. An atlas shows that Zimbabwe has about the same latitude and elevation as central Brazil. The capital of Zimbabwe, Harare 17°49'45"S, has an elevation of 1,490 m (4,890 ft). The capital Brazil, Brasilia 15°47'38"S, is in central Brazil and has an elevation 1,172 m (3,845 ft). Not only is Brasilia closer to the equator, where it is generally warmer; but it is also lower in elevation, where it is warmer.

As discussed in last week’s TWTW, agriculture is booming in central Brazil. Is it due to global warming / climate change? See links under Agriculture Issues & Fear of Famine.

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SEPP’S APRIL FOOLS AWARD
THE JACKSON

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

Top vote getters include, but are not limited to: U.S. Rep Alexandria Ocasio Cortez [Always-On-Camera]; Bill Nye, the Science Guy; John Schellnhuber, [Director of Potsdam Center for Climate Impacts, advisor to Pope Francis and Angela Merkel]; Pope Francis; Theresa May [retiring as UK PM, leaving huge presents]; Paul Krugman [NYT columnist and public “intellectual”]; and Greta Thunberg [“the young thing”]. Voting will close on July 15, extended from June 30, with the winner announced shortly thereafter.

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Number of the Week: Between 11 and 48,000 deaths. Paul Homewood reminds us of one of the ridiculous efforts to establish a statistical link between tiny particles with a radius of 2.5 micrometers or less and “premature” deaths from lung disorders. Written by a corresponding member of French Academy of Agriculture, the article was published in European Scientist and exposes groupthink in action.

“The French Public Health report, which published the figure of 48,000 victims of air pollution in France per annum, was published one month after an article in the prestigious journal Nature, which attempted the same assessment on a worldwide scale. The militant environmental press largely parroted both these two publications, without ever noting their obvious contradictions:
• On the one hand, an estimate of 38,000 victims each year from PM 2.5 fine particulate matter and nitrogen oxides, on a global scale, thus including the hundreds of millions of inhabitants of the metropolises of emerging countries

• On the other hand, an estimate of 48,000 victims for MP 2.5 alone, on the scale of the 66 million French population, with considerably lower levels of air pollution.

One need not say more. See links under Health, Energy, and Climate.

NEWS YOU CAN USE:

Science: Is the Sun Rising?
Finns: clouds control temperature, CO2 sensitivity 0.24 °C
By Lubos Motl, The Reference Frame, July 12, 2019
Link to paper: No experimental evidence for the significant anthropogenic climate change
By Jyrki Kauppinen, Pekka Malmi, Atmospheric and Oceanic Physics (physics.ao-ph), Submitted June 29, 2019

Physicists: Clouds ‘Practically Control’ Climate, Whereas Human Warming Amounts To 0.01°C Per 100 Years
By Kenneth Richard, No Tricks Zone, July 11, 2019

Harmonic Analysis of Worldwide Temperature Proxies for 2000 years
By Horst-Joachim Lüdecke and Carl-Otto Weiss, the Open Atmospheric Science Journal, 2019
https://benthamopen.com/FULLTEXT/TOASCJ-11-44

Planetary Low Tide May Force Regular Sunspot Sync Ups
A regular alignment of the planets—no, it’s not pseudoscience—makes a strong enough tug to regulate the Sun’s 11- and 22-year cycles.
By Kimberly M. S. Cartier, EOS, June 21, 2019 [H/t Climate Etc.]
https://eos.org/articles/planetary-low-tide-may-force-regular-sunspot-sync-ups

The influence of the de Vries (∼ 200-year) solar cycle on climate variations: Results from the Central Asian Mountains and their global link

Challenging the Orthodoxy -- NIPCC
Climate Change Reconsidered II: Physical Science
Idso, Carter, and Singer, Lead Authors/Editors, Nongovernmental International Panel on Climate Change (NIPCC), 2013
https://www.heartland.org/media-library/pdfs/CCR-II/CCR-II-Full.pdf
Summary: http://www.nipccreport.org/reports/CCR2a/pdf/Summary-for-Policymakers.pdf

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/

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

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 "Simple Physics" Slogan
By John Robson, Climate Discussion Nexus, Comments by William van Wijngaarden, Department of Physics and Astronomy, York University, Canada, April 16, 2019
https://climatediscussionnexus.com/video/ -- Video

Medieval Climate Anomaly Now Confirmed In Southern Hemisphere On All Four Continents
In Medieval times, the penguins had it nice and warm
By Die kalte Sonne (German text translated in the English by P Gosselin), No Tricks Zone, July 6, 2019
Link to paper: The Medieval Climate Anomaly in Antarctica
By Sebastian Lüning, Mariusz Gałka, and Fritz Vahrenholt, Palaeogeography, Palaeoclimatology, Palaeoecology, Oct 15, 201

Christopher Booker: slayer of sacred cows
The Private Eye co-founder was among our fiercest critics of groupthink. RIP.
By Andy Shaw, Spiked, July 5, 2019 [H/T GWPF]
https://www.spiked-online.com/2019/07/05/christopher-booker-slayer-of-sacred-cows/

**How the Media Corrupted Climate Policy**
The administration is right: Worst-case scenarios shouldn’t dominate the debate
By Holman W. Jenkins, Jr., WSJ, Via GWPF, July 7, 2019

**Greenhouse Gases – A More Realistic View**

**Climate Alarmism Is Now a Real Economic Threat to the US**
By Alan Carlin, Carlin Economics and Science, July 7, 2019
http://www.carlineconomics.com/archives/5068

**Challenging the Orthodoxy – Conference**
By Robert Bradley Jr. Master Resource, July 9, 2019

**Opinion: Is Man-Made Climate Change a Settled Science?**
By Mei Chen, The Epoch Times, July 11, 2019
https://www.theepochtimes.com/opinion-is-man-made-climate-change-a-settled-science_2998954.html
Link to website: 13th International Conference on Climate Change (ICCC-13)
By The Heartland Institute, Trump International Hotel, WDC, July 25, 2019
https://www.heartland.org/events/events/13th-international-conference-on-climate-change

**Defending the Orthodoxy**
**Climate change made France's record heat 5 times more likely**
By John Nielsen-Gammon, The Hill, July 6, 2019
“Models can be unreliable because they’re, well, not real, and observations can be unreliable because it’s hard to tease out natural variability and local influences. But the combination — plus the basic fact that since the Earth is warming, heat waves ought to become more intense on average anyway — makes a darned strong case for global warming.”

'Climate Despair' Is Making People Give Up on Life
"It's super painful to be a human being right now at this point in history."
By Mike Pearl, VICE, July 11, 2019
Climate change isn't our only existential threat
By Ira Helfand, CNN, July 6, 2019

*Questioning the Orthodoxy*

**Journalism's Contribution to the Rise of Climate Alarm**
By H. Sterling Burnett, Heartland Institute, July 12, 2019

CEI Files Formal Complaint Regarding NASA's Claim of 97% Climate Scientist Agreement on Global Warming
Press Release, CEI, July 10, 2019
https://cei.org/content/cei-files-formal-complaint-regarding-nasas-claim-97-climate-scientist-agreement-global

Educating Kids to Debate Alarming Climate Claims
By Paul Driessen, Townhall, July 6, 2019
https://townhall.com/columnists/pauldriessen/2019/07/06/educating-kids-to-debate-alarming-climate-claims-n2549587

ScienceMag: realistic reforestation may devour all of our CO2 emissions
By Lubos Motl, The Reference Frame, July 6, 2019
https://motls.blogspot.com/2019/07/sciencemag-realistic-reforestation-may.html
Link to article: Adding 1 billion hectares of forest could help check global warming
By Alex Fox, Science Mag. July 4, 2019
Link to paper: The global tree restoration potential
By Jean-Francois Bastin, et al., Science, July 5, 2019
https://science.sciencemag.org/content/365/6448/76

*After Paris!*

**China And India Will Watch The West Destroy Itself – OpEd**
By Paul Homewood, Not a Lot of People Know That, July 10, 2019

**Kyoto, Paris and a total failure to cut CO2**
By Ruth Lea, The Conservative Woman, July 5, 2019
https://www.conservativewoman.co.uk/kyoto-paris-and-a-total-failure-to-cut-co2/
Following President Trump’s decision to withdraw from the Paris Agreement in 2017, we are left with the EU (now less than 10 per cent of total global emissions), and Canada and Australia (less than 3 per cent together).

Current pledges to phase out coal power are critically insufficient to slow climate change
Press Release, By Chalmers University of Technology, Phys.org, July 1, 2019
Link to paper: Prospects for powering past coal
By Jessica Jewell, Vadim Vinichenko, Lola Nacke & Aleh Cher, Nature Climate Change, July 1, 2019
https://www.nature.com/articles/s41558-019-0509-6

Futile Paris Accord
By Donn Dears, Power For USA, July 9, 2019

Change in US Administrations
Obama’s “Clean Power Plan” is replaced by the Affordable Clean Energy (ACE) rule
By Anthony Watts, WUWT, July 12, 2019

Affordable Clean Energy Rule Is an Improvement, But Still Flawed
By Marlo Lewis, Open Market, July 9, 2019
https://cei.org/blog/affordable-clean-energy-rule-improves-obama-era-policy-still-contains-fatal-flaw

Intelligence aide, blocked from submitting written testimony on climate change, resigns from State Dept.
By Juliet Eilperin, Washington Post, Via WUWT, July 11, 2019

“One of the statements White House officials objected to was this observation: ‘Absent extensive mitigating factors or events, we see few plausible future scenarios where significant — possibly catastrophic — harm does not arise from the compounded effects of climate change.’”
[SEPP Comment: Where is hard evidence of catastrophic climate change from CO2 increasing?]

Problems in the Orthodoxy
Status Report On New York's Quest For "Climate Leadership"
By Francis Menton, Manhattan Contrarian, July 6, 2019
https://www.manhattancontrarian.com/blog/2019-7-6-7669n2g879mcy2hwtxadnscm8rlcg

CCC: UK has just 18 months to avoid 'embarrassment’ over climate inaction
By Simon Evans, Carbon Brief, July 10, 2019

Link to reports: By Committee on Climate Change: Independent advice to government on building a low-carbon economy and preparing for climate change, July 10, 2019
https://www.theccc.org.uk/publications/
Reducing UK emissions – 2019 Progress Report to Parliament
Progress in preparing for climate change – 2019 Progress Report to Parliament
Growing Mismatch Between Climate Activism and Global Energy Reality
By Staff, Financial Times, Via GWPF, July 8, 2019

Government missing its targets on climate change, advisers warn
By August Graham, City A.M. July 10, 2019 [H/t GWPF]

Quebec joins Saskatchewan in carbon tax challenge
By Cosmin Dzsurdza, The Post Millennial, Can, July 8, 2019

*Seeking a Common Ground*
Infrared absorption cross-sections in HITRAN2016 and beyond: Expansion for climate, environment, and atmospheric applications

HITRAN 2016 edition
By Iouli E. Gordon, Harvard-Smithsonian Center for Astrophysics Atomic and Molecular Physics Division, Accessed July 12, 2019
https://www.cfa.harvard.edu/hitran/

Prominent Veteran Meteorologist Pleads For Moderation In The Climate Debate, Slams Both Hardcore Alarmists, “Deniers”
By P Gosselin, No Tricks Zone, July 12, 2019

Climate catastrophising risks shutting down vital debate
By Chris Bullivant, City A.M., July 9, 2019 [H/t GWPF]
https://www.cityam.com/climate-catastrophising-risks-shutting-down-vital-debate/
“So when children this spring took to the streets alarmed that the world was about to end, I heard an echo of those claims from the 1980s. I wondered if they were being misled by exaggerations, especially when an Extinction Rebellion spokesperson said that we would be eating each other within five years’ time due to food shortages.”

Climate scientists’ pre-traumatic stress syndrome
By Judith Curry, Climate Etc. July 8, 2019

*Review of Recent Scientific Articles by CO2 Science*
Future Pea Growth in Response to Rising Atmospheric CO2 and Temperature
http://www.co2science.org/articles/V22/jul/a4.php
The Observed Tolerance of a Decorator Crab to Ocean Acidification
http://www.co2science.org/articles/V22/jul/a3.php

Hourly Rainfall Trends in Uttar Pradesh, India, Since 1969
http://www.co2science.org/articles/V22/jul/a2.php

The Increasing Resilience of Corals to Thermal Stress
http://www.co2science.org/articles/V22/jul/a1.php

“Whatever the mechanism, it is clear that model projections of future coral reef demise are likely way off the mark, having been invalidated by observational data showing that present coral populations currently have a higher thermal threshold for bleaching giving them an increased likelihood of persisting well into the future.”

**Model Issues**

Global and Regional Increase of Precipitation Extremes Under Global Warming
By Simon Michael Papalexiou and Alberto Montanari, Water Resources Research, May 9, 2019

[SEPP Comment: When has the weather been constant?]

**Measurement Issues -- Atmosphere**

Global Temperature Report: June 2019: Maps and Graphs
By Staff, Earth System Science Center, The University of Alabama in Huntsville, Accessed July 12, 2019

Changing Weather
The Battle of New Orleans: Climate-Change Edition
By Joe Bastardi, Patriot Post, July 11, 2019 [H/t WUWT]

Alaska’s Heatwave Nearly As Hot As 1915-So It Must Be Global Warming Say BBC
By Paul Homewood, Not a Lot of People Know That, July 6, 2019

July 12, 1936 – 113 Degrees In Wisconsin
By Tony Heller, The Deplorable Climate Science Blog, July 12, 2019
Federal scientists predict 2019 will set flooding record
By Chris Mills Rodrigo, The Hill, July 10, 2019
Link to report: 2018 State of U.S. High Tide Flooding with a 2019 Outlook
By Staff, NOAA, National Ocean Service, June 2019
[SEPP Comment: Relates, vaguely, sea level rise with CO2 emissions, yet does not provide evidence establishing the relationship.]

Changing Seas
Effects of Variability in Atlantic Ocean Circulation
There is strong evidence that the Atlantic meridional overturning circulation plays an essential role in Atlantic multidecadal variability and associated climate impacts.
By Rong Zhang, et al., EOS, July 9, 2019 [H/t Climate Etc.]

Red Sea Temperature Record Shows It Follows The AMO, Not CO2 … “Natural Climate Oscillations”
AMO cycle on the downward side: Red Sea to cool in the coming decades
By Die kalte Sonne, (German text translated by P Gosselin), No Tricks Zone, July 7, 2019

Coral reefs shifting away from equator
New research reveals a dramatic rebalancing of young corals from tropical to subtropical waters during the last 40 years
By Staff, Science Daily, July 9, 2019 [H/t GWPF]
https://www.sciencedaily.com/releases/2019/07/190709160136.htm
Link to paper: Global biogeography of coral recruitment: tropical decline and subtropical increase
By N. N. Price1, et al., MEPS, Marine Ecology Progress Series, July 4, 2019
https://www.int-res.com/abstracts/meps/v621/p1-17/
[SEPP Comment: How much is due to temperature change and how much is due to CO2 enrichment?]

Methane emissions: don’t blame cows and camels, blame the oceans
By Jo Nova, Her Blog, July 8, 2019

Changing Cryosphere – Land / Sea Ice
10 fallacies about Arctic sea ice & polar bear survival: teachers & parents take note
By Susan Crockford, Polar Bear Science, July 12, 2019
Polar bears are thriving despite global warming: this short essay explains why
By Susan Crockford, Polar Bear Science, July 11, 2019
“In conclusion, the polar bear is thriving with almost 50% less sea ice than existed in 1979 with little evidence that catastrophe for the species awaits. On the contrary, many Arctic residents complain there are now too many bears for human safety.”

Antarctica was warmer one thousand years ago — and life was OK
By Jo Nova, Her Blog, July 11, 2019
http://joannenova.com.au/2019/07/antarctica-was-warmer-one-thousand-years-ago-and-life-was-ok/

Antarctic Ice Surprise
By David Whitehouse, GWPF, July 10, 2019
https://www.thegwpf.com/antarctic-ice-surprise/
“Nature is complicated and often contradictory. Even with such an all-encompassing theory like Anthropogenic Global Warming (AGW) not every result and observation points in the same direction.”

Agriculture Issues & Fear of Famine
Grounded: Oversupply of coffee beans sends global prices tumbling
By Sebastian McCarthy, City A.M. July 9, 2019

UPDATE 1-Brazil ships record amount of green coffee with 2018-19 crop
By Marcelo Teixeira, Reuters, July 8, 2019

University of Minnesota: Zimbabwe Food Production Declining Because Climate Change
Guest essay by Eric Worrall, WUWT, July 10, 2019

Un-Science or Non-Science?
Tiny Creatures Play a Big Role in Climate Change
By Andrew Urevig, ENSIA, July 9, 2019 [H/t Climate Etc.]
Link to paper: Scientists’ warning to humanity: microorganisms and climate change
By Cavicchioli, Ripple and Webster, Nature Reviews Microbiology, June 19, 2019
https://www.nature.com/articles/s41579-019-0222-5

Lowering Standards
ABC BOM suddenly discover historic weather records (but only for snow)
By Jo Nova, Her Blog, July 7, 2019
BBC backlash: Beeb facing legal challenge as viewers raise thousands to tackle ‘bias'

THE BBC is facing a legal challenge over the way it monitors its impartiality amid accusations of biased coverage.

By David Williamson, Express, UK, July 7, 2019 [H/t GWPF]
https://www.express.co.uk/news/uk/1150214/BBC-bias-bbc-tv-licence-fee-pensioners

**Communicating Better to the Public – Make things up.**

**Edinburgh Will Be As Hot As Paris In 2050**

By Paul Homewood, Not a Lot of People Know That, July 11, 2019
https://notalotofpeopleknowthat.wordpress.com/2019/07/11/i/

**Communicating Better to the Public – Use Propaganda on Children**

**Climate scare machine — happy to use people with a mental illness as a promotional tool:**

By Jo Nova, Her Blog, July 12, 2019

**Expanding the Orthodoxy**

**The world needs a global agenda for sand**

By Staff Writers, Boulder CO (SPX), Jul 08, 2019
http://www.spacedaily.com/reports/The_world_needs_a_global_agenda_for_sand_999.html

Link to article: Time is running out for sand

Sand and gravel are being extracted faster than they can be replaced. Monitor and manage this resource globally, urge Mette Bendixen and colleagues.

By Mette Bendixen, Jim Best, Chris Hackney & Lars Lønsmann Iversen, Nature, July 2, 2019
https://www.nature.com/articles/d41586-019-02042-4

“We now call on UNEP and the World Trade Organization (WTO) to set up and oversee a global monitoring programme for sand resources.”

**That Old Gas Stove Is Not Your Friend**

Berkeley to consider another environmental first with proposed ordinance banning new natural gas hookups.

By Jean Tepperman, East Bay Express, (Oakland, Berkeley), July 3, 2019 [H/t WUWT]
https://www.eastbayexpress.com/oakland/that-old-gas-stove-is-not-your-friend/Content?oid=26787463

“One again, the City of Berkeley is considering a groundbreaking environmental policy: This time it's a ban on natural gas hookups in all new buildings, starting January 1, 2020.”

[SEPP Comment: And when the wind doesn’t blow, canned food and smoke signals?]

**Questioning European Green**

**Net Zero and the Industrial Ruination of the Countryside**

Press Release, GWPF, July 11, 2019

Link to report: Green Killing Machines: The impact of Renewable Energy on Wildlife and Nature (PDF)

By Andrew Montford, GWPF, 2019
Germans Rebelling Against Wind Farms
By Donn Dears, Power For USA, July 12, 2019
https://ddears.com/2019/07/12/germans-rebelling-against-wind-farms/

Energy Ruin? German Expert: Fridays-For-Future Demands Would Cost Households $1150 – A Month!
By P Gosselin, No Tricks Zone, July 10, 2019

Questioning Green Elsewhere
Celebrating America’s Environmental Stewardship
By Jim Steele, Landscapes and Cycles, July 10, 2019
http://landscapesandcycles.net/celebrate-america-s-environmental-stewardship.html
“Due to more efficient farming methods, the extent of land covered by crops decreased 18% between 1938 and 1992, allowing most of that land to return to more natural habitat.”
[SEPP Comment: Contributing to the “loss of farmland” was replacing horses and other draft animals with internal combustion engines, lessening the need for animal feed.]

Costing the Green New Deal and “Deep Decarbonization”: Some Clarifications
By Mark Krebs, Master Resource, July 11, 2019

Global Investment in Green Energy Drops Sharply
By Staff, Financial Times, Via GWPF, July 12, 2019

The Political Games Continue
AOC’s Chief of Staff Admits the Green New Deal Is Not about Climate Change
By Jack Crowe, National Review, July 12, 2019

New York City's Rikers Solar Plan Makes No Sense
By Daniel Turner, Real Clear Energy, July 11, 2019
“As Congresswoman Alexandria Ocasio-Cortez once said ‘t’s better to be morally right than factually correct’.”

The Hidden Climate Agenda
By Paul Homewood, Not a Lot of People Know That, July 6, 2019
https://notalotofpeopleknowthat.wordpress.com/2019/07/06/the-hidden-climate-agenda/

Something’s Rotten in D.C., and It Isn’t Those Rain Totals
By Chris Martz, WUWT, July 9, 2019
Cap-and-Trade and Carbon Taxes
The Confusions of the ‘Conservative’ Carbon Tax
By Benjamin Zycher, National Review, July 8, 2019 [H/t Cooler Heads]

Subsidies and Mandates Forever
China has slashed clean energy funding by 39%, leading a global decline
By James Temple, MIT Technology Review, July 10, 2019
[SEPP Comment: According to its website, MIT Technology Review is a media company, “Founded at the Massachusetts Institute of Technology in 1899, ... our coverage is independent of any influence, including our ownership by MIT.”]

EPA and other Regulators on the March
Why toxicologists resisted and radiation geneticists supported EPA’S adoption of LNT for cancer risk assessment
By Edward J. Calabrese and Robert J. Golden, Chemico-Biological Interactions, July 3, 2019 [H/t WUWT]
[SEPP Comment: Another hollow victory for bureaucratic science (groupthink).]

Energy Issues – Non-US
Who Runs OPEC?
Has the quest for higher oil prices forced Saudi Arabia to relinquish control of the cartel to Putin's Russia?
By Staff, Al Jazeera July 9, 2019

Energy Issues -- US
Keystone XL Pipeline Benefits are Linked to the USMCA [U.S. Mexico Canada Agreement]
By Steven Globerman, Real Clear Energy, July 05, 2019
https://www.reaclearenergy.org/articles/2019/07/05/keystone_xl_pipeline_benefits_are_linked_to_the_usmca_110455.html

Xcel says it will likely need more power capacity by 2030s
As utility shifts from coal to renewables, gas plants, other technology may fill gap.
By Mike Hughlett Star Tribune, Minnesota, July 2, 2019 [H/t Toshio Fujita]
http://www.startribune.com/xcel-says-it-will-likely-need-more-power-plants-by-2030s/512073292/
“With its goal of concurrently winding down coal power and boosting renewable energy, Xcel Energy is discovering that by the 2030s, it will need more ‘dispatchable’ power than perhaps previously expected.
“While Xcel tries to meet its aggressive goals for carbon-free power, the utility said in a regulatory filing Monday that in the early 2030s it may need to add the equivalent capacity of
The reason: to better handle surges in power demand as variable energy sources — wind and solar — grow.

“Dispatchable power is electricity that can be constant and turned on quickly. Xcel’s future dispatchable needs could be met by large electricity-storing batteries or other new technologies. But they could also require the construction of more small gas plants.”

**Oil and Natural Gas – the Future or the Past?**

*Report: Pennsylvania had record year for natural gas production*
By Stephen Huba, Trib.LIVE, Pittsburg, July 10, 2019

Link to report: 2018 Oil and Gas Annual Report
By Staff, Pennsylvania Department of Environmental Protection

**Vacca Muerta finally produces oil, a century after its discovery**
Obstacles have long prevented the exploitation of Vacca Muerta, Argentina’s famed shale formation in Neuquén. But now, the dead cow is coming to life.
By Jonathan Gilbert, Bloomberg, July 7, 2019 [H/t GWPF]

**Nuclear Energy and Fears**

*Carbon-Free Power: Solar versus Nuclear*
By Wallace Manheimer, American Thinker, July 12, 2019

‘Global Catastrophes’: Nuclear Power is More Liability Than Asset in Climate Change Fight
Editorial, Sputnik News, July 9, 2019 [Boldface Added]

Ukraine inaugurates giant dome over destroyed Chernobyl reactor
By Staff Writers, Chernobyl, Ukraine (AFP) July 10, 2019

**Alternative, Green (“Clean”) Solar and Wind**

*What It Will Take for the Wind and Solar Industries to Collapse*
By Norman Rogers, American Thinker, July 9, 2019
[https://www.americanthinker.com/articles/2019/07/what_it_will_take_for_the_wind_and_solar_industries_to_collapse.html](https://www.americanthinker.com/articles/2019/07/what_it_will_take_for_the_wind_and_solar_industries_to_collapse.html)

**A Fine Couple They Are (Wind and Solar Power)**
By Jim Romeo, Power Mag, July 1, 2019
[https://www.powermag.com/a-fine-couple-they-are-wind-and-solar-power/](https://www.powermag.com/a-fine-couple-they-are-wind-and-solar-power/)

“The pairing of wind and solar is emerging as a smart strategy to implement renewable energy sources with better economic feasibility.”
Energy & Environmental Newsletter: July 8, 2019
By John Droz, Jr., Master Resource,
https://www.masterresource.org/alliance-for-wise-energy-decisions/energy-environmental-newsletter-july-8-2019/

Alternative, Green ("Clean") Energy -- Storage
Giant batteries and cheap solar power are shoving fossil fuels off the grid
By Robert F. Service, Science Mag., July 11, 2019 [H/t Toshio Fujita]
“Although the Los Angeles project may seem cheap, the costs of a fully renewable--powered grid would add up. Last month, the energy research firm Wood Mackenzie estimated the cost to decarbonize the U.S. grid alone would be $4.5 trillion, about half of which would go to installing 900 billion watts, or 900 gigawatts (GW), of batteries and other energy storage technologies. (Today, the world's battery storage capacity is just 5.5 GW.) But as other cities follow the example of Los Angeles, that figure is sure to fall.”
[SEPP Comment: Highly question dramatic decreases in costs. Lithium mining doesn’t seem to be subject to dramatic economies of scale. The headline in the article would be better put as: Promise of giant batteries and cheap solar power is shoving government policies into fantasyland.]

Alternative, Green ("Clean") Vehicles
From princes to undertakers, Norway's motorists go electric
By Staff, AFP, July 9, 2019 [H/t Toshio Fujita]
“But do Norwegians, who owe their immense wealth to North Sea oil, really have a greater environmental conscience than others? “Probably not -- the speedy electrification of the country's automotive fleet is attributed mainly to generous state subsidies. “According to Norway's biggest insurer Gjensidige, new electric cars are involved in 20 percent more accidents involving personal injuries than diesel models, in part because of their faster acceleration.”

California Dreaming
California lawmakers approve legislation for $21 billion wildfire fund
By Zack Budryk, The Hill, July 11, 2019

Health, Energy, and Climate
Air pollution: 38,000 deaths per year worldwide, including 48,000 in France…
By Philippe Stoop, European Scientist, August 29, 2018 [H/t Paul Homewood]
https://www.europeanscientist.com/en/features/air-pollution-38000-deaths-per-year/#_edn1

Fireworks and Air Quality
By Cliff Mass, Weather and Climate Blog, July 6, 2019
Environmental Industry
Let's stand up to David Attenborough and the neo-Malthusians who want to control our lives
By Matt Kilcoyne, Telegraph, UK, Via GWPF, July 11, 2019

Other Scientific News
Lunar Living: 9 Weird Aspects of Living on the Moon
By Roy Spencer, His Blog, July 12, 2019

Other News that May Be of Interest
Scientists: Humans Perform As Well Or Better When Exposed To High (5000-15000 ppm) vs. Low CO2 Concentrations
By Kenneth Richard, No Tricks Zone, July 8, 2019
https://notrickszone.com/2019/07/08/scientists-humans-perform-as-well-or-better-when-exposed-to-high-5000-15000-ppm-vs-low-co2-concentrations/
One of the comments at the end of the article:
“I spent months on a submarine with CO2 so high (and oxygen so low) that cigarettes wouldn’t stay lit (this was back in the not-so-long-ago bad old days when smoking was still allowed on submarines). At the end of it, just before we came off station, cigarette lighters wouldn’t even light.
“Our oxygen generator had broken, our oxygen candles were all used up, we were on station (off Kamchatka where the military base was, where we weren’t supposed to be) and couldn’t ventilate, and our CO2 scrubber was on the fritz.
“No problems at all cognitively, although when we did finally get out of there and came to periscope depth to ventilate, that air smelled so sweet it almost made me cry.”

What’s In A Name? The Hidden Complexities Of Classifying Cancer
By Christopher Gerry, ACSH, July 8, 2019

BELOW THE BOTTOM LINE:

We have 18 months to save world, Prince Charles warns Commonwealth leaders
By Hannah Furness, Royal Correspondent, Telegraph, UK, July 11, 2019 [H/t WUWT]

ARTICLES

1. It’s Not Too Late for New York to Start Fracking
Cuomo deprives his state of its economic benefits because of imaginary environmental risks
Editorial, WSJ, July 12, 2019
https://www.wsj.com/articles/its-not-too-late-for-new-york-to-start-fracking-11562970236

SUMMARY: After describing his familiarity with upstate New York, the investment management employee and adjunct professor of finance writes:

“Like Rip Van Winkle, the economy of upstate New York has gone to sleep for the past few decades. Upstate continues to post slower economic growth and higher unemployment compared with the downstate and capital regions. Upstate per capita income is about 25% to 50% of the downstate average, and the gap is widening. New York’s rural areas also suffer higher rates of opioid overdose deaths and hospitalizations.

“Such torpor is shocking given that roughly two-thirds of New York’s 62 counties—including the entire western portion of the state—currently sit atop the overlapping Marcellus and Utica shale formations, the most economic and prolific natural-gas play in the country. These gas-rich formations underlie four states—New York, Ohio, Pennsylvania and West Virginia. New York alone has chosen to ignore this economic gift.

“It has been five years since Gov. Andrew Cuomo banned fracking—the process by which natural gas is extracted from shale—under the cover of water-related environmental concerns, effectively shutting down natural-gas development in the state. Upstate residents can get a glimpse of what they are missing economically by looking over the border to Pennsylvania, which since 2014 has become a center of America’s natural-gas industry. It ranks only behind Texas in output. From a standing start barely a decade ago, the Keystone State in 2018 supplied as much natural gas to the North American and world markets as Qatar did.

“For Pennsylvania residents, the economic benefits of fracking for shale gas have included lower prices for heating and power and expanded employment opportunities. Industries such as petrochemicals have sprouted up, while construction has boomed due to the related energy infrastructure that must be built to process and transport the state’s dry and wet gas volumes.

“It isn’t too late for New York to get in on the shale boom. Natural-gas development wouldn’t solve all the upstate region’s economic problems, but the shale industry would be fairly durable because tapping the Marcellus and Utica formations requires continuous drilling. This would help New York rebuild its industrial base.

“New York could learn from Pennsylvania’s experience of introducing oil and gas activities into a populated, topographically diverse part of the country. If it started shale extraction today, the Empire State would be able to take advantage of recent industry advancements in multi-well pad drilling, completion techniques and water management. In the half decade since Mr. Cuomo banned fracking, Pennsylvania has developed best practices regarding property rights, community relations and protecting the environment—including the state’s myriad lakes, rivers and streams.

“For Mr. Cuomo, the ban was never about water; despite the “scientific uncertainties” surrounding hydraulic fracturing and water resources cited at the time by state environmental regulators. The New York portion of the gas-producing Marcellus and Utica shale formations sits thousands of feet below the surface; aquifers typically lie no more than a few hundred feet below
the surface. Its core is located on the old Route 17 corridor running along the Southern Tier of the state, well to the west of the Catskill and Delaware watersheds that provide drinking water for New York City and its suburbs.

“The drilling moratorium was more about keeping the upstate region as a pastoral retreat for city-dwellers. It’s no surprise that the state’s most-vocal antifracking “riverkeepers” tend to hail from the Upper West Side of Manhattan and Park Slope, Brooklyn.

“The ban was also about keeping another carbon-emitting fossil fuel in the ground as part of the Cuomo administration’s climate agenda. In recent years Gov. Cuomo has blocked new interstate natural-gas pipelines from traversing New York, while pushing gas-fired power out of the state’s electricity-generation mix in favor of renewables such as wind and solar. The result has been rising electricity costs for New York consumers, giving new meaning to the state motto Excelsior—Latin for “Ever Upward.”

“It is telling to contrast the inability of New York’s state government to grasp the “scientific uncertainties” associated with fracking—despite years of empirical data—with the metaphysical certitude Albany attaches to global warming, mostly based on projections of climate models. As with most ideologically driven regulatory experiments, there has been little focus on the opportunity cost to New York of its forgone oil and gas development.

“Don’t hold your breath waiting for Mr. Cuomo to revisit his economically disastrous and environmentally ignorant fracking ban soon—especially with Democrats in full control of the Legislature. With an eye always trained to his political future, Mr. Cuomo has developed his own state-level Green New Deal, recently signing the Climate Leadership and Community Protection Act, which requires that New York’s electricity grid be 100% carbon neutral by 2040. The next shot at an economic reprieve for upstate residents won’t come until 2022, when control of Albany is up for grabs in statewide elections.

“While bad for long-suffering New Yorkers, that timing will work fine by me. It will cut down on the Thruway traffic until my son graduates from college.”

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U.S. gas production is at a record high, but the infrastructure needed to move the fuel around the country hasn’t kept up
By Stephanie Yang and Ryan Dezember, WSJ, July 8, 2019

The reporters write:

“America is awash in natural gas. In parts of the country there’s hardly a drop to burn.

“Earlier this year, two utilities that service the New York City area stopped accepting new natural-gas customers in two boroughs and several suburbs. Citing jammed supply lines running into the city on the coldest winter days, they said they couldn’t guarantee they’d be able to deliver gas to additional furnaces. Never mind that the country’s most prolific gas field, the Marcellus Shale, is only a three-hour drive away.
“Meanwhile, in West Texas, drillers have so much excess natural gas they are simply burning it off, roughly enough each day to fuel every home in the state.

“U.S. gas production rose to a record of more than 37 trillion cubic feet last year, up 44% from a decade earlier. Yet the infrastructure needed to move gas around the country hasn’t kept up. Pipelines aren’t in the right places, and when they are, they’re usually decades old and often too small.

“The result, despite natural-gas prices that look low on commodities exchanges, is energy feast and famine.

“This spring, the price of natural gas at a trading hub near Midland, Texas, dropped as low as negative $9 per million British thermal units—meaning that producers were paying people to take it off their hands. (A million British thermal units is enough to dry about 50 loads of laundry.)

“Elsewhere, prices soared due to bouts of cold weather coupled with supply disruptions, including an explosion along a British Columbian pipeline and a leaky underground storage facility near Los Angeles. At a trading hub in Sumas, Wash., natural gas rose to $200 per million British thermal units in March, the highest ever recorded in the U.S. In Southern California, prices went as high as $23; the average over the winter was a record $7.23.

“The national natural gas price set at Henry Hub in Louisiana has been kept low by abundant supplies, yet limited pipeline capacity has sent prices soaring, and in one case plunging, at regional trading hubs.

The national benchmark, which is set at a knot of pipelines in Louisiana, recently hit a three-year low of $2.19 and has hovered below $3 for much of the year:

“I don’t recall a situation when we’ve had the highs and lows happen in such extremes and in such relatively close proximity,’ says Rusty Braziel, a former gas trader who now advises energy producers, industrial gas buyers and pipeline investors.

“With U.S. homes, power plants and factories using more natural gas than ever, the uneven distribution of the shale boom’s bounty means that consumers can end up paying more or even become starved for fuel, while companies that can’t get it to market lose out on profits. Around New York City, the dearth of gas has cast uncertainty over new developments and raised fears of stifling economic growth.

“One reason for the problem is that pipelines have become political. Proponents of reducing the use of fossil fuels have had little luck limiting drilling in energy-rich regions. Instead, they’ve turned to fighting pipeline projects on environmental grounds in regions like New York and the Pacific Northwest, where they have a more sympathetic ear.

“Even in Texas, the heart of the oil-and-gas industry, new pipelines have started to meet more local resistance. In April, landowners, Hays County and Kyle, a booming city on the outskirts of Austin, sued to block construction of a 430-mile pipeline that would move gas from the West Texas drilling fields, where it is being burned up, to buyers near Houston. The case was dismissed by a Texas judge in June.
“Natural gas, which is often found alongside oil and coal, was once a nuisance to drillers and miners alike. It would send crude shooting up out of wells like flammable geysers and was at risk of exploding in mineshafts. Before the advent of arc-welded pipelines that could be laid over long distances, gas had little value unless it happened to be very close to early industrial cities, like Pittsburgh or Cleveland.”

The report then goes into the history of how natural gas became a fuel of choice after WW II.

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