

The Week That Was: 2016-07-30 (July30, 2016)
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The Science and Environmental Policy Project

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Quote of the Week: *“Certainty is rarely objective: it is usually no more than a strong feeling of trust, of conviction, although based on insufficient knowledge. Such feelings are dangerous since they are seldom well-founded. Strong feelings of conviction make dogmatists of us. They may even turn us into hysterical fanatics who try to convince themselves of a certainty which they unconsciously know is not available.”* -- Karl Popper, "Towards an Evolutionary Theory of Knowledge" in "All Life is Problem Solving" [H/t Rob Lemeire]

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Number of the Week: 17.5 to 75 times more

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THIS WEEK:

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

Accusation Is Evidence? Senator Sheldon Whitehouse (D-RI) claims he is seeking evidence of wrongful influence by Exxon for raising doubt that carbon dioxide (CO₂) is the primary cause of global warming, now called climate change. He claims he is not suppressing scientific inquiry, or freedom of speech, but merely seeking evidence. The question is what constitutes evidence to Senator Whitehouse and his group. Is it direct physical evidence, such as comprehensive temperature measurements by satellites showing atmospheric temperatures are rising in response to rising atmospheric carbon dioxide? Which is not occurring. Of course, with the latest El Niño there is little doubt that atmospheric temperatures also rise in response to El Niño weather events. Is it indirect evidence, such as surface temperatures, which are sparse (the globe is poorly covered) and measure many natural and human caused influences in addition to CO₂. Or is it hearsay, rumor, such as 97% of scientists say... or scientific organizations (which have not rigorously polled) say...

Senator Whitehouse organized a teach-in given on the Senate floor on week of July 11 by Whitehouse and eighteen of his senate colleagues. A major claim is that “According to Climate Investigations Center research, your groups have received over \$92 million from the Koch family, Donors Trust, Donors Capital, and ExxonMobil. And that's just what investigators can figure out.”

Even if true, this amount of money is trivial compared with the \$2.5 Billion budget of the US Global Change Research program spends each year trying to establish that CO₂ is the primary cause of climate change.

According to its web site, the Climate Investigations Center: *“was established in 2014 to monitor the individuals, corporations, trade associations, political organizations and front groups who work to delay the implementation of sound energy and environmental policies that are necessary in the face of ongoing climate crisis.*

“Some of the issues our team monitors include:

*Efforts to stall the climate policy process by the fossil fuel industry and its allies
Climate science denial campaigns spawned by industrial interests and their front groups*

The latest climate science impacts assessments and backlash against them
Attribution science advances connecting climate impacts to global warming pollution

The web site gives no indication of scientific evidence or experience, sources of funding, or even if the IRS filings of the claimed “front groups” were checked. In short, Mr. Whitehouse and his band of 19 are willing to accept accusation and hearsay as evidence.

The staff of Mr. Whitehouse thoughtfully provided videos of each senator’s presentation. Since SEPP is incorporated in Virginia, the remarks of Senator Kaine, of the Commonwealth, were of particular interest. Senator Kaine was just nominated for Vice President by the Democratic Party.

Mr. Kaine spoke of rising sea levels in the Hampton Roads/Norfolk area in Virginia. This is a serious problem, but he gave no evidence that it is from warming caused by CO₂. Sea levels have risen about 400 feet (120 meters) since the maximum extent of the last ice age. For the past several centuries, general sea levels have been rising by about 18 cm (7 inches) per century. When satellites began to replace tidal gages, there appeared to be an acceleration rate of sea level rise. It appears that this issue is being resolved as the different instruments are being calibrated. Sea levels will continue to rise until the onset of the next major ice age, which could be disastrous for humanity. Senator Kaine seemed to confuse sea level rise with rate of rise.

Further, Hampton Roads/Norfolk area undergoing subsidence, in part due to a meteor that hit the area millions of years ago. The issues of measuring sea levels, subsidence, etc. are discussed in the reports of the Nongovernmental International Panel on Climate Change (NIPCC).

Further, Mr. Kaine discussed the gradual disappearance of the inhabited Tangier Island in the lower Chesapeake Bay. For decades, schoolchildren close to the Bay were taught about the disappearance of such islands. The Bay is a sunken estuary of the Susquehanna River, and tributary rivers. In satellite photos on Google, one can see the channels these rivers and rivers such as the Hudson and Saint Lawrence carved into the Atlantic Coastal Plane during the most recent Ice Age. The islands are made of highly erodible sediments. Mr. Kaine makes no mention of this history and considers the island erosion recent.

Mr. Kaine accuses some groups based in Virginia, but not SEPP, of accepting money from fossil fuel companies, but does not state amounts. He says his evidence comes from DeSmog Blog, a questionable source, and, apparently, has not been confirmed with IRS filings. To Mr. Kaine, accusation, hearsay, are acceptable evidence.

Ironically, Mr. Kaine closes with a quote from Pope Francis emphasizing truth.

It should be noted that this is not the first time that part of the science community appears to be accepting accusation and hearsay as evidence. Oreskes and Conway based their popular book on it. Following a fawning review in *Science* magazine, S. Fred Singer, the only survivor of the four scientists who were attacked, submitted a thoughtful rebuttal. The editors of *Science* rejected the rebuttal, citing lack of space.

Please note: some may consider SEPP as biased, because it does not consider the products of unvalidated global climate models as physical evidence. As to funding: in 2015, SEPP received moderate donations from a wide variety of individuals, none greater than \$5,000. We do not solicit corporate or foundation money; any funds we received from these sources are the result of

matching donations. An independent accountant reviews all donations, and files appropriate IRS documents. Any royalties, honorariums, etc. go into the SEPP accounts.

See links under Suppressing Scientific Inquiry – The Witch Hunt, Suppressing Scientific Inquiry – The Witch Hunt – Push-Back, Challenging the Orthodoxy – NIPCC, the July 16 TWTW, http://www.climateinvestigations.org/who_we_are and <http://www.whitehouse.senate.gov/news/release/senators-call-out-web-of-denial-blocking-action-on-climate-change>

Political Games: Generally, TWTW does not comment on political issues. However, the 2016 Democratic Party Platform deserves particular mention. Westernized urban and suburban civilization requires reliable electricity to run its communication systems, medical facilities, sewer and water purification systems, refrigeration, food storage, subways, elevators, heating, cooling air handling systems, neighborhood traffic lights, etc. Without reliable electricity, modern life becomes chaotic.

Other than fossil fuels, the only proven sources of reliable electricity are nuclear and hydro. Hydroelectric power is dependent on weather (the EIA considers it as such) and is regional. Nuclear is strongly opposed by many environmental groups, as seen by the letter by Michael Brune, executive director of the Sierra Club, to the *Wall Street Journal* and repeated in the July 2 TWTW. There are no other reliable, affordable sources proven at this time. Countries such as the UK, Germany, Spain, Italy, and Greece are littered with projects that promised reliable, affordable electricity, but failed to deliver. Any possible learning curve is largely exhausted. Industrial-scale solar may have promise, but is yet to be proven and may work only in a small area of the US.

For over one hundred years, utilities have been searching for ways to store electricity, generated when it is not needed for when it is needed. The only storage technology existing on a large scale is pumped-hydro storage. This system has a cycle cost of about 25% or more, meaning that only 75% or less of the electricity put into the system can be retrieved. As seen on El Hierro Island in the Canary Islands, the storage needs may be greatly underestimated, as well as the costs. Large, commercial scale batteries offer promise, but have yet to be proven. Construction on a 100 megawatt battery (very small by standards needed) west of Los Angeles, is planned, but not yet underway, much less proven or shown to be cost-effective.

This is not to say that such technologies cannot be developed, similar to the development of the technology to extract oil and natural gas from dense shale – which are making the US largely fossil fuel independent of the petrostates. But there are no demonstrations that technologies in solar and wind along with electricity storage are reliable and affordable.

In spite of these experiences, the 2016 Democratic Party Platform calls for the effective abandonment of fossil fuels for transportation and electricity generation. The naivety is staggering. It states: “*The Democrats are of the mind that human-caused climate change is one of the major problems facing the country/world today, describing it as ‘an urgent threat and a defining challenge of our time.’*”

There is no empirical or physical evidence that demonstrates CO2 threatens humanity. The threat is largely invented by political actors such as the UN Intergovernmental Panel on Climate Change (IPCC) and the EPA. We do not understand the natural causes of climate change; thus it is

virtually impossible to delineate the human causes. The IPCC and its US followers have failed the American public by not investigating the natural causes of climate change.

Yet, the Platform calls for getting 50% of electricity from “clean energy sources” within a decade. The sources are not identified or the costs calculated.

Further, the Platform states:

“We are committed to a national mobilization, and to leading a global effort to mobilize nations to address this threat on a scale not seen since World War II. In the first 100 days of the next administration, the President will convene a summit of the world’s best engineers, climate scientists, policy experts, activists, and indigenous communities to chart a course to solve the climate crisis. Our generation must lead the fight against climate change and we applaud President Obama’s leadership in forging the historic Paris climate change agreement. We will not only meet the goals we set in Paris, we will seek to exceed them and push other countries to do the same by slashing carbon pollution and rapidly driving down emissions of potent greenhouse gases like hydrofluorocarbons.

In WW II, most of the US weapons used were already in production or theoretically understood. Even the atomic bombs were theoretically investigated by the UK, Germany and Japan. Only the US employed the necessary resources to make the fuel. By July 1945 (3.5 years into the war), the US had enough uranium for one bomb, which was theoretically straight-forward and not tested, and enough plutonium for two bombs, theoretically uncertain with one tested. Fortunately for both sides, Japan surrendered after the second bomb was dropped. The US nuclear arsenal was depleted.

The plan to fight climate change without theoretically understanding causes or an understanding of the resources needed to replace fossil fuels, is not a commitment similar to that made by the US in WWII, but more like the one made by President Johnson when he committed hundreds of thousands of troops into Vietnam, without a strategic plan and without understanding the opposition, thereby violating the maxim: Know your enemy! See links under The Political Games Continue.

Replacing Fossil Fuels for Electricity: Martin Livermore of the *Scientific Alliance* made some very rough calculations on the extent of power stations needed and the types of energy/fuel required to replace fossil fuels in the UK. He did not consider costs. He concludes: “This rough analysis strongly suggests that ambitious national emissions reduction targets are going to be increasingly difficult to meet and that essentially complete decarbonisation of the economy by 2050 is currently an unrealisable vision.” See Energy Issues – Non-US

Additions and Corrections: Reader John Kaufmann pointed out that last week, in the questions raised by Roy Spencer, the “2” in the symbols for carbon dioxide “CO₂” was dropped, leaving carbon monoxide, CO. This is no explanation why, but such possibilities will be checked.

Several readers have expressed concern that TWTW does not seem to be interested in truth, but rather, in furthering doubts about current view of the climate establishment. The issue of what is “truth” aside, the latter part of the concern is valid. TWTW is not particularly interested in the products of unvalidated global climate models, even though many may have undergone intense review. At a minimum, if the models are used to project future temperatures from carbon dioxide

emissions, then the models should be tested using atmospheric temperatures. That is where the greenhouse effect takes place. TWTW deeply appreciates those who provide additions and corrections.

Number of the Week: 17.5 to 75 times more. Atmospheric CO₂ is about 4 parts per 10,000 parts atmosphere. Water vapor ranges from about 70 to 300 parts per 10,000 parts of atmosphere. Roughly, atmospheric water vapor concentration ranges from 17.5 to 75 times more than CO₂, with large variations in altitude and, also, latitude. Yet, the influence of changing water vapor on global warming/climate change is largely not-analyzed by the IPCC and its followers.

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NEWS YOU CAN USE:

Censorship

Ugly: “Why climate denial should be a criminal offence”

By Anthony Watts, WUWT, July 26, 2016

<https://wattsupwiththat.com/2016/07/26/ugly-why-climate-denial-should-be-a-criminal-offence/>
[SEPP Comment: Let’s criminalize those who disagree with me!]

Suppressing Scientific Inquiry – The Witch Hunt

Senators Hit Back in Letter to Denial Front Groups

“Your letter proves our point” write Reid, Schumer, Whitehouse, Boxer, Durbin, Sanders, Franken, Warren, Markey, et al.

Press Release, Office of US Senator for Rhode Island, Sheldon Whitehouse, July 22, 2016

<http://www.whitehouse.senate.gov/news/release/senators-hit-back-in-letter-to-denial-front-groups>

Link to: Senators Call Out Web of Denial Blocking Action on Climate Change

Nineteen Senators expose fossil fuel-funded groups involved in a campaign to deny climate facts and stymie climate legislation

<http://www.whitehouse.senate.gov/news/release/senators-call-out-web-of-denial-blocking-action-on-climate-change>

Includes speech by Vice Presidential Candidate Tim Kaine of the Commonwealth of Virginia.

Suppressing Scientific Inquiry – The Witch Hunt – Push-Back

Creating a Climate of Intimidation

By Misha Tseytlin, Morning Consult, July 29, 2016

<https://morningconsult.com/opinions/creating-climate-intimidation/>

[SEPP Comment: Some state attorneys general are inventing rules of evidence to call other people morally vacant. Written by the Solicitor General of Wisconsin.]

ExxonMobil, Climate Change And Free Speech: Down from Climategate

By Allen Brooks, Master Resource, July 27, 2016

<https://www.masterresource.org/climate-speech-freedom/exxonmobil-climate-speech/>

Kaine's warmist rhetoric chills free speech and inquiry

By Bill O’Keefe, Richmond Times-Dispatch, July 23, 2016

http://www.richmond.com/opinion/their-opinion/guest-columnists/article_02633564-7527-5cb5-8ff4-c91cd1dd5979.html

Challenging the Orthodoxy -- NIPCC

Why Scientists Disagree About Global Warming

The NIPCC Report on the Scientific Consensus

By Craig D. Idso, Robert M. Carter, and S. Fred Singer, NIPCC, Nov 23, 2015

<http://climatechangereconsidered.org/>

Download with no charge

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

Climate Change Reconsidered II: Physical Science

Idso, Carter, and Singer, Lead Authors/Editors, 2013

<http://www.heartland.org/media-library/pdfs/CCR-II/CCR-II-Full.pdf>

Summary: <http://www.nipccreport.org/reports/ccr2a/pdf/Summary-for-Policymakers.pdf>

Climate Change Reconsidered II: Biological Impacts

Idso, Idso, Carter, and Singer, Lead Authors/Editors, 2014

<http://www.nipccreport.org/reports/ccr2b/pdf/Full-Report.pdf>

Summary: <https://www.heartland.org/media-library/pdfs/CCR-IIb/Summary-for-Policymakers.pdf>

Challenging the Orthodoxy

Study finds: Middle atmosphere temperature in sync with the ocean PDO

Relationship between decadal variations in temperatures in the Pacific and the tropopause identified

By Anthony Watts, WUWT, July 26, 2016

<https://wattsupwiththat.com/2016/07/26/study-finds-middle-atmosphere-temperature-in-sync-with-the-ocean-pdo/>

Link to paper: Decadal variability of tropical tropopause temperature and its relationship to the Pacific Decadal Oscillation.

By Wang, Matthes, Omrani, and Latif, Pub Med, NIH, July 12, 2016

<http://www.ncbi.nlm.nih.gov/pubmed/27404090>

[SEPP Comment: This is not in one of the usual journals publishing human-caused climate change such as Science, which censors its publications.]

Human Mortality Due to Heat Is NOT Rising!

By Craig Idso, CATO, July 28, 2016

<http://www.cato.org/blog/human-mortality-due-heat-not-rising>

German Geophysicist: “AGW Built On Failed Scientific Assumptions And Economic Speculations”

Challenging AGW on the Eve of Destruction

Guest essay by Uli Weber, Geophysicist, Germany, No Tricks Zone, July 24, 2016

<http://notrickszone.com/2016/07/24/german-geophysicist-agw-built-on-failed-scientific-assumptions-and-economic-speculations/#sthash.Lr5YHKwv.dpbs>

My Temperature Record Presentation In Omaha

By Tony Heller (Steve Goddard), July 14, 2016

Video at Doctors for Disaster Preparedness, July 9, 2016

<http://realclimatescience.com/2016/07/my-temperature-record-presentation-in-omaha/>

Defending the Orthodoxy

The Remarkable Inconsistency Of Climate Denial

By Adam Frank, NPR, July 26, 2016 [H/t Clyde Spencer]

<http://www.npr.org/sections/13.7/2016/07/26/487457043/the-remarkable-inconsistency-of-climate-denial>

[SEPP Comment: The hottest year on record, which are only partial, and short term records, is not necessarily the hottest one ever. The remarkable consistency of the defenders is their failure to address the lack of physical evidence of cause and ignoring nature as a cause.]

United Nations Finds That Greenhouse Gases Are Increasing from Agriculture

By Staff Writers, Yahoo, July 23, 2016 [H/t Clyde Spencer]

<https://www.yahoo.com/news/united-nations-finds-greenhouse-gases-130000745.html?nhp=1>

Link to report: How Does Agriculture Change Our Climate?

By Colombo, et al, Institute on the Environment, and other organizations, 2016

http://www.environmentreports.com/how-does-agriculture-change/?referrer=yahoo&category=beauty_food&include utm=1&utm_medium=referral&utm_source=yahoo&utm_campaign=feed#section2

Questioning the Orthodoxy

Climate facts versus climate theories

Guest essay by Andy May, WUWT, July 26, 2016

<https://wattsupwiththat.com/2016/07/26/climate-facts-versus-climate-theories/>

Globally 91% of wars have nothing to do with climate change

By Jo Nova, Her Blog, July 27, 2016

<http://joannenova.com.au/2016/07/globally-91-of-wars-have-nothing-to-do-with-climate-change/>

[SEPP Comment: Unless it is a war on carbon dioxide?]

How Climatologists Suddenly Turned On A Dime, “Shooed Away” Uncertainty To Promote “Scary Scenarios”

National Academy of Sciences (1975): “We do not know what causes...climatic change”

By Kenneth Richard, No Tricks Zone, July 23, 2016

<http://notrickszone.com/2016/07/23/how-climatologists-suddenly-turned-on-a-dime-shooed-away-uncertainty-to-promote-scary-scenarios/#sthash.MtJW5aXH.dpbs>

[SEPP Comment: A good question is what was the physical evidence for the estimates by modelers for a doubling of CO2 in 1979?]

Trite Science Prize: New science paper tells us air over land “heats more than water”

By Jo Nova, Her Blog, July 30, 2016

<http://joannenova.com.au/2016/07/is-that-news-new-science-paper-tells-us-air-over-land-heats-more-than-water/>

Science and Politics: An Abusive Relationship

Science should inform politics, not the reverse.

Guest opinion by Edward Ferrara, WUWT, July 24, 2016

<https://wattsupwiththat.com/2016/07/24/science-and-politics-an-abusive-relationship/>

Questioning the Orthodoxy -- Statistics

The Hierarchy Of Models: From Causal (Best) To Statistical (Worst)

By William Briggs, His Blog, July 29, 2016

<http://wmbriggs.com/post/19387/>

[SEPP Comment: In this, hypothesis testing is used in the statistical, Bayesian, sense; not in an empirical sense.]

After Brexit!

Brexit looms large over EU climate agenda

Britain's leave vote confuses EU emissions pledges.

By Quirin Schiermeier, Nature, July 26, 2016 [H/t GWPF]

<http://www.nature.com/news/brexit-looms-large-over-eu-climate-agenda-1.20322>

[SEPP Comment: Typical propaganda photo of a Polish coal-fired power plant blackening blue skies. Dark clouds in the background indicate that the dark smoke is probably condensing water vapor and a result of weather conditions, or use of special lenses on the camera.]

The Administration's Plan

EPA clears path to regulate carbon emissions from U.S. aircraft

By Valerie Volcovici, Reuters, July 25, 2016 [H/t Clyde Spencer]

<https://www.yahoo.com/news/epa-clears-path-regulate-carbon-emissions-u-aircraft-153006254.html?nhp=1>

The Administration's Plan – Push-Back

Federal Coal Leasing: First, Do No Harm (to consumers, taxpayers, industry)

By Betsy Monseu, CEO of the American Coal Council, Master Resource, July 28, 2016

<https://www.masterresource.org/federal-lands/federal-coal-leasing-dont-prohibit/>

[SEPP Comment: Review of the processes of modern coal leasing on lands controlled by the US government – which resulted in nearly \$12 billion in royalties over the last ten years.]

Petition to remove air conditioning from all US State Property

By Jo Nova, July 26, 2016

<http://joannenova.com.au/2016/07/petition-to-remove-air-conditioning-from-all-us-state-property/>

Problems in the Orthodoxy

Scientist James Lovelock: "It's easier to save Dorset than the planet"

By Catherine Bolado, Daily Echo, July 23, 2016 [H/t GWPF]

http://www.bournemouthecho.co.uk/news/14626537.Scientist_James_Lovelock_It_s_easier_to_save_Dorset_than_the_planet/

[SEPP Comment: Question the statement “the devastating impact of CFC gases upon the ozone layer.”]

Seeking a Common Ground

Atmospheric Radiation Measurement Program

By Judith Curry, Climate Etc. July 28, 2016

<https://judithcurry.com/2016/07/28/atmospheric-radiation-measurement-program/#more-21891>

Credibility Loss in Climate Science is Part of a Wider Malaise in Science

Guest Opinion: Dr. Tim Ball, WUWT, July 24, 2016

<https://wattsupwiththat.com/2016/07/24/credibility-loss-in-climate-science-is-part-of-a-wider-malaise-in-science/>

Why is polar bear conservation such a contentious issue?

By Susan Crockford, Polar Bear Science, July 27, 2016

<https://polarbears.com/2016/07/27/why-is-polar-bear-conservation-such-a-contentious-issue/>

Review of Recent Scientific Articles by CO2 Science

The Greening of North California's Coastal Santa Cruz Mountains

Potter, C. 2016. Thirty years of vegetation change in the coastal Santa Cruz Mountains of Northern California detected using landsat satellite image analysis. *Journal of Coastal Conservation* **20**: 51-59. July 29, 2016

<http://www.co2science.org/articles/V19/jul/a13.php>

“...the author: concludes that ‘the findings from this Landsat image analysis in the Santa Cruz Mountains suggest that NDVI [has increased significantly throughout the forests of the study area over the past 30 years,’ adding that ‘variations in precipitation over the past 30 years have had few detectable impacts on forest cover change.’”

[SEPP Comment: The coastal mountain range runs south from San Francisco to Monterey.]

New Evidence That Reef Islands Can Repair Storm Wave Damage

Mann, T. and Westphal, H. 2016. Multi-decadal shoreline changes on Taku Atoll, Papua New Guinea: Observational evidence of early reef island recovery after the impact of storm waves. *Geomorphology* **257**: 75-84. July 27, 2016

<http://www.co2science.org/articles/V19/jul/a12.php>

The researchers: "support the concept of *dynamic* rather than *static* reef islands and clearly demonstrate how short-term processes can influence interpretations of medium-term change."

Learning to Live in a Warming World: How Pool Frogs Do It

Orizaola, G. and Laurila, A. 2016. Developmental plasticity increases at the northern range margin in a warm-dependent amphibian. *Evolutionary Applications* **9**: 471-478. July 25, 2016

<http://www.co2science.org/articles/V19/jul/a11.php>

Measurement Issues -- Surface

Mann-Made Warming In The Arctic

By Paul Homewood Not a Lot of People Know That, July 27, 2016

<https://notalotofpeopleknowthat.wordpress.com/2016/07/27/mann-made-warming-in-the-arctic/>

“It is hard not to conclude that GISS are grossly overestimating Arctic temperatures.”

“To get around this problem [of little actual data], GISS guess temperatures, based on stations up to 1200 km away.”

NASA: Global Warming Observations Need a Further 19% UPWARD Adjustment

Guest essay by Eric Worrall, WUWT, July 24, 2016

<https://wattsupwiththat.com/2016/07/24/nasa-global-warming-observations-need-a-further-19-upward-adjustment/>

Link to paper: Reconciled climate response estimates from climate models and the energy budget of Earth

By Richardson, Cowtan, Hawkins, & Stolpe, *Nature, Climate Change*, June 27, 2016

<http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate3066.html>

“Correcting for these biases and accounting for wider uncertainties in radiative forcing based on recent evidence, we infer an observation-based best estimate for TCR of 1.66 °C, with a 5–95% range of 1.0–3.3 °C, consistent with the climate models considered in the IPCC 5th Assessment Report.”

[SEPP Comment: There is no issue with the problems stated in the abstract about historic surface temperatures. They are poor - sparse. The problem is with the failure to address atmospheric temperatures – where the greenhouse effect takes place.]

Changing Weather

New England's Killer Heatwave Of 1911

By Paul Homewood, Not a Lot of People Know That, July 25, 2016

<https://notalotofpeopleknowthat.wordpress.com/2016/07/25/new-englands-killer-heatwave-of-1911/#more-23224>

New Paper Shows No Precipitation Trend On Iberian Peninsula Over Past 300 Years!

Puzzling drought history of Spain during the past 300 years

By Dr. Sebastian Lüning, Prof. Fritz Vahrenholt (German passages translated by P. Gosselin), No Tricks Zone, July 27, 2016

<http://notrickszone.com/2016/07/27/new-paper-shows-no-precipitation-trend-on-iberian-peninsula-over-past-300-years/#sthash.KmqLkquW.dpbs>

Changing Climate

How meltwater from the ice sheets disturbed the climate 10,000 years ago

By Staff Writers, Bochum, Germany (SPX) Jul 22, 2016

http://www.spacedaily.com/reports/How_meltwater_from_the_ice_sheets_disturbed_the_climate_10000_years_ago_999.html

Link to paper: Reorganization of the North Atlantic Oscillation during early Holocene deglaciation

By Wassenburg, et al. Nature, Geoscience, July 18, 2016

<http://www.nature.com/ngeo/journal/vaop/ncurrent/full/ngeo2767.html>

Changing Seas

A Response to ABC's Media Watch's "Shoot the Coral Messenger" Flimflam!

Guest essay by Jim Steele, WUWT, July 23, 2016

<https://wattsupwiththat.com/2016/07/23/a-response-to-abcs-media-watches-shoot-the-coral-messenger-flimflam/>

Changing Cryosphere – Land / Sea Ice

The obligatory global warming exploration ship stopped by sea ice thread

By Jazz Shaw, ICECAP, July 21, 2016

http://icecap.us/index.php/go/in-the-news/the_obligatory_global_warming_exploration_ship_stopped_by_sea_ice_thread/

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

Large Populous States Have More Billion-Dollar Extreme Weather Events

Guest Post by Ira Glickstein, WUWT, July 25, 2016

<https://wattsupwiththat.com/2016/07/25/large-populous-states-have-more-billion-dollar-extreme-weather-events/>

Scientists caught off-guard by record temperatures linked to climate change

By Zoe Tabary, Reuters, July 26, 2016 [H/t Clyde Spencer]

<https://www.yahoo.com/news/scientists-caught-off-guard-record-temperatures-linked-climate-134205137.html?nhp=1>

[SEPP Comment: If the surprise is believable, it indicates a belief that El Niños do not influence temperatures.]

When will they learn? Climate is NOT the same as weather

By Anthony Watts, WUWT, July 26, 2016

<https://wattsupwiththat.com/2016/07/26/when-will-they-learn-climate-is-not-the-same-as-weather/>

Link to paper: Armed-conflict risks enhanced by climate-related disasters in ethnically fractionalized countries

By Schleussner, et al. PNAS, July 25, 2016

<http://www.pnas.org/content/early/2016/07/20/160161113#aff-2>

Communicating Better to the Public – Make things up.

Naomi Oreskes' Tale of Discovering Corrupt Skeptic Climate Scientists has a Fatal Glitch

Guest post by Russell Cook, WUWT, July 26, 2016

<https://wattsupwiththat.com/2016/07/26/naomi-oreskes-tale-of-discovering-corrupt-skeptic-climate-scientists-has-a-fatal-glitch/>

Link to second post: To be Credible, you must Keep Your Story Straight, Pt 2: “Oreskes’ timeline problem”

By Russell Cook, GelbspanFiles.com, July 26, 2016

<http://gelbspanfiles.com/?p=4195>

Kerry urges phasing-out of toxic greenhouse gases

By Staff Writers, AFP, July 22, 2016 [H/t Clyde Spencer]

<https://www.yahoo.com/news/kerry-urges-phasing-toxic-greenhouse-gases-164933046.html?nhp=1>

Comment by Clyde Spencer. Of course HFCs are NOT toxic. CFCs were invented to replace truly toxic refrigerants like ammonia and sulfur dioxide. Because of the claimed ozone destroying capacity of CFCs, HFCs were invented to replace them. They are chemically unreactive and therefore not toxic.

John Kerry: Air conditioner, fridge gas, as big a threat as ISIS

By Jo Nova, Her Blog, July 24, 2016

<http://joannenova.com.au/2016/07/john-kerry-air-conditioner-fridge-gas-as-big-a-threat-as-isis/>

“As Fred Singer says, this is a 1% forcing that they are talking about (1% of nothing):”

Communicating Better to the Public – Do a Poll?

Only 20% of US people think the media even try to be unbiased on politics

By Jo Nova, Her Blog, July 25, 2016

<http://joannenova.com.au/2016/07/only-20-of-us-people-think-the-media-even-try-to-be-unbiased-on-politics/>

Questioning European Green

Under May's New Government, a U.K. Gas Fracking Push Is Probable

By Kelly Gillblom, Bloomberg, July 25, 2016

<http://www.bloomberg.com/news/articles/2016-07-25/under-may-s-new-government-a-u-k-gas-fracking-push-is-probable>

The Political Games Continue

You Ought to Have a Look: Platform Planks on Energy and the Environment

By Patrick J. Michaels and Paul C. "Chip" Knappenberger, Cato, July 29, 2016

<http://www.cato.org/blog/you-ought-have-look-platform-planks-energy-environment>

Clinton wants to end ‘Halliburton loophole’ on fracking, adviser says

By Timothy Cama, The Hill, July 27, 2016

<http://thehill.com/policy/energy-environment/289475-clinton-wants-to-end-halliburton-loophole-on-fracking-adviser-says>

Democratic Platform Vows To Meet Climate Challenge with Good-Paying Jobs, Cheaper Energy from Green Sources, and National Mobilization

By Myron Ebell, Global Warming.org, July 28, 2016

<http://www.globalwarming.org/2016/07/27/democratic-platform-vows-to-meet-climate-challenge-with-good-paying-jobs-lower-cost-energy-from-green-sources-and-national-mobilizationand/>

Link to 2016 Democratic Party Platform, July 21, 2016

<https://www.demconvention.com/wp-content/uploads/2016/07/Democratic-Party-Platform-7.21.16-no-lines.pdf>

Democrats strike ‘all-of-the-above’ energy policy from platform

Climate groups push party left

By Valerie Richardson, The Washington Times, July 25, 2016

http://www.washingtontimes.com/news/2016/jul/25/democrats-strike-all-of-the-above-energy-policy-fr/?utm_campaign=shareaholic&utm_medium=twitter&utm_source=socialnetwork

Republican Party Platform: Paris Climate Treaty Requires Ratification; Defund UNFCCC; and Block EPA Climate Rules

By Myron Ebell, Global Warming.org, July 26, 2016

<http://www.globalwarming.org/2016/07/26/republican-party-platform-paris-climate-treaty-requires-ratification-defund-unfccc-and-block-epa-climate-rules/>

Link to: Republican Platform, 2016

https://prod-static-ngop-pbl.s3.amazonaws.com/media/documents/DRAFT_12_FINAL%5b1%5d-ben_1468872234.pdf

GOP Energy and Climate Platform Is Well Constructed

By Larry Bell, Newsmax, July 25, 2016

<http://www.newsmax.com/LarryBell/democratic-platform/2016/07/25/id/740270/>

Cap-and-Trade and Carbon Taxes

Corporate Cowards Hang Separately

By Donn Dears, Power For USA, July 29, 2016

<https://dddusmma.wordpress.com/2016/07/29/corporate-cowards-hang-separately/>

Subsidies and Mandates Forever

Wind Power Misinformation in the Empire State

By Mary Kay Barton, Master Resource, July 26, 2016

<https://www.masterresource.org/windpower-problems/wind-misinformation-empire-state/>

“Manhattan Institute scholar, Robert Bryce, recently reported that the wind industry has garnered \$176 billion of crony cash here in the U.S. It’s no wonder the American Wind Energy Association spends over \$20 million per year lobbying for more of the same!”

As Corn Devours U.S. Prairies, Greens Reconsider Biofuel Mandate

By Jennifer A Dlouhy, Bloomberg, July 27, 2016

<http://www.bloomberg.com/politics/articles/2016-07-27/as-corn-devours-u-s-prairies-greens-reconsider-biofuel-mandate>

"The ethanol policy was sold to environmentalists as something that was going to clean up the environment, and it's done anything but," said Democratic Representative Peter Welch of Vermont, who is co-sponsoring legislation to revamp the RFS. "It's truly been a flop. The environmental promise has been transformed into an environmental detriment."

[SEPP Comment: Rep. Welch is the rare politician who strongly advocated a program, then recognized its consequences were undesirable, and admitted it.]

Eliminate Favorable Treatment of Biofuels

By Nicolas Loris, Heritage, July 25, 2016

<http://www.heritage.org/research/reports/2016/07/eliminate-favorable-treatment-of-biofuels>

[SEPP Comment: Arguing that rather than expanding the renewable fuel standard as some in Congress want, it should be abandoned.]

Running Drivers into the Blend Wall

Push to Ratchet up Renewable Fuel Standard Rewards Ethanol Lobby at Consumers' Expense

By Marlo Lewis, CEI, July 25, 2016

<https://cei.org/content/running-drivers-blend-wall>

Subsidizing luxury vehicles makes no sense

By Myron Ebell, CEI, Herald Democrat, North Texas, July 29, 2016

<http://m.heralddemocrat.com/opinion/subsidizing-luxury-vehicles-makes-no-sense>

Energy Issues – Non-US

A green electric future

By Martin Livermore, The Scientific Alliance, July 23, 2016

<http://scientific-alliance.org/node/1010>

[SEPP Comment: Analyzing the two major issues, aside from costs, for decarbonizing the UK economy: the extent of power stations needed and the type of energy/fuel.]

China Shuts Down Construction Of New Wind Turbines, Fears Blackouts

By Andrew Follett, Daily Caller, July 21, 2016

<http://dailycaller.com/2016/07/21/china-shuts-down-construction-of-new-wind-turbines/>

The Death of OPEC

By Anas Alhajji is an energy economist and the former chief economist at NGP Energy Capital Management, Project Syndicate, July 26, 2016

<https://www.project-syndicate.org/commentary/opec-saudi-arabia-price-war-by-a--f--alhajji-2016-07>

[SEPP Comment: A shift from trying to control the crude oil market, to trying to control the market in refined products? It will not be easy now that many are realizing that the world is not running out of oil. Refineries can be built wherever there are good ports, and governments permitting them.]

Washington's Control of Energy

U.S. to speed permits for drilling on federal land

By Staff Writers, AP, July 28, 2016

<http://fuelfix.com/blog/2016/07/28/u-s-to-speed-permits-for-drilling-on-federal-land/>

“Royalties, rents, bonus payments and other government revenue from oil, natural gas and natural gas liquids topped \$12 billion just two years ago.

“That figure dropped below \$9 billion in 2015.”

Oil and Natural Gas – the Future or the Past?

Pennsylvania’s Energy Story is Worth Sharing

By Catarino Wissman, Energy Tomorrow, American Petroleum Institute, July 28, 2016

<http://energytomorrow.org/blog/2016/07/28/pennsylvanias-energy-story-is-worth-shar>

World Bank: Next victim of cheap oil is renewable fuel

By John Siciliano, Washington Examiner, July 26, 2016

<http://www.washingtonexaminer.com/world-bank-next-victim-of-cheap-oil-is-renewable-fuel/article/2597797>

Nuclear Energy and Fears

Hinkley C [nuclear power plant] and the UK Power Market

By Staff Writers, GWPF, July 29, 2016

<http://www.thegwpf.com/hinkley-c-and-the-uk-power-market/>

How long does it take to build a nuclear power plant?

By Euan Mearns, Energy Matters, July 27, 2016

<http://euanmearns.com/how-long-does-it-take-to-build-a-nuclear-power-plant/#more-14743>

The Hinkley Point C Pantomime

By Euan Mearns, Energy Matters, July 29, 2016

<http://euanmearns.com/the-hinkley-point-c-pantomime/#more-14768>

“The massive investment will be underwritten by a contract guaranteeing the price paid for electricity decades into the future. This is one of the most controversial elements of the project. An inflation indexed price of £92.50 / MWh (2012 prices) is guaranteed for 35 years after grid connection. This compares with wholesale prices that are currently of the order £50 / MWh.”

Theresa May delays Hinkley nuclear decision amid concerns over Chinese involvement

Paul Homewood, Not a Lot of People Know That, July 29, 2016

<https://notalotofpeopleknowthat.wordpress.com/2016/07/29/theresa-may-delays-hinkley-nuclear-decision-amid-concerns-over-chinese-involvement/>

Alternative, Green (“Clean”) Solar and Wind

Solar Impulse: Poster Child for the Impracticality of Solar Power

By Roy Spencer, His Blog, July 26, 2016

<http://www.drroyspencer.com/2016/07/solar-impulse-poster-child-for-the-impracticality-of-solar-power/>

[SEPP Comment: A priest in a balloon did it in 11 days? Carrier pigeons would be less costly for delivering messages than the Solar Impulse.]

Blinded By The Sun

By Peter O’Brien, Quadrant, July 28, 2016

<http://quadrant.org.au/opinion/doomed-planet/2016/07/blinded-sun/>

“The solar-powered plane that recently concluded its much delayed and long overdue round-the-world flight was predictably touted as further 'proof' that green energy has come of age. The real-world appraisal is dour: a PR stunt to obscure the fact that 'alternative technologies' are going nowhere.”

[South] Australia Considers Banning Wind Power Because It's Causing Blackouts

By Andrew Follett, Daily Caller, July 25, 2016

<http://dailycaller.com/2016/07/25/australia-considers-banning-wind-power-because-its-causing-blackouts/>

[SEPP Comment: One Australian politician has proposed a ban on new wind farms.]

South Australia's green dream, or its nightmare?

By Ian Hore-Lacy, WNN, July 26, 2016 [H/t Paul Sheridan]

<http://www.world-nuclear-news.org/V-South-Australian-green-dream-or-its-nightmare-2607161.html>

New York Times: There Are Serious Problems With Wind And Solar

By Paul Homewood, Not a Lot of People Know That, July 23, 2016

<https://notalotofpeopleknowthat.wordpress.com/2016/07/23/new-york-times-there-are-serious-problems-with-wind-and-solar/#more-23204>

The Eigg renewables project revisited

By Roger Andrews, Energy Matters, July 25, 2016

<http://euanmearns.com/the-eigg-renewables-project-revisited/#more-14728>

The project is a) “inefficient (overall capacity factor 11%), b) that Eigg will probably never be able to do away entirely with diesel backup and c) that the project owes its existence to the fact that 94% of the capital cost was financed by grants. It is economically unviable on a stand-alone basis.”

Alternative, Green (“Clean”) Vehicles

Key, Electric Vehicle Headlines

By Donn Dears, Power For USA, July 26, 2016

<https://dddusmma.wordpress.com/2016/07/26/key-electric-vehicle-headlines/>

Little Green Lies: Why Electric Cars Won't Save the Environment

By Larry Alton, American Thinker, July 27, 2016

http://www.americanthinker.com/articles/2016/07/little_green_lies_why_electric_cars_wont_save_the_environment.html

Health, Energy, and Climate

FAIL: Carbon-financed cookstove fails to deliver hoped-for benefits in the field

By Anthony Watts, WUWT, July 28, 2016

<https://wattsupwiththat.com/2016/07/28/fail-carbon-financed-cookstove-fails-to-deliver-hoped-for-benefits-in-the-field/>

Solve Global Warming By Putting A Carbon Tax On...Meat?

By Hank Campbell, ACSH, July 25, 2016

<http://acsh.org/news/2016/07/25/solve-global-warming-by-putting-a-carbon-tax-on-meat/>

Environmental Industry

How the Climate Alarmists Attempt to Mislead the Public and Dupe the Gullible: An Actual Example

By Alan Carlin, Carlin Economics and Science, July 28, 2016

<http://www.carlineconomics.com/archives/2801>

Other Scientific News

Parasites hitch ride down Silk Road

By Staff Writers, Paris (AFP), July 21, 2016

http://www.terraily.com/reports/Parasites_hitch_ride_down_Silk_Road_999.html

Trees' surprising role in the boreal water cycle quantified

By Staff Writers

Fairbanks AS (SPX) Jul 22, 2016

http://www.terraily.com/reports/Trees_surprising_role_in_the_boreal_water_cycle_quantified_999.html

Link to paper: Deciduous trees are a large and overlooked sink for snowmelt water in the boreal forest

By Young-Robertson, et al. Nature, Scientific Reports, July 12, 2016

<http://www.nature.com/articles/srep29504>

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BELOW THE BOTTOM LINE:

Extinction ahead!

By Staff Writers, Climate Change Predictions.org, July 29, 2016

<http://climatechangepredictions.org/uncategorized/6617>

The Earth is warming so rapidly that unless humans can arrest the trend, we risk becoming "extinct" as a species, a leading Australian health academic has warned.

Helen Berry, associate dean in the faculty of health at the University of Canberra, said while the Earth has been warmer and colder at different points in the planet's history, the rate of change has never been as fast as it is today.

"What is remarkable, and alarming, is the speed of the change since the 1970s, when we started burning a lot of fossil fuels in a massive way," she said. "We can't possibly evolve to match this rate [of warming] and, unless we get control of it, it will mean our extinction eventually."

From: Sydney Morning Herald, 31 Mar 2014

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ARTICLES:

1. The Trans-Alaska Pipeline Will Dry Up Without New Oil

New drill sites are needed to replace mature ones. But that requires Obama administration approval.

By Thomas Barrett, WSJ, July 29, 2016

<http://www.wsj.com/articles/the-trans-alaska-pipeline-will-dry-up-without-new-oil-1469831114>

SUMMARY: The president of the Alyeska Pipeline Service Co., a former U.S. Vice Admiral in the Coast Guard and deputy secretary in the Transportation Department, writes:

For nearly four decades, the Trans-Alaska Pipeline System has served as Alaska's economic artery while providing the rest of the U.S. with a reliable supply of domestic oil from Alaska's

North Slope. Even with lower oil prices and the shale revolution increasing domestic production, TAPS, as we Alaskans call it, remains a key component of the national energy infrastructure. But the pipeline needs more Arctic oil to sustain its contributions to Alaska's economy and America's energy security.

As president of the Alyeska Pipeline Service Co., which was formed in 1970 to build and operate TAPS, I've seen firsthand how essential the pipeline is to Alaska's economy. One-third of all jobs in the state are tied to the oil and gas industry, and oil companies are, by far, the largest contributors to state revenues.

Even more important are the people who make the industry work. Thousands of Alaskans across the state—engineers and surveyors, pipeline technicians, welders and laborers, accountants and safety and environmental professionals—get up every day to ensure that Alaska's oil and gas industry operates safely and responsibly, and continues to serve as the lifeblood of the Alaska economy, and a reliable energy source for America.

The pending five-year offshore leasing program under review by the Obama administration is critical to the continued operation of TAPS. The program stipulates the size, timing and location of possible leasing activity that the Interior secretary determines best meets the energy needs of the nation from 2017-22.

As the administration considers the public comments submitted on the draft plan, it is crucial to consider what is at stake. The draft 2017-22 leasing program includes three proposed sales in Alaska: one each in the Arctic's Chukchi and Beaufort seas and one in Cook Inlet. The Arctic offshore resource potential is enormous. The Interior Department estimates that Alaska's Arctic offshore basins hold more than 27 billion barrels of oil and 132 trillion cubic feet of natural gas—approximately one-third of the nation's oil and gas reserves. Those resources could ensure a steady future supply of oil for TAPS.

It is vital that the sales remain in the final program. TAPS has moved more than 17 billion barrels of North Slope oil since it began operations in 1977, but it now runs at a quarter of its maximum capacity due to the natural decline in mature North Slope basins. At its peak, more than two million barrels flowed down TAPS every day. Today, the daily average is closer to 530,000 barrels. Years of declining production make TAPS operations increasingly difficult. Recent investments by producers have delivered an uptick in production, but the long-term health of TAPS requires larger quantities of new production.

The good news is the Arctic possesses abundant onshore, nearshore and offshore oil resources, and Alaskans support finding and using those resources. A 2014 poll by the Consumer Energy Alliance found that 73% of Alaskans support developing the Arctic offshore for oil and gas.

Without new production, TAPS must continue operations in conditions it wasn't originally designed to handle. Lower pipeline throughput means oil moves more slowly, cooling over time and creating challenges with wax, water and ice buildup. Although Alaskans continue to devise safe and innovative solutions to move the oil from matured fields every day, the best long-term solution lies in the billions of barrels of oil that are nearby and can be responsibly produced.

Alaska's Arctic offshore oil basins offer an opportunity to maintain a stable and safely produced domestic energy supply. Why develop these oil and gas reserves and not others? The hydrocarbon

resource is known and enormous. Reliable world-class infrastructure is already in place, and its development is supported by the great majority of local residents.

Given the long lead times required to safely develop Arctic offshore resources and the urgent need for new investment in the region, the Obama administration should include all three Alaska lease sales in the coming five-year program. Americans will need to rely on fossil fuels for much of their energy needs for decades to come. It would be shortsighted to limit voluntarily the options for strengthening U.S. energy security.

[SEPP Comment: Squeezing the pipeline dry appears to be the goal of many in Washington.]

2. How Much Oil Is in Storage Globally? Take a Guess

There isn't a universal requirement for reporting on inventories, and it can affect prices

By Dan Strumpf and Nicole Friedman, WSJ, July 24, 2016

<http://www.wsj.com/articles/how-much-oil-is-in-storage-globally-take-a-guess-1469380040>

The reporters state: *"The historic fall in oil prices has created a pileup of inventories, much of it stashed in tanks in the U.S. and other industrialized countries that are committed to disclosing the latest tally, but millions of barrels of oil are flowing to locations outside the scope of industry trackers.*

"Some countries, such as Russia and China, choose not to report their oil-storage levels. And traders and oil companies that park supertankers have no obligation to make public their supply. This makes for more cryptic and volatile oil markets. How much crude is in these locations, and how quickly it can be resold into the market, can affect oil prices.

"The data itself is so inconsistent,' said Harish Sundaresh, portfolio manager and commodities strategist for Loomis, Sayles & Co., which manages \$240 billion. 'In countries like Nigeria, Brazil, Angola, it's not trustable.'

"Keeping track of inventories has become more complicated as developing countries store and consume more oil.

"Singapore, home to one of the world's busiest ports and the Asian headquarters of many big oil-trading firms, is one country befuddling analysts. The waterways surrounding the island nation have become home to one of the world's biggest oil-storage sites. But it is unclear how much oil is in the tankers anchored there.

"At the beginning of July, 23 supertankers capable of holding 43 million barrels of oil were anchored for a month or more in the Singapore straits, according to Thomson Reuters's vessel-tracking service, up from 15 ships at the start of the year. If they were full, it would be enough to meet the U.S.'s oil needs for more than two days.

"But no official count of the oil exists. Thomson Reuters and others offer estimates based on the reported level of a vessel's waterline. Yet a number of ships are likely carrying fuel oil, a refined product used in shipping, analysts said. Others may be carrying seawater, further complicating estimates.

“There are many different figures being mentioned in terms of the amount of ships which are actually being used for storage’ and the amount of oil that is on them, said Tom Bonehill, managing director of Norstar Shipping, a tanker owner.

Inventories are also taking on a bigger role as the Organization of the Petroleum Exporting Countries retreats from its traditional task of managing prices, analysts say. Since November 2014, OPEC has increased its production to pump at nearly full tilt. That leaves the group with less spare capacity, meaning inventories become more critical if supplies elsewhere are disrupted.
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“OPEC has stopped being a swing supplier;’ said Antoine Halff, director of the oil-market program at Columbia University’s Center on Global Energy Policy. ‘Given the uncertainty about whether shale-oil production in the U.S. can take the role of swing supplier, it falls on stocks’ to replace lost barrels in the case of a supply disruption.

“With little hard data on certain storage spots, analysts piece together inventories using a patchwork of public information and guesswork.

“In China, another storage mystery is unfolding. Government data show oil imports rising at a faster rate than refiners are processing it. The figures suggest the country built a surplus 160 million barrels during the first half of the year, enough to meet its oil needs for about two weeks.”

3. Why Sand Is the Oil Industry’s Bellwether

Sand miners’ rebound boosts evidence that fracking and oil and gas market have bottomed
By Spencer Jakab, WSJ, July 26, 2016

<http://www.wsj.com/articles/why-sand-is-the-oil-industrys-bellwether-1469547240>

SUMMARY: The journalist states that sand used for hydraulic fracturing is a solid leading indicator of what is happening in the part of the US oil industry that relies on fracturing.

“Four publicly traded miners of sand have seen their share prices rally by an average of 320% from their 52-week lows. The largest, U.S. Silica Holdings, announced last Monday that it was buying an unlisted competitor operating a single mine for \$210 million.

“Investing in sand is a bet that hydraulic fracturing, or fracking, will rebound. The production technique is the marginal supply source for crude in the world both because it is at the edge in terms of cost and also because it has by far the quickest turnaround time. Wells drilled today can be producing in a matter of several months. Hundreds already drilled but uncompleted, so-called DUCs, can be brought online even faster. Both require sand—lots and lots of it.

“During the fracking boom, sand became big business. An average well at the time required some 3,000 tons or so as a “proppant”—a material to hold open tiny cracks in the rock that allow oil and gas to flow out of it. These days industry experts use about 50% more sand per well, but they use less sand overall as activity has collapsed. Companies in the proppant business, while they have struck a more optimistic tone, haven’t seen a fundamental recovery quite yet and their share prices still are down by between 40% and 90% over the past two years.

“While it is unlikely that the glory days of 2012 and 2013 will return when privately financed sand mines popped up everywhere, the proppant market looks good for low-cost, well-capitalized

companies. It used to be the case that higher-quality “white sand” found in places like Minnesota or man-made ceramic particles sold by companies such as Carbo Ceramics were most desirable. But as companies have ratcheted down costs, transport expenses for sand have become an issue, so-called brown sand from locations closer to oil fields—mines such as the one bought by U.S. Silica—appear more promising.

“After two years of belt-tightening, a leaner energy industry may be on the cusp of a rebound at lower prices. Manufacturers of sand, who have done the same, are acting as the bellwether.

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