

The Week That Was: 2017-07-22 (July 22, 2017)
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The Science and Environmental Policy Project

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Quote of the Week.

“...it was clear that the first and greatest need was to establish the facts of the past record of the natural climate in times before any side effects of human activities could well be important.”
– H.H. Lamb on forming the Climatic Research Unit [H/t Tim Ball]

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Number of the Week: \$2 Billion to \$0

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THIS WEEK:

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

Dogmatism: In a video presentation, Professor of Toxicology Edward Calabrese summarizes his extensive research in the history of the Linear No-dose Threshold (LNT) model. The use of this model has disturbed many pharmaceutical and medical researchers. It is directly contradicted by the dose-response model on what makes a compound toxic to plants and / or animals. The intensity of exposure to the compound (or radiation, sunlight, etc.) makes a compound toxic. The intensity of exposure can be over time, or, in the case of some compounds, in the quantity consumed. Yet, low levels of exposure may be beneficial to plants and / or animals.

For example, one hundred aspirin eaten by a person at one time will likely kill that person. But, one aspirin taken with food for one hundred days will not. Some exposure to sunlight is necessary for the humans to synthesize vitamin D, unless it is taken as a dietary supplement. Yet, over-exposure can lead to skin cancer.

The EPA has dogmatically applied the LNT model arbitrarily, without conducting the necessary research to determine if the model is valid for that application. The use of the LNT model is the source for imaginary, not confirmed, deaths for EPA calculations of the benefits for many regulations. Examples of EPA regulations with imaginary deaths include tiny air-borne particles (PM 2.5), ground level ozone, and tiny amounts of mercury (from fish or coal-fired power plants). Often, the EPA does not distinguish between natural and human-caused variations in amounts of exposure.

Calabrese explains his long conversion from the LNT model to dose-response concept of what makes compound toxic to plants and animals, where low doses stimulate living organisms. Calabrese’s findings are bitterly contested by EPA supporters, many of whom benefit from its research. See Article # 1 and links under Challenging the Orthodoxy.

Watergate II – Sea Level Rise: The Watergate fiasco began with a careless break-in of an office in the Watergate complex by employees of the Nixon Administration. This was followed by clumsy efforts by the administration to deny it. Watergate II began with baseless assertions in the Fifth Assessment Report (AR5, 2013) by the UN Intergovernmental Panel on Climate Change (IPCC). These are being followed by efforts of the IPCC followers to justify them.

The issue is acceleration of sea level rise. For the last three thousand years, sea levels have been rising moderately at 7 to 8 inches (20 cm) per century. However, the Synthesis Report of AR-5 (2014) states:

“Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen. {1.1} (p.2)

“Over the period 1992 to 2011, the Greenland and Antarctic ice sheets have been losing mass (high confidence), likely at a larger rate over 2002 to 2011. Glaciers have continued to shrink almost worldwide (high confidence). Northern Hemisphere spring snow cover has continued to decrease in extent (high confidence). There is high confidence that permafrost temperatures have increased in most regions since the early 1980s in response to increased surface temperature and changing snow cover. {1.1.3} (p. 4)

“Over the period 1901 to 2010, global mean sea level rose by 0.19 [0.17 to 0.21] m (Figure SPM.1b). The rate of sea level rise since the mid-19th century has been larger than the mean rate during the previous two millennia (high confidence). {1.1.4, Figure 1.1}” (p 4)

It appears that the followers of the IPCC are diligently manipulating data or disguising changes brought about by changes in instrumentation to make the IPCC findings appear to be valid. As such, they are undermining their own credibility.

As we have seen with the efforts of NOAA’s National Centers for Environmental Information (NCEI) under Tom Karl, to manipulate sea surface temperatures by declaring that temperature measurements from buoys at the surface should be cooler than those taken at ship intakes many feet below the surface (no precise depth known), we should expect similar efforts concerning rate of sea level rise. On his blog, Roy Spencer alerts us to the “tricks” being used on rate of sea level rise. He states:

“Short-term undulations in the sea level rise curve should not be used as a predictive curve for the future. They are affected by a wide variety of natural phenomena. For example, ice loss from Greenland (which was large in 2011-12) has recently reversed itself with huge gains made in the last year. These events are governed by natural variations in weather patterns, which have always occurred.

“For longer-term variations, yes, the rate of sea level rise during the entire period since 1993 probably is a little more than, say, during the period since 1900 (sea level rise was occurring naturally, anyway). But the inferred acceleration is small. And even that acceleration could be mostly natural — we simply don’t know.”

On his blog, Paul Homewood, demonstrates how short-term intervals give incorrect readings of long-term trends for Newlyn and North Shields in the UK. The long-term trends covered are from 1915 and 1895, respectively. What is seen are patterns of peaks and troughs. From such patterns, one can draw a linear trend of virtually any slope, depending on the end points selected.

The datasets for sea level rise are further complicated by use of different types of instrumentation. The traditional ones have been tidal gages, which, recently, have been supplemented, in part, by satellite measurements. The satellite readings are giving a higher rate of sea level rise than the

bulk of tidal gages. It is critical that the different datasets from different types of instruments be calibrated.

As discussed in the 2008 report of the Nongovernmental International Panel on Climate Change (NIPCC), it is doubtful that sea surface temperature measurements from three major methods – buckets, ship intakes, and buoys – can be properly calibrated. The depth of the water for bucket readings and ship intakes were not properly recorded. However, there is no logical reason for not calibrating satellite measurements with tidal gage measurements.

Unfortunately, it appears that many researchers from government entities do not appear to be inclined to calibrate data from satellites with data from the tidal gages throughout the world. As such, short-term datasets are highly questionable, regardless of the source of the data, when they are presented without referencing to long-term datasets that may be available.

This practice is particularly disturbing, because it is similar to what Mr. Mann did, as exposed during Climategate. He combined two datasets from totally different measuring methods without proper calibration, then proceeded to ignore the first source of data when it diverged from the new data source of data.

When government entities entrusted to maintain historic records, such as NOAA, Ashville, (National Centers for Environmental Information (NCEI)) and NASA-GISS, on Broadway, continue to manipulate data and present data from different instruments, without proper calibration; they are failing their public purpose and misleading the public. For long-term data, the above quote from H.H. Lamb applies. These entities demonstrate no interest in separating the human influence from natural variation. See links under Challenging the Orthodoxy – NIPCC, Challenging the Orthodoxy, and Changing Seas

The Cryosphere: Adding to the complications of those defending the IPCC, and its pronouncements, are reports that the ice in the polar regions is not melting fast enough to significantly contribute to accelerating rates of sea level rise. According to a presentation by a representative of NASA, Headquarters (DC), there are three components to the increasing trend in sea level rise, each contributing about equally: melting mountain glaciers, expansion of water due to ocean warming, and melting of the polar ice caps.

There is melting of some mountain glaciers, but the Himalayas seem to be holding their own. In the IPCC AR-4, (2007), which frightened many politicians, it was predicted these mountain glaciers would be gone by 2035. Expansion of the oceans due to warming is difficult to measure without reliable measurements of ocean temperatures. As discussed above, longer term sea surface temperature trends are highly questionable. The long-predicted calving of the Larsen C future iceberg, from the Larsen ice shelf may soon occur. But, there seems to be nothing unusual about the event, and floating ice melting does not increase water levels.

Further, the May 13 TWTW discussed that the estimates of the influence of the Antarctic on sea level rise since the onset of the current warming period some 18,000 years ago may be greatly overestimated in the calculations using GRACE satellite estimates of sea levels. What is attributed to the Antarctic, may have been the melting of land based ice in the Northern Hemisphere.

Now, the Danish Meteorological Institute (DMI), which monitors Greenland as well as anyone, is reporting that the ice mass in Greenland appears to be accumulating for 2016-17. It may be a reversal of the net ice loss reported for 2011-12.

The IPCC frequently states that weather events are not climate events, climate events require at least 30 years. This is particularly true for events involving the cryosphere, which may have abrupt warming trends. Yet, in its Summaries for Policymakers the, IPCC uses short-term trends to make alarming projections / predictions. See links under Changing Cryosphere.

The Sun: Increasingly, we are seeing more papers stating solar changes may have major influences on the earth's climate. Unfortunately, due to the strong bias in western scientific journals against major natural influences on climate, and any data that question the assumption that human influence dominates changes in the earth's climate; the conclusions of these papers do not generally appear in the US popular press.

One such paper, which may be very important, appeared in the bulletin of the Russian Academy of Sciences. According to the journalist reporting on the paper: "...the authors of this work believe the question of what causes global changes in the Earth's climate remains open, and will obviously be solved once and for all in the next 10-15 years."

Lowering Standards: Writing in Power for USA, Donn Dears discusses an article in the *Wall Street Journal* that totally missed the point regarding the primary cause of the blackout in South Australia. Contrary to the article, the blackout was not caused by Australia exporting fossil fuels (natural gas), but government policies favoring weather dependent sources, wind power, over reliable fossil fuels. See links under Lowering Standards.

Web Site Hacking: The SEPP web site has been under attack again. It appears to be coming from a hacker in the Orient, probably Japan. Thus far, the attacks have not been malicious, but they are disruptive. To evaluate the problem, we have been forced to turn off the web site on several occasions and the links. Such is an inconvenience of modern convenient communications.

Number of the Week: \$2 Billion to \$0. In many markets, the prices of commodities are volatile, unstable. For that reason, many players in the commodity markets who try to anticipate price also try to hedge their investments (bets). Borrowing against these investments (bets) is a sophisticated form of gambling. The *Wall Street Journal* has an article on a private equity fund that gambled \$2 Billion on US oil and gas when prices were high. It lost.

It is reasonable for politicians and governments to seek reliable sources of energy for the future. For example, research in electricity storage may be needed. It is a problem that has existed for over one hundred years. Also, test experiments in new forms of extracting reliable energy from weather dependent wind and solar of electricity may be appropriate. But, those who commit government loans and subsidies to deploy, in quantity, sources of electricity known to be unreliable on the hope of a major technological breakthrough are gambling with public funds. See Article # 2.

**SEPP'S APRIL FOOLS AWARD
THE JACKSON**

VOTING FOR THE COVERTED SEPP TROPHY ENDS IN JULY, The Jackson, a lump of coal. Readers are asked to nominate and vote for who they think is most deserving, following these criteria:

- The nominee has advanced, or proposes to advance, significant expansion of governmental power, regulation, or control over the public or significant sections of the general economy.
- The nominee does so by declaring such measures are necessary to protect public health, welfare, or the environment.
- The nominee declares that physical science supports such measures.
- The physical science supporting the measures is flimsy at best, and possibly non-existent.

The five past recipients, Lisa Jackson, Barack Obama, John Kerry, Ernest Moniz and John Holdren are not eligible. Generally, the committee that makes the selection prefers a candidate with a national or international presence. **The voting will close on July 30.** Please send your nominee and a brief reason why the person is qualified for the honor to Ken@SEPP.org. Thank you. The award will be presented at the annual meeting of the Doctors for Disaster Preparedness in August.

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NEWS YOU CAN USE:

Commentary: Is the Sun Rising?

Will the sun put the brakes on global warming?

By Michael Guillen, Fox News, July 16, 2017

<http://www.foxnews.com/opinion/2017/07/16/will-sun-put-brakes-on-global-warming.html>

Link to paper: Cosmic rays, solar activity, and changes in the Earth's climate

By Y. I. Stozhkov, G. A. Bazilevskaya, V. S. Makhmutov, N. S. Svirzhevsky, A. K. Svirzhevskaya, V. I. Logachev and V. P. Okhlopov, Bulletin of the Russian Academy of Sciences: Physics, Mar 8, 2017

<https://link.springer.com/article/10.3103/S1062873817020411>

Nature Unbound IV – The 2400-year Bray cycle. Part B

By Javier, Climate Etc. July 16, 2017

<https://judithcurry.com/2017/07/16/nature-unbound-iv-the-2400-year-bray-cycle-part-b/>

Challenging the Orthodoxy -- NIPCC

Climate Change Reconsidered II: Physical Science

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

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>

Nature, Not Human Activity, Rules the Climate

S. Fred Singer, Editor, NIPCC, 2008

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

Challenging the Orthodoxy

The Search for Truth in Regulatory Science

Featuring Edward J. Calabrese and Patrick J. Michaels, CATO, July 20, 2017

<https://www.cato.org/multimedia/events/search-truth-regulatory-science>

90 minute Video

Study: Sea Level Rise Revised Downward

By Roy Spencer, His Blog, July 21, 2017

<http://www.drroyspencer.com/2017/07/study-sea-level-rise-revised-downward/>

Link to Nature article: Satellite snafu masked true sea-level rise for decades

Revised tallies confirm that the rate of sea-level rise is accelerating as the Earth warms and ice sheets thaw.

By Jeff Tollefson, Nature, July 17, 2017

http://www.nature.com/news/satellite-snafu-masked-true-sea-level-rise-for-decades-1.22312?WT.ec_id=NEWS-20170720&spMailingID=54532717&spUserID=MTc2NjY4OTI4MwS2&spJobID=1203188657&spReportId=MTIwMzE4ODY1NwS2

Why we emphasize that the climate has always changed

By Luboš Motl, The Reference Frame, July 20, 2017

<http://motls.blogspot.com/2017/07/why-we-emphasize-that-climate-has.html>

The Climate Alarmists' Gross Perversion of the Word Clean

By Alan Carlin, Carlin Economics and Science, July 20, 2017

<http://www.carlineconomics.com/archives/3740>

The Data Adjustment Bureau

By Euan Mears, Energy Matters, July 20, 2017

<http://euanmearns.com/the-data-adjustment-bureau/#more-19000>

The Greatest Scientific Fraud Of All Time -- Part XVI

By Francis Menton, Manhattan Contrarian, July 19, 2017 [A noted attorney]

<http://manhattancontrarian.com/blog/2017/7/19/the-greatest-scientific-fraud-of-all-time-part-xvi>

Defending the Orthodoxy

Climate Change 2014, Synthesis Report: Summary for Policymakers

No lead authors identified, IPCC, 2014

https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf

Climate scientists push back against catastrophic scenarios

In both the popular and academic press, scientists argue against worst cases.

By John Timmer, Ars Technica, July 12, 2017 [H/t Clyde Spencer]

<https://arstechnica.com/science/2017/07/climate-scientists-push-back-against-catastrophic-scenarios/>

Link to paper: Overestimate of committed warming

By Gavin Schmidt, et al. Nature, July 12, 2017

<https://www.nature.com/nature/journal/v547/n7662/full/nature22803.html>

[SEPP Comment: Another straw-man issue. Take the most radical view, then state that an extreme view is moderate?]

New record extends global temperatures back two million years

Sees major transition at 1.2 million years, questionably high climate sensitivity.

By John Timmer, Ars Technica, Sep 26, 2016

<https://arstechnica.com/science/2016/09/two-million-year-climate-record-sheds-light-on-change-in-ice-ages/>

Link to paper: Evolution of global temperature over the past two million years

By Carolyn Snyder, Nature, Oct 13, 2016

<https://www.nature.com/nature/journal/v538/n7624/full/nature19798.html>

NASA-MIT study evaluates efficiency of oceans as heat sink, atmospheric gases sponge

By Ellen Gray, NASA – Global Climate Change, June 13, 2017 [H/t WUWT]

<https://climate.nasa.gov/news/2598/nasa-mit-study-evaluates-efficiency-of-oceans-as-heat-sink-atmospheric-gases-sponge/>

“Most of the excess heat from climate change will go into the ocean eventually, we think,” Romanou said. “Most of the excess chemical pollutants and greenhouse gases will be buried in the ocean. But the truth is that the ocean recirculates that extra load and, at some point, will release some of it back to the atmosphere, where it will keep raising temperatures, even if future carbon dioxide emissions were to be much lower than they are now.”

Questioning the Orthodoxy

CO2 Whack-A-Mole

By Donn Dears, Power For USA, July 21, 2017

<http://www.powerforusa.com/2017/07/21/co2-whack-a-mole/>

Tired of Being Wrong, Climate Alarmists Move Doomsday to Next Century

By Stephen Kruiser, Independent Journal Review, July 16, 2017 [H/t GWPF]

<http://ijr.com/the-declaration/2017/07/922200-tired-wrong-climate-alarmists-move-doomsday-next-century/>

No kids, no cars, no meat, no flying!

By Lorrie Goldstein, Toronto Sun, July 15, 2017

<http://www.torontosun.com/2017/07/15/no-kids-no-cars-no-meat-no-flying>

The surprising news from scientists about rising sea levels!

By Larry Kummer, Fabius Maximus, July 20, 2017

<https://fabiusmaximus.com/2017/07/20/the-bottom-line-about-rising-sea-levels/>

Black Activists Criticize Gore for Comparing Climate Change Advocacy to Fight Against Slavery

By Rick Moran, PJ Media, July 14, 2017 [H/t Timothy Wise]
<https://pjmedia.com/trending/2017/07/14/black-activists-criticize-gore-for-comparing-climate-change-advocacy-to-fight-against-slavery/>

Truth Is Just a Detail

Pundits invested in climate-change alarmism praise even shoddy work—as long as it comes to the right conclusions.

By Oren Cass, City Journal, July 11, 2017 [H/t Timothy Wise]
<https://www.city-journal.org/html/truth-just-detail-15316.html>

We love scary stories. The reason why reveals a secret about America.

By Larry Kummer, Fabius Maximus, July 17, 2017
<https://fabiusmaximus.com/2017/07/17/why-we-love-doomster-stories/>

Bill Nye says skeptics will die off. Instead young gullibles grow up to be old skeptics

By Jo Nova, Her Blog, July 21, 2017
<http://joannenova.com.au/2017/07/bill-nye-says-skeptics-will-die-off-instead-young-gullibles-grow-up-to-be-old-skeptics/>

[SEPP Comment: Will memories of “the hottest year ever” fade with the El Nino?]

New short film shows Grantham Institute vision for a low-carbon future

By Charlotte Butler, Imperial College, July 10, 2017 [H/t/ Dennis Ambler]
http://www3.imperial.ac.uk/newsandeventspggrp/imperialcollege/naturalsciences/climatechange/newsummary/news_7-7-2017-15-57-17

After Paris!

Japan, China, and South Korea violate Paris agreement by funding coal in Indonesia

The three nations – all members of the Paris climate agreement – are involved with 18 of 22 coal power deals made in Indonesia since 2010, according to a report from Market Forces, an Australia-based environmental finance organization.

By Thin Lei Win, Reuters, July 29, 2017 [H/t GWPF]
<https://www.csmonitor.com/World/2017/0719/Japan-China-and-South-Korea-violate-Paris-agreement-by-funding-coal-in-Indonesia>

Trump wants climate deal's green fund to build coal plants

By John Siciliano, Washington Examiner, July 14, 2017
<http://www.washingtonexaminer.com/trump-wants-climate-deals-green-fund-to-build-coal-plants/article/2628715>

Change in US Administrations

Donald Trump took the heat, but the rest of the G20's posturing won't hide their rising emissions

By Paul Homewood, Not a Lot of People Know That, July 16, 2017
<https://notalotofpeopleknowthat.wordpress.com/2017/07/16/donald-trump-took-the-heat-but-the-rest-of-the-g20s-posturing-wont-hide-their-rising-emissions/>

Trump Nominates Climate Sceptic to be Department of Agriculture's Top Scientist

By Staff Writers, The Washington Post, Via GWPF, July 20, 2017

<https://www.thegwpf.com/trump-nominates-climate-sceptic-to-be-department-of-agricultures-top-scientist/>

Problems in the Orthodoxy

Religious Dilemma: Breaking the 9th Commandment or 'Saving the Planet'

By Russell Cook, Catholic Online, July 18, 2017

<http://www.catholic.org/news/green/story.php?id=75535>

Seeking a Common Ground

The Hiatus: One Message for Politicians, Another for Scientists

By David Whitehouse, GWPF, July 17, 2017

<https://www.thegwpf.com/the-hiatus-one-message-for-politicians-another-for-scientists/>

Review of Recent Scientific Articles by CO2 Science

Observed Tolerance of Juvenile Blue Crabs to Ocean Acidification

Glandon, H.L. and Miller, T.J. 2017. No effect of high $p\text{CO}_2$ on juvenile blue crab, *Callinectes sapidus*, growth and consumption despite positive responses to concurrent warming. *ICES Journal of Marine Science* **74**: 1201-1209. July 20, 2017

<http://www.co2science.org/articles/V20/jul/a9.php>

[SEPP Comment: the "Chesapeake Bay" blue crab is found in the Sea of Cortez (Gulf of California) between Baha California and mainland Mexico. Doubt if warming will affect it.]

The Relationship Between Ocean Acidification and Net Calcification in a Hawaiian Reef Coral

Bahr, K.D., Jokiel, P.L. and Rodgers, K.S. 2017. Seasonal and annual calcification rates of the Hawaiian reef coral, *Montipora capitata*, under present and future climate change scenarios. *ICES Journal of Marine Science* **74**: 1083-1091. July 20, 2017

<http://www.co2science.org/articles/V20/jul/a8.php>

The Resilience of Coastal Marine Ecosystems to Climatic Change

O'Leary, J.K., Micheli, F., Airoidi, L., Boch, C., de Leo, G., Elahi, R., Ferretti, F., Graham, N.A.J., Litvin, S.Y., Low, N.H., Lummis, S., Nickols, K.J. and Wong, J. 2017. The Resilience of Marine Ecosystems to Climatic Disturbances. *BioScience* **67**: 208-220. July 18, 2017

<http://www.co2science.org/articles/V20/jul/a7.php>

The Relationship Between Temperature and Human Health in China

Wang, C., Zhang, Z., Zhou, M., Zhang, L., Yin, P., Ye, W. and Chen, Y. 2017. Nonlinear relationship between extreme temperature and mortality in different temperature zones: A systematic study of 122 communities across the mainland of China. *Science of the Total Environment* **586**: 96-106. July 17, 2017

<http://www.co2science.org/articles/V20/jul/a6.php>

Measurement Issues -- Surface

New report on global warming debunks government temp data

By Rick Moran, American Thinker, July 17, 2017

http://www.americanthinker.com/blog/2017/07/new_report_on_global_warming_debunks_government_temp_data.html

Changing Weather

Natural disasters less devastating in 2017: Munich Re

By Staff Writers, AFP, July 18, 2017

<https://www.yahoo.com/news/natural-disasters-less-devastating-2017-munich-103904188.html>

Report for 2016: Natural catastrophe losses at their highest for four years

By Staff Writers, Munich RE, Jan 4, 2017

<https://www.munichre.com/en/media-relations/publications/press-releases/2017/2017-01-04-press-release/index.html>

[SEPP Comment: No trend in earthquakes volcanos, etc. Difference between insured and uninsured.]

Climate change gives us less devastating natural disasters

By Jo Nova, Her Blog, July 20, 2017

<http://joannenova.com.au/2017/07/climate-change-causes-less-devastating-natural-disasters/>

Melt Out at Paradise on Mount Rainier

By Cliff Mass, Weather and Climate Blog, July 17, 2017

<http://cliffmass.blogspot.com/2017/07/melt-out-at-paradise-on-mount-rainier.html>

[SEPP Comment: Variability but not significant trend for 100 years.]

Changing Seas

Analysis Of Sea Level Trends At Newlyn

By Paul Homewood, Not a Lot of People Know That, July 21, 2017

<https://notalotofpeopleknowthat.wordpress.com/2017/07/21/analysis-of-sea-level-trends-at-newlyn/>

“At the end of 2016, the trend was 3.23mm/yr, ie between 2007 and 2016. This of course is higher than the trend of 1.83mm recorded over the full history of the gauge.”

Satellite snafu masked true sea-level rise for decades

Revised tallies confirm that the rate of sea-level rise is accelerating as the Earth warms and ice sheets thaw.

By Jeff Tollefson, Nature, July 17, 2017

http://www.nature.com/news/satellite-snafu-masked-true-sea-level-rise-for-decades-1.22312?WT.ec_id=NEWS-20170720&spMailingID=54532717&spUserID=MTc2NjY4OTI4MwS2&spJobID=1203188657&spReportId=MTIwMzE4ODY1NwS2

“It’s all coming together.”

“If sea-level rise continues to accelerate at the current rate, Nerem says, the world’s oceans could rise by about 75 centimetres over the next century. That is in line with projections made by the Intergovernmental Panel on Climate Change in 2013.

“– Steven Nerem, a remote-sensing expert at the University of Colorado Boulder who is leading the reanalysis.”

The increasing rate of global mean sea-level rise during 1993–2014

By Xianyao Chen, et al. Nature Climate Change, June 26, 2017

<http://www.nature.com/nclimate/journal/v7/n7/full/nclimate3325.html?foxtrotcallback=true>

UK Sea Level Data For 2016

By Paul Homewood, Not a Lot of People Know That, July 20, 2017

<https://notalotofpeopleknowthat.wordpress.com/2017/07/20/uk-sea-level-data-for-2016/#more-28796>

[SEPP Comment: Messy (disorganized) data can be made to confess to anything.]

Changing Cryosphere – Land / Sea Ice

I've studied Larsen C and its giant iceberg for years – it's not a simple story of climate change

By Adrian Luckman, The Conversation, July 12, 2017 [H/t Climate Etc.]

https://theconversation.com/ive-studied-larsen-c-and-its-giant-iceberg-for-years-its-not-a-simple-story-of-climate-change-80529?utm_content=bufferfdb35&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

“It is probably too early to blame this event directly on human-generated climate change.”

Current Surface Mass Budget of the Greenland Ice Sheet

By Staff Writers, DMI, April 25, 2017 [Accessed date given]

<http://beta.dmi.dk/en/groenland/maalinge/greenland-ice-sheet-surface-mass-budget/>

There have been far bigger Antarctic icebergs than the latest A68 Larson C berg

By Jo Nova, Her Blog, July 17, 2017

<http://joannenova.com.au/2017/07/there-have-been-far-bigger-antarctic-icebergs-than-the-latest-a68-larson-c-berg/>

European Climate Institute EIKE Says Antarctica Ice Calving “Totally Normal”, Natural Causes

By P Gosselin, No Tricks Zone, July 15, 2017

<http://notrickszone.com/2017/07/15/european-climate-institute-eike-says-antarctica-ice/#sthash.ygYwUDii.dpbs>

Western Hudson Bay polar bears reportedly still on ice as of 17 July 2017

By Susan Crockford, Polar Bear Science, July 18, 2017

<https://polarbearscience.com/2017/07/18/western-hudson-bay-polar-bears-reportedly-still-on-ice-as-of-17-july-2017/>

Agriculture Issues & Fear of Famine

How Capitalism Saved the Bees

A decade after colony collapse disorder began, pollination entrepreneurs have staved off the beepocalypse.

By Shawn Regan, Reason.com, Aug/Sep 2017

<http://reason.com/archives/2017/07/19/how-capitalism-saved-the-bees>

Lowering Standards

WSJ Blows It on Australia's Power Crisis (intermittent resources, not fossil fuels, at fault)

By Donn Dears, Master Resource, July 17, 2017

<https://www.masterresource.org/australia/wsj-left-reporting/>

Communicating Better to the Public – Make things up.

The Uninhabitable Earth

Famine, economic collapse, a sun that cooks us: What climate change could wreak — sooner than you think.

By David Wallace-Wells, New York Magazine, July 9, 2017 [H/t Martin Stickley]

<http://nymag.com/daily/intelligencer/2017/07/climate-change-earth-too-hot-for-humans.html>

Doomsday activist who claimed humans will be 'burned alive' by climate change is shot down by scientists

A controversial article appearing in the New York magazine has drawn criticism from the scientific community

By Jeff Parsons, The Mirror, UK, Via GWPF, July 16, 2017

<https://www.thegwpf.com/doomsday-activist-who-claimed-humans-will-be-burned-alive-by-climate-change-is-shot-down-by-scientists/>

Swiss Daily, German Scientist Slam Reporting U of Exeter Antarctic Findings... “An Abuse Of Science”!

By P. Gosselin, No Tricks Zone, July 21, 2017

<http://notrickszone.com/2017/07/21/swiss-daily-german-scientist-slam-reporting-u-of-exeter-antarctic-findings-an-abuse-of-science/#sthash.mLzOVTAX.dpbs>

“However, upon closer examination that “greening” of the South Pole is actually some moss growing near the very tip of the Antarctic peninsula, 65° south latitude!”

[SEPP Comment: A comparable latitude in the Northern Hemisphere to 65° south latitude includes Fairbanks Alaska, and Lapland in Europe.]

Communicating Better to the Public – Do a Poll?

Stealth advocacy: a survey of weathercasters’ views on climate change

By Mike Smith, Climate Etc. July 19, 2017

<https://judithcurry.com/2017/07/19/stealth-advocacy-a-survey-of-weathercasters-views-on-climate-change/#more-23232>

[SEPP Comment: The paper is the version accepted for publication, but it may not be the final version.]

Expanding the Orthodoxy

Climate Alarmism and Corporate Responsibility: Rejecting Cronyism for ‘Good Profits’

By Robert Bradley Jr. Master Resource, July 22, 2017

<https://www.masterresource.org/uncategorized/climate-alarmism-corporate-responsibility/>

[SEPP Comment: Lessons from Kyoto. Will the new effort lead to a trade war on carbon dioxide emissions?]

Former US Chief Sustainability Officer: The Military Is Leading the March Toward Energy Independence

By Jon Powers, Green Tech, Media, July 20, 2017

<https://www.greentechmedia.com/articles/read/the-military-is-leading-the-march-toward-energy-independence>

[SEPP Comment: Where is the DOE report concluding wind and solar will create a more reliability?]

Five Reasons You're Right Not To Trust Corporate Science Media - The Bloomberg Example

By Hank Campbell, ACSH, July 13, 2017

<http://www.acsh.org/news/2017/07/13/five-reasons-youre-right-not-trust-corporate-science-media-bloomberg-example-11551>

Vatican archbishop: All should accept that global warming is a fact

By Lisa Bourne, LifeSite, July 9, 2017 [H/t GWPF]

<https://www.lifesitenews.com/news/vatican-archbishop-all-should-accept-that-global-warming-is-a-fact>

Questioning Green Elsewhere

Debunking the 100% Renewables Fantasy

By Jason Scott Johnston, Real Clear Energy, July 18, 2017

http://www.realclearenergy.org/articles/2017/07/18/debunking_the_100_renewables_fantasy_110240.html

Funding Issues

Publishing Science, An Extremely Profitable Marketing System

By Chuck Dinerstein, ACSH, July 11, 2017

<http://www.acsh.org/news/2017/07/11/publishing-science-extremely-profitable-marketing-system-11532>

Litigation Issues

Climate Lawsuit Brewing?

By Robert Bryce, National Review, July 18, 2017

<http://www.nationalreview.com/article/449567/renewables-advocate-mark-jacobson-tells-his-critics-hes-hired-lawyer>

Subsidies and Mandates Forever

New homes will now require solar panels in South Miami, a first in Florida

By Carli Teproff, Miami Herald, July 18, 2017

<http://www.miamiherald.com/news/local/community/miami-dade/south-miami/article162307863.html>

EPA and other Regulators on the March

Rethinking Energy Efficiency: Reason Foundation Comments to DOE

By Julian Morris, Master Resource, July 18, 2017

<https://www.masterresource.org/efficiency-standards/reason-energy-efficiency-doe-comments/>
[SEPP Comment: Costly mistakes in reasoning, with the costs borne by consumers.]

Energy Issues – Non-US

National Grid's Future Energy Scenarios: Cui Bono?

By John Constable, GWPF, July 19, 2017

<https://www.thegwgf.com/national-grids-future-energy-scenarios-cui-bono/>

Gas and coal are big winners in electricity capacity auction

Fossil fuel dominates National Grid plans to ensure lights stay on during peak demand

By Andrew Ward, Financial Times, February 4, 2017

<https://www.ft.com/content/1e3d6e34-ea84-11e6-893c-082c54a7f539?mhq5j=e3>

Germany's energy consumption and power mix in charts

By Staff Writers, Clean Energy Wire, July 16, 2017

<https://www.cleanenergywire.org/factsheets/germanys-energy-consumption-and-power-mix-charts>

Japan: Fifty solar PV companies already gone in 2017 as subsidies end. Coal soaring.

What's the word for competitive-but-needs-a-subsidy? Broke...

By Jo Nova, Her Blog, July 20, 2017

<http://joannenova.com.au/2017/07/japan-fifty-solar-pv-companies-already-gone-in-2017-as-subsidies-end/>

Insanity and hypocrisy Down Under

By Paul Driessen, WUWT, July 18, 2017

<https://wattsupwiththat.com/2017/07/16/insanity-and-hypocrisy-down-under/>

[SEPP Comment: The Wall Street Journal article was an example of incompetence.]

Tesla is building the world's biggest battery. Here's how it will work.

Get amped to learn about lithium-ion energy storage!

By Rob Verger, Popular Science, July 13, 2017

<http://www.popsci.com/tesla-building-worlds-biggest-battery-how-it-will-work>

Energy Issues -- US

Big Oil Ramps Up Its Fight Against Nuclear Power

By Andrew Follett, Daily Caller, July 17, 2017

<http://dailycaller.com/2017/07/17/big-oil-ramps-up-its-fight-against-nuclear-power/>

America Needs More Pipelines

Better pipeline infrastructure will reduce oil and gas transportation costs and improve safety.

By Charles Hughes, US News. July 20, 2017

<https://www.usnews.com/opinion/economic-intelligence/articles/2017-07-20/america-needs-more-pipelines-to-transport-oil-and-gas-safely>

New York Grapples With the Best Way to Promote Storage: Mandates or Market Reforms?

By Julian Spector, Green Tech Media, July 21, 2017

<https://www.greentechmedia.com/articles/read/new-york-grapples-with-the-best-way-to-promote-storage>

[SEPP Comment: New York's Reforming the Energy Vision project. (REV) may require reforming politicians to address realities rather than dreams.]

The Hinkley Point fiasco doesn't bode well for Brexit

By Rupert Darwall, CapX, July 20, 2017

<https://capx.co/the-hinkley-point-fiasco-doesnt-bode-well-for-brexit/>

US Has Produced More Oil Than Saudi Arabia For 4 Straight Years [GRAPH]

By Andrew Follett, Daily Caller, July 17, 2017

<http://dailycaller.com/2017/07/17/us-has-produced-more-oil-than-saudi-arabia-for-4-straight-years-graph/>

[SEPP Comment: Graph shows total petroleum production, which includes other liquids, not just crude oil. Other liquids include biofuels and natural gas liquids]

Oil and Natural Gas – the Future or the Past?

Russia's Financial Support for Anti-Fracking Groups Is No Coincidence

By Austin Back, National Review, July 21, 2017

<http://www.nationalreview.com/article/449717/anti-fracking-groups-russia-secret-funding-protects-kremlin-interests>

Russia suspected of using Bermuda shell company to exploit American anti-fracking activists

By Dan Boylan, Washington Times, July 16, 2017

<http://www.washingtontimes.com/news/2017/jul/16/russia-fights-us-fracking-using-shell-company-to->

[f/?mkt_tok=eyJpIjoiT0dVNFIUZ3hZVFprT0dKayIsInQiOiJwZG93Z256ckc2NEIXOWg4UVBzcVNkczBKVUh4aFpRYlIwvcDJVQnIwck1JcTVqSmDRUdLZk1VnY5SFU4VXg3UHVSsanUwZEpLSjFzYXNtV1NSMXN4XC9oN0xxODJTeGV3Wm1iMXdaU1d3NHpyTWMzNnN0d29rZDhUMHpSb3RCS3BvIn0%3D](http://www.washingtontimes.com/news/2017/jul/16/russia-fights-us-fracking-using-shell-company-to-f/?mkt_tok=eyJpIjoiT0dVNFIUZ3hZVFprT0dKayIsInQiOiJwZG93Z256ckc2NEIXOWg4UVBzcVNkczBKVUh4aFpRYlIwvcDJVQnIwck1JcTVqSmDRUdLZk1VnY5SFU4VXg3UHVSsanUwZEpLSjFzYXNtV1NSMXN4XC9oN0xxODJTeGV3Wm1iMXdaU1d3NHpyTWMzNnN0d29rZDhUMHpSb3RCS3BvIn0%3D)

The Only Way OPEC Can Kill U.S. Shale

By Irina Slav, Oil Price, July 16, 2017

<http://oilprice.com/Energy/Crude-Oil/The-Only-Way-OPEC-Can-Kill-US-Shale.html>

Potential Gas Committee (PGC) Reports Record Future Supply on Natural Gas in the U.S.

Press Release, By Staff Writers, July 19, 2017

<http://potentialgas.org/press-release>

[SEPP Comment: PGC is an outgrowth of a group in the natural gas industry to systematically report on estimates of future gas supply.]

Alternative, Green (“Clean”) Solar and Wind

Solar Plants Aim to Keep Lights on at Night

By Anna Hirtenstein and Mathew Carr, Bloomberg, July 17, 2017

<https://www.bloomberg.com/news/articles/2017-07-18/cheap-solar-supplying-power-at-night-seen-soon-in-middle-east>

Wind Energy's 8 Serious Disadvantages: Hurts Everything From Wealth To Health

By P Gosselin, No Tricks Zone, July 16, 2017

<http://notrickszone.com/2017/07/16/wind-energys-8-serious-disadvantages-hurts-everything-from-wealth-to-health/#sthash.D6wDsnkM.dp0ed2da.dpbs>

Alternative, Green (“Clean”) Vehicles

On the right tracks?

By Martin Livermore, The Scientific Alliance, July 21, 2017

<http://scientific-alliance.org/scientific-alliance-newsletter/right-tracks>

Why Electric Cars Are Everywhere Except Here, Now

By John Lippert, Bloomberg, July 19, 2017

<https://www.bloomberg.com/news/articles/2017-07-19/why-electric-cars-are-everywhere-except-here-now-quicktake-q-a>

CO2 Intensity of Electric Cars

By Euan Mearns, Energy Matters, July 17, 2017

<http://euanmearns.com/co2-intensity-of-electric-cars/>

Electric Vehicle Sales Report

By Donn Dears, Power For USA, July 18, 2017

<http://power4usa.org/2017/07/18/electric-vehicle-sales-report/>

Global automakers call on China to ease "impossible" electric car rules

By Jan Schwartz and Adam Jourdan, Reuters, July 13, 2017

<https://www.reuters.com/article/us-china-autos-electric-idUSKBN19Y1RC>

How the electric car revolution could backfire

The state risks locking in the wrong technology too early

By Matt Ridley, Rational Optimist, July 20, 2017

<http://www.rationaloptimist.com/blog/electric-cars/>

California Dreaming

California's economy will suffer plenty from climate change. But at least it's not Florida

By Charles the moderator, WUWT, July 19, 2017

<https://wattsupwiththat.com/2017/07/19/californias-economy-will-suffer-plenty-from-climate-change-but-at-least-its-not-florida/>

Health, Energy, and Climate

Forget extreme temperatures: Nothing kills as many people as moderate cold

Cold is more likely to kill you in Sydney than in Sweden

By Jo Nova, Her Blog, July 16, 2017

<http://joannenova.com.au/2017/07/forget-extreme-temperatures-nothing-kills-as-many-people-as-moderate-cold/>

Learning from Malaria

By Bjørn Lomborg, Project Syndicate, July 18, 2017

<https://www.project-syndicate.org/commentary/learning-from-the-fight-against-malaria-by-bjorn-lomborg-2017-07>

Wakefield's Lies Continue To Harm Somali Kids

By Ruth Kava, ACSH, July 14, 2017

<http://www.acsh.org/news/2017/07/14/wakefields-lies-continue-harm-somali-kids-11553>

Environmental Industry

The totalitarianism of the environmentalists

By Marian L. Tupy, Human Progress, Via CapX, July 19, 2017

<https://capx.co/the-totalitarianism-of-the-environmentalists/>

Environmentalists are birthing more climate-change hype

By Jonah Goldberg, San Francisco Chronicle, July 13, 2017

<http://www.sfchronicle.com/opinion/article/Environmentalists-are-birthing-more-11287769.php>

[SEPP Comment: Complete with photo of cracked earth in drought, perhaps a lakebed.]

Why the Greens Are Dying [Green Party in Australia]

By Andrew Bolt, Herald Sun, AU, July 20, 2017 [H/t GWPF]

<http://www.heraldsun.com.au/blogs/andrew-bolt/why-the-greens-are-dying/news-story/eaba11ad80f9740b0dc0e631f6f94b77>

Other Scientific News

NASA looks to solar eclipse to help understand Earth's energy system

By Kasha Patel, Phys.Org, July 20, 2017

<https://phys.org/news/2017-07-nasa-solar-eclipse-earth-energy.html>

Other News that May Be of Interest

Big Muddy Missouri river needs a plan

By Staff Writers, Urbana IL (SPX), Jul 12, 2017

http://www.terradaily.com/reports/Big_Muddy_Missouri_river_needs_a_plan_999.html

Link to paper: Sedimentation, navigation, and agriculture on the lower Missouri River

By Kenneth Olson and Lois Morton, Journal of Soil and Water Conservation, July/August 2017

No Abstract

<http://www.jswconline.org/content/72/4/80A>

How Parasites Pull the Strings

By Robbie Rae, Project Syndicate, July 18, 2017

<https://www.project-syndicate.org/commentary/mind-control-parasites-by-robbie-rae-2017-07>

The last survivors on Earth

Charles the moderator, WUWT, July 16, 2017

<https://wattsupwiththat.com/2017/07/16/the-last-survivors-on-earth/>

Link to paper: The Resilience of Life to Astrophysical Events

By David Sloan, Rafael Alves Batista & Abraham Loeb, Nature, July 14, 2017

<https://www.nature.com/articles/s41598-017-05796-x>

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BELOW THE BOTTOM LINE:

The Carbon-Fed “Sixth Mass Genesis” – An Anthropocene Success Story!

Guest post by David Middleton, WUWT, July 14, 2017

<https://wattsupwiththat.com/2017/07/14/the-carbon-fed-sixth-mass-genesis-an-anthropocene-success-story/>

Ban clean air!

By Staff Writers, Climate Change Predictions.org, July 21, 2017

<http://climatechangepredictions.org/uncategorized/8755>

“It may seem counterintuitive, but cleaner air could actually be exacerbating global warming trends. The soot and other particles that make up air pollution tend to scatter light back out into space.

“As countries around the globe have cleaned up their act, there are fewer particles to reflect light, meaning more sunlight is reaching the Earth’s surface and warming it, Martin Wild, a researcher at ETH Zurich in Switzerland, said Tuesday (Dec. 15) here at the annual meeting of the American Geophysical Union.” Yahoo News, 29 Dec 2015

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ARTICLES:

1. A Step Toward Scientific Integrity at the EPA

Scott Pruitt sweeps out Obama-era science advisers. The agency needs truly independent ones.

By Steve Malloy, WSJ, July 17, 2017

<https://www.wsj.com/articles/a-step-toward-scientific-integrity-at-the-epa-1500326062>

SUMMARY: Steve Malloy has found a number of practices of the EPA that call into question its ability to conduct objective research. He writes:

“The Trump administration in May began the process of replacing the small army of outside science advisers at the Environmental Protection Agency. In June, 38 additional EPA advisers were notified that their appointments would not be renewed in August. To Mr. Trump’s critics, this is another manifestation of his administration’s “war on science.” Historians aside, the administration’s actions are long overdue.

“The most prominent of the EPA’s myriad boards of outside advisers are the Science Advisory Board and the Clean Air Scientific Advisory Committee, or CASAC. Mostly made up of university professors, these boards also frequently draw members from consulting firms and activist groups. Only rarely do members have backgrounds in industry. All EPA boards are governed by the Federal Advisory Committee Act, which requires that they be balanced and unbiased. While the EPA is required by law to convene the SAB and CASAC, the agency is not bound by law to heed their advice.

“The EPA’s Obama -era ‘war on coal’ rules and its standards for ground-level ozone—possibly the most expensive EPA rule ever issued—depend on the same scientifically unsupported notion that the fine particles of soot emitted by smokestacks and tailpipes are lethal. The EPA claims that such particles kill hundreds of thousands of Americans annually.

“The EPA first considered regulating fine particles in the mid-1990s. But when the agency ran its claims past CASAC in 1996, the board concluded that the scientific evidence did not support the agency’s regulatory conclusion. Ignoring the panel’s advice, the EPA’s leadership chose to regulate fine particles anyway, and resolved to figure out a way to avoid future troublesome opposition from CASAC.

“In 1996 two-thirds of the CASAC panel had no financial connection to the EPA. By the mid-2000s, the agency had entirely flipped the composition of the advisory board so two-thirds of its members were agency grantees. Lo and behold, CASAC suddenly agreed with the EPA’s leadership that fine particulates in outdoor air kill. During the Obama years, the EPA packed the CASAC panel. Twenty-four of its 26 members are now agency grantees, with some listed as principal investigators on EPA research grants worth more than \$220 million.

“Although the scientific case against particulate matter hasn’t improved since the 1990s, the EPA has tightened its grip on CASAC. In effect, EPA-funded researchers are empowered to review and approve their own work in order to rubber-stamp the EPA’s regulatory agenda. This is all done under the guise of ‘independence.’”

“Another ‘independent’ CASAC committee conducted the most recent review of the Obama EPA’s ground-level ozone standards. Of that panel’s 20 members, 70% were EPA grantees who’d hauled in more than \$192 million from the agency over the years. These EPA panels make decisions by consensus, which has lately been easy enough to achieve considering they are usually chaired by an EPA grantee.”

After discussing ways that have failed to reform EPA practices, Malloy concludes:

“President Trump and his EPA administrator have ample statutory authority to rectify the problem. As Oklahoma’s attorney general, Scott Pruitt spent years familiarizing himself with the EPA’s unlawful ways. He is in the process of reaffirming the independence of the agency’s science advisory committees. This won’t mean that committee members can’t have a point of view. But a committee as a whole must be balanced and unbiased. Mr. Pruitt’s goal is the one intended by Congress—peer review, not pal review.”

2. From \$2 Billion to Zero: A Private-Equity Fund Goes Bust in the Oil Patch

The more than \$1 billion of debt an EnerVest fund took on during oil’s price surge now threatens its viability

By Ryan Dezember, WSJ, July 16, 2017

<https://www.wsj.com/articles/from-2-billion-to-zero-a-private-equity-fund-goes-bust-in-the-oil-patch-1500210002>

SUMMARY: In a cautionary tale of trying to get rich too fast in the oil patch: if you borrow against speculative assets, be prepared to lose it all. The journalist writes:

“A \$2 billion private-equity fund that borrowed heavily to buy oil and gas wells before energy prices plunged is now worth essentially nothing, an unusual debacle that is wiping out investments by major pensions, endowments and charitable foundations.

“EnerVest Ltd., a Houston private-equity firm that focuses on energy investments, manages the fund. The firm raised and started investing money in 2013, when oil was trading at more than double the current price of about \$45 a barrel. But the fund added \$1.3 billion of borrowed money to boost its buying power. That later caused it trouble when oil prices tumbled.

“Now the fund’s lenders, led by Wells Fargo are negotiating to take control of the fund’s assets to satisfy its debt, according to people familiar with the matter.”

Investors in the fund, including pension funds, charitable organizations, and universities, may receive only pennies on the dollar, if that. The reporter continues:

Though private-equity investments regularly flop, industry consultants and fund investors say this situation could mark the first time that a fund larger than \$1 billion has lost essentially all of its value.

EnerVest’s collapse shows how debt taken on during the drilling boom continues to haunt energy investors three years after a glut of fuel sent prices spiraling down.

At its onset, the oil bust was expected to cause widespread losses for private-equity investors. While most funds have been able to navigate the downturn and are hanging on for higher prices, there have been pockets of acute pain. EnerVest’s struggles have been among the most severe.

The equity fund taking on debt to finance additional investments is the primary cause of a possible wipe-out, as the reporter states in his article:

EnerVest was launched in 1992 and says it operates more U.S. oil and gas wells than any other company. It started out investing for GE Capital, General Electric Corp.’s finance arm.

Eventually it began pooling other big investors' cash, which it used to buy producing oil and gas wells. EnerVest hunted for fields already producing oil and gas but neglected by big oil companies. Once EnerVest bought them, it made improvements and drilled more to increase output.

The strategy isn't as risky as staking wildcatters or borrowing heavily to buy entire oil companies, but profits are usually lower. To juice returns, however, funds managed by EnerVest and rivals that shared the strategy borrowed money as if they themselves were oil companies, encumbering all of the funds' assets with the same debt.

Doing that eliminates a key protection for private-equity investors, which generally finance each investment independently so that soured deals don't put good ones at risk. The use of fund-level debt effectively cross-collateralizes assets, meaning that good investments can be pulled down by bad ones.

Institutional investors were drawn to these so-called resource funds because they typically pay out steady streams of cash as soon as they make their first investments, unlike other private-equity investments that can take years to bear fruit, said Christian Busken, who advises endowments and other big energy investors as director of real assets for Fund Evaluation Group LLC.

"It shouldn't be something where you can be wiped out. But you are exposed to commodity prices," said Mr. Busken, who hasn't worked directly with EnerVest.

EnerVest's funds historically returned more than 30% or so, which enabled it to raise progressively larger pools of cash. In 2010, it raised about \$1.5 billion for its 12th fund and added \$800 million of debt. Three years later it raised \$2 billion for its next and borrowed \$1.3 billion. The fund bought wells in the Texas Panhandle, Utah, outside Dallas and elsewhere, according to securities filings from some of the sellers. The purchases were made largely as U.S. oil prices hovered in the \$100-a-barrel range and when natural-gas prices were higher.

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