

The Week That Was: 2013-05-11 (May 11, 2013)
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The Science and Environmental Policy Project

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Quote of the Week: *The actual earth surface temperature response to CO2 emissions cannot be validated in the models if important naturally occurring climate change mechanisms are not modeled accurately.*— The Right Climate Stuff Research Team (p. 20)

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Number of the Week: 90 to 99%

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Gap in TWTW: A combination of computer hard drive failure, some files were lost, and travel resulted in a two week gap in TWTW. We apologize for any inconvenience.

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April Fools: Due to the gap in TWTW, the April Fools contest continues this week. Using the following criteria, readers are requested to submit their nomination of a government official or political leader along with a sentence or two why that person should be considered:

- 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 final selection will be determined by a special SEPP panel. The name of the winner will be emblazoned with names of other winners of the great SEPP trophy – The Jackson – a lump of coal named after the first winner, (former) EPA administrator Lisa P. Jackson. Please submit your nomination to Ken@SEPP.org.

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THIS WEEK:

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

Demon Carbon: Geologist, astronaut, former Senator Harrison Schmitt and physicist William Happer had an essay published in the *Wall Street Journal* on the demonization of carbon dioxide (CO2), which gives life to green plants. They distinguish between C3 plants, which evolved in an atmosphere rich in CO2 and include most grains, and C4 plants, which evolved in an atmosphere low in CO2 and includes corn. Increases in atmospheric CO2 greatly benefit the rigorous growth of C3 plants more than C4 plants, which involved in an atmosphere lower in CO2 than C3 plants. The authors explain how the increases in CO2 diminish the need for water for both types of plants, thus benefit all food crops. Please see Article # 2.

Quote of the Week: The quote comes from the conclusions and recommendations of The Right Climate Stuff (TRCS) research team discussed in the April 20 TWTW. It pithily addresses the major failure of the climate models presented by the UN Intergovernmental Panel on Climate Change (IPCC). The models do not address the natural mechanisms of climate change, thus

cannot be validated. As such, they are have little value and are misleading for critical decision making. According to the IPCC 2007 Fourth Assessment Report (AR-4) the only major natural mechanism considered was changes in solar irradiance (intensity of daylight), which the IPCC claimed had a minor influence on late 20th century warming.

As stated in prior TWTW's, if other natural mechanisms had a major influence on global warming and/or climate change in the latter part of the 20th century, then the procedures (methodology) used lumped the other natural influences in with human influences. This significant error carries on to other reports which support the IPCC, such as that of the US Global Change Research Program and the EPA's finding that greenhouse gases, particularly CO₂, endanger human health and welfare.

Increasingly, some climate researchers and modelers are backtracking, claiming that natural mechanisms such as ocean and atmospheric oscillations, are now being considered. It remains to be seen if this backtracking will be clearly discussed in the 2013 IPCC Fifth Assessment Report (AR-5). Please see links under Challenging the Orthodoxy and Seeking a Common Ground.

Serious Inaccuracy: In his usual style, Christopher Monckton presents a letter to the IPCC challenging the claim in the IPCC AR-4 that 20th century global warming was accelerating and that the accelerated global warming is anthropogenic (human caused). This is an important distinction, because it is impossible to claim the recent warming is anthropogenic if one cannot separate an observed rate of warming before significant CO₂ emissions from a similar rate with significant CO₂ emissions. Monckton claims the rate of warming in the latter part of the 20th century was no greater than the rate of warming in the earlier part of the 20th century, therefore there is no scientific basis for making the claim that the human contribution is significant, unless one can provide direct physical evidence, which has not been done. Please see link under Challenging the Orthodoxy.

Warmest in 1,400 Years? The Past Global Changes 2k Network of the International Geosphere-Biosphere Programme produced a study claiming that, although some regions may have been hotter in the past, the 1971 to 2000 period was the globally the hottest in 1,400 years. The study also claims that late 19th century industrialization reversed a long-term cooling trend. The reports of the study emphasize the unusually hot European summer of 2003. The authors state that the Medieval Warm Period may have not been global and claim the warming between 1971 and 2000 was faster than any comparable period over the past 1400 years. Yet, as seen in satellite data, warming from 1979 on is predominately regional – the northern part of the northern hemisphere. Further, the study is based on proxy data such as tree rings and ocean cores. It is questionable if proxy data can accurately measure warming rates at 30 year intervals.

As expressed above, Monckton contests the claim that the 1970 to 2000 warming rate was greater than the one from 1910 to 1940. The reports state that the study will be incorporated in AR-5. Please see links under Defending the Orthodoxy.

400 3.5 Million Years Ago Equals 400 Today? The atmospheric carbon dioxide concentration as measured at Mauna Loa Hawaii hit 400 parts per million (ppm). As spring spreads to the Northern Hemisphere, it will fall. But it will increase in the winter. Global warming alarmists consider this a bad omen of terrible things to come.

With almost perfect timing, a study was released claiming that 3.5 million years ago was the last time the CO2 concentration was 400 ppm and the Arctic was free of ice and much warmer. The study was of sediment cores taken from a lake in northeast Siberia, at a latitude of about 67 degrees north and states the area was undisturbed by ice ages. Of course, the media immediately picked up on claims that is we should expect a far warmer Arctic with the 400 ppm concentration of CO2. The period is called the Middle Pliocene Warming

The study and the reports raise many questions and issues left unanswered, including why was the area undisturbed by ice ages that started about 2.5 million years ago? What triggered the onset of ice ages? The generally accepted explanation is that Milankovitch Cycles drive ice age cycles, but there is no compelling reason to assume that they did not occur before 2.5 million years ago. A generally accepted explanation for the beginning of the ice ages is that about 5 million years ago the South American plate ran into North American plate creating the Isthmus of Panama and closing the Caribbean Seaway that allowed mingling of the tropical Pacific and Atlantic oceans. In turn, this resulted into the thermo-haline circulations of the oceans, which, in time, established the ice ages with the Milankovitch Cycles.

None of this is discussed in the reports. Further, an earlier publication of NASA-GISS states: “At present, our results do not support the suggestion that Pliocene warming was caused by carbon dioxide increase since such changes are not consistent with the SST distributions derived from deep sea cores. There is evidence that changes in ocean circulation and the amount of heat oceans transport may be one potential cause of the warming.” No doubt there will be further developments on this issue. Please see links under Changing Climate.

Greenland Ice: As reported in the April 6 TWTW, Clifford Ollier, Professor at the School of Earth and Environmental Studies, The University of Western Australia, has been pointing out that those who have been insisting that warming will cause a sudden increase in sea levels from a rapid sliding of Greenland ice into the sea ignore the terrain of Greenland, which is largely a bowl formed by a ring of mountains with few openings to the sea. A study using a model of the actual terrain supports Ollier’s assertion. Among the findings are: The ice sheets that have openings in the mountain rims to the ocean drain about 22% of the Greenland Ice Sheet. “Using atmospheric and oceanic forcing from a mid-range future warming scenario that predicts warming by 2.8 degrees Celsius by 2100, we project a contribution of 19 to 30 millimeters to sea level rise from these glaciers by 2200” -- .7 to 1.2 inches by **next** century. This is hardly a cause for alarm. Please see links under Changing Cryosphere – Land / Sea Ice.

Price of Oil? Fred Singer has an essay discussing the difficulty of predicting the price of oil, including some personal experiences. Please see Article # 1.

Amplifications and Corrections: In the discussion of the findings of The Right Climate Stuff research team, the April 20 TWTW left out the word science in one of the principal findings. The bullet point should have read: Carbon-based AGW **science** is not settled. [Carbon-based AGW refers to carbon dioxide emissions causing dangerous global warming.

Number of the Week: 90 to 99%. In its finding that CO2 endangers human health and welfare, the EPA follows the script of the IPCC AR-4 and asserts: “... most of the observed increase in

global average temperature since the mid-twentieth century is very likely due to the observed increase in human generated greenhouse gas emissions, and very likely is a defined term, which means 90 to 99% certain...” [From the transcript of the oral arguments.]

As more holes appear in the findings of AR-4, EPA’s certainty may not change, but its credibility may diminish further.

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ARTICLES:

For the numbered articles below please see this week’s TWTW at: www.sepp.org. The articles are at the end of the pdf.

1. The Oil Price Enigma

By S. Fred Singer, American Thinker, May 9, 2013

http://www.americanthinker.com/2013/05/the_oil_price_enigma.html

2. In Defense of Carbon Dioxide

The demonized chemical compound is a boon to plant life and has little correlation with global temperature.

By Harrison Schmitt and William Happer, WSJ, May 8, 2013

<http://online.wsj.com/article/SB10001424127887323528404578452483656067190.html>

3. Earth Day Lesson: Environment is not Climate

By Thomas P. Sheahan, American Thinker, Apr 22, 2013

http://www.americanthinker.com/2013/04/earth_day_lesson_environment_is_not_climate.html

4. A Tale of Two Oil States

While the shale boom lifts Texas, California sits on vast resources.

Editorial, WSJ, May 6, 2013

http://online.wsj.com/article/SB10001424127887324695104578416871045535226.html?mod=W_SJ_Opinion_LEADTop

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NEWS YOU CAN USE:

Commentary: Is the Sun Rising?

Solar Influence on European temperatures

By Staff Writers, SPPI & CO2 Science, Apr 24, 2013

http://scienceandpublicpolicy.org/images/stories/papers/originals/european_temps.pdf

Solar Influence on Climate: Cosmic Rays

By Staff Writers, SPPI & CO2 Science, May 1, 2013

http://scienceandpublicpolicy.org/originals/solar_influence_on_climate_cosmic_rays.html

Climategate Continued

More Kaufman Contamination

By Steve McIntyre, Climate Audit, Apr 29, 2013

<http://climateaudit.org/2013/04/29/more-kaufman-contamination/#more-17915>

[SEPP Comment: More failure to carefully examine the proxy data to determine if it has been altered by human influences such as farming. Inclusion of contaminated sites in a broad study

results in a bias in the study. The continued practice of journals to publish such studies highlights a failure of peer review.]

Challenging the Orthodoxy

Global Microwave SST Update for April, 2013: -0.04 deg. C

By Roy Spencer, His Blog, May 7, 2013

<http://www.drroyspencer.com/2013/05/global-microwave-sst-update-for-april-2013-0-04-deg-c/>

[SEPP Comment: Explaining why it appears that sea surface temperature trend shows no warming trend for at least the past ten years, since these particular measurements began.]

Request for Correction of Serious Inaccuracy

By Christopher Monckton, SPPI, May 6, 2013

http://scienceandpublicpolicy.org/originals/request_for_correction_of_serious_inaccuracy.html

The Way Back

By IPCC expert Reviewer Vincent Gray, NZ Climate Truth Newsletter No 310, May 10, 2013

<http://theclimatescepticsparty.blogspot.com.au/>

[SEPP Comment: A review of 30 years of environmental zealotry and the decline of science.

“There is still much to do before science and common sense can once again prevail.”]

Defending the Orthodoxy

A summary of current climate change findings and figures

By Staff Writers, WMO, March 2013

<http://www.wmo.int/pages/mediacentre/factsheet/documents/ClimateChangeInfoSheet2013-03final.pdf>

[SEPP Comment: Cites the 2010 paper stating 97 to 98% of most active climate researchers support the concept of carbon-based AGW. Do discussion of the government payments to these researchers.]

Record low in Arctic sea ice caused by global warming, says UN

Global warming not only increased temperatures last year but caused a record low in Arctic sea ice, as well as deadly storms and economic uncertainty, the UN has warned.

By Louise Gray, Telegraph, UK, May 2, 2013

<http://www.telegraph.co.uk/earth/environment/climatechange/10033034/Record-low-in-Arctic-sea-ice-caused-by-global-warming-says-UN.html>

Link to report, WMO statement on the status of the global climate in 2012

By Staff Writers, WMO, 2013

http://www.wmo.int/pages/mediacentre/press_releases/documents/WMO_1108_EN_web.pdf

Earth's current warmth not seen in the last 1,400 years or more

By Staff Writers, New York NY (SPX), Apr 23, 2013

http://www.terraily.com/reports/Earths_current_warmth_not_seen_in_the_last_1400_years_or_more_999.html

Link to paper: Continental-scale temperature variability during the past two millennia

By Moinuddin Ahmed, et al, Nature Geoscience, Apr 21, 2013

<http://www.nature.com/ngeo/journal/v6/n5/full/ngeo1797.html>

What's causing the surface warming slowdown? Scientists tell us what they think

By Roz Pidcock, Carbon Brief, May 8, 2013

<http://www.carbonbrief.org/blog/2013/05/whats-causing-the-surface-warming-slowdown-scientists-tell-us-what-they-think>

Questioning the Orthodoxy

Against Popular Opinion

Video of Norm Kalmanovitch, Shaw TV, Calgary, May 2, 2013

http://www.youtube.com/watch?feature=player_embedded&v=vp4QXkSeSIE&noredirect=1#

[SEPP Comment: Low-key, personal, and effective.]

Bruckner's opus

By Andrew Montford, Bishop Hill, Apr 25, 2013

<http://www.bishop-hill.net/blog/2013/4/25/bruckners-opus.html>

[SEPP Comment: A summary of modern concepts, e.g., the idea of catastrophe has replaced the idea of progress.]

Dr. Roy Spencer on Global Warming, 'No one knows'

By Marshall Connolly, Catholic Online, Apr 25, 2013

<http://www.catholic.org/green/story.php?id=50654>

Even More about Trenberth's Missing Heat – An Eye Opening Comment by Roger Pielke Sr.

By Anthony Watts, WUWT, May 9, 2013

<http://wattsupwiththat.com/2013/05/09/even-more-about-trenberths-missing-heat-an-eye-opening-comment-by-roger-pielke-sr/>

The real deniers of climate change

Foolish doom-criers stand fast despite a chill

By David Deming, Washington Times, Apr 23, 2013

<http://www.washingtontimes.com/news/2013/apr/23/the-real-deniers-of-climate-change/>

Is Roy Spencer the world's most important scientist?

By Norman Rogers, American Thinker, May 9, 2013

http://www.americanthinker.com/2013/05/is_roy_spencer_the_worlds_most_important_scientist.html

Negative Feedbacks: What They Are, and Why They Are Important

By John Hinderaker, Power Line, Apr 28, 2013 [H/t GWPF]

<http://www.powerlineblog.com/archives/2013/04/negative-feedbacks-what-they-are-and-why-they-are-important.php>

Ocean Heat Content (0 to 2000 Meters) – Why Aren't Northern Hemisphere Oceans Warming During the ARGO Era?

By Bob Tisdale, WUWT, Mar 3, 2013

<http://wattsupwiththat.com/2013/05/03/ocean-heat-content-0-to-2000-meters-why-arent-northern-hemisphere-oceans-warming-during-the-argo-era/>

The Climate Circus Leaves Town

As traditional energy sources go from doom and gloom to boom.

By Steven Hayward, The Weekly Standard, Apr 29, 2013 [H/t George Nicholas]

http://www.weeklystandard.com/articles/climate-circus-leaves-town_718070.html

The tragedy of climatism: Resource misuse on a global scale

By Steve Goreham, Washington Times, May 2, 2013

http://communities.washingtontimes.com/neighborhood/climatism-watching-climate-science/2013/may/2/tragedy-climatism-resource-misuse-global-scale/#disqus_thread

Questioning European Green

Biomass used to be good

By Martian Livermore, Scientific Alliance, May 9, 2013

<http://scientific-alliance.org/scientific-alliance-newsletter/biomass-used-be-good>

[SEPP Comment: Once increasing biomass was considered a good thing for the planet, now to “save the planet” some want to burn it.]

Plans to massively expand wood burning lead to concerns about sustainability

By Robin Webster, Carbon Brief, May 7, 2013

<http://www.carbonbrief.org/blog/2013/05/how-much-biomass-are-we-going-to-be-using-by-2017>

Britain can't afford to surrender to the greens on shale gas

If we give in to the green lobby, Britain will drift into an energy crisis

By Peter Lilley, Spectator, UK, May 11, 2013 [H/t Bishop Hill]

<http://www.spectator.co.uk/features/8905731/the-only-way-is-shale/>

These state bodies are egged on by powerful environmental NGOs, which are heavily financed by the EU (WWF receives €600,000 and Friends of the Earth Europe €1.2 million) and our government (we pay WWF £4.1 million) to create the semblance of popular support. These NGOs can deploy any uncorroborated scare story in their war against fossil fuels.

[SEPP Comment: Government subsidized environmental groups then influence policy by claiming: 1) the amount of shale gas is insignificant; 2) it won't reduce price; and 3) employ scare stories.]

Climate Change Committee points out the elephant in the room

By Martin Livermore, Scientific Alliance, Apr 26, 2013

<http://scientific-alliance.org/scientific-alliance-newsletter/climate-change-committee-points-out-elephant-room>

Europe is becoming a green-energy basket case

Editorial, Washington Post, Apr 21, 2013

http://www.washingtonpost.com/opinions/europe-is-becoming-a-green-energy-basket-case/2013/04/21/4b1b81d0-a87e-11e2-b029-8fb7e977ef71_story.html

Leading Economics Publisher Calls Germany's Subsidized Solar Industry “A Capital Destroyer Of Historic Dimensions”!

By P Gosselin, No Tricks Zone, May 6, 2013

<http://notrickszone.com/2013/05/06/leading-economics-publisher-calls-germanys-subsidized-solar-industry-a-capital-destroyer-of-historic-dimensions/>

The solar ruin did not happen despite the subsidies, but it was because of them that it turned into a disaster.

Temperature: The Blinding Obsession. It's the Precipitation Stupid

By Tim Ball, A Different Perspective, May 1, 2013

<http://drtimball.com/2013/temperature-the-blinding-obsession-its-the-precipitation-stupid/>

Questioning Green Elsewhere

The Department of Energy Spends \$11 Million Per Job

By Staff Writers, Institute for Energy Research, May 6, 2013 [H/t Mark Duchamp]

<http://www.instituteforenergyresearch.org/2013/05/08/does-11-million-jobs>

[SEPP Comment: According to the analysis based on DOE numbers, spending \$26 Billion on renewable energy since 2009 created 2,298 permanent jobs.]

Earth Day's good news: Column

Shale gas revolution has curtailed U.S. carbon dioxide emissions.

By Bjørn Lomborg, USA Today, Apr 22, 2013

<http://www.usatoday.com/story/opinion/2013/04/22/earth-days-good-news-column/2101327/>

Environmentalists are Hurting the US Economy

By Marita Noon, Energy Tribune, May 10, 2013

<http://www.energytribune.com/76741/environmentalists-are-hurting-the-us-economy#sthash.KtWcidcH.dpbs>

Report: Global Renewable Investments in 2012 Tumble 11% as Market Shifts from West to East

By Staff Writers, Power News, Apr 25, 2013

http://www.powermag.com/news/5561.html?hq_e=el&hq_m=2660664&hq_l=7&hq_v=5e660500d0

Link to the Report: Who's Winning the Clean Energy Race, 2012?

By Various Writers from Bloomberg New Energy Finance, Pew Charitable Trusts, 2012

http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/News/Press_Releases/Clean_Energy/clen-G20-report-2012-FINAL.pdf

[SEPP Comment: According to the report China is winning the clean energy race and the US has stumbled. It would be better for American citizens if the US pulls out of the race and lets China win.]

Shepherd or shoot goats in the name of climate change

By Steve Goreham, Washington Times, May 9, 2013

<http://communities.washingtontimes.com/neighborhood/climatism-watching-climate-science/2013/may/9/shepherd-or-shoot-goats-name-climate-change/>

Problems in the Orthodoxy

Baffled German Government Concedes! "Global Warming Has Stopped...Warming Pause Is Remarkable...Unexpected"

By P Gosselin, No Tricks Zone, May 5, 2013

<http://notrickszone.com/2013/05/05/baffled-german-government-concedes-global-warming-has-stopped-warming-pause-is-remarkable-unexpected/>

Germany To Open Six More Coal Power Stations In 2013

By Paul Homewood, Not a Lot of People Know That, Apr 22, 2013 [H/t GWPF]

<http://notalotofpeopleknowthat.wordpress.com/2013/04/22/germany-to-open-six-more-coal-power-stations-in-2013/>

Germany’s \$20-Million Solar Jobs – Die Welt Finally Realizes: “Expensive Green Energy Subsidies Useless”

By P Gosselin, No Tricks Zone, May 2, 2013

<http://notrickszone.com/2013/05/02/germanys-20-million-solar-jobs-die-welt-finally-realizes-expensive-green-energy-subsidies-useless/>

Scientists Admit They Cannot Predict Drought

By Doug Hoffman, The Resilient Earth, via GWPF, Apr 29, 2013

<http://www.thegwpf.org/scientists-admit-predict-drought/>

Link to article: Climate models fail to ‘predict’ US droughts

Simulations identify past megadroughts, but at wrong times.

By Quirin Schiermier, Nature, Apr 16, 2013

<http://www.nature.com/news/climate-models-fail-to-predict-us-droughts-1.12810>

Lowering Standards

Royal Society calls Lewandowsky “outstanding”, gives him money, loses more scientific credibility

By Jo Nova, Her Blog, Apr 28, 2013

<http://joannenova.com.au/2013/04/royal-society-calls-lewandowsky-outstanding-gives-him-money-loses-more-scientific-credibility/>

Funding Fights

Global Warming Alarm: Continued Cooling May Jeopardize Climate Science And Green Energy Funding!

By Larry Bell, Forbes, Apr 30, 2013

<http://www.forbes.com/sites/larrybell/2013/04/30/global-warming-alarm-continued-cooling-may-jeopardize-climate-science-and-green-energy-funding/>

Seeking a Common Ground

10 signs of intellectual honesty

By Judith Curry, Climate Etc., Apr 20, 2013

<http://judithcurry.com/2013/04/20/10-signs-of-intellectual-honesty/#more-11583>

Consensus and Controversy: the Debate on Man-made Global Warming

By Emil Røyrvik, SINTEF, GWPF, Apr 23, 2013

<http://www.thegwpf.org/consensus-controversy-debate-man-made-global-warming/>

Links to the full report.

Let's review the peer review process

By Philip Moriarty, Times Higher Education, UK, Apr 18, 2013 [H/t GWPF]

<http://www.timeshighereducation.co.uk/features/feature-lets-review-the-peer-review-process/2003180.fullarticle>

Monbiot on CSAs [Chief Scientific Advisor]

By Andrew Montford, Bishop Hill, Apr 30, 2013

<http://www.bishop-hill.net/blog/2013/4/30/monbiot-on-csas.html>

[SEPP Comment: Too many scientific advisors consider lobbying to be part of their job.]

More on the 'pause'

By Judith Curry, Climate Etc., May 7, 2013

<http://judithcurry.com/2013/05/07/more-on-the-pause/#comments>

[SEPP Comment: A long post suggesting that the ability to predict global warming has been exaggerated.]

Pierrehumbert and unrealistic expectations

By Andrew Montford, Bishop Hill, May 7, 2013

<http://bishophill.squarespace.com/blog/2013/5/7/pierrehumbert-and-unrealistic-expectations.html>

[SEPP Comment: See link immediately above.]

The art and science of effective science advice

By Judith Curry, Climate Etc., Apr 28, 2013

<http://judithcurry.com/2013/04/28/the-art-and-science-of-effective-science-advice/#more-11596>

[SEPP Comment: Excerpts from the UK publication "Future Directions for Scientific Advice in Whitehall."]

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

NASA Study Projects Warming-Driven Changes in Global Rainfall

By Kathryn Hansen for Goddard Space Flight Center

Greenbelt MD (SPX) May 07, 2013

http://www.terraily.com/reports/NASA_Study_Projects_Warming_Driven_Changes_in_Global_Rainfall_999.html

[SEPP Comment: Another long-term study of very limited value using models that have not been validated. The article fails acknowledge this important fact.]

NASA Makes Another Useless Global Warming Prediction

Editorial, IBD, May 8, 2013

<http://news.investors.com/ibd-editorials/050813-655342-nasa-predicts-extreme-rain-from-climate-change.htm?p=full>

[SEPP Comment: See link immediately above.]

Communicating Better to the Public – Make things up.

Oreskes and Conway do the end of the world

By Andrew Montford, Bishop Hill, Apr 29, 2013

<http://bishophill.squarespace.com/blog/2013/4/29/oreskes-and-conway-do-the-end-of-the-world.html>

WWU faculty continue attack on Easterbrook with more misinformation

By Staff Writers, ICECAP, May 10, 2013

http://icecap.us/index.php/go/political-climate/wwu_faculty_continue_uniformed_attack_on_easterbrook/

Measurement Issues

Some Like It To Appear Hot

By Tom Quirk, Quadrant, AU, May 11, 2013

<http://www.quadrant.org.au/blogs/doomed-planet/2013/05/some-like-it-to-appear-hot>
[SEPP Comment: Continued failure to account for the urban heat island effect.]

NASA Opens New Era in Measuring Western US Snowpack

By Staff Writers, Washington DC (SPX), May 06, 2013

http://www.spacedaily.com/reports/NASA_Openes_New_Era_in_Measuring_Western_US_Snowpack_999.html

Changing Weather

Iceman cometh - New Hemispheric cold season (Nov-Apr) snow cover a new record

By Joseph D'Aleo, ICECAP, May 1, 2013

http://icecap.us/index.php/go/new-and-cool/iceman_cometh/

Do They Even Look?

Baffled German Government Concedes! "Global Warming Has Stopped... Warming Pause Is Remarkable... Unexpected"

By Joe Bastardi, Patriot Post, May 9, 2013

<http://patriotpost.us/opinion/18098>

MET office now admits Arctic sea ice didn't cause unusually cold weather

The Hockey Schtick, Apr 22, 2013 [H/t GWPF]

<http://hockeyschtick.blogspot.co.uk/2013/04/met-office-now-admits-arctic-sea-ice.html>

Link to the full report: Why was the start to spring 2013 so cold?

By Julia Slingo, Met Office Chief Scientist, April, 2013

<http://www.metoffice.gov.uk/media/pdf/i/2/March2013.pdf>

Down to minus 45

By Vladimir Radyuhin, The Hindu, Apr 22, 2013

<http://www.thehindu.com/opinion/op-ed/down-to-minus-45/article4640409.ece>

[SEPP Comment: During the winter, the atmosphere above the Arctic is extremely dry. Yet, some meteorologists blame springtime cold and heavy snows on Arctic ice melt the previous summer. See link immediately above.]

Long Term Tornado Trends

By Paul Homewood, WUWT, May 8, 2013

<http://wattsupwiththat.com/2013/05/08/long-term-tornado-trends-2/>

Changing Climate

Ice-free Arctic in our future, ancient climate record suggests

By John Roach, NBC News, May 9, 2013 [H/t Clyde Spencer]

http://science.nbcnews.com/_news/2013/05/09/18149937-ice-free-arctic-in-our-future-ancient-climate-record-suggests

Link to Article: Pliocene Warmth, Polar Amplification, and Stepped Pleistocene Cooling Recorded in NE Arctic Russia

By Brigham-Grette, et al, Science, May 9, 2013

<http://www.sciencemag.org/content/early/2013/05/08/science.1233137>

Also See: What Caused the Middle Pliocene Warming?

By Staff Writers, NASA-GISS,

http://www.giss.nasa.gov/research/features/199704_pliocene/page3.html

New NSF paleo research claiming Arctic was warmer fails to take major ocean circulation changes 3 million years ago into account

By Anthony Watts, WUWT, May 9, 2013

<http://wattsupwiththat.com/2013/05/09/new-nsf-paleo-research-claiming-arctic-was-warmer-fails-to-take-major-ocean-circulation-changes-3-million-years-ago-into-account/>

[SEPP Comment: See link immediately above.]

Changing Seas

Sea Surface Temperatures Reach Highest Level in 150 Years on Northeast Continental Shelf

By Staff Writers, Woods Hole MA (SPX), Apr 29, 2013

http://www.terraily.com/reports/Sea_Surface_Temperatures_Reach_Highest_Level_in_150_Years_on_Northeast_Continental_Shelf_999.html

Changing Cryosphere – Land / Sea Ice

Greenland Glaciers Not Melting as Quickly: Sea Level Rise Slower Than Predicted

By Catherine Griffin, Science World Report, May 8, 2013 [H/t GWPF]

<http://www.scienceworldreport.com/articles/6727/20130508/greenland-glaciers-melting-quickly-sea-level-rise-slower-predicted.htm>

Link to paper, Future sea-level rise from Greenland's main outlet glaciers in a warming climate

By Faezdh Nick, et al, Nature, May 9, 2013

<http://www.nature.com/nature/journal/v497/n7448/full/nature12068.html>

Changing Earth

Mauna Loa hits 400 PPM of CO₂, alarmists wail and gnash teeth, Earth survives

By Anthony Watts, WUWT, May 10, 2013

<http://wattsupwiththat.com/2013/05/10/mauna-loa-hits-400-ppm-of-co2-alarmists-wail-and-gnash-teeth-earth-survives/>

[SEPP Comment: Survivor tee shirts are available.]

Dust in the clouds

Cirrus clouds form around mineral dust and metallic particles, study finds.

By Jennifer Chu, MIT News Office, May 9, 2013 [H/t WUWT]

<http://web.mit.edu/newsoffice/2013/cirrus-clouds-mineral-dust-0509.html>

Link to paper: CLARIFYING THE DOMINANT SOURCES AND MECHANISMS OF CIRRUS CLOUD FORMATION

Cziczo, et al., Science, May 9, 2013

<http://www.sciencemag.org/content/early/2013/05/08/science.1234145.full?sid=2e16fb2d-88b1-466e-b5f3-050caeb4eeb6>

A look at the world explains 90 percent of changes in vegetation

By Staff Writers, Zurich, Switzerland (SPX), Apr 17, 2013

http://www.spacedaily.com/reports/A_look_at_the_world_explains_90_percent_of_changes_in_vegetation_999.html

[SEPP Comment: Does not mention the benefits of CO2 enrichment.]

Acidic Waters

Arctic waters growing alarmingly acidic

By Erlend Lanke Soibu, Norwegian Broadcasting Corporation, May 11, 2013

<http://sciencenordic.com/arctic-waters-growing-alarmingly-acidic>

[SEPP Comment: Unable to link to report. The claim that the oceans will be twice as acidic as today is absurd, the oceans are alkaline. How did creatures in the sea survive when atmospheric CO2 concentration was far greater than today?];

Review of Recent Scientific Articles by NIPCC

For a full list of articles see www.NIPCCreport.org

More Problems with State-of-the-Art Climate Models

Reference: Li, G. and Xie, S.-P. 2012. Origins of tropical-wide SST biases in CMIP multi-model ensembles. *Geophysical Research Letters* 39: 10.1029/2012GL053777.

<http://www.nipccreport.org/articles/2013/apr/23apr2013a3.html>

Effects of Temperature on Mortality in Nairobi, Kenya

Reference: Egondi, T., Kyobutungi, C., Kovats, S., Muindi, K., Ettarh, R. and Rocklov, J. 2012. Time-series analysis of weather and mortality patterns in Nairobi's informal settlements. *Global Health Action* 5: 23-31.

<http://nipccreport.org/articles/2013/may/7may2013a1.html>

[SEPP Comment: Cold kills.]

Problems Modeling Air-Sea Fluxes and Sea Surface Temperatures

Reference: Bates, S.C., Fox-Kemper, B., Jayne, S.R., Large, W.G., Stevenson, S. and Yeager, S.G. 2012. Mean biases, variability, and trends in air-sea fluxes and sea surface temperature in the CCSM4. *Journal of Climate* 25: 7781-7801.

<http://nipccreport.org/articles/2013/may/7may2013a4.html>

Adaptive Evolution in the Sea's Most Abundant Primary Producer

Reference: Lohbeck, K.T., Riebesell, U. and Reusch, T.B.H. 2012. Adaptive evolution of a key phytoplankton species to ocean acidification. *Nature Geoscience* 5: 346-351.

<http://nipccreport.org/articles/2013/may/8may2013a1.html>

The Political Games Continue

Lawmakers Push for Financing Parity for Renewable Projects

By Staff Writers, Power News, Apr 25, 2013

http://www.powermag.com/news/5563.html?hq_e=el&hq_m=2660664&hq_l=6&hq_v=5e660500d0

[SEPP Comment: In this instance, the organization of the company results in different tax outcomes.]

Litigation Issues

Carbon Dioxide and the Supreme Court: Earth Cult Day

By James V. DeLong, Conservatives 4 Palin, Apr 22, 2013

<http://conservatives4palin.com/2013/04/carbon-dioxide-and-the-supreme-court-earth-cult-day.html>

A Supreme Court EPA Decision That Could Cost Taxpayers \$21 Billion Per Year

By Marlo Lewis, Forbes, May 8, 2013

<http://www.forbes.com/sites/realspin/2013/05/08/a-supreme-court-epa-decision-that-could-cost-taxpayers-21-billion-per-year/>

[SEPP Comment: SEPP is a party in the lawsuit.]

Cap-and-Trade and Carbon Taxes

The Five Circles of Carbon Tax Hell

By James DeLong, Master Resource, May 3, 2013

<http://www.masterresource.org/2013/05/five-circles-of-carbon-tax-hell/#more-25389>

[SEPP Comment: A view of what a carbon tax may become rather than the idealized view of its supporters.]

China a leader in fight on climate change?

By Staff Writers, Sydney (UPI), Apr 29, 2013

http://www.terraily.com/reports/China_a_leader_in_fight_on_climate_change_999.html

Link to the report: "The Critical Decade: Global Action Building on Climate Change"

By the Australian Climate Change Commission

<http://climatecommission.gov.au/report/global-action-building/>

[SEPP Comment: Must continue to justify taxes on carbon dioxide.]

A View into Incomprehensible Legislation

By Donn Dears, Power for USA, Apr 23, 2013 [H/t James Kross]

<http://dddusmma.wordpress.com/2013/04/23/a-view-into-incomprehensible-legislation/>

Carbon Tax Folly

By Donn Dears, Power for USA, May 3, 2013

<http://dddusmma.wordpress.com/2013/05/03/carbon-tax-folly/>

Subsidies and Mandates Forever

Time To End The Myth Of Tax-Subsidized Big Oil

By Pete Sepp, IBD, May 8, 2013

<http://news.investors.com/ibd-editorials-perspective/050813-655311-oil-and-gas-business-tax-rates-are-among-the-highest-of-any-industry.htm?p=full>

EPA and other Regulators on the March

Court backs EPA veto of mountaintop mining project

By Ben Geman, The Hill, Apr 23, 2013

<http://thehill.com/blogs/e2-wire/e2-wire/295565-court-backs-epa-veto-of-mountaintop-mining-permit>

EPA chief: Permit vetoes aren't used 'frivolously'

By Ben Geman, The Hill, Apr 24, 2013

<http://thehill.com/blogs/e2-wire/e2-wire/295785-epa-chief-permit-vetoes-arent-used-frivolously>

EPA drops \$569 million in response to Hurricane Sandy sewage spill

By Ben Goad, The Hill, May 2, 2013

<http://thehill.com/blogs/regwatch/energyenvironment/297463-epa-drops-569-million-in-response-to-supertorm-sandy-sewage-spill>

[SEPP Comment: More reason for calling Sandy an unusual extreme weather event.]

Former EPA chief under fire for new batch of 'Richard Windsor' emails

By Julian Hatten, The Hill, May 1, 2013

<http://thehill.com/blogs/regwatch/energyenvironment/297255-former-epa-chief-under-fire-for-new-batch-of-richard-windsor-emails>

Settlement Between Feds, Wisconsin Utilities Mandate More Coal-Plant Retirements

By Sonal Patel, Power News, Apr 25, 2013

http://www.powermag.com/news/5558.html?hq_e=el&hq_m=2660664&hq_l=10&hq_v=5e660500d0

[SEPP Comment: Another example of sue and settle with the Sierra Club, EPA and Justice Department working hand-in-glove, with no justice to the consumer. EPA pending regulations make it impossible to replace the plants being forced to retire.]

Energy Issues – Non-US

Fear of Fracking

By Jeffrey Frankel, Project Syndicate, Apr 16, 2013

<http://www.project-syndicate.org/commentary/overcoming-objections-to-shale-gas-by-jeffrey-frankel>

The precautionary principle is hard to dislodge. Is it really true that new technologies are necessarily riskier? By this logic, men who worry about their virility should hesitate to try the unfamiliar new technology, Viagra, and instead stick with powdered rhino horn.

Rebound Redux: IEA Gets Energy Efficiency Wrong

By Michael Shellenberger, Master Resource, Apr 29, 2013

<http://www.masterresource.org/2013/04/rebound-redux-iea-wrong/#more-25379>

[SEPP Comment: The results from policies requiring energy efficiency may be different from the expected. On another note, regulatory bureaucrats fail to count the great cost to consumers in time from products mandated in the name of energy efficiency.]

Energy Issues -- US

FracFocus Responds to Harvard Study

By Staff Writers, FracFocus, Apr 24, 2013

<http://fracfocus.org/node/344>

[SEPP Comment: FracFocus is a voluntary, national tool for registering chemicals used in hydraulic fracturing. Some states make registration mandatory.]

Methane study, EPA debunk claims of water pollution, climate change from fracking

By Ben Wolfgang, Washington Times, Apr 29, 2013

<http://www.washingtontimes.com/news/2013/apr/29/pa-environment-agency-debunks-fracking-water-claim/>

Obama's security adviser: US oil boom won't lessen Mideast focus

By Ben Geman, The Hill, Apr 24, 2013

<http://thehill.com/blogs/e2-wire/e2-wire/295873-obamas-security-advisor-us-oil-boom-wont-lesser-mideast-focus>

Washington's Control of Energy

Canadian Minister: Put Up Or Shut Up On Keystone XL

Editorial, IBD, Apr 25, 2013

<http://news.investors.com/ibd-editorials/042513-653581-canada-seeks-keystone-pipeline-approval-or-else.htm?p=full>

Ignorant Arrogance: Energy "Market Failure" Revisited

By Peter Grossman, Master Resource, May 2, 2013

<http://www.masterresource.org/2013/05/energy-market-failure-revisited/#more-25284>

[SEPP Comment: Addressing the frequent justification for government intervention – the market has failed.]

Keystone XL and Climate Change: Much Ado About 0.00001°C/yr. (May 7th Testimony before Congress)

By Chip Knappenberger, Master Resource, May 8, 2013

<http://www.masterresource.org/2013/05/keystone-xl-and-climate-change-much-ado-about-0-00001cyr-may-7th-testimony-before-congress/#more-25520>

Outside View: No modest proposal from Anthony Swift

By Jack Rafuse, Alexandria, Va. (UPI), May 2, 2013

http://www.energy-daily.com/reports/Outside_View_No_modest_proposal_from_Anthony_Swift_999.html

[SEPP Comment: Refuting the NRDC's position on the Keystone XL.]

Oil and Natural Gas – the Future or the Past?

Interior Department boosts estimates of oil-and-gas resources in North Dakota

By Zack Colman, The Hill, Apr 30, 2013

<http://thehill.com/blogs/e2-wire/e2-wire/296953-feds-nd-oil-gas-reserves-much-greater-than-thought->

Israel, once energy-dependent, is new big gas producer

By William Booth, Washington Post, May 8, 2013

http://www.washingtonpost.com/world/middle_east/israel-once-energy-dependent-is-new-big-gas-producer/2013/05/07/75be92f4-b410-11e2-9fb1-62de9581c946_story.html

Equipment firms feel pressure as deep-water work heats up

By Emily Pickrell, Fuel Fix, May 8, 2013

<http://fuelfix.com/blog/2013/05/08/equipment-firms-feel-pressure-as-deep-water-work-heats-up/>

Return of King Coal?

Europe's anti-carbon agenda is adverse to human health and welfare (Part I)

By Frank Clemente, Energy Facts Weekly, May 2, 2013

<http://us1.campaign-archive2.com/?u=29bc7d5d85828d574f86c157a&id=44e76936da&e=>

Will Coal Make a Comeback?

By Donn Dears, Power for USA, May 7, 2013

<http://dddusmma.wordpress.com/2013/05/07/will-coal-make-a-comeback/>

Nuclear Energy and Fears

Japan's Triple Disaster

Earthquake and tsunami led to release of radioisotopes

By David Pacchioli, Oceanus, Apr 25, 2013

<http://www.whoi.edu/oceanus/feature/japan-triple-disaster>

SMR funding signed, sealed and delivered

By Staff Writers, WNN, Apr 16, 2013

http://www.world-nuclear-news.org/NN-SMR_funding_signed_sealed_and_delivered-1604137.html?utm_source=World+Nuclear+News&utm_campaign=ce494e216d-WNN_Weekly_23_April4_22_2013&utm_medium=email

A formal agreement with the US Department of Energy (DoE) means that Babcock & Wilcox (B&W) mPower can access the first \$79 million of federal funding under a government program to accelerate commercialization of small modular reactors (SMRs).

Alternative, Green ("Clean") Solar and Wind

The High Cost of Low-Value Wind Power

By Staff Writer, NCPA, Apr 17, 2013

http://www.ncpa.org/sub/dpd/index.php?Article_ID=23074&utm_source=newsletter&utm_medium=email&utm_campaign=EnvPD

Link to full report: The High Cost of Low-Value Wind Power

By Jonathan Lesser, Regulation, Spring, 2013

<http://www.cato.org/sites/cato.org/files/serials/files/regulation/2013/3/v36n1-8.pdf>

£1m for wind farms to shut turbines for one day

By Tom Peterkin, Scotland Today, May 5, 2013

<http://www.scotsman.com/scotland-on-sunday/scotland/1m-for-wind-farms-to-shut-turbines-for-one-day-1-2920750>

[SEPP Comment: Wind power is not free, even when it is unwanted.]

AWEA's Kelley says industry continuing to face tax incentive uncertainty

Transcript by Staff Writers, EETV, Apr 24, 2013

<http://www.eenews.net/tv/transcript/1673>

But this is a mature technology, it's now one of the lowest cost forms of energy in America.
[SEPP Comment: *Then why does it need production subsidies?*]

Can Wind ‘Compete’ without Subsidies?

By Marlo Lewis, Global Warming.org, Apr 18, 2013

<http://www.globalwarming.org/2013/04/18/can-wind-compete-without-subsidy/>

Chinese solar panel maker Suntech flames out

By Steven Mufson, Washington Post, May 3, 2013

http://www.washingtonpost.com/business/economy/chinese-solar-panel-maker-flames-out/2013/05/03/9b7f29d6-ac2c-11e2-9493-2ff3bf26c4b4_print.html

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

Energy Insecurity: The False Promise of Liquid Biofuels

By T.A Kiefer, Captain USN, Strategic Studies Quarterly, Spring, 2013 [H/t Dan Kish]

http://www.au.af.mil/au/ssq/digital/pdf/spring_13/kiefer.pdf

Full Report: Twenty First Century Snake Oil: Why the United States Should Reject Biofuels as Part of a Rational National Security Energy Strategy

By Captain T. A. “Ike” Kiefer, Waterloo Institute, Jan 2013 [H/t David Kreutzer]

<http://wici.ca/new/wp-content/uploads/2013/04/Kiefer-Snake-Oil3.pdf>

Biofuel Pioneer Forsakes Renewables to Make Gas-Fed Fuels

By Andrew Herndon, Bloomberg, May 1, 2013 [H/t Toshio Fujita]

<http://www.bloomberg.com/news/2013-04-30/biofuel-pioneer-forsakes-renewables-to-make-gas-fed-fuels.html>

[SEPP Comment: *Turning wood and plants such as switchgrass into biofuels is much tougher than President Bush and Congress believed.*]

Alternative, Green (“Clean”) Vehicles

Administration Denies Reality at Fisker Congressional Hearing

By Paul Chesser, National Legal and Policy Center Apr 25, 2013

<http://nlpc.org/stories/2013/04/25/house-committees-fisker-hearings-reveal-administration-denial-reality>

Solyndra Redux in Electric Car Industry

By Walter Russell Mead, Via Media, Apr 25, 2013 [H/t GWPF]

<http://blogs.the-american-interest.com/wrm/2013/04/25/solyndra-redux-in-electric-car-industry/>

Carbon Schemes

CO2 sequestration research stumbles onto something useful: a big lithium strike in Wyoming

By Alec Rawls, WUWT, May 2, 2013

<http://wattsupwiththat.com/2013/05/02/co2-sequestration-research-stumbles-onto-something-useful-a-big-lithium-strike-in-wyoming/>

California Dreaming

California high-speed rail estimates “astounding”

By Michael Barone, Washington Examiner, Apr 24, 2013

http://washingtonexaminer.com/california-high-speed-rail-estimates-astounding/article/2528101?utm_source=Washington%20Examiner:%20Opinion%20Digest%20-%2004/25/2013&utm_medium=email&utm_campaign=Washington%20Examiner:%20Opinion%20Digest

Jerry Brown calls climate change reason for budget restraint

By Staff Writer, Sacramento Bee, May 6, 2013

<http://blogs.sacbee.com/capitolalertlatest/2013/05/jerry-brown-calls-climate-change-reason-for-budget-restraint.html>

Health, Energy, and Climate

Earth Day should be about people too

By Staff Writers, ACSH, Apr 23, 2013

<http://hsdispatch.com/2013/04/23/earth-day-should-be-about-people-too-2/>

Environmental Industry

Is Al Gore the Latter Day Pardoner? Carbon Credits Are Modern Indulgences

By Tim Ball, A Different Perspective, Apr 22, 2013

<http://drtimball.com/2013/is-al-gore-the-latter-day-pardoner-carbon-credits-are-modern-indulgences/>

'Greeny Lying Bastards' and Other Carbon Disinformation

By Larry Bell, Forbes, Apr 23, 2013

<http://www.forbes.com/sites/larrybell/2013/04/23/greeny-lying-bastards-2/>

Opponents of Keystone to train 60K activists in civil disobedience

By Zack Colman, The Hill, Apr 22, 2013

<http://thehill.com/blogs/e2-wire/e2-wire/295293-activists-plan-protests-opposing-keystone>

Quarantining Alberta Oil

Environmentalists are successfully ring-fencing the province

By Lawrence Solomon, Financial Post, Apr 25, 2013

<http://opinion.financialpost.com/2013/04/25/lawrence-solomon-quarantining-alberta-oil/>

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BELOW THE BOTTOM LINE:

The Inaugural Golden Fleece Award

For Flagrant Fleecing of Community Resources

By Viv Forbes, Carbon Sense, May 10, 2013

<http://carbon-sense.com/wp-content/uploads/2013/05/golden-fleece-award.pdf>

Dem resolution warns climate change could push women to ‘transactional sex’

By Pete Kasperowicz, The Hill, Apr 29, 2013 [H/t Cork Hayden]

<http://thehill.com/blogs/floor-action/house/296679-dems-warn-climate-change-could-drive-women-to-transactional-sex#ixzz2RxilsV2n>

Igniting debate: School scrubs photo of professors burning book

By Joshua Rhett Miller, Fox News, May 8, 2013

<http://www.foxnews.com/us/2013/05/08/photograph-california-professors-ready-to-burn-climate-change-book-removed-from/?test=latestnews>

ScienceShot: Global Warming at Your Doorstep

By Gretchen Cuda Kroe, Science, Apr 30, 2013 [H/t Toshio Fujita]

<http://news.sciencemag.org/sciencenow/2013/04/scienceshot-global-warming-at-yo.html>

[SEPP Comment: *The measurements were taken in the fall when grass dies and the rapid decomposition releases CO2.*]

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ARTICLES:

1. The Oil Price Enigma

By S. Fred Singer, American Thinker, May 9, 2013

http://www.americanthinker.com/2013/05/the_oil_price_enigma.html

Oil is the single most important commodity purchased today, and its price influences the fortunes of every nation on the planet in significant ways. Yet nobody can tell you with honesty that they know where the price is headed.

Thirty years ago (and much younger then), I imagined that I could construct a model to calculate the future price of oil -- and even persuaded some others to accept this idea. Needless to say, the price never really performed as my model had predicted, except in very general terms; it did go higher. The experience left me with a deep appreciation of the importance of assumptions in models -- in this case, extraneous political parameters. Usefully also, I acquired a certain skepticism towards models generally.

The situation then was relatively simple: There was just an OPEC monopolist and the 'rest-of-the-world' producers. Today, the situation is much more complicated and I'm not sure I know how to predict a future price for crude oil.

In 1982, the world price was controlled by an OPEC core, mainly Saudi Arabia, which had excess production capacity and could also afford to cut their production in order to maintain a price. In fact, in the early 1980's, Saudi Arabia cut its production from 10 million barrels per day (MBD) down to almost 2 MBD in order to sustain a high world price. Ultimately, they failed -- probably because they needed the revenue (i.e., total number of barrels sold times the world price). The other world producers, including the rest of OPEC, were simply "price-takers," selling as much as they could produce at whatever the world price happened to be.

Under those circumstances, the scenario was fairly simple. One assumed that the OPEC core acted rationally, which means they would try to maximize their 'discounted profit stream' by adjusting their production from year to year (or perhaps month to month) to obtain the optimum price path over time: not too low a price to cut profit per barrel -- and not too high to cut the number of barrels sold.

This kind of problem can be solved with the help of 'optimal control theory,' as used by engineers and physicists. (Economists refer to it as the Pontryagin problem.) Mathematically, it means finding the integrand that will maximize the value of the integral.

In this case, the integral would be the summation over future years of (profit per bbl)x(number of barrels sold by the 'core'), all discounted to the present with a certain discount rate.

This problem, as originally posed by MIT Prof Robert Pindyck, can be solved by brute-force methods, using high-speed computers that try progressively different integrands until a maximum of the integral is reached. It turns out, however, that after some minor simplifying assumptions the problem can be solved analytically. The complete solution, though elegant, looks rather forbidding and is discussed in Appendix 2 of my monograph "The Price of World Oil" [Ann. Rev. Energy 1983]. But by applying recursive calculations, one obtains a price vs. time curve that will maximize the discounted profit stream to the OPEC core.

The solution of the problem demonstrates some interesting facts. The most important parameter for the OPEC core to consider is the discount rate -- as seen by Saudi Arabia. For example, fear that the Kingdom might lose control of the oil implies a high value of discount rate (that devalues future profits heavily) and calls for selling as much oil as possible within a short time frame. On the other hand, if there are no such fears about security, then the discount rate will be more normal, of the order of 2-3% per year. The solutions generally show an increasing price as the cost of production rises when wells are depleted.

Yale economist William Nordhaus has pointed out that there will be a backstop technology that sets an upper limit to the future price of oil. He assumed that this will be liquefied natural gas (LNG)-which seemed reasonable at the time, with crude oil selling for about \$12 a barrel and LNG up to \$100 for the energy equivalent.

That was in 1982. Today the situation is much different - and actually reversed. With a world price between \$90-100 per barrel, many oil resources around the world have become profitable. In Canada, tar sands production is increasing year by year. In the US, advances in 'fracking' and horizontal drilling now permit oil extraction from shale deposits, although kerogen in tight shale rocks is still beyond reach.

[As an aside, I still remember the National Petroleum Council, the industry energy experts who advised the Department of Interior, telling us around 1970 that "if the price of crude oil ever reaches \$3 (yes, three dollars) a barrel, shale oil will become economic."]

It appears to me that the present price of oil, between \$90-100 a barrel, is unstable -- as production increases around the world without a corresponding increase in demand. The major demand is still for transportation, on the ground and in the air. But the price of natural gas has fallen so much that the price-energy ratio is now around 6. LNG can be sold on the world market at around \$15 (per oil-equivalent barrel) and provides a fairly effective backstop to the world price of crude.

However, things are not as simple. While natural gas is very cheap in the United States and indeed in many other parts of the world, the situation can change drastically because of political decisions that have to do with environmental factors. For example, because of efforts to reduce

emissions of CO₂, natural gas is rapidly displacing cheap coal as the major boiler fuel for electrical generation. Many utilities have already made the switch or plan to go in that direction -- which would vastly increase the demand for natural gas. The use of LNG as a more economic fuel for large trucks is also becoming popular and can displace up to 3 MBD of US oil demand -- and therefore about one-third of oil imports.

Finally, we have the possibility of converting natural gas directly to gasoline or diesel fuel. Shell Oil has already built such a plant in Qatar and is planning the construction of a much larger plant in the United States. So even with natural gas production rising throughout the world, demand may rise even faster and raise the price of natural gas in relation to crude oil. It is difficult to predict where the balance will occur and how it will change over time -- with LNG becoming a world fuel, much like crude oil, as transportation costs become a small fraction of the total cost. Even tiny Israel may join the club of LNG exporters on the basis of their discoveries of huge gas fields in the Eastern Mediterranean.

But political developments can change this benign scenario almost overnight. Without the Keystone pipeline, high transportation costs would discourage the full development of Canadian tar sands. If environmental zealots succeed in curtailing drilling and fracking, gas prices will surely rise and affect oil prices. On the world market, all price predictions are off if the Middle East blows up. In all of these scenarios, which vitally affect global economic growth, the White House plays a crucial role. Dare we hope that as a 'lame duck' Obama will be less likely to follow Green zealots?

Ultimately, we have technological imponderables. If methane hydrates from the ocean floor should become commercial, then we can access a truly spectacular resource of natural gas -- and all bets are off.

2. In Defense of Carbon Dioxide

The demonized chemical compound is a boon to plant life and has little correlation with global temperature.

By Harrison Schmitt and William Happer, WSJ, May 8, 2013

<http://online.wsj.com/article/SB10001424127887323528404578452483656067190.html>

Of all of the world's chemical compounds, none has a worse reputation than carbon dioxide. Thanks to the single-minded demonization of this natural and essential atmospheric gas by advocates of government control of energy production, the conventional wisdom about carbon dioxide is that it is a dangerous pollutant. That's simply not the case. Contrary to what some would have us believe, increased carbon dioxide in the atmosphere will benefit the increasing population on the planet by increasing agricultural productivity.

The cessation of observed global warming for the past decade or so has shown how exaggerated NASA's and most other computer predictions of human-caused warming have been—and how little correlation warming has with concentrations of atmospheric carbon dioxide. As many scientists have pointed out, variations in global temperature correlate much better with solar activity and with complicated cycles of the oceans and atmosphere. There isn't the slightest evidence that more carbon dioxide has caused more extreme weather.

The current levels of carbon dioxide in the earth's atmosphere, approaching 400 parts per million, are low by the standards of geological and plant evolutionary history. Levels were 3,000 ppm, or more, until the Paleogene period (beginning about 65 million years ago). For most plants, and for the animals and humans that use them, more carbon dioxide, far from being a "pollutant" in need of reduction, would be a benefit. This is already widely recognized by operators of commercial greenhouses, who artificially increase the carbon dioxide levels to 1,000 ppm or more to improve the growth and quality of their plants.

Using energy from sunlight—together with the catalytic action of an ancient enzyme called rubisco, the most abundant protein on earth—plants convert carbon dioxide from the air into carbohydrates and other useful molecules. Rubisco catalyzes the attachment of a carbon-dioxide molecule to another five-carbon molecule to make two three-carbon molecules, which are subsequently converted into carbohydrates. (Since the useful product from the carbon dioxide capture consists of three-carbon molecules, plants that use this simple process are called C3 plants.) C3 plants, such as wheat, rice, soybeans, cotton and many forage crops, evolved when there was much more carbon dioxide in the atmosphere than today. So these agricultural staples are actually undernourished in carbon dioxide relative to their original design.

At the current low levels of atmospheric carbon dioxide, rubisco in C3 plants can be fooled into substituting oxygen molecules for carbon-dioxide molecules. But this substitution reduces the efficiency of photosynthesis, especially at high temperatures. To get around the problem, a small number of plants have evolved a way to enrich the carbon-dioxide concentration around the rubisco enzyme, and to suppress the oxygen concentration. Called C4 plants because they utilize a molecule with four carbons, plants that use this evolutionary trick include sugar cane, corn and other tropical plants.

Although C4 plants evolved to cope with low levels of carbon dioxide, the workaround comes at a price, since it takes additional chemical energy. With high levels of carbon dioxide in the atmosphere, C4 plants are not as productive as C3 plants, which do not have the overhead costs of the carbon-dioxide enrichment system.

That's hardly all that goes into making the case for the benefits of carbon dioxide. Right now, at our current low levels of carbon dioxide, plants are paying a heavy price in water usage. Whether plants are C3 or C4, the way they get carbon dioxide from the air is the same: The plant leaves have little holes, or stomata, through which carbon dioxide molecules can diffuse into the moist interior for use in the plant's photosynthetic cycles.

The density of water molecules within the leaf is typically 60 times greater than the density of carbon dioxide in the air, and the diffusion rate of the water molecule is greater than that of the carbon-dioxide molecule.

So depending on the relative humidity and temperature, 100 or more water molecules diffuse out of the leaf for every molecule of carbon dioxide that diffuses in. And not every carbon-dioxide molecule that diffuses into a leaf gets incorporated into a carbohydrate. As a result, plants require many hundreds of grams of water to produce one gram of plant biomass, largely carbohydrate.

Driven by the need to conserve water, plants produce fewer stomata openings in their leaves when there is more carbon dioxide in the air. This decreases the amount of water that the plant is forced to transpire and allows the plant to withstand dry conditions better.

Crop yields in recent dry years were less affected by drought than crops of the dust-bowl droughts of the 1930s, when there was less carbon dioxide. Nowadays, in an age of rising population and scarcities of food and water in some regions, it's a wonder that humanitarians aren't clamoring for more atmospheric carbon dioxide. Instead, some are denouncing it.

We know that carbon dioxide has been a much larger fraction of the earth's atmosphere than it is today, and the geological record shows that life flourished on land and in the oceans during those times. The incredible list of supposed horrors that increasing carbon dioxide will bring the world is pure belief disguised as science.

Mr. Schmitt, an adjunct professor of engineering at the University of Wisconsin-Madison, was an Apollo 17 astronaut and a former U.S. senator from New Mexico. Mr. Happer is a professor of physics at Princeton University and a former director of the office of energy research at the U.S. Department of Energy.

3. Earth Day Lesson: Environment is not Climate

By Thomas P. Sheahan, American Thinker, Apr 22, 2013

http://www.americanthinker.com/2013/04/earth_day_lesson_environment_is_not_climate.html

Earth Day is here again, but few people seem interested any more in global warming. It's plausible to inquire whether people realize we've got a duty to protect the environment. Actually, "protecting the environment" is not necessarily the same topic as "global warming." Confusion about the two needs to be cleared up.

The earliest written indication that mankind is responsible for taking care of the earth is probably in the Bible, in *Genesis 1* (v. 26-28) where God gives mankind *dominion* over everything else. Thus began the notion of *stewardship*, that we are responsible for properly using all things on earth.

For thousands of years the prevailing attitude was that the earth was huge and unlimited, so if you messed things up in one place you'd just move on. Certainly the settlement of the American west displayed that mentality. But later in the 19th century people saw the damage and became conscious of the need to preserve some of nature's beauty, and National Parks became established.

By the mid-20th century incidents of major pollution were becoming too frequent, and some tragedies occurred (example: in London England in 1952, thousands died from air fouled by burning soft, high-sulfur coal). A new word, *smog*, entered the vocabulary as polluted air in cities like Los Angeles burned the eyes. Within 25 miles of a paper mill, it really stunk. Still, "The Environment" didn't mean enough to motivate changing. "The price of progress" was the standard excuse.

Then in 1968 came the flight around the moon by Apollo 8, which returned the photo of the earth hanging like a bright blue marble against the backdrop of the vast emptiness of space.:

http://www.Nasa_blue_marble.jpg

That one photo instantly told everyone that this is the only place we've got. The Biblical concept of *stewardship* suddenly became real once again.

With overwhelming national agreement, Congress quickly passed laws to clean up air and water. The Environmental Protection Agency was chartered, and issued standards for industrial facilities and automobiles. Before long every state had its own environmental department. Things got better as factories were retro-fitted and old cars disappeared from the roads. Today you can eat the fish from some rivers that were sterile a half century ago.

Non-senior citizens either never knew or have forgotten what it used to be like, but examples of the cleaner environment abound when you stop to think about them. For example, a modern sewage-treatment plant is so good that it goes totally unnoticed in a community.

People realize the need for vigilance, to preserve the environment from future threats of pollution. Today there are many precautionary measures, notably government regulations requiring that before any new technology can be introduced, an evaluation of the environmental impact must be done. (Actually, the locomotive, the automobile and the airplane would never make it through environmental permitting today, even though they polluted less than what they replaced.)

Sadly, not all countries have learned from America's experience. In China the demand for electricity is so great that coal is burned very inefficiently, without any controls, and the air makes Los Angeles of the 1950s look good. Of the ten most air-polluted cities in the world, eight are in China. India likewise needs to clean up. It's easy for Americans to criticize, but they're sacrificing air quality to get faster economic growth. The sooner they retrace the half-century path of America, the better off the entire world will be.

The concern about global warming grew out of the environmental movement. The Earth has been warming very slowly since the "Little Ice Age" ended almost two centuries ago. In recent decades, fear was expressed that it may be warming too fast, due to the influence of mankind. Specifically, carbon dioxide emitted by burning coal, oil and natural gas was blamed for the warming. Large computer models were run to predict decades into the future. A lot of people concluded "we've got to *do something* to prevent further temperature rises."

Then reality set in. The models, for all their mathematical complexity, could not even "predict" the past reliably. The global temperature stopped rising, even though the CO₂ kept right on rising. The worrisome phrase "global warming" got replaced by "climate change."

Moreover, studies of the long-term behavior of Earth's climate showed that warm and cold periods come and go over time frames of several centuries. There are wobbles in Earth's orbit around the sun, and the sun erupts with activity occasionally (evidenced by sunspots). *Natural* variations in climate, as compared to humanity's contribution, are gradually being recognized as an important factor.

It is impossible to prevent natural climate change, and therefore efforts toward *mitigation* are fruitless. *Adaptation* is the way to respond to the ever-changing climate. That's what plants and animals have always done -- migrating, growing fur, increasing the density of *stomata* in leaves, and so forth. Recent analysis indicates that the computer-predicted rise in temperature was too high by a factor of two, which provides a much larger cushion of time for a response.

For mankind to be effective stewards of the planet, to protect the environment, we must use our intelligence. That begins with *learning* the basic chemistry and biology that underlie the intricate complexities of environmental science. We can't "fix" a problem we don't understand. Too many political leaders and environmental activists have lost sight of that prerequisite. Even the best of intentions cannot compensate for a deficiency in scientific understanding.

The issue isn't closed, and scientific agreement is lacking. That's quite a change from the popular "consensus" of a decade ago. This year's Earth Day might be a good time to focus on asking the right *basic* questions, so that we can work *with* nature to improve the planet.

4. A Tale of Two Oil States

While the shale boom lifts Texas, California sits on vast resources.

Editorial, WSJ, May 6, 2013

<http://online.wsj.com/article/SB10001424127887324695104578416871045535226.html?mod=W>
[SJ Opinion LEADTop](#)

Texas and California have been competing for years as U.S. growth models, and one of the less discussed comparisons is on energy. The Golden State has long been one of America's big three oil producing states, along with Texas and Alaska, but last year North Dakota surpassed it. This isn't a matter of geological luck but of good and bad policy choices.

Barely unnoticed outside energy circles, Texas has doubled its oil output since 2005. Even with the surge in output in North Dakota's Bakken region, Texas produces as much oil as the four next largest producing states combined. The Lone Star State now pumps nearly two million barrels a day, and Texas Railroad Commissioner Barry Smitherman (who is also oil commissioner) says "total production could double by 2016 and triple by the early 2020s." The entire U.S. now produces about seven million barrels a day.

The two richest fields are the Eagle Ford shale formation in South Texas, where production is up 50% in the last year alone, and the 250-square mile Permian Basin. Midland-Odessa in the Permian is one of America's fastest-growing metro areas.

More than 400,000 Texans are employed by the oil and gas industry (almost 10 times more than in California) and Mr. Smitherman says the average salary is \$100,000 a year. The industry generates about \$80 billion a year in economic activity, which exceeds the annual output of all goods and services in 13 individual states.

Now look to California, where oil output is down 21% since 2001, according to Energy Department data, even as the price of oil has soared and now trades in the neighborhood of \$95 a barrel. (See the nearby chart.)

This is not because California is running out of oil. To the contrary, California has huge reservoirs offshore and even more in the Monterey shale, which stretches 200 miles south and southeast from San Francisco. The Department of Energy estimates that the Monterey shale contains about 15 billion barrels of oil, which is about double the estimated supply in the Bakken.

Occidental Petroleum, OXY +3.03% the big oil player in California, has recently purchased leases from the Interior Department to drill in the Monterey shale, but in April a federal judge blocked the breakthrough drilling process known as hydraulic fracturing, or "fracking," in the state. The judge ordered an environmental review of the drilling process that Texas, North Dakota and other states have safely regulated for years.

A large part of the explanation for the Texas boom and the California bust is the political culture. Despite their cars, California voters have elected politicians who consider fossil fuels to be "dirty energy."

The plaintiffs in the Monterey shale lawsuit were the local chapters of the Sierra Club and the Center for Biological Diversity. Rita Dalessio, chairwoman of the Ventana chapter of the Sierra Club, said, "We're very excited. We're thrilled" by the judge's ban, adding that "I'm sure the champagne is flowing in San Francisco." This attitude is prevalent among California's elite and wealthy.

California has also passed cap-and-trade legislation that adds substantially to the costs of conventional energy production and refining. The politicians in Sacramento and their Silicon Valley financiers have made multibillion-dollar and mostly wrong bets on biofuels and other green energy. Texas has invested heavily in wind power but not at the expense of oil production.

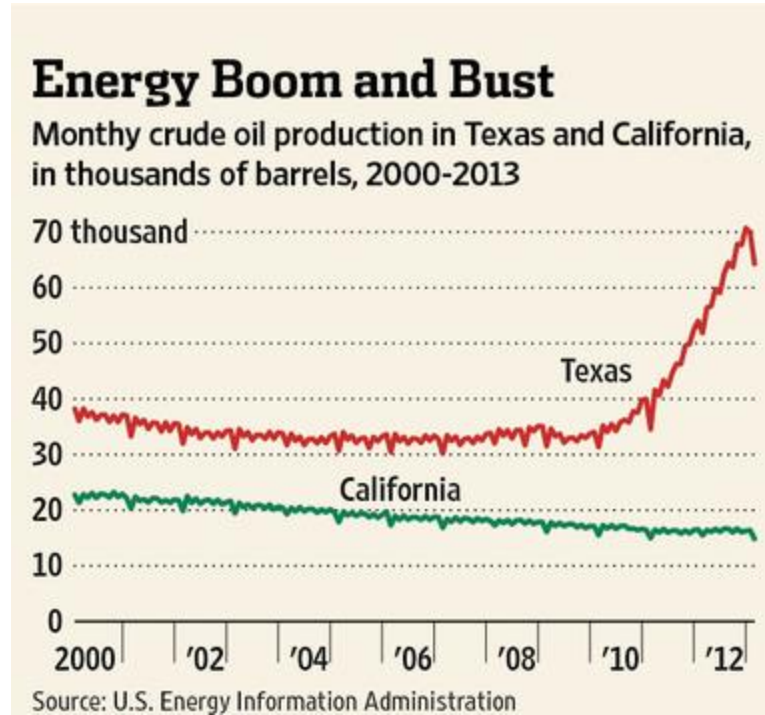
Another contrast is that most Texas oil is on private lands, which owners are willing to lease at a price. In California much of the oil-rich areas are state or federally owned, and leasing doesn't happen because of political constraints. In California it can take weeks or even months to get approval for an oil rig. The average in Texas? Four days.

In short, Texas loves being an oil-producing state while California is embarrassed by it. And it's no accident that Texas has been leading the nation in job creation since the recession ended. The energy boom is creating thousands of jobs related to drilling but also in downstream industries such as transportation, high-technology, construction and manufacturing. The Texas jobless rate is 6.4% while California's is still the third highest at 9.4%.

Texans are realizing another benefit from oil production: money to fund government services. According to energy analyst Kathleen Hartnett White of the Texas Public Policy Foundation, "oil and gas production generated \$12 billion in state taxes in 2012." This helps Texas avoid a state income tax. California's top marginal income-tax and capital-gains tax rate is 13.3%.

California has the natural resources and technical expertise to be the next Texas if it wants to be. What it needs is the political will. California Governor Jerry Brown at least says he wants to drill, but his dominant Democratic Party is so beholden to the already-rich greens that the state is paralyzed.

So the oil remains locked in the ground, as one million Californians look for work, as its schools and roads deteriorate, and as it keeps raising taxes to balance the budget. What a tragedy. Imagine how fast the U.S. economy would grow if California were more like Texas.



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