## The Week That Was: 2013-08-17 (August 17, 2013) Brought to You by SEPP (<u>www.SEPP.org</u>) The Science and Environmental Policy Project

**Quote of the Week:** *"When the climate models do not agree with the reality, then reality is not what's false!"* Fritz Vahrenholt [H/t No Tricks Zone – Seeking a Common Ground]

Number of the Week: 0 + 0

#### **THIS WEEK:**

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

**IPCC:** Reuters reported that a leak of the Summary for Policymakers (SPM) of Fifth Assessment Report (AR5) By the UN Intergovernmental Panel on Climate Change (IPCC), which will be published in late September, will state that the IPCC are 95% sure that human activity, primarily burning of fossil fuels, are the main cause of warming since the 1950s

The 1995 SPM asserted just over 50 confidence, the 2001 report asserted 66 percent confidence and the 2007 report asserted at least 90% confidence. One should recall that the SPM is a politically negotiated document, and the science behind its assertions are often highly questionable. For example, the 2001 SPM featured the notorious hockey-stick, in which temperatures fell slowly over the last thousand years only to rise rapidly in the last century. The hockey-stick disappeared in the 2007 report, without a trace, and the 2007 SPM emphasized only the last half of the 20<sup>th</sup> century, disregarding climate history.

Recently, there have been numerous scientific reports questioning the values projected by the models the IPCC relies on, and the failure to validate these models. Yet, the IPCC marches on, expressing ever increasing certainty in its work, as others express significant uncertainty in its work.

One could attribute the progression of expressed certainty as the orderly progression of what can be called bureaucratic science – become more determined that the bureaucracy is right, and ignore data that contradicts it. How the IPCC justifies the increasing certainty, in the face of contradicting data, will make interesting reading. Please see links under Defending the Orthodoxy and, for a discussion of bureaucratic science, Seeking a Common Ground. \*\*\*\*\*\*\*\*\*\*\*

**Questioning Models:** Hans von Storch, Director of the *Institute for Coastal Research* at *Helmholtz Research Center* in Germany, and others, have produced a somewhat technical discussion paper questioning the output of the computer models on which the IPCC relies for its pronouncements of global warming/climate change. Storch is not a climate skeptic. He believes that human emissions of carbon dioxide (CO2) are causing or may cause Catastrophic Anthropogenic Global Warming (CAGW).

The paper states that there has been no surface warming for the fifteen years from 1998 to 2012 and that this stagnation is inconsistent with the model projections, even at the 2% confidence level, much less than at the 5% level, or a higher level.

The authors suggest three possible reasons for the inconsistency: 1) underestimation of internal natural climate variability over time periods of a decade or more; 2) influence of external forcing factors; and 3) overestimation of the model sensitivity to increasing atmospheric concentrations greenhouse gases, primarily CO2. The authors somewhat dismiss the first reason, stating it will have little long term impact on calculating CAGW.

Apparently, the authors consider that eventually all natural influence will be included in the models. Some, such as SEPP, may find the argument unconvincing, because it may take decades or centuries before all the natural influences are incorporated in the models. The Right Climate Stuff research team stated it would be better to create a valid model of natural influences, before trying to model the human influences.

The Storch team is to be thanked for producing the discussion paper. They believe the models can be improved. Please note that they did not state that they falsified the models, but others did. Please see links under Problems in the Orthodoxy and for a direct link to this valuable paper: <a href="http://www.academia.edu/4210419/Can\_climate\_models\_explain\_the\_recent\_stagnation\_in\_glob\_al\_warming">http://www.academia.edu/4210419/Can\_climate\_models\_explain\_the\_recent\_stagnation\_in\_glob\_al\_warming</a>

**Best Available Evidence**: On her web site, Judith Curry has a lengthy post reviewing what constitutes the best available evidence for human-caused climate change. The post discusses the problem of communicating science better, particularly for policy makers. It brings up a number of interesting points such as for complex problems, with large uncertainties, one cannot determine the best available evidence by objective criteria. A second point is that with large uncertainties the best available evidence may lead to bad decisions.

Unfortunately, by addressing climate change in general, her discussion avoids a central issue. Are human emissions of carbon dioxide causing unprecedented and dangerous global warming? To the question of what constitutes the best available evidence, the greenhouse warming takes place in the atmosphere and that is where we should see the best available evidence. The evidence simply is not there. Until that evidence is clearly evident, the rest is fluff.

**More Heat:** The *Potsdam Institute for Climate Impact Research* (PIK) produced a study projecting that more parts of the world will suffer from extreme heat waves, which will quadruple by 2040. Of course, this garnered far greater press coverage than the discussion paper by Storch, et al., stating that the difference between model projections and observations is at a less than 2% confidence interval.

According to reports, the authors of the study claimed they used a suite of 29 models that they say accurately represent the historic, observed trend, giving them confidence the models' ability to project the trend into the future. According to the abstract: "For the near-term (i.e., by 2040), the models predict a robust, several-fold increase in the frequency of such heat extremes, irrespective of the emission scenario." Not only are projections from un-validated models not scientifically robust, but there is little or no evidence that the model projections are useful. Please see links Communicating Better to the Public – Make things up.

**The Greenhouse Effect:** On their respective web sites Roy Spencer and Tim Ball take different approaches in questioning the analogy that the atmospheric greenhouse effect can be explained by physical greenhouses. Both conclude that the analogy is inadequate. Please see links under Questioning the Orthodoxy.

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**Social Benefits of Carbon:** A study published in *The New Scientist* states that the increase in carbon dioxide following the ice age, helped early farmers to select the more robust plants for agriculture. Also there is A review of a study showing the enhanced atmospheric CO2 promotes more efficient water use by plants. Please see links under Social Benefits of Carbon.

**Offshore Wind:** It is difficult to obtain firm numbers on the costs of generating electricity from wind turbines located offshore. Two weeks ago, TWTW linked to an article in Der Speigel stating that in Germany offshore wind receives subsidies more than twice that of onshore (land based) wind. Yet investment in offshore wind is not continuing beyond a brief early spurt. This week, an article in Bloomberg states (according to Bloomberg New Energy Finance) the cost of offshore wind is about 2.7 times the cost of onshore wind.

Dong Energy, a Danish company with heavy wind investments is teaming with other companies and some universities to come up with a way to substantially decrease the costs of installing offshore wind. Also, it remains to be seen what the actual life span of offshore wind turbines will be in the corrosive salt conditions. Please see links under Questioning European Green, and Alternative, Green ("Clean") Solar and Wind.

**Reliable v. Unreliable:** Glenn Schleede presented an often overlooked detail when examining comparisons between the costs of wind and other forms of electricity generation. Given a particular unit of electricity, say kilowatt hour (KWh), what is the value of a reliable source of electricity as compared with an unreliable source? Modern civilization requires reliable electricity. What are the costs of frequent, unpredictable disruptions? These costs should be included in comparisons of costs such as the EIA levelized costs. They are not.

Instead of recognizing the high costs of unreliability, governments are subsidizing and mandating unreliable wind and solar. When they produce, wind and solar power can be sold at prices below those of traditional sources, such as fossil fuels. Europe is witnessing utilities not building or closing fossil fuel plants and nuclear plants because they are no long a viable investment. When these plants are shut, what will provide the necessary back-up to unreliable sources? In the end, the consumer will pay more. Please see links under Energy Issues – Non-US and Alternative, Green ("Clean") Solar and Wind.

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**Shifting attitudes**: The discovery of the methods to extract oil and natural gas for dense shale are changing attitudes in Europe. Prime Minister of the UK, David Cameron, wrote in a popular newspaper requesting support of hydraulic fracturing for natural gas in England. Of course, this produced strong denunciations. But can the British government continue to heavily subsidize unreliable wind, if the possibility of inexpensive natural gas remains unexplored? Please see links under Questioning European Green and Alternative, Green ("Clean") Solar and Wind \*\*\*\*\*\*\*\*\*\*

**Green Jobs:** The US General Accountability Office found that, under the 2009 stimulus bill, the US spent over \$500 Million on training people for specialized green jobs only to discover that only a few such jobs exist. Most green jobs are ordinary jobs given a specialized political aura, such as sanitation workers and mass transit employees and require no special government programs for training. The stimulus bill was less than a smashing success, failing to reach any of the stated promises. Please see link under Green Jobs.

**Number of the Week:** 0+0. The first 0 was selected from a pithy comment by Ross McKitrick as reported by WUWT: "Here's the list of scientific institutions and societies that have issued statements agreeing with CAGW, and that surveyed their members to find out how many agreed with the statement prior to issuing it, and published the results of the survey:

"Anyone want to see the list again?"

The second 0 was for the number of people that showed up for Climate Action Day in Georgetown promoted by Organizing for Action, a follow-up organization from President Obama's election campaign.

## **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. Science Says So, Suckers!

Just because climate science involves physics doesn't mean its conclusions are as certain as gravity.

By Jamie Whyte, WSJ, Aug 14, 2013

http://online.wsj.com/article/SB10001424127887324139404579012590381443168.html?mod=W SJ\_Opinion\_LEFTTopBucket

## 2. Canadian Oil-Sands Firm Struggles to Plug Leak

By Chester Dawson, WSJ, Aug 9, 2013

http://online.wsj.com/article/SB10001424127887323477604579003061473106206.html?mod=W SJ Energy

[SEPP Comment: Problems with using high-pressure steam on site to heat the oil sands in order to extract the liquid.]

## 3. Energy Firm Makes Costly Fracking Bet—on Water

For Antero's Planned Ohio River Pipeline, Payoff Hinges on Rainfall Patterns By Russell Gold, WSJ, Aug 13, 2013 http://online.wsj.com/article/SB10001424127887323420604578652594214383364.html?mod=W SJ\_Energy

[SEPP Comment: The volume of water use found at the bottom of the article is not particularly significant in Eastern US, but may be significant in the West and other semi-arid regions. Yet, even in the Eastern US, recycling should be encouraged.]

## **NEWS YOU CAN USE:**

## Challenging the Orthodoxy

European Institute For Climate And Energy Calls Climate Protection "An Absurd Science"...Says Models Flawed By P Gosselin, No Tricks Zone, Aug 11, 2013

http://notrickszone.com/2013/08/11/european-institute-for-climate-and-energy-calls-climate-protection-an-absurd-science-says-models-flawed/

## Current Wisdom: Even More Low Climate Sensitivity Estimates

By Patrick Michaels and Paul Knappenberger, CATO, Aug 14, 2013 http://www.cato.org/blog/current-wisdom-even-more-low-climate-sensitivity-estimates

## **Defending the Orthodoxy**

## Experts surer of manmade global warming but local predictions elusive

By Staff Writers, Reuters, Aug 16, 2013

http://www.trust.org/item/20130816133815-ao2wt/?source=hptop

[SEPP Comment: We are 95% certain humans are causing something we can no longer find in the real world. Great Propaganda Photo.]

## IPCC chair Pachauri seeks clean-tech help in climate battle

The United Nations' panel on climate change, the IPCC, is now drawing up a new report on global warming. The head of the panel provided a sneak preview of its findings on Monday in Joensuu. By Staff Writers, Yle Uutiset, (Finnish Broadcasting Company) Aug 13, 2013 [H/t GWPF] <a href="http://yle.fi/uutiset/ipcc\_chair\_pachauri\_seeks\_cleantech\_help\_in\_climate\_battle/6775177">http://yle.fi/uutiset/ipcc\_chair\_pachauri\_seeks\_cleantech\_help\_in\_climate\_battle/6775177</a>

## Climate benefit for cutting soot, methane smaller than previous estimates

By Staff Writers, Richland WA (SPX), Aug 14, 2013 http://www.terradaily.com/reports/Climate\_benefit\_for\_cutting\_soot\_methane\_smaller\_than\_prev ious\_estimates\_999.html

## In his second term, Obama becomes bolder on the environment

By Juliet Eilperin, Washington Post, Aug 10, 2013 http://www.washingtonpost.com/politics/in-his-second-term-obama-becomes-bolder-on-theenvironment/2013/08/10/1e65239e-f9f5-11e2-a369-d1954abcb7e3\_story.html?hpid=z3

## White House Climate Change Comments Show Obama's Ideological Intolerance

Editorial, IBD, Aug 13, 2013 http://news.investors.com/ibd-editorials/081313-667389-president-obama-shows-his-intoleranceof-scientific-skepticism.htm

## Warming Climate Pushes Plants Up the Mountain

By Daniel Stolte, Univ. Arizona News, Aug 14, 2013 [H/t WUWT] http://uanews.org/story/warming-climate-pushes-plants-up-the-mountain [SEPP Comment: Does cooling climate push them down? Of course, the issue is that they have not gone extinct over the past 2.6 million years of extreme climate variation caused by ice ages.]

## Questioning the Orthodoxy

Carbon Dioxide: The Green Greenhouse Gas of Life (and 'miracle molecule') By Paul Driessen, Master Resource, Aug 13, 2013 http://www.masterresource.org/2013/08/co2-gas-of-life/#more-27095

**Does a Greenhouse Operate through the Greenhouse Effect?** By Roy Spencer, His Blog, Aug 11, 2013 http://www.drroyspencer.com/2013/08/does-a-greenhouse-operate-through-the-greenhouse-effect/

A Greenhouse as Analogy For The Atmosphere Is Completely Wrong By Tim Ball, A Different Perspective, Aug 12, 2013 http://drtimball.com/2013/a-greenhouse-as-analogy-for-the-atmosphere-is-completely-wrong/

#### Meteor Dust and My TV Reception

By Alan Caruba, Warning Signs, Aug 12, 2013 http://factsnotfantasy.blogspot.com/2013/08/meteor-dust-and-my-tv-reception.html

## What the 'year of living dangerously' at nearly 400 ppm of CO2 in Earth's atmosphere looks like

By Anthony Watts, Aug 10, 2013 http://wattsupwiththat.com/2013/08/10/what-the-year-of-living-dangerously-at-nearly-400-ppmof-co2-in-earths-atmosphere-looks-like/ [SEPP Comment: Debunking the headlines.]

## Social Benefits of CO2

Ancient climate change picked the crops we eat today By Sara Reardon, New Scientist, Aug 15, 2013 <u>http://www.newscientist.com/article/dn24048-ancient-climate-change-picked-the-crops-we-eat-today.html?utm\_source=buffer&utm\_campaign=Buffer&utm\_content=buffer164b3&utm\_mediu m=twitter#.UhCWZJK1Fc6</u>

## Impact of climate, population and CO2 on water resources

By Judith Curry, Climate Etc., Aug 13, 2013 http://judithcurry.com/2013/08/13/impact-of-climate-population-and-co2-on-waterresources/#more-12553

## Climate change may be speeding coast redwood, giant sequoia growth

Scientists find that since the 1970s, some California coast redwoods have grown at the fastest rate ever.

By Bettina Boxal, LA Times, Aug 14, 2013 [H/t WUWT] http://www.latimes.com/news/local/la-me-redwoods-climate-20130814,0,3829911.story [SEPP Comment: Enhanced atmospheric CO2 is more likely the dominant cause.]

## Seasonal carbon dioxide range expanding as more is added to Earth's atmosphere

Northern Hemisphere land-based ecosystems 'taking deeper breaths,' scientists find By Staff NSF Press Release, Aug 8, 2013 [H/t WUWT] http://www.nsf.gov/news/news\_summ.jsp?cntn\_id=128720&org=NSF

## The global dance of carbon dioxide and spreading green flora

By Jo Nova, Her Blog, Aug 17, 2013 http://joannenova.com.au/2013/08/watch-as-co2-rises-and-falls-over-the-arctic-every-year/#more-29258

[SEPP Comment: Nice video of the seasonal variation of CO2 and greening. Too bad NASA could not resist the typical propaganda film of showing a power plant belching steam taken under special light or with special lenses.]

## **Problems in the Orthodoxy**

Can climate models explain the recent stagnation in global warming? By Hans von Storch et al., Institute for Coastal Research, No date <u>http://www.academia.edu/4210419/Can\_climate\_models\_explain\_the\_recent\_stagnation\_in\_glob</u> al\_warming

#### Von Storch: models are falsified

By Andrew Montford, Bishop Hill, Aug 12, 2013 http://bishophill.squarespace.com/blog/2013/8/12/von-storch-models-are-falsified.html

#### Seeking a Common Ground

# Vahrenholt Thrashes Leading IPCC, Former NCAR Scientist In Hamburg Debate! "The Wound Of Climate Science"

By P Gosselin, No Tricks Zone, Aug 15, 2013 <u>http://notrickszone.com/2013/08/15/vahrenholt-thrashes-leading-ipcc-former-ncar-scientist-in-hamburg-debate-the-wound-of-climate-science/</u>

## Attitudes to our environment

By Martin Livermore, Scientific Alliance, Aug 16, 2013 <u>http://scientific-alliance.org/scientific-alliance-newsletter/attitudes-our-environment</u> [SEPP Comment: Many species in addition to man change the environment in which they live.]

## Providing Evidence to Policy Makers: an Integration of Expertise and Politics

By Roger Pielke, Jr., Bridges, August 2013 http://www.ostina.org/en/volume-38-august-14-2013/opeds-commentaries/providing-evidence-topolicy-makers-an-integration-of-expertise-and-politics [SEPP Comment: The obligations scientists take in testifying before Congress.]

## The Problem with Apollo Analogies

Brief comments by Roger Pielke, Jr, His Blog, Aug 12, 2013 <u>http://rogerpielkejr.blogspot.com/2013/08/the-problem-with-apollo-analogies.html</u> [SEPP Comment: For using Apollo to justify a spending program to replace fossil fuels.]

## So what is the best available scientific evidence, anyways?

By Judith Curry, Climate Etc., Aug 14, 2013 http://judithcurry.com/2013/08/14/so-what-is-the-best-available-scientific-evidenceanyways/#more-12560

## **Climate Science & Sociology**

By Johanna [No last name given], Climate Etc., Aug 11, 2013 http://judithcurry.com/2013/08/11/climate-science-sociology/#more-12545 [SEPP Comment: A very long post discussing the politicization of climate science and the disadvantages of bureaucratic science.]

## **Cloud Cover and Climate Change**

By Staff, SPPI & CO2 Science, Aug 13, 2013 http://scienceandpublicpolicy.org/originals/cloud\_cover\_and\_climate\_change.html

## Lowering Standards

Quote of the week – the Aye's have it By Anthony Watts, WUWT, Aug 12, 2013 http://wattsupwiththat.com/2013/08/12/quote-of-the-week-the-ayes-have-it/

## NOAA's claim on El Reno tornado may not hold up

#### By Paul Homewood, WUWT, Aug 16, 2013

http://wattsupwiththat.com/2013/08/16/noaas-claim-on-el-reno-tornado-may-not-hold-up/ [SEPP Comment: When announcing new records, NOAA fails to clearly and explicitly state changes in its policies for reporting records, thereby misleading the public.]

#### Expanding the Orthodoxy

Scientists look into Earth's "Deep Time" to predict future effects of climate change By Staff Writers, Washington DC (SPX), Aug 14, 2013 http://www.terradaily.com/reports/Back\_to\_the\_future\_Scientists\_look\_into\_Earths\_Deep\_Time\_ to\_predict\_future\_effects\_of\_climate\_change\_999.html

#### **Questioning European Green**

**Europe Pulls the Plug on Its Green Future** By Benny Peiser, The Australian, via GWPF, Aug 9, 2013 <u>http://www.thegwpf.org/benny-peiser-europe-pulls-plug-green-future/</u> [SEPP Comment: Rejoice Europe!]

## German Green Energy Bluster Running Out Of Wind

By Larry Bell, Forbes, Aug 13, 2013 http://www.forbes.com/sites/larrybell/2013/08/13/german-green-energy-bluster-running-out-ofwind/

#### **Cameron's Fracking Plea**

By Walter Russell Mead, Via Meadia, Aug 13, 2013 http://blogs.the-american-interest.com/wrm/2013/08/13/camerons-fracking-plea/

## Energy 'volcano to erupt' with 10 per cent price hikes

Millions of households are set to be hit with gas and electricity price hikes of as much as 10 per cent, it has been claimed. By Steve Hawkes, Telegraph, UK, Aug 9, 2013 [H/t GWPF] <u>http://www.telegraph.co.uk/finance/personalfinance/consumertips/household-bills/10232886/Energy-volcano-to-erupt-with-10-per-cent-price-hikes.html</u>

## EU countries to cut renewable support further:

Editorial by Gerard Wynn, Reuters, Aug 14, 2013 <u>http://www.reuters.com/article/2013/08/14/column-wynn-renewable-eu-idUSL6N0GE1TJ20130814</u>

**Germany's Energy Chaos: Government May have to Rescue Nuclear Power Plants** By Daniel Wetzel, Die Welt, Trans Phillip Mueller, GWPF, Aug 15, 2013 <u>http://www.thegwpf.org/germanys-energy-chaos-government-rescue-nuclear-power-plants/</u> [SEPP Comment: The German dilemma: we have to save them in order to close them.]

## Germans grow skeptical over shift to renewables

By Johanna Schmeller, Deutsche Welle, Aug 12, 2013 [H/t GWPF] http://www.dw.de/germans-grow-skeptical-over-shift-to-renewables/a-17013961 [SEPP Comment: Energy density is discussed, a rarity for a newspaper.]

## Letter from the Chairman of Balcombe Parish Council

## By Alison Stevenson, Balcombe Parish Council Aug 12, 2013

http://balcombeparishcouncil.com/2013/08/12/letter-from-the-chairman-of-balcombe-parishcouncil/

[SEPP Comment: To the outsiders protesting drilling for natural gas and who pretend they represent the locals – you are not appreciated.]

## Scots 'face world's biggest energy bills' from wind power

By David Maddox, Scotsman, Aug 14, 2013 [H/t Wind Action] http://www.scotsman.com/news/environment/scots-face-world-s-biggest-energy-bills-from-windpower-1-3029517

## Green Jobs

## Audit finds bloated budget for green jobs training despite lack of open positions

By Perry Chiaramonte, Fox News, Aug 4, 2013 [H/t Wind Action] http://www.foxnews.com/politics/2013/08/04/audit-finds-bloated-budget-for-green-jobs-trainingdespite-lack-open-positions/#ixzz2avdYQC1E

Link to report: Employment and Training: Labor's Green Jobs Efforts Highlight Challenges of Targeted Training Programs for Emerging Industries By Staff Writers, GAO, June 2013

http://www.gao.gov/assets/660/655331.pdf

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

## Wearing out words

They're changing the name of the global-warming scam again Editorial, Washington Times, Aug 13, 2013 [H/t Climate Depot] http://www.washingtontimes.com/news/2013/aug/13/wearing-out-words/

## Ambivalent coverage of climate change's 'new normal'

Considering the importance of the information, the mainstream press provided surprisingly limited analysis

By Alexis Sobel Fitts, Columbia Journalism Review, Aug 12, 2013

http://www.cjr.org/the\_observatory/ambivalent\_coverage\_of\_climate.php?page=all&utm\_source= Weekly+Carbon+Briefing&utm\_campaign=1b58aba9ce-

<u>Carbon\_Brief\_Weekly\_18\_7\_137\_18\_2013&utm\_medium=email&utm\_term=0\_3ff5ea836a-</u>1b58aba9ce-215218249

[SEPP Comment: Sea levels have been rising for over 18,000 years since the maximum extent of the last major ice age, and will continue to do so until the onset of the next major ice age. Over the past 4000 years the rate of rise has slowed considerably. What is the new normal?]

## Study questions nature's ability to 'self-correct' climate change

By Staff Writers, Flagstaff AZ (SPX), Aug 12, 2013

http://www.terradaily.com/reports/Study\_questions\_natures\_ability\_to\_self\_correct\_climate\_chan\_ge\_999.html

While plants did contain more carbon when CO2 levels were increased, soil actually lost carbon due to microbial decomposition; both factors essentially balanced one another out.

[SEPP Comment: Avoids the issue: few skeptics claim that more vigorous plant growth will balance the concentration of CO2 in the atmosphere. They claim that an increase in concentration of CO2 in the atmosphere will cause more vigorous plant growth and benefit the environment.]

#### Headstone for an Apocalypse

By Peter Brannen, NYT, Aug 16, 2013 http://www.nytimes.com/2013/08/17/opinion/headstone-for-an-apocalypse.html?\_r=1&

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

Extreme heat waves to quadruple by 2040, study says

By John Roach, NBC News, Aug 14, 2013 [H/t Clyde Spencer] http://www.nbcnews.com/science/extreme-heat-waves-quadruple-2040-study-says-6C10919395#extreme-heat-waves-quadruple-2040-study-s

Link to letter: Historic and future increase in the global land area affected by monthly heat extremes

By Dim Coumou and Alexander Robinson, Environmental Research Letters, Aug 14, 2013 http://iopscience.iop.org/1748-9326/8/3/034018

## Rahmstorf Claims "New Generation" Of Climate Models Are Robust Because "They Can Predict The Past Very Well"!

By P Gosselin, No Tricks Zone, Aug 16, 2013 http://notrickszone.com/2013/08/16/rahmstorf-claims-new-generation-of-climate-models-arerobust-because-they-can-predict-the-past/ [SEPP Comment: See first link in this section.]

#### The Past is Getting Colder

By Brent Hargreaves, The End Is Nigh – Not!, Aug 10, 2013 [H/t Bishop Hill] <u>http://endisnighnot.blogspot.co.uk/2013/08/the-past-is-getting-colder.html</u>

## Communicating Better to the Public – Go Personal.

Murry Salby responds to the attacks on his record By Jo Nova, Her Blog, Aug 11, 2013 http://joannenova.com.au/2013/08/murry-salby-responds-to-the-attacks-on-his-record/ [SEPP Comment: Is it his science or his conclusions that create the criticism?]

## Models v. Observations

Climate model simulations of the AMO By Judith Curry, Climate Etc., Aug 16, 2013 http://judithcurry.com/2013/08/16/climate-model-simulations-of-the-amo/#more-12365

## Measurement Issues

Distorted data? Feds close 600 weather stations amid criticism they're situated to report warming

By Maxim Lott, Fox News, Aug 13, 2013 [H/t WUWT] http://www.foxnews.com/science/2013/08/13/weather-station-closures-flaws-in-temperaturerecord/#ixzz2bs0Bki00

[SEPP Comment: One question is how many have temperature records going back at least 80 years?]

## **Changing Weather**

**UI researcher finds human activity muddies causes of Texas floods** By Staff Writers, Iowa City IA (SPX), Aug 12, 2013 http://www.terradaily.com/reports/UI\_researcher\_finds\_human\_activity\_muddies\_causes\_of\_Tex\_as\_floods\_999.html

[SEPP Comment: For thousands of years humans have been controlling the adverse effects of weather changes as well as they could.]

## **Changing** Climate

Rapid cooling triggered Bronze-Age collapse and Greek Dark Age By Robert Felix, Ice Age Now, May 10, 2013 [H/t GWPF] http://iceagenow.info/2013/05/rapid-cooling-triggered-bronze-age-collapse-greek-dark-age/

## **Changing Seas**

Why Did Sea Level Drop in 2010? By Sid Perkins, Science Shots, Aug 14, 2013 [H/t Ken Capron] http://news.sciencemag.org/earth/2013/08/scienceshot-why-did-sea-level-drop-2010

## Changing Cryosphere – Land / Sea Ice

No need to worry about Greenland's waterslides

By Tamsin Edwards, PLOS Blog, Aug 12, 2013 [H/t GWPF]

http://blogs.plos.org/models/no-need-to-worry-about-greenlands-waterslides/

Link to paper: Enhanced basal lubrication and the contribution of the Greenland ice sheet to future sea-level rise.

By S. Shannon, et al., PNAS, Aug 12, 2013

http://dbms.ilrt.bris.ac.uk/media/user/162431/Shannon\_et\_al\_2013\_PNAS.pdf

"This is the first attempt to study whether meltwater lubrication of Greenland's waterslides is important to future sea level. We find it is not. Instead we should focus on understanding changes in melting and snowfall and (to a lesser extent) icebergs."

## Greenland ice sheet IS melting but much of the heating is coming from INSIDE the earth

Study suggests melting in an area is due to composition of Earth's mantle The IceGeoHeat team claims they produced more accurate forecasts by adding their new findings to earlier models on climate change

By Ellie Zolfagharifard, Mail Online, UK, Aug 12, 2013 [H/t GWPF]

http://www.dailymail.co.uk/sciencetech/article-2389991/Global-warming-Scientists-discoverheat-INSIDE-Earth-melting-areas-Arctic-ice.html

[SEPP Comment: States that currently sea levels are rising at a rate of about 30 cm, or 11 inches, per century. Greenland ice melt contributes accounts for 7 cm, or less than 3 inches, per century. Will some declare that geothermal heating of the ice is caused by carbon dioxide?]

**Melting water's lubricating effect on glaciers has only 'minor' role in future sea-level rise** By Staff Writers, Bristol, UK (SPX), Aug 14, 2013

http://www.terradaily.com/reports/Melting waters lubricating effect on glaciers has only min or role in future sea level rise 999.html

## In the Arctic, nearby soot may be a larger forcing than CO2

By Anthony Watts, WUWT, Aug 13, 2013

http://wattsupwiththat.com/2013/08/13/in-the-arctic-nearby-soot-may-be-a-larger-forcing-thanco2/

Link to paper: Arctic surface temperature change to emissions of black carbon within Arctic or midlatitudes

By Sand, et al., Journal of Geophysical Research, Jul 30, 2013 http://onlinelibrary.wiley.com/doi/10.1002/jgrd.50613/abstract

#### Study documents early warming of West Antarctica at end of last ice age

By Ed Brook, Oregon State U, Aug 14, 2013 [H/t WUWT]

http://oregonstate.edu/ua/ncs/archives/2013/aug/study-documents-explains-early-warming-westantarctica-end-last-ice-age

Unable to find link to the paper

[SEPP Comment: Based on one ice core, a warming of the west Antarctic triggered a warming of Southern Oceans that released the CO2 necessary to end the last ice age?]

## Acidic Waters

Baby corals pass the acid test By Staff Writers, Brisbane, Australia (SPX), Aug 15, 2013 <u>http://www.terradaily.com/reports/Baby\_corals\_pass\_the\_acid\_test\_999.html</u> Link to paper: Near-future reductions in pH will have no consistent ecological effects on the early life-history stages of reef corals By Chia-Miin Chua, et al., Marine Ecology, Jul 12, 2013 <u>http://www.int-res.com/abstracts/meps/v486/p143-151/</u>

## Agriculture Issues & Fear of Famine

**GM crops don't kill kids; opposing them does** By Matt Ridley, Rational Optimist, Aug 12, 2013 http://www.rationaloptimist.com/blog/gm-crops-don't-kill-kids-opposing-them-does.aspx

## **Review of Recent Scientific Articles by NIPCC**

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

## Deep Cyclones Over Central Europe: Increasing or Decreasing?

Reference: Bielec-Bakowska, Z. and Piotrowicz, K. 2013. Long-term occurrence, variability and tracks of deep cyclones over Krakow (Central Europe) during the period 1900-2010. International *Journal of Climatology* 33: 677-689.

http://nipccreport.org/articles/2013/aug/13aug2013a1.html

[SEPP Comment: 110 year history shows no significant change in air pressures measured in Krakow, Poland indicating no increase in frequency and intensity of violent storms.]

## Breeding Cultivars of Rice for a CO2-Enriched and Warmer World

Reference: Shimono, H. and Okada, M. 2013. Plasticity of rice tiller production is related to genotypic variation in the biomass response to elevated atmospheric CO2 concentration and low temperatures during vegetative growth. *Environmental and Experimental Botany* 87: 227-234. <u>http://nipccreport.org/articles/2013/aug/13aug2013a2.html</u> [SEPP Comment: More CO2 and warmth yields more rice.]

## To the Brink of Extinction ... and Back

Reference: Gilmour, J.P., Smith, L.D., Heyward, A.J., Baird, A.H. and Pratchett, M.S. 2013. Recovery of an isolated coral reef system following severe disturbance. *Science* 340: 69-71. <u>http://nipccreport.org/articles/2013/aug/13aug2013a4.html</u> [SEPP Comment: The negative human influence on corals is significant, but it is not from CO2.]

## Last Millennium Climate Simulations Still Falling Short of Reality

Reference: Landrum, L., Otto-Bliesner, B.L., Wahl, E.R., Conley, A., Lawrence, P.J., Rosenbloom, N. and Teng, H. 2013. Last millennium climate and its variability in CCSM4. *Journal of Climate* 26: 1085-1111. http://nipccreport.org/articles/2013/aug/14aug2013a2.html

#### Litigation Issues

**Court: Obama broke law with nuke delay** By Zack Colman, The Hill, Aug 13, 2013 <u>http://thehill.com/blogs/e2-wire/e2-wire/316797-obama-administration-must-rule-on-yucca-federal-court-says</u>

## Cap-and-Trade and Carbon Taxes

Scathing MIT Paper Blasts Obama's Climate Models By Staff Writer, IER, Aug 12, 2013 http://www.instituteforenergyresearch.org/2013/08/12/scathing-mit-paper-blasts-obamas-climatemodels/

Link to paper: Climate Change Policy: What Do the Models Tell US By Robert S. Pindyck, National Bureau of Economic Research, July 2013 http://web.mit.edu/rpindyck/www/Papers/Climate-Change-Policy-What-Do-the-Models-Tell-Us.pdf

[SEPP Comment: Does not address climate models, but addresses the models used by the administration to estimate the Social Cost of Carbon (SCC), which is a form of a carbon tax not legislated.]

## 'Most transparent administration ever' keeps carbon tax plans secret

By Brian McNicoll, Washington Examiner, Aug 9, 2013

http://washingtonexaminer.com/most-transparent-administration-ever-keeps-carbon-tax-planssecret/article/2534116?utm\_source=Washington%20Examiner:%20Opinion%20Digest%20Reocc urring%20-

<u>%2008/12/2013&utm\_medium=email&utm\_campaign=Washington%20Examiner:%200pinion%</u> 20Digest

#### Subsidies and Mandates Forever

# FACT: Since the Renewable Fuel Standard went into effect, corn, not oil, has driven food prices with a near perfect correlation

By Mark Perry, AEIdeas, Aug 10, 2013 [H/t Timothy Wise] http://www.aei-ideas.org/2013/08/fact-since-the-renewable-fuel-standard-went-into-effect-cornnot-oil-drives-food-prices-near-perfect-correlation/

# Wind farms paid £30 million a year to stand idle because the grid can't cope with all the energy they produce

By Nick McDermott, Mail Online, UK, Aug 10, 2013 [H/t GWPF] http://www.dailymail.co.uk/news/article-2388417/Wind-farms-paid-30-million-year-stand-idlegrid-cope-energy-produce.html

## EPA and other Regulators on the March

It's Time to Restore EPA's Original Purpose By Jay Lehr, Heartland, Aug 14, 2013 http://news.heartland.org/newspaper-article/2013/08/14/its-time-restore-epas-original-purpose

## Federal Judge: EPA May Have Skirted FOIA Law with Secret Emails

Judge orders EPA to submit to discovery in lawsuit By CJ Claramella, Washington Free Beacon, Aug 15, 2013 [H/t Timothy Wise] http://freebeacon.com/federal-judge-epa-may-have-skirted-foia-law-with-secret-emails/

## BP sues EPA over federal contract ban

By Ben Geman, The Hill, Aug 13, 2013 http://thehill.com/blogs/e2-wire/e2-wire/316739-bp-sues-epa-to-lift-federal-contractingsuspension

## Energy Issues – Non-US

**The Decline of Renewable Energy** By Bjørn Lomborg, Project Syndicate, Aug 14, 2013 <u>http://www.project-syndicate.org/commentary/the-falling-share-of-renewables-in-global-energy-</u> <u>production-by-bj-rn-lomborg</u>

Since 1990, wind-generated power has grown 26% per year and solar a phenomenal 48%. But the growth has been from almost nothing to slightly more than almost nothing.

# United States and China Oil Consumption and Imports: A Tale of Two Very Different Countries

By Michael Economides, Omoboia Ajao and Hoagie Merry, Energy Tribune, Aug 16, 2013 <u>http://www.energytribune.com/78800/united-states-china-oil-consumption-imports#sthash.LxLBZnPf.dpbs</u>

## RWE to Close 3.1 GW of Conventional Generation Across Europe on Profit Woes

By Sonal Patel, Power Magazine, Aug 15, 2013 http://www.powermag.com/rwe-to-close-3-1-gw-of-conventional-generation-across-europe-onprofit-woes/?hq\_e=el&hq\_m=2729121&hq\_l=3&hq\_v=5e660500d0 [SEPP Comment: What facilities will provide the necessary back-up for solar and wind?]

## Energy Issues -- US

## Shut Up and Drill: Why Fracking Could End the Age of Gas Price Spikes

Drivers of the world, rejoice: The technology behind the natural gas revolution could give us a more flexible and dependable source of gasoline

By Karl Smith, The Atlantic, Aug 8, 2013

http://www.theatlantic.com/business/archive/2013/08/shut-up-and-drill-why-fracking-could-end-the-age-of-gas-price-spikes/278494/

[SEPP Comment: Addresses gasoline (petrol) spikes.]

## Washington's Control of Energy

**Energy Manipulation** Walter E. Williams, Townhall, Aug 14, 2013 <u>http://townhall.com/columnists/walterewilliams/2013/08/14/energy-manipulation-n1662249/page/full</u>

We Win and They Lose By Marita Noon, Energy Tribune, Aug 14, 2013 http://www.energytribune.com/78790/we-win-and-they-lose#sthash.60Ux4Sdb.dpbs

#### White House warns of rising threat to power grid from 'extreme weather'

By Ben Geman, The Hill, Aug 12, 2013 http://thehill.com/blogs/e2-wire/2-wire/316583-white-house-grid-outages-cost-18-33b-annuallyclimate-change-worsens-threat

#### Obama's Keystone pipe blockage

U.S. energy dependency is counter-progressive By Lucian Pugliaresi, Washington Times, Aug 13, 2013 <u>http://www.washingtontimes.com/news/2013/aug/13/pugliaresi-obamas-keystone-pipe-blockage/print/</u>

#### **Oil-Sands Industry Turns to Algae to Appease Obama**

By Jeremy van Loo, Bloomberg, Aug 12, 2013 <u>http://www.bloomberg.com/news/2013-08-12/oil-sands-industry-turns-to-algae-to-appease-obama.html</u>

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

We cannot afford to miss out on shale gas

Safe fracking will cut energy bills and create wealth without ruining precious countryside, writes David Cameron By David Cameron, Prime Minister of UK, Telegraph, UK, Aug 11, 2013

http://www.telegraph.co.uk/news/politics/10236664/We-cannot-afford-to-miss-out-on-shalegas.html

## Shale is fuelling a global revolution

The International Energy Authority has declared that, with several OPEC members struggling to maintain production due to unrest and infrastructure problems, North America's shale boom was insulating the world from steep oil price spikes.

Editorial, Telegraph, UK, Aug 9, 2013

http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/10234461/Shale-is-fuelling-a-global-revolution.html

## Natural Gas Vehicle Update

By Donn Dears, Power for USA, Aug 13, 2013

http://ddusmma.wordpress.com/2013/08/13/natural-gas-vehicle-update-2/

[SEPP Comment: The future success outlined in the article does not need financial assistance from government, but does need regulator restraint by government. In the map, the wide brown is the massive volume of coal going by rail from, principally, Wyoming to the Mid-West. The locals joke they are shipping Wyoming to the east.]

## The five myths about fracking

By Matt Ridley, Rational Optimist, Aug 16,2013 http://www.rationaloptimist.com/blog/the-five-myths-about-fracking-(1).aspx

## How Anti-Fracking Activists Deny Science on Air Emissions

By Steve Everley, Energy Collective, Aug 13, 2013 [H/t Bishop Hill] <u>http://theenergycollective.com/saeverley/260046/how-anti-fracking-activists-deny-science-air-emissions</u>

#### Markey warns of security threat from imports of Yemen natural gas

By Zack Colman, The Hill, Aug 12, 2013

http://thehill.com/blogs/e2-wire/e2-wire/316667-sen-markey-to-obama-restrict-natural-gasexports-to-avoid-terrorism-threat

[SEPP Comment: He opposes exporting of natural gas because it will promote importing of gas from Yemen. It costs about \$6.00 per 1000 cubic feet to transport the gas overseas, in each direction! Why import it if it is availed domestically?]

## Nuclear Energy and Fears

**Toxicologist says NAS panel 'misled the world' when adopting radiation exposure guidelines** By Staff Writers, Amherst MA (SPX), Aug 15, 2013 [H/t Toshio Fujita] http://www.spacemart.com/reports/Toxicologist\_says\_NAS\_panel\_misled\_the\_world\_when\_adop ting\_radiation\_exposure\_guidelines\_999.html

Links to papers: How the US National Academy of Sciences misled the world community on cancer risk assessment: new findings challenge historical foundations of the linear dose response By Edward Calabrese, Archives of Toxicology, August 2013

http://link.springer.com/article/10.1007%2Fs00204-013-1105-6

Origin of the linearity no threshold (LNT) dose–response concept By Edward Calabrese, Archives of Toxicology, July 2013

http://link.springer.com/article/10.1007%2Fs00204-013-1104-7

## Fukushima operator pumps out toxic groundwater

By Staff Writers, Tokyo (AFP), Aug 10, 2013 <u>http://www.terradaily.com/reports/Fukushima\_operator\_pumps\_out\_toxic\_groundwater\_999.html</u> [SEPP Comment: See link immediately above.]

## State Has No Authority to Shutter Vermont Yankee Reactor, Federal Court Rules

By Sonal Patel, Power News, Aug 16, 2013 http://www.powermag.com/state-has-no-authority-to-shutter-vermont-yankee-reactor-federalcourt-rules/?hq\_e=el&hq\_m=2729121&hq\_l=2&hq\_v=5e660500d0

Alternative, Green ("Clean") Solar and Wind

**DOE Misdirection: 8/6/13 Press Release & Report on Wind Energy** By Glenn Schleede, Master Resource, Aug 12, 2013 http://www.masterresource.org/2013/08/misleading-doe-86-13-press-release-wind/#more-27080

## European Offshore Wind: Germany Points To Possible Trouble On The Horizon

By Peter Kelly-Detwiler, Forbes, Aug 8, 2013 [H/t Toshio Fujita] http://www.forbes.com/sites/peterdetwiler/2013/08/08/european-offshore-wind-germany-pointsto-possible-trouble-on-the-horizon/

**Dong Energy Spearheads Offshore Wind Cost-Cutting Drive** By Alex Morales, Bloomberg, Aug 8, 2013 [H/t Toshio Fujita] <u>http://www.bloomberg.com/news/2013-08-08/dong-energy-spearheads-offshore-wind-cost-</u> cutting-drive.html

**National Audit Office Is Urged to Investigate Soaring Green Energy Levies** By Tim Webb, The Times, via GWPF, Aug 13, 2013

## http://www.thegwpf.org/national-audit-office-urged-investigate-soaring-green-energy-levies/

#### Price of Wind Energy in the United States Is Near an All-Time Low

By Staff Writers, Berkeley CA (SPX), Aug 12, 2013 <u>http://www.winddaily.com/reports/Price\_of\_Wind\_Energy\_in\_the\_United\_States\_Is\_Near\_an\_Al</u> <u>1\_Time\_Low\_999.html</u> Link to report: 2012 Wind Technologies Market Report By Ryan Wiser, et al. Department of Energy, <u>http://emp.lbl.gov/sites/all/files/lbnl-6356e.pdf</u> [SEPP Comment: The prices of turbines do not reflect the costs of subprime electricity to the consumer, or the costs of subsidies.]

#### Plans to build more wind farms are 'deluded', L&G boss warns the government

By James Salmon, Mail Online, UK, Aug 9, 2013 <u>http://www.thisismoney.co.uk/money/news/article-2385991/Plans-build-wind-farms-deluded.html</u> [SEPP Comment: The UK government is trying to persuade insurance companies to "invest" in wind farm; this company will have none of it.]

Solar Takes Some Hits

By Donn Dears, Power for USA, Aug 16, 2013 http://ddusmma.wordpress.com/2013/08/16/solar-takes-some-hits/

#### Alternative, Green ("Clean") Vehicles

**Government-Gamed Markets and Subsidies Give Tesla Another 'Profitable' Quarter** By Paul Chesser, NLPC, Aug 12, 2013 <u>http://nlpc.org/stories/2013/08/09/government-gamed-markets-and-subsidies-give-tesla-another-profitable-quarter</u>

#### Health, Energy, and Climate

**Ignoring the Ignorant** By Henry Miller, Project Syndicate, Aug 16, 2013 <u>http://www.project-syndicate.org/commentary/ignorance-and-influence-in-public-policy-by-henry-i--miller</u>

#### Oh Mann!

New paper finds tree-ring proxy temperature data is 'seriously compromised' By Staff, The Hockey Schtick, Aug 15, 2013 [H/t GWPF] <u>http://hockeyschtick.blogspot.co.uk/2013/08/new-paper-finds-tree-ring-proxy.html</u> Link to paper: A likelihood perspective on tree-ring standardization: eliminating modern sample bias By J. Cecile, C. Pagnutti, and M. Anand, Climate of the Past, No Date

http://www.clim-past-discuss.net/9/4499/2013/cpd-9-4499-2013.html

#### Environmental Industry

Pestered By Mosquitos And Tics Ticking You Off A Mite? Perhaps Thank The Green War On DDT

By Larry Bell, Forbes, Aug 11, 2013 http://www.forbes.com/sites/larrybell/2013/08/11/pestered-by-mosquitos-and-tics-ticking-you-offa-mite-perhaps-thank-the-green-war-on-ddt/ [SEPP Comment: The green war on human health.]

#### Environmentalists Attack Reuters Journalist for Thought-crime of Doubting Global Warming

By Matthew Vadum, NewsBusters, Aug 3, 2013 [H/t WUWT] <u>http://newsbusters.org/blogs/matthew-vadum/2013/08/03/enviromentalists-attack-reuters-journalist-crime-doubting-global-warm</u>

## **Other Scientific News**

## **BELOW THE BOTTOM LINE:**

**OFA Gets Zero Attendance for Climate Change Rally** By Staff, Washington Free Beacon, Aug 13, 2013

http://freebeacon.com/ofa-gets-zero-attendance-for-climate-change-rally/

## Even nuclear weapons are going green

By John Upton, Grist, Aug 13, 2013 [H/t GWPF]

http://grist.org/news/even-nuclear-weapons-are-going-green/

The project is part of a broader campaign to make the nation's nuclear weapons system more ecofriendly.

## Berlin's Wildly Fantastic 1,400-Foot-High, Hydra-Headed Windmill

By John Metcalfe, Atlantic, Aug 14, 2013 [H/t Toshio Fujita] <u>http://m.theatlanticcities.com/technology/2013/08/berlins-wildly-fantastic-1400-foot-high-hydra-headed-windmill/6530/</u> *[SEPP Comment: From the past! Our future?]* 

## **ARTICLES:**

## 1. Science Says So, Suckers!

Just because climate science involves physics doesn't mean its conclusions are as certain as gravity.

By Jamie Whyte, WSJ, Aug 14, 2013

http://online.wsj.com/article/SB10001424127887324139404579012590381443168.html?mod=W SJ\_Opinion\_LEFTTopBucket

So tweeted Barack Obama's advocacy group Organizing for Action on Monday, adding the hashtag #ScienceSaysSo. Had the hashtag read #ThePresidentSaysSo, no one would have bought the bogus appeal to authority. But many will buy the appeal to scientific authority.

Few nowadays defer to the traditional authority figures of old—parents, priests or politicians. But many are inclined to take scientists' word for things. If scientists say that anthropogenic climate change is happening, well, then anthropogenic climate change is happening. (Mr. Obama's tweeters must mean anthropogenic climate change, since no one denies that the climate is changing, as it always does.)

Deference to scientists is sometimes warranted. But the general deference to science suggested by President Obama and other campaigners is absurd. It underestimates the variety of science and the incentives scientists have to exaggerate the credibility of their theories.

People often talk about science as if it were a single discipline with a single method, "the scientific method," so that all scientifically acquired beliefs are equally likely to be true. Since all of Team Obama's threesome—gravity, the spherical Earth and climate change—are scientific, you should be no less certain about reality of anthropogenic climate change than about the reality of gravity.

This vision of science is wrong. Scientific inquiry encompasses a great variety of disciplines with different methods, some of which are more reliable than others. Particle physics, evolutionary biology, epidemiology, climatology and behavioral economics, to take but five examples, concern different phenomena, use different methods and produce results of very different credibility. Deference is due to some scientists but not to all.

The physics of medium-sized objects moving at velocities well below the speed of light has been experimentally tested and successfully applied in technology to such an extent that it is beyond reasonable doubt. Anyone who drives a car across an ancient bridge has reason to defer to physicists.

The climate models upon which the anthropogenic climate change hypothesis is based have no such record of success. This is not their fault. They are new and they make predictions about the climate, which can be observed only over a period of decades, shorter periods being mere weather. A new model that predicts weather patterns in 50 years' time cannot be said to have been tested until 50 years have elapsed. Even then, we will have only one data point, which is hardly enough to confirm any theory.

So why should anyone believe these climate models and their implications? One popular answer is that they are entailed by what we already know about physics. For example, according to the Australian scientists Stephan Lewandowsky and Michael Ashley, "we can calculate the effect [of greenhouse gases], and predict what is going to happen to the earth's climate during our lifetimes, all based on fundamental physics that is as certain as gravity."

Alas, a theory can contain nothing but well-known bits of physics and still be false. If I explained the time that paper airplanes stay aloft as a simple function of gravity, my theory would contain nothing but physics as certain as gravity. Yet it would still be false because gravity is not the only factor relevant to flight.

Similarly, even if a climate model contains nothing but physics, those bits of physics might be insufficient to explain and predict weather patterns. The only way to find out is to the test the model's predictions against observed long-run weather patterns. But as I noted earlier, we cannot do that at present.

Many are impressed by the fact that climate models can "retrodict" climatic change—that is, use past climatic data (say, from the 1860s) to predict climatic data from the less-distant past (say, from the 1920s). They should not be. Given modern computer power, building a model that fits historic data is easily done. Successful data-fitting does not show that the model properly describes the underlying mechanisms or will provide a reliable guide to the future.

Anyone who follows the news will know that most scientists believe in anthropogenic climate change. This is supposed to convince us. But it ought to perplex us. Why would scientists— people supposedly devoted to intellectual rigor and honesty—tell us that we ought to believe the implications of untested climate models with as much confidence as we believe in gravity?

First separate climate scientists from scientists working in other fields who declare their confidence in the anthropogenic thesis. The latter are in no better a position to judge the merits of climate models than anyone else. They are merely expressing solidarity with their scientific brothers. They are like the unionized workers in the 1970s who went on strike in sympathy with workers in entirely different industries, knowing nothing about the alleged legitimacy of the grievance.

What about the climate scientists themselves, then? It would be extraordinary if they did not exaggerate the credibility of their theories. Scientists are human, and humans are inclined to act in ways that benefit themselves and to believe what suits them. And it suits climate scientists if the credibility of their models is overestimated.

Forget the increased funding of their research. What scientist does not what to believe he has made a genuine discovery? I doubt there has been a scientist in any immature field of inquiry who did not overestimate the credibility of his ideas, including those whose theories turned out to be right. Especially when those ideas, if true, might be used to save the world. Scientists are no less susceptible to the fantasy of the heroic scientist than intellectually lazy American presidents, enthusiastic undergraduates or anyone else.

We are asked to believe that "climate change is happening" because scientists with obvious incentives to overstate their achievements tell us that their untested models prove it. Those of us who remain skeptical are then accused of being anti-science fools. Funny.

*Mr.* Whyte is author of "Quack Policy: Abusing Science in the Cause of Paternalism," which will be released next week by the Institute of Economic Affairs.

2. Canadian Oil-Sands Firm Struggles to Plug Leak

By Chesteer Dawson, WSJ, Aug 9, 2013

http://online.wsj.com/article/SB10001424127887323477604579003061473106206.html?mod=W SJ\_Energy

[SEPP Comment: Problems with using high-pressure steam in site to heat the oil sands in order to extract the liquid.]

COLD LAKE AIR WEAPONS RANGE, Alberta—The chief executive of Canada's largest independent oil producer said efforts to plug a series of leaks and prevent new ones will raise costs at one of its most productive oil-sands sites, but rejected criticism that the technology used to extract the oil is flawed.

Canadian Natural Resources Ltd.'s Primrose operation, on a weapons-testing range on Canada's largest air force base, has been plagued by four separate leaks whose cause remains unknown. The leaks so far total more than 7,300 barrels of oil.

Chief Executive Steve Laut, on a visit to the site in northeastern Alberta late Thursday, said CNRL is working to contain damage to the surrounding boreal forest and is prepared to adjust its oilextraction methods using high-pressure steam in order to stop new leaks from forming. "It's going to cost us more," Mr. Laut said.

"We are very committed to making sure we get this thing cleaned up, understand the cause, how to prevent it and getting this thing back in shape," he said.

The leaks pose no threat to people, but have affected wildlife and vegetation in a 50-acre contained area on the largely muskeg-covered Royal Canadian Air Force base. CNRL experienced similar leaks here in 2009, which has raised questions about its so-called in situ steam-based extraction techniques.

Alberta's energy regulator last month imposed an indefinite ban on some steaming operations at Primrose, which the Calgary, Alberta-based company had touted earlier this year for producing 109,000 barrels a day and generating "returns amongst the highest in the company's portfolio."

The leaks, the first of which was reported in May, have forced CNRL to cut its production forecast for the area next year by about 10,000 barrels a day. Before the leaks, it had planned to drill up to 120 new wells annually at Primrose and boost production to 120,000-125,000 barrels a day for the next five to 10 years.

In the second quarter, CNRL's total output was more than 623,000 barrels of oil equivalent a day.

Its problems at Primrose have drawn attention to a form of production that is less well known than the oil sands' open pit mines but is growing rapidly and viewed by industry as critical for accessing the nearly 80% of Alberta's total heavy-oil reserves located deep underground.

The company blames "seepage" from poorly capped well bores that have been abandoned, but hasn't been able to pinpoint which ones. Environmental organizations, however, say the high-pressure steaming has fractured subterranean capstone that traps oil reserves below it, a problem which would be difficult to remedy.

Mr. Laut denied that possibility and defended his company's use of so-called cyclic steam injection, or CSS, citing a nearly 30-year operational track record. "It's physically impossible to inject steam up through that cap rock because the pressures that are required are more than we inject," he said.

Critics said it is too early to rule out any possible causes. "It's irresponsible for CNRL to advance a theory when the investigation is incomplete," said Chris Severson-Baker, a managing director at the Pembina Institute, a Canadian environmental think tank. "Whatever they learned in 2009 didn't prevent this latest incident," he added.

Provincial officials overseeing the cleanup echoed the company's preliminary analysis. "We let the technical merit prove it through, but what we're looking at is a likely well bore, or near well bore, failure," said Colin Woods, an on-site team leader for the Alberta Energy Regulator, which is conducting an investigation into the leaks.

But a government report issued in January appeared to contradict claims by CNRL that the 2009 leaks were caused solely by faulty oil well bores. While stating that the pathway to the surface was never identified, the finding by the AER's predecessor organization cited underground rock formation breaches from high-pressure steaming "not related to a well bore issue" as a probable contributing factor.

CNRL says the leaks likely began in early spring, though weren't detected until May 20. Regulators were informed that day, although the problem wasn't publicly announced until June 24 and the partial ban wasn't imposed until CNRL had completed all of its planned steaming operations at Primrose for the year.

The regulator says the length of the ban on new steaming operations at Primrose could be lifted before the conclusion of its probe. "The restrictions will remain in place until we are confident the issue is understood and we are confident it won't happen again. That could happen before the investigation is fully complete," said AER spokeswoman Cara Tobin.

The extraction method used by CNRL at Primrose involves injecting high-pressure steam into underground oil deposits embedded in rock, creating fissures for petroleum to seep out of the same well which is used to pump in the steam. Typically, steam is injected for a matter of months and then halted to allow recovery of the oil leached out from the rock.

Alberta's oil producers have invested heavily in CSS and another form of lower-pressure in-situ extraction called steam-assisted gravity drainage. Of the 1.8 million barrels of oil a day produced from Canadian oil sands last year, more than half came from in these in-situ mines, according to the Canadian Association of Petroleum Producers.

CAPP projects in-situ extraction will leap to 3.5 million barrels a day by 2030.

## 3. Energy Firm Makes Costly Fracking Bet—on Water

For Antero's Planned Ohio River Pipeline, Payoff Hinges on Rainfall Patterns By Russell Gold, WSJ, Aug 13, 2013 http://online.wsj.com/article/SB10001424127887323420604578652594214383364.html?mod=W SJ\_Energy

[SEPP Comment: The volume of water use found at the bottom of the article is not particularly significant in Eastern US, but may be significant in the West and other semi-arid regions. Yet, even in the Eastern US, recycling should be encouraged.]

Antero Resources Inc., an energy company backed by New York private-equity firms, plans to spend more than half a billion dollars on a pipeline. But the 80 miles of pipe won't transport oil or gas: They will carry water from the Ohio River to fracking sites in West Virginia and Ohio.

The project is a costly wager that the hydraulic-fracturing industry's thirst for reliable sources of water will grow over the next few years. Fracking, an oil-field technique driving the nation's current energy boom, involves injecting vast quantities of water into the earth, along with other materials, to break up rock formations and unlock trapped oil and gas.

Antero's big bet on water, which worries some environmental groups, could pay off handsomely for the company's executives and private-equity backers, who have positioned themselves to get

the biggest financial benefit from the pipeline. But some experts say the investment's long-term success could hinge on the region's rainfall.

Colorado-based Antero, which has announced plans to go public, had oil and gas revenues of about \$265 million last year, according to filings with the Securities and Exchange Commission.

The company says it is the most active driller in the Marcellus Shale, a gas-rich rock formation that stretches across Pennsylvania and into New York, Ohio and West Virginia. It is also pushing into Ohio's Utica Shale as well. The company uses a total of about six million gallons of water to frack each of its wells.

The proposed pipeline would slash the company's water costs by two-thirds, or about \$600,000 per well, Chance Richie, a water consultant to Antero, said at an industry conference in March. The trucks that now deliver most of that water are a "very, very large expense," he said.

They also contribute to congested roadways in some rural areas. "We are not used to all this traffic—it is like New York City out there," said Ralph Sandora, a commissioner in rural Doddridge County, W.Va., where Antero has leased more than 100,000 acres for drilling.

Mr. Richie referred questions about the project to Antero. Company officials declined to comment.

Tapping the Ohio would give the pipeline access to the region's most dependable source of water. Many of the rivers and streams that Antero now uses run low in the summer, prompting state officials to stop gas-industry withdrawals. A drought in Ohio last year curtailed water to fracking operations.

In a permit filed with the Army Corps of Engineers, which regulates water withdrawals from the Ohio River, Antero said it plans to build an intake pipe capable of sucking up 3,360 gallons of river water a minute—or about 4.8 million gallons a day.

Pumps would send the water through a 20-inch steel pipe eastward where it would be collected in several large pools before it was piped to drilling pads. The Army Corps has approved part of Antero's plan, and a decision on the remainder is pending.

Mr. Richie, the consultant, said at the March conference that the company was talking to other companies about using the piped-in water.

Some environmental groups are concerned by the scope of the project. "There is a whole lot of water in the Ohio River, but not if we start withdrawing millions of gallons of water a day," says Janet Keating, executive director of the Ohio Valley Environmental Coalition.

A growing number of pipelines are supplying water to fracking wells—though few of them have been anywhere near as expensive. Antero filed for an initial public offering in June.

In 2011, Range Resources Corp. built a 20-mile pipeline in the West Virginia panhandle to move water from the Ohio River. A company spokesman declined to discuss the cost, but said it was "not even remotely close" to Antero's projected half-billion dollars.

In 2012, Aqua America Inc. built a 54-mile pipeline in northern Pennsylvania that serves several different energy companies.

The pipeline cost about \$100 million, said Executive Vice President Karl Kyriss, who added that the company is evaluating two more pipelines. He estimated that the industry has spent nearly \$1 billion altogether on water pipelines.

An Exxon Mobil Corp. spokesman said Exxon has built three relatively short water pipelines in Pennsylvania and West Virginia.

It isn't clear how quickly Antero's pipeline project might pay for itself. Based on the company's projected savings of \$600,000 per well, Antero would need to frack 875 wells to break even; according to its filings, it plans to frack 135 wells in the Marcellus this year.

Amy Myers Jaffe, executive director of energy and sustainability at the University of California Davis, says that while the pipeline's construction costs are high, the project could pay off if there was a drought that sent other companies scrambling for water.

"Access to reliable, affordable water can make or break the profitability of companies doing shale in a remote, water-scarce region," she said.

The pipeline might not remain with the publicly traded Antero for long. According to its SEC filings, the company's top management and its private-equity backers, which include Warburg Pincus LLC, Yorktown Partners LLC and Trilantic Capital Partners, will be able to force the company to split off its gas and water pipelines into a separate company, called Antero Midstream. Antero would enter into a 20-year agreement with the new Antero Midstream to purchase water.

Shareholders of the newly public Antero would own the split-off company, but the private-equity backers and Antero management would retain management control and ultimately receive 50% of the cash distributions generated by the pipeline company.

The three private-equity firms either declined to comment or didn't respond to requests for comment.

Hydraulic fracturing is a water-intensive business.

Average amount of water used to hydraulically fracture a single Marcellus Shale well: 4.2 million-5 million gallons 4.2 million gallons is enough water for a town of 42,000 people for one day Number of Marcellus Shale wells drilled in 2005-July 2013: 8,700\* Percentage of freshwater used: 90% Percentage of water recovered from fracks and reused: 10% Note: \*Includes wells drilled and fracked through May 2013 in both Pennsylvania and West Virginia, but doesn't include every well. Some data are still being processed.

Sources: Susquehanna River Basin Commission via Environmental Protection Agency; West Virginia Department of Environmental Protection