

The Week That Was: 2014-11-01 (November 1, 2014)
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The Science and Environmental Policy Project

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Quote of the Week: *"The difference between genius and stupidity is that genius has its limits"*
Albert Einstein

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Number of the Week: More than \$15 Billion in FY 2013

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THIS WEEK:

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

IPCC Synthesis Report: On November 2, the UN Intergovernmental Panel on Climate Change (IPCC) is scheduled to release its report synthesizing three separate assessment reports (ARs) into a coherent whole. The three reports are Climate Change: The Physical Science (2013); Impacts, Adaption, and Vulnerability (2014); and Mitigation of Climate Change (2014). It is easier speculating what the synthesis report will not contain, rather than speculating what it will contain. Above all, the synthesis report will not be an accurate representation of the science, but a defense of the political positions of the respective countries – bureaucratic science, at best.

The synthesis report will not discuss the failure of the IPCC and the climate establishment to advance understanding of the sensitivity of the earth to a doubling of carbon dioxide (CO₂), which is called climate sensitivity. The 2013 estimate was 1.5 – 4.5°C. This is the same estimate as given in a 1979 report to the US National Academy of Science by a special group under MIT meteorologist Jule Charney. As discussed in the October 18 TWTW, the inability to narrow this estimate demonstrates a lack of progress in the climate science embodied by the IPCC and its adherents such as the US National Climate Assessment produced by the US Global Change Research Program.

There will be little or no systematic discussion of the failure of the climate models, relied on by the IPCC, to predict the lack of 21st century warming. There will be little or no systematic discussion of the 40 some latter-day explanations of the lack of warming. Some of these explanations are inconsistent with other explanations, and many embody natural causes, which according to the IPCC Summary for Policymakers, should have been considered in the original reports.

In the synthesis report, there will be little or no systematic discussion of the possibility that the low-end of the estimated range of climate sensitivity is far too high. More importantly, there will be little or no systematic discussion of the possibility that the high-end of the estimated range of climate sensitivity is far, far too high. Without the high-end estimates, there is no logical justification for extensive studies on impacts, adaption, vulnerability; and mitigation of climate change. Such studies include emotional issues such as species extinction and dramatic sea level rise, upon which a large part of the climate establishment justifies its existence.

What we can expect is a muddling through – the IPCC ignoring the mounting evidence that its proclamations about certainty are wrong, and that the earth is simply not very sensitive to increasing greenhouse gas emissions. The effort will keep the bureaucrats and their political supporters satisfied, as the general populace becomes increasingly aware that there is something

seriously wrong with climate science and with the entities that support it. See links under Challenging the Orthodoxy, Defending the Orthodoxy, and Questioning the Orthodoxy.

EU Agreement to 2030: With a few notable exceptions, there seems to be no limit to the number of Western politicians who are willing to lead their countries into energy poverty, provided other politicians are willing to do the same.

Last week, the politicians of the European Union reached an agreement on carbon dioxide emissions to the year 2030, with some uncertainty. The major components of this agreement include: 1) cutting carbon emissions by at least 40% by 2030 compared with 1990 levels, which will be legally binding on every member state; 2) that the share of renewables such as wind and solar in the EU's energy mix will be raised to 27% compared with 1990 levels, and 3) a 27% improvement in energy efficiency.

It is not clear how some of these provisions will be enforced and if the provisions survive if the UN IPCC does not pass a major resolution acceptable by all parties at the December 2015 climate summit in Paris. Germany and the Nordic countries demanded stringent enforcement provisions. Poland, holding the presidency of the European Council, and other central European countries resisted. These countries received promises of financial assistance to meet various targets of energy efficiency. It remains to be seen how the details will work out. See Article # 1 and links under Questioning the Orthodoxy and Problems in the Orthodoxy.

UK Anniversary: This year marks the sixth anniversary the UK Parliament passed the Climate Change Act, with only 5 members of Parliament voting against. It is increasing evident that the Act is becoming a burden on the citizens of the UK, as the science of global warming/climate change is imploding. As stated by Nick Butler, those who voted for the Act embraced several beliefs which are not true:

- * Fossil fuel prices would rise inexorably as global demand exceeded supply;
- * Europe could gain a material competitive advantage by being the first major region in the world to develop a low-carbon economy based on renewables;
- * A gradually rising carbon price would increase the cost of externalities including air pollution and climate change, until renewables became fully competitive;
- * The negative effects of higher energy costs on competitiveness would be mitigated by a global deal with all the world's major economies making progress towards the common goal of reducing emissions.

The Act followed a White Paper issued in 2003 by the government entitled: *Our energy future – creating a low carbon economy*. John Brignell of Number Watch states 5 basic principles of sound energy policy, which have been ignored by the government.

1. Energy should be obtained from a variety of sources, lest one should fail.
2. There should be a reliable and continuous source to service the base load.
3. There should be further instantly available sources to accommodate demand surges.
4. Unpredictable and intermittent sources should be avoided.

5. Policy should not be decided by trends, fashions or religious convictions.

Obviously, wind and solar, strongly supported by the EU, fail these basic principles. See Power mad! <http://www.numberwatch.co.uk/2003%20February.htm#Power> and links under Questioning European Green.

Failing Wind: The Scientific Alliance and the Adam Smith Institute published an empirical study by Capell Aris entitled: Wind Power Reassessed: A review of the UK wind resources for electricity generation. The study uses nine years of wind data from airfield weather-observations to calculate the likely performance of a wind fleet across the UK, then expands the scope to include Ireland and the low countries of the northern European plain covering Belgium, Holland, Denmark and Germany. The purpose of the expanded scope is to see if highly promoted interconnections can improve performance.

Based on these measurements, the researchers built a theoretical wind fleet with 10GW of nameplate capacity. They found that power output exceeds 90% of theoretical power 17 hours per annum; power output exceeds 80% of theoretical power 163 hours per annum, theoretical power is below 20% for 3,448 hours (20 weeks) per annum, and theoretical power is below 10% for 1,519 hours (9 weeks) per annum. Further, when the fleet is 20% of maximum, 77% of the failure to generate more than 20% occur in events that continue for 12 hours per more.

Further, the study found that expanding to Ireland improved the performance somewhat; but expanding it to the northern European plain reduced the performance. The European interconnections have little impact on the mitigation of wind fleet intermittency and variability.

Those familiar with the deficiencies of wind power may not be surprised by the results. But such studies are needed to explain to politicians, and others with the EU, that the hope of free wind power remains a myth. See links under Alternative, Green (“Clean”) Solar and Wind.

Defense of the Grid: Under increasing criticism, the UK National Grid produced a winter outlook report showing that things are not as bleak for the UK as many claim, which may be true. However, there are two components to the outlook that must be considered. One is current status and the second is trend. The current status may be fine, but if the trend is downward, it needs to be addressed. With the EU embracing a 27% increase of renewables and a 40% reduction in carbon dioxide emissions, the outlook is not promising. See links under Defending the Orthodoxy.

How Low Can Oil Go? Speculation continues on the extent to which world oil prices can fall until there is a curtailment in US oil production from dense shale. The large, diverse set of variables include cost of leases, cost of transport, knowledge of the shale formation, technological improvements, and many other factors that require local as well as world-wide knowledge. For an overview of some of the factors, see Articles # 3 and # 4.

US Elections: The Administration appears to be preparing for the US mid-term elections on November 4 with apparent disdain for the results. In the *Federal Register*, government agencies are filing notice of impending regulations to take effect sometime after the election.

If this is the pattern for the next two years, then the nation can expect continued economic stagnation with a growth rate of less than 3 percent. The exception is oil and natural gas extraction

on state and privately controlled land, which the Administration has not been able to control, at least as of now.

The Federal courts have made it clear that they will not protect the public from impending regulations. The regulations must be final. See links under Litigation Issues and EPA and other Regulators on the March.

Number of the Week: More than \$15 Billion in FY 2013. The Wall Street Journal had an article announcing that the government of India is abandoning its regulation of diesel fuel. The government has been subsidizing the fuel at below market rates at an estimated cost of about \$10 billion per year. According to the report, total fuel subsidies amounted to more than \$15 Billion in FY 2013. The article is consistent with prior reports in TWTW, which stated that developing countries and petro-states are the primary governments subsidizing fossil fuels. Thus, arguments by the wind industry that it needs subsidies in Western countries because fossil fuels are subsidized are illogical.

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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. EU Leaders Agree to Long-Term Energy, Climate Change Targets

Leaders Gather at Summit to Hash Out Targets on Emissions, Renewable Energy

By Vanessa Mock, WSJ, Oct 23, 2014

http://online.wsj.com/articles/eu-leaders-seek-to-bridge-divide-over-climate-goals-1414087982?mod=WSJ_hps_sections_world

2. Diesel Deregulation Frees Up Billions for Wiser Spending [India]

By Anant Vijay Kala, WSJ, Oct 22, 2014

<http://blogs.wsj.com/indiarealtime/2014/10/22/diesel-deregulation-frees-up-billions-for-india-to-spend-more-wisely/>

3 The Oil Price Swoon Won't Stop the Shale Boom

Still profitable at lower prices, fracking is ripe for technology gains that would help it weather further declines.

By Mark Mills, WSJ, Oct 23, 2014

http://online.wsj.com/articles/mark-p-mills-the-oil-price-swoon-wont-stop-the-shale-boom-1414106473?mod=WSJ_hps_sections_opinion

4. Energy Boom Can Withstand Steeper Oil-Price Drop

Some Smaller U.S. Producers Are Likely to Face Pinch From a More-Modest Decline

By Russell Gold, Erin Ailworth, and Benoît Faucon, WSJ, Oct 29, 2014

<http://online.wsj.com/articles/energy-boom-can-withstand-steeper-oil-price-drop-1414627471>

5. Arctic Shipping Volume Rises as Ice Melts

Northern Sea Route Primarily Carries Oil, Much of the Cargo Involving Russia

By Chester Dawson, WSJ, Oct 29, 2014

<http://online.wsj.com/articles/arctic-cargo-shipping-volume-is-rising-as-ice-melts-1414612143>

[SEPP Comment: Might not see much commerce until summer ice melt is predictable.]

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NEWS YOU CAN USE:

Climategate Continued

Gavin Schmidt and the EPA Denial Decision

By Steve McIntyre, Climate Audit, Oct 18, 2014

<http://climateaudit.org/2014/10/18/gavin-schmidt-and-the-epa-denial-decision/#more-20138>

[SEPP Comment: *Can the head of NASA-GISS be considered an objective scientist?*]

The Third Warmest Arctic Century

By Steve McIntyre, Climate Audit, Oct 27, 2014

<http://climateaudit.org/2014/10/27/the-third-warmest-arctic-century/#more-20170>

Warmest since, uh, the Medieval Warm Period

By Steve McIntyre, Climate Audit, Oct 28, 2014

<http://climateaudit.org/2014/10/28/warmest-since-uh-the-medieval-warm-period/>

One of the idiosyncrasies of multiproxy studies is that they agree on almost nothing except a very slight accounting advantage of the modern warm period over the medieval warm period.

Challenging the Orthodoxy -- NIPCC

“Modern seas unprecedented”: An insult to geology and sea level research

By Nils-Axel Mörner, Jo Nova’s Blog, Oct 31, 2014

<http://joannenova.com.au/2014/10/modern-seas-unprecedented-an-insult-to-geology-and-sea-level-research/>

Challenging the Orthodoxy

Bertrand Russell’s 10 commandments

By Judith Curry, Climate Etc. Oct 31, 2014

<http://judithcurry.com/2014/10/31/bertrand-russells-10-commandments/#more-17146>

Happer on the Hapless Climatistas

By Steven Hayward, Power Line, Oct 20, 2014 [H/t Timothy Wise]

<http://www.powerlineblog.com/archives/2014/10/happer-on-the-hapless-climatistas.php>

[SEPP Comment: *Video of presentation by Will Happer.*]

A Physicist Ponders the Pause

By John Reid, Quadrant, Oct 20, 2014 [H/t Tom Sheahan]

<http://quadrant.org.au/opinion/doomed-planet/2014/10/physicist-looks-pause/>

Why 2014 Won’t Be the Warmest Year on Record

By Roy Spencer, His Blog, Oct 21, 2014

<http://www.drroyspencer.com/2014/10/why-2014-wont-be-the-warmest-year-on-record/>

Climate change PROVED to be 'nothing but a lie', claims top meteorologist

The debate about climate change is finished - because it has been categorically proved NOT to exist, one of the world's leading meteorologists has claimed.

By Jason Taylor, Express, Oct, 22, 2014

<http://www.express.co.uk/news/nature/526191/Climate-change-is-a-lie-global-warming-not-real-claims-weather-channel-founder>

[SEPP Comment: *The word “proved” is too strong.*]

George Christensen, Australian MP, calls for an inquiry into the BOM: The media finally notices

By Jo Nova, Her Blog, Nov 1, 2014

<http://joannenova.com.au/2014/11/george-christensen-australian-mp-calls-for-an-inquiry-into-the-bom/#more-39239>

The U.S. is Falling Further **Beyond [Behind] in Numerical Weather Prediction: Does the Obama Administration Care?**

By Cliff Mass, Weather Blog, Oct 29, 2014

<http://cliffmass.blogspot.com/2014/10/the-us-is-falling-further-beyond-in.html>

Defending the Orthodoxy

IPCC preparing 'most important' document on climate change

By Matt McGrath, BBC, Oct 30, 2014

<http://www.bbc.com/news/science-environment-29803811>

"They are there to make sure that there is nothing in a document that their government approved that is inconsistent with their government's negotiation position," said the person with knowledge of the proceedings.

Emissions must fall to net zero this century, UN says

By Laura Barron-Lopez, The Hill, Oct 31, 2014

<http://thehill.com/policy/energy-environment/222430-emissions-must-fall-to-net-zero-this-century-un-says>

EU leaders adopt 'flexible' energy and climate targets for 2030

By Staff Writers, EurActiv, Oct 24, 2014 [H/t GWPF]

<http://www.euractiv.com/sections/eu-priorities-2020/eu-leaders-adopt-flexible-energy-and-climate-targets-2030-309462>

Link to document: Conclusions on 2030 Climate and Energy Policy

By Staff Writers, European Council, Oct 24, 2014

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145356.pdf

The European Council calls on all countries to come forward with ambitious targets and policies well in advance of the Conference of the Parties 21 in Paris. It will revert to this issue after the Paris Conference.

EU leaders agree CO2 emissions cut

By Staff Writer and Roger Harrabin, BBC, Oct 24, 2014 [H/t Bishop Hill]

<http://www.bbc.com/news/world-europe-29751064>

[SEPP Comment: Great propaganda photo of steam from a cooling tower.]

Winter Outlook Report 2014/15

By Staff Writers, National Grid, Oct 2014

file:///C:/Users/Owner/Downloads/Winter%20Outlook%20Report%202014_15.pdf

Questioning the Orthodoxy

Weather Channel Founder John Coleman: There is no significant man-made global warming at this time

By Anthony Watts, WUWT, Oct 23, 2014

<http://wattsupwiththat.com/2014/10/23/weather-channel-founder-john-coleman-there-is-no-significant-man-made-global-warming-at-this-time/>

Climate Predictions and Wishful Thinking

By Anthony J. Sadar, American Thinker, Oct 31, 2014 [H/t Timothy Wise]

http://www.americanthinker.com/blog/2014/10/climate_predictions_and_wishful_thinking_.html

EPA’s “Energy Requiem for the Common Man”

By Charles Battig, Right Side News, Oct 27, 2014

<http://www.rightsidenews.com/2014102735030/life-and-science/energy-and-environment/epas-energy-requiem-for-the-common-man.html#/>

2014 Antarctic Ozone Hole Holds Steady

By Staff Writers, Washington DC (SPX), Oct 31, 2014

http://www.terradaily.com/reports/2014_Antarctic_Ozone_Hole_Holds_Steady_999.html

[SEPP Comment: Why is it not shrinking?]

Claim: Recently discovered Arctic microbe is key player in climate change

By Anthony Watts, WUWT, Oct 22, 2014

<http://wattsupwiththat.com/2014/10/22/claim-recently-discovered-arctic-microbe-is-key-player-in-climate-change/>

[SEPP Comment: Another missing link?]

EU climate change targets: a case of style over substance?

By Martin Livermore, The Scientific Alliance, Oct 24, 2014

<http://scientific-alliance.org/scientific-alliance-newsletter/eu-climate-change-targets-case-style-over-substance>

Magnetism and Weather: Interconnections?

By Tim Ball, WUWT, Oct 29, 2014

<http://wattsupwiththat.com/2014/10/29/magnetism-and-weather-interconnections-2/>

New Paper Refutes Walrus-Climate Scare

By Staff Writers, GWPF, Oct 20, 2014

<http://www.thegwpf.com/new-paper-refutes-walrus-climate-scare/>

Link to paper: On the Beach: Walrus haul-outs are nothing new

By Susan Crockford, GEPF, 2014

<http://www.thegwpf.org/content/uploads/2014/10/walrus-fuss.pdf>

[SEPP Comment: No strong correlation with low sea ice levels.]

W Hudson Bay polar bear population no longer “declining” – where are the headlines?

By Susan Crockford, Polar Bear Science, Oct 29, 2014

<http://polarbearscience.com/2014/10/29/w-hudson-bay-polar-bear-population-no-longer-declining-where-are-the-headlines/>

Social Benefits of Carbon

Which Is the Bigger Threat to People in Developing Countries: Climate Change or Energy Poverty?

By Marlo Lewis, Global Warming.org, Oct 20, 2014

<http://www.globalwarming.org/2014/10/20/which-is-the-bigger-threat-to-people-in-developing-countries-climate-change-or-energy-poverty/>

Problems in the Orthodoxy

EC Agrees on 2030 Climate and Energy Policy Framework

By Aaron Larson, Power, Oct 24, 2014

http://www.powermag.com/ec-agrees-on-2030-climate-and-energy-policy-framework/?hq_e=el&hq_m=2971872&hq_l=17&hq_v=5e660500d0

Why Climate Negotiations Are Like Arms Control

By Steven Hayward, Power Line, Oct 24, 2014

<http://www.powerlineblog.com/archives/2014/10/why-climate-negotiations-are-like-arms-control.php>

Deep rifts remain at UN talks on global climate pact

By Mariette Le Roux, AFP, Oct 25, 2014

<https://uk.finance.yahoo.com/news/deep-rifts-remain-un-talks-191815636.html>

IPCC Scientist Mojib Latif Sees North Atlantic Cooling Over Next Decade...Confirms Oceans Play Crucial Role

By P Gosselin, No Tricks Zone, Oct 22, 2014

<http://notrickszone.com/2014/10/22/ipcc-scientist-mojib-latif-sees-north-atlantic-cooling-over-next-decade-confirms-oceans-play-crucial-role/>

India wants focus on adapting to climate change at upcoming UN Climate Conference

By Staff Writer, dna india, Oct 27, 2014 [H/t GWPF]

<http://www.dnaindia.com/delhi/report-india-wants-focus-on-adapting-to-climate-change-at-upcoming-un-climate-conference-2029603>

U.N. talks of tough global climate targets, vague on national action

By Alister Doyle, Reuters, Oct 31, 2014

<http://in.reuters.com/article/2014/10/31/climatechange-talks-idINKBN0IK1G520141031>

Seeking a Common Ground

Back from the twitter twilight zone: Responses to my WSJ op-ed

By Judith Curry, Climate Etc. Oct 18, 2014

<http://judithcurry.com/2014/10/18/back-from-the-twitter-twilight-zone-responses-to-my-wsj-op-ed/#more-17068>

[SEPP Comment: A lengthy post. Disagree with part of Judith's summary. The areas of ignorance have been there. They have been ignored by the IPCC and the modelers.]

Ethics of communicating scientific uncertainty

By Judith Curry, Climate Etc. Oct 21, 2014

<http://judithcurry.com/2014/10/21/ethics-of-communicating-scientific-uncertainty/#more-16954>

Global Warming Pause 'Settled'

By Graham Lloyd, The Australian, Via GWPF, Oct 18, 2014

<http://www.thegwgf.com/global-warming-pause-settled/>

[SEPP Comment: Now that most scientists agree that it exists, what does it mean?]

Root Cause Analysis of the Modern Warming

By Matt Skaggs, Climate Etc. Oct 23, 2014

<http://judithcurry.com/2014/10/23/root-cause-analysis-of-the-modern-warming/>

Models v. Observations

Our Initial Comments on the Abraham et al. Critique of the Spencer & Braswell 1D model

By Roy Spencer, His Blog, Oct 23, 2014

<http://www.drroyspencer.com/2014/10/our-initial-comments-on-the-abraham-et-al-critique-of-the-spencer-braswell-1d-model/>

Model Issues

The Limitations Of Linear Trends

By Paul Homewood, Not a Lot of People Know That, Oct 24, 2014

<http://notalotofpeopleknowthat.wordpress.com/2014/10/24/the-limitations-of-linear-trends/>

Where Was Climate Research Before Computer Models

By Tim Ball, WUWT, Oct 22, 2014

<http://wattsupwiththat.com/2014/10/22/where-was-climate-research-before-computer-models/>

Pioneering Environmental Lawyer Challenges Climate Modelling

By Victor Yannacone Jr. GWPF, Oct 21, 2014

<http://www.thegwpf.com/pioneering-environmental-lawyer-challenges-climate-modelling/>

Measurement Issues

Do Satellite Temperature Trends Have a Spurious Cooling from Clouds?

By Roy Spencer, His Blog, Oct 30, 2014

<http://www.drroyspencer.com/2014/10/do-satellite-temperature-trends-have-a-spurious-cooling-from-clouds/>

NCDC v GISS Global Temperatures

By Paul Homewood, Not a Lot of People Know That, Oct 24, 2014

<http://notalotofpeopleknowthat.wordpress.com/2014/10/24/ncdc-v-giss-global-temperatures/>

Urbanisation Bias In The GHCN Dataset

By Paul Homewood, Not a Lot of People Know That, Oct 26, 2014

<http://notalotofpeopleknowthat.wordpress.com/2014/10/26/urbanisation-bias-in-the-ghcn-dataset/>

New Zealand's temperature record

By Andrew Montford, Bishop Hill, Oct 31, 2014

<http://bishophill.squarespace.com/blog/2014/10/31/new-zealands-temperature-record.html>

Quote of the week – massive climate FAIL by Mashable's Andrew Freedman

By Anthony Watts, WUWT, Oct 21, 2014

<http://wattsupwiththat.com/2014/10/21/quote-of-the-week-massive-climate-fail-by-mashables-andrew-freedman/>

[SEPP Comment: It may be more correct to say that all three use the same primary data source.]

Changing Weather

Natural Catastrophes Drop To 10-Year Low! Weather-Related Losses Mostly Due To “Cold Events”

By P Gosselin, No Tricks Zone, Oct 25, 2014

<http://notrickszone.com/2014/10/25/natural-catastrophes-drop-to-10-year-low-weather-related-losses-mostly-due-to-cold-events/>

Tornado Blind Alley,

By Steven Hayward, Power Line, Oct 17, 2014 [H/t Timothy Wise]

<http://www.powerlineblog.com/archives/2014/10/tornado-blind-alley.php>

Violent Tornadoes Are On The Decline In The US

By Paul Homewood, WUWT, Oct 31, 2014

<http://wattsupwiththat.com/2014/10/31/violent-tornadoes-are-on-the-decline-in-the-us/>

Bastardi Rips GISS Claims Of “Warmest September Ever” And NWS Forecast Of A “Blowtorch Winter”

By P Gosselin, No Tricks Zone, Oct 19, 2014

<http://notrickszone.com/2014/10/19/bastardi-rips-giss-claims-of-warmest-september-ever-and-nws-forecast-of-a-blowtorch-winter/>

Polar Vortex Charleston

By Roy Spencer, His Blog, Oct 30, 2014

<http://www.drroyspencer.com/2014/10/polar-vortex-charleston/>

Earliest Snow in Columbia, SC

By Roy Spencer, His Blog, Nov 1, 2014

<http://www.drroyspencer.com/2014/11/earliest-snow-in-columbia-sc/>

U.S. Floods, Droughts and Global Warming: Another Wardrobe Failure

By Paul C. "Chip" Knappenberger and Patrick J. Michaels, CATO, Oct 21, 2014

<http://www.cato.org/blog/us-floods-droughts-global-warming-another-wardrobe-failure>

Changing Climate

More Glacier Studies Confirm Roman And Medieval Warm Periods Were Just As Warm As Today

New studies confirm: Glaciers in the Alps already had “fevers” during the Roman and Medieval warm periods

By Sebastian Lüning and Fritz Vahrenholt, Trans, edit. P Gosselin, No Tricks Zone, Oct 30, 2014

<http://notrickszone.com/2014/10/30/more-glacier-studies-confirm-roman-and-medieval-warm-periods-were-just-as-warm-as-today/>

El Nino Chances Fading Say BoM Models,

By Staff Writers, Reporting Climate Science, Oct 20, 2014 [H/t GWPF]

<http://www.reportingclimatescience.com/news-stories/article/el-nino-chances-fading-say-bom-models.html>

NASA’s 2011 Data Show “Blocking Events”, “Vortices” Far More Frequent When CO2 Was Under 350 ppm In 1950s!

By P Gosselin, No Tricks Zone, Oct 23, 2014

<http://notrickszone.com/2014/10/23/nasas-2011-data-show-blocking-events-vortices-more-frequent-when-co2-was-under-350-ppm-in-1950s/>

Changing Seas

Sheldon Whitehouse: Plenty of reason to fear sea-level rise in R.I.

By Sheldon Whitehouse, Providence Journal, Oct 30, 2014

<http://www.providencejournal.com/opinion/commentary/20141030-sheldon-whitehouse-plenty-of-reason-to-fear-sea-level-rise-in-r.i.ece>

[SEPP Comment: The Senator resorts to personal attacks.]

Tom Harris and Bob Carter: Whitehouse misguided on sea-level rise

By Tom Harris and Bob Carter, Providence Journal, Oct 21, 2014

<http://www.providencejournal.com/opinion/commentary/20141021-tom-harris-and-bob-carter-whitehouse-misguided-on-sea-level-rise.ece>

[SEPP Comment: See link immediately above.]

Changing Cryosphere – Land / Sea Ice

Coming Europe Winter: “Meteorologists Agree” It is “Going To Be Damned Cold!”...Early Siberia Snow Bodes Ill

By P Gosselin, No Tricks Zone, Oct 31, 2014

<http://notrickszone.com/2014/10/31/coming-europe-winter-meteorologists-agree-it-is-going-to-be-damned-cold-early-siberia-snow-bodes-ill/>

Arctic Ice Melt Seen Doubling Risk of Harsh Winter in EU

By Stefan Nicola, Bloomberg, Oct 26, 2014

<http://www.bloomberg.com/news/2014-10-26/arctic-ice-melt-seen-doubling-risk-of-harsh-winter-in-eu.html>

[SEPP Comment: Is it early Siberian snow or summer warmth/ice melt that brings cold winters?]

New paper explains how Polar Vortex is controlled by natural variability, not CO2

By Staff Writer, The Hockey Shtick, Oct 25, 2014

<http://hockeyshtick.blogspot.com/2014/10/new-paper-explains-how-polar-vortex-is.html>

Expanding Antarctic Ice Linked To Colder Oceans

By Paul Homewood, Not a Lot of People Know That, Oct 22, 2014

<http://notalotofpeopleknowthat.wordpress.com/2014/10/22/expanding-antarctic-ice-linked-to-colder-oceans/>

Study: Changing winds cause melting of coastal Antarctic glaciers

By Anthony Watts, WUWT, Oct 22, 2014

<http://wattsupwiththat.com/2014/10/22/study-changing-winds-cause-melting-of-coastal-antarctic-glaciers/>

Scientists Resurrect Treasure Trove of Satellite Data From the 1960s

By Andrew Freedman, Mashable, Oct 21, 2014 [H/t Climate Depot]

<http://mashable.com/2014/10/21/scientists-1960s-satellite-climate-data/>

The Cloudy Future of Arctic Sea Ice

By Staff Writers, Huntsville AL (SPX), Oct 20, 2014

http://www.spacedaily.com/reports/The_Cloudy_Future_of_Arctic_Sea_Ice_999.html

[SEPP Comment: As if it never happened before.]

Changing Earth

Global surge of big earthquakes and implications for Cascadia

By Staff Writers, Boulder CO (SPX), Oct 22, 2014

http://www.terraily.com/reports/A_Global_Surge_of_Great_Earthquakes_from_2004_2014_and_Implications_for_Cascadia_999.html

Acidic Waters

Ocean Acidification

Report to Congressional Requesters

By Staff Writers, GAO, Sep 2014 [H/t Timothy Wise]

<http://www.gao.gov/assets/670/665777.pdf>

The Scope and Severity of Ocean Acidification's Effects Are Potentially Significant but Not Fully Known

[SEPP Comment: Even the chosen terminology is not accurate. "Acidity is often measured on the pH scale, where pH equals the negative logarithm of the hydrogen ion concentration. The pH scale ranges from 0 to 14. A pH of 7 is neutral, a pH less than 7 is acidic, and a pH greater than 7 is basic or alkaline. **Therefore, as pH decreases, the acidity of a substance can be said to have increased, even if the substance has a pH above 7.**" (Boldface added)]

Agriculture Issues & Fear of Famine

Newsbytes: World food production at record levels

By Anthony Watts, WUWT, Oct 23, 2014

<http://wattsupwiththat.com/2014/10/23/newsbytes-world-food-production-at-record-levels/>

How Important Is Water to the U.S. Economy?

By Staff Writers, NCPA, Oct 22, 2014

http://www.ncpa.org/sub/dpd/index.php?Article_ID=24985&utm_source=newsletter&utm_medium=email&utm_campaign=DPD

Link to report: In Times of Drought: Nine Economic Facts about Water in the United States

By Kearney, et al. Brookings, Oct 20, 2014

http://www.brookings.edu/research/reports/2014/10/20-9-economic-facts-water-united-states?utm_campaign=Brookings+Brief&utm_source=hs_email&utm_medium=email&utm_content=14581672&hsenc=p2ANqtz-8rYLchx6LaSpN_arR1CIItHzlHF4gCiR9XGbPODZ7t3Jup5R-ZMtNOjXAJm8ZxDVubJTb4tVMRuE3Hgft6hFImMLqB5g&hsmi=14581672

Un-Science or Non-Science?

A global natural gas boom alone won't slow climate change

By Staff Writers, College Park MD (SPX), Oct 20, 2014

http://www.oilgasdaily.com/reports/A_global_natural_gas_boom_alone_wont_slow_climate_change_999.html

Link to Report: Global Natural Gas Boom Alone Won't Slow Climate Change

By McJeon, et al. Joint Global Change Research Institute, Oct 2014

<https://www.pnnl.gov/science/highlights/highlight.asp?id=3814>

Link to paper: Limited impact on decadal-scale climate change from increased use of natural gas

By McJeon, et al, Nature, Oct 15, 2014

<http://www.nature.com/nature/journal/vaop/ncurrent/full/nature13837.html>

[SEPP Comment: Fundamental issue – The Assumed climate sensitivity in the integrated assessment models.]

A disagreement over climate-conflict link heats up

By John Bohannon, Science Insider, Oct 28, 2014 [H/t GWPF]

<http://news.sciencemag.org/climate/2014/10/disagreement-over-climate-conflict-link-heats>

[SEPP Comment: Violence and warming.]

Communicating Better to the Public – Make things up.

Climate Witchcraft Booms: Global WARMING To Cause More Severe Winters...But Green Energies Causing COOLING!

By P Gosselin, No Tricks Zone, Oct 28, 2014

<http://notrickszone.com/2014/10/28/climate-witchcraft-booms-global-warming-to-cause-more-severe-winters-but-green-energy-causing-cooling/>

Feds outline climate change plans

By Laura Barron-Lopez, The Hill, Oct 31, 2014

<http://thehill.com/policy/energy-environment/222458-38-federal-agencies-outline-climate-threats-adaptation-plans>

The Department of Health and Human Services (HHS) calls climate change “one of the top public health challenges of our time.”

Secret Post-Facto Changes in the IPCC AR5 Report

By Brandon Shollenberger, WUWT, Oct 19, 2014

<http://wattsupwiththat.com/2014/10/19/secret-post-facto-changes-in-the-ipcc-ar5-report/>

Sea level rise “unprecedented” when modeling the ancient past

By Jo Nova, Her Blog, Oct 21, 2014

<http://joannenova.com.au/2014/10/sea-level-rise-unprecedented-when-modeled-results-are-compared-to-cherry-picked-adjusted-instruments/>

Communicating Better to the Public – Go Personal.

Warmists should apologise to Bob Carter

By Andrew Bold, Herald Sun, AU, Oct 21, 2014 [H/t WUWT]

http://blogs.news.com.au/heraldsun/andrewbolt/index.php/heraldsun/comments/warmists_should_apologise_to_bob_carter/

Slimed by Naomi Oreskes – In Defense of Dr. Fred Singer

By Ron Arnold, WUWT, Oct 20, 2014

<http://wattsupwiththat.com/2014/10/20/slimed-by-naomi-oreskes-in-defense-of-dr-fred-singer/>

The Weather Channel pushes back against John Coleman

By Anthony Watts, WUWT, Oct 30, 2014

<http://wattsupwiththat.com/2014/10/30/the-weather-channel-pushes-back-against-john-coleman/>

Communicating Better to the Public – Use Propaganda on Children

Shooting Santa to Save the World

By Tony Thomas, Quadrant, Oct 19, 2014

<http://quadrant.org.au/opinion/tony-thomas/2014/10/shooting-santa-save-world/>

Expanding the Orthodoxy

BABBIN: The Pentagon's war on the global climate

Obama's foolish green agenda interferes with the military's core mission

By Jed Babbin, Washington Times, Oct 19, 2014 [H/t Timothy Wise.]

<http://www.washingtontimes.com/news/2014/oct/19/babbin-the-pentagons-war-on-the-global-climate/>

Hagel: 'Climate change presents security issues' for US

By Laura Barron-Lopez, The Hill, Oct 30, 2014

<http://thehill.com/policy/energy-environment/222361-hagel-climate-change-presents-security-issues-for-us>

Questioning European Green

Steel Production May Exit Europe Over Unilateral Carbon Policy, Mittal Warns EU Leaders

By Aditya Mittal, WSJ, Via GWPF, Oct 23, 2014

<http://www.thegwpf.com/steel-production-may-exit-europe-over-unilateral-carbon-policy-mittal-warns/>

[SEPP Comment: Mr. Mittal is the CEO of ArcelorMittal Europe.]

Reassessing wind power

By Martin Livermore, The Scientific Alliance, Oct 31, 2014

<http://scientific-alliance.org/scientific-alliance-newsletter/reassessing-wind-power>

'Fighting the nonsense' The climate change rebels were spot on, says ANN WIDDECOMBE

SIX years ago Parliament passed the Climate Change Act with a mere five MPs, all Conservatives, voting against it.

By Ann Widdecombe, Express, UK, Oct 29, 2014

<http://www.express.co.uk/comment/columnists/ann-widdecombe/528569/Ann-Widdecombe-on-Climate-change-Ched-Evans-and-Fiona-Woolf>

EU Energy Policy Isn't Working: Time To Start Again

By Nick Butler, Financial Times, Via GWPF, Oct 27, 2014

<http://www.thegwpf.com/nick-butler-eu-energy-policy-isnt-working-time-to-start-again/>

After Spending Billions On Green Energy 'Technology,' Britain faces Blackout Threat

By Andrew Walker, Breitbart, Oct 29, 2014 [H/t GWPF]

<http://www.breitbart.com/Breitbart-London/2014/10/29/After-Spending-Billions-On-Green-Technology-Britain-Faces-Blackouts>

House of cards?

By Andrew Montford, Bishop Hill, Oct 23, 2014

<http://bishophill.squarespace.com/blog/2014/10/23/house-of-cards.html>

You could get the impression that the whole thing is just a house of cards, with everyone expecting to import non-existent surplus energy from everyone else.

[SEPP Comment: Those pesky details! Ofgem is the UK Office of Gas and Electricity Markets, which regulates the gas and electricity markets in the UK.]

Thinking about energy costs

By Andrew Montford, Bishop Hill, Oct 23, 2014

<http://bishophill.squarespace.com/blog/2014/10/23/thinking-about-energy-costs.html>

Link to report: Rotten foundations: Time to reassess the EU's Environment and Climate Change policies

By Raoul Ruparel and Christopher Howarth, Open Europe, Sep 2014

http://www.openeurope.org.uk/Content/Documents/Rotten_Foundations_-_Open_Europe_Report.pdf

Ahead of the upcoming EU summit [independent think tank] Open Europe has today published a new analysis of the EU's energy and environment policies. The study reveals that by 2020, EU-measures in this area will on average add 23% (£350,000) to small and medium sized firms' energy bills in the UK. Meanwhile, household bills will increase by almost £150 (11%).

Britain's Man-Made Energy Crisis,

By Benny Peiser, Mail, UK, Via GWPF, Oct 28, 2014

<http://www.thegwpf.com/benny-peiser-britains-man-made-energy-crisis/>

Britain's Energy Policy Is Insane: That's The inconvenient Truth

There has always been money to be made from selling fear

By Tim Montgomerie, The Times, Via GWPF, Oct 18, 2014

<http://www.thegwpf.com/britains-energy-policy-is-insane-thats-the-inconvenient-truth/>

Editorial: Fantasy Policies Will Not Solve Our Energy Crisis

Editorial, Daily Telegraph, UK, Via GWPF, Oct 21, 2014

<http://www.thegwpf.com/editorial-fantasy-policies-will-not-solve-our-energy-crisis/>

Europe Blackout Threat Looms Amid Power-Supply Risks, Study Says

By Tara Patel, Bloomberg, Oct 27, 2014 [H/t GWPF]

<http://www.bloomberg.com/news/2014-10-27/europe-blackout-threat-looms-amid-power-supply-risks-study-says.html>

Green Blob Success: 'Blackout Britain' Threatens Economy

By Jonathan Leake, Sunday Times, Via GWPF, Oct 26, 2014

<http://www.thegwpf.com/green-blob-at-work-blackout-britain-threatens-economy/>

Miliband & Worthington: The Most Expensive Man And Woman In British History

By Christopher Booker, Sunday Telegraph, Via GWPF, Oct 19, 2014

<http://www.thegwpf.com/miliband-worthington-the-most-expensive-man-and-woman-in-british-history/>

Renewables Threaten Europe's Energy Security This Winter

By Walter Russell Mead & Staff, American Interest, Oct 29, 2014 [H/t GWPF]

<http://www.the-american-interest.com/blog/2014/10/29/renewables-threaten-europes-energy-security-this-winter/>

Questioning Green Elsewhere

The Failure of Green Energy Policies

By Euan Mearns, Energy Matters, Oct 31, 2014 [H/t Bishop Hill]

<http://euanmearns.com/the-failure-of-green-energy-policies/>

It is important to recall that well over \$1,700,000,000,000 (\$1.7 trillion) has been spent on installing wind and solar devices in recent years with the sole objective of reducing global CO2 emissions. It transpires that since 1995 low carbon energy sources (nuclear, hydro and other renewables) share of global energy consumption has not changed at all.

The German Disease: Coming Soon to a Country Near You?

By Steven Hayward, PowerLine, Oct 27, 2014

<http://www.powerlineblog.com/archives/2014/10/the-german-disease-coming-soon-to-a-country-near-you.php>

What Goes Up...Ontario's Soaring Electricity Prices and How to Get Them Down

By Ross McKittrick and Tom Adams, Fraser Institute, Oct 30, 2014

<http://www.fraserinstitute.org/research-news/display.aspx?id=21912>

Green Jobs

Cash-Strapped NHS Wales Wastes a Fortune on Politically Correct Non-Jobs

By Andre Walker, Breitbart, Oct 22, 2014 [H/t Bishop Hill]

<http://www.breitbart.com/Breitbart-London/2014/10/22/Cash-strapped-NHS-Wales-Wastes-A-Fortune-On-Politically-Correct%20Non-Jobs>

Funding Issues

A case of advanced dementia

By John Brignell, Number Watch, Oct 24, 2014

http://www.numberwatch.co.uk/2014_october.htm#dementia

Squabble Over \$100 Billion Aid Stalls Global Warming Deal

By Stefan Nicola, Bloomberg, Oct 24, 2014 [H/t GWPF]

<http://www.businessweek.com/news/2014-10-25/squabble-over-100-billion-aid-stalls-global-warming-deal>

The Political Games Continue

Obama To Delay Major Climate Regulations Until After The Election

By Michael Bastasch, Daily Caller, Oct 20, 2014

<http://dailycaller.com/2014/10/20/obama-to-delay-major-climate-regulations-until-after-the-election/>

US outlines strategy for Arctic Council, puts climate on top

By Laura Barron-Lopez, The Hill, Oct 24, 2014

<http://thehill.com/policy/energy-environment/221816-us-outlines-strategy-for-arctic-council-puts-climate-on-top>

Litigation Issues

Court again tosses E15 challenge on lack of standing

By Amanda Peterka, E&E Reporter, Oct 21, 2014

<http://www.eenews.net/eenewspm/2014/10/21/stories/1060007671>

EPA and other Regulators on the March

EPA Director on Environmental Laws: 'Enforcement Really is Democracy in Action'

By Eric Scheiner, CNS News, Oct 31, 2014 [H/t Timothy Wise]

<http://www.cnsnews.com/news/article/eric-scheiner/epa-director-environmental-laws-enforcement-really-democracy-action>

[SEPP Comment: Regulations without solid foundations is democracy in action?]

FEMA edict to U.S. states: ‘Provide a Climate Plan or Lose Funding’

By Anthony Watts, WUWT, Oct 20, 2014

<http://wattsupwiththat.com/2014/10/20/fema-edict-to-u-s-states-provide-a-climate-plan-or-lose-funding/>

Dentists brace for new EPA pollution rules

By Tim Devaney, The Hill, Oct 21, 2014

<http://thehill.com/regulation/221376-dentists-facing-new-pollution-rules>

DOE pushing new efficiency rules for furnaces

By Tim Devaney, The Hill, Oct 29, 2014

<http://thehill.com/regulation/222199-doe-pushing-new-efficiency-rules-for-furnaces>

Efficiency rules target air conditioners, clothes dryers

By Tim Devaney, The Hill, Oct 22, 2014

<http://thehill.com/regulation/221562-efficiency-rules-target-air-conditioners-clothes-dryers>

DOE hits brakes on efficiency rules

By Tim Devaney, The Hill, Oct 20, 2014

<http://thehill.com/regulation/221256-doe-hits-brakes-on-efficiency-rules>

EPA takes step in regulating drinking water

By Laura Barron-Lopez, The Hill, Oct 20, 2014

<http://thehill.com/policy/energy-environment/221317-epa-takes-first-step-toward-regulating-strontium-in-drinking-water>

EPA cracks down on toxic chemicals

By Tim Devaney, The Hill, Oct 24, 2014

<http://thehill.com/regulation/221831-epa-cracks-down-on-toxic-chemicals>

Energy conservation standards target fluorescent lamps, water heaters

By Tim Devaney, The Hill, Oct 20, 2014

<http://thehill.com/regulation/221262-energy-conservation-standards-target-fluorescent-lamps-water-heaters>

Snapping turtles may get protection from feds

By Tim Devaney, The Hill, Oct 29, 2014

<http://thehill.com/regulation/222205-snapping-turtles-may-be-endangered-feds-say>

Energy Issues – Non-US

Cold snap could see factories closed to conserve electricity

By Edd Gent, E&T, Oct 28, 2014 [H/t GWPF]

<http://eandt.theiet.org/news/2014/oct/winter-outlook.cfm>

Cooling Tower Fire Takes Down UK Power Plant

Aaron Larson, Power, Oct 20, 2014

http://www.powermag.com/cooling-tower-fire-takes-down-uk-power-plant/?hq_e=el&hq_m=2967611&hq_l=9&hq_v=5e660500d0

Study: Improved electricity access has little impact on climate change [in India]

By Anthony Watts, WUWT, Oct 19, 2014

<http://wattsupwiththat.com/2014/10/19/study-improved-electricity-access-has-little-impact-on-climate-change/>

Link to paper: Household electricity access a trivial contributor to CO2 emissions growth in India

By Shonali Pachauri, Nature Climate Change, Oct 19, 2014

<http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate2414.html>

Beijing's focus on coal lost in haze of smog: experts

By Staff Writers, Beijing (AFP), Oct 22, 2014

http://www.energy-daily.com/reports/Beijings_focus_on_coal_lost_in_haze_of_smog_experts_999.html

Energy Issues -- US

Hydro Power, Real Renewable Energy

By Donn Dears, Power For USA, Oct 28, 2014

<https://dddusmma.wordpress.com/2014/10/28/hydro-power-real-renewable-energy/>

Myths and realities of renewable energy

By Planning Engineer, Climate Etc. Oct 22, 2014

<http://judithcurry.com/2014/10/22/myths-and-realities-of-renewable-energy/#more-17092>

[SEPP Comment: A lengthy essay on some of the issues regarding renewable energy.]

Opec Plots US Shale Oil Takedown

Oil cartel planning to push the cost of crude down to make new shale production uneconomical

By Nigel, Wilson, International Business Times, Oct 28, 2014 [H/t GWPF]

<http://www.ibtimes.co.uk/opec-plots-us-shale-takedown-1472155>

Washington's Control of Energy

Energy Cost Rise: A Pledge Obama (Unfortunately) Kept

Editorial, IBD, Oct 22, 2014

<http://news.investors.com/ibd-editorials/102214-723066-energy-prices-are-historically-higher-under-obama.htm>

Alaska unlocks oil and gas leases near dispute ANWR border

By Daniel J. Graeber, (UPI) Juneau, Alaska, Oct 23, 2014

http://www.oilgasdaily.com/reports/Alaska_unlocks_oil_and_gas_leases_near_dispute_ANWR_border_999.html

Plant Washington Coal Project Gets New Lifeline

By Thomas Overton, Power, Oct 29, 2014

http://www.powermag.com/plant-washington-project-gets-new-lifeline/?hq_e=el&hq_m=2971872&hq_l=8&hq_v=5e660500d0

[SEPP Comment: Consequences of CO2 regulations are not known.]

TransCanada: Energy East pipeline application submitted

By Daniel J. Graeber, Quebec City (UPI), Oct 30, 2014

http://www.oilgasdaily.com/reports/TransCanada_Energy_East_pipeline_application_submitted_99.html

Oil and Natural Gas – the Future or the Past?

Fracking Revolution Cuts Prices, Drives A Stake Through OPEC's Heart

By Harold Hamm, IBD, Oct 24, 2014

<http://news.investors.com/ibd-editorials-viewpoint/102414-723415-america-should-pursue-its-oil-and-gas-revolution-to-its-fullest-extent.htm>

...the U.S. has increased oil production by an enormous 65% over the past five years.

Cheaper oil is good news

Ignore producers: the cost of energy benefits consumers

By Matt Ridley, Rational Optimist, Oct 22, 2014

<http://www.rationaloptimist.com/blog/cheaper-oil-is-good-news.aspx>

Fracking Innovation Defying Oil Price Dangers

By Walter Russell Mead and Staff, American Interest, Oct 22, 2014

<http://www.the-american-interest.com/blog/2014/10/22/fracking-innovation-defying-oil-price-dangers/>

Fracking Has Changed the Energy Policy Debate

By Adam O'Neal, Real Clear Politics, Oct 28, 2014

http://www.realclearpolitics.com/articles/2014/10/28/fracking_has_changed_the_energy_policy_debate_124451.html

Will low oil prices take a bite out of the US shale boom?

Oil prices continue to fall, putting pressure on US drillers who need oil prices to remain relatively high to make production profitable. Low oil prices are already reducing the number of active drilling rigs in the US.

By Nick Cunningham, Oilprice.com, Oct 23, 2014

<http://www.csmonitor.com/Environment/Energy-Voices/2014/1023/Will-low-oil-prices-take-a-bite-out-of-the-US-shale-boom>

A New Approach To Monitoring Groundwater Supplies Near Fracking Sites

By Staff Writers, Cincinnati OH (SPX), Oct 20, 2014

http://www.oilgasdaily.com/reports/Taking_a_Unique_Approach_to_Monitoring_Groundwater_Supplies_Near_Ohio_Fracking_Sites_999.html

Free Markets Supply Affordable Energy and a Clean Environment

By Nicholas Loris, Heritage Foundation, Oct 31, 2014 [H/t Timothy Wise]

<http://www.heritage.org/research/reports/2014/10/free-markets-supply-affordable-energy-and-a-clean-environment>

Return of King Coal?

Developing world embracing coal despite Obama's efforts to limit use

Fuel remains popular despite Obama push: report

By Patrice Hill, Washington Times, Oct 27, 2014

<http://www.washingtontimes.com/news/2014/oct/27/developing-world-drives-strong-demand-coal/>

Not Beyond Coal

How the Global Thirst for Low-Cost Electricity Continues Driving Coal Demand

By Robert Bryce, Manhattan Institute, Oct, 2014

http://www.manhattan-institute.org/html/eper_14.htm#.VF98F

Nuclear Energy and Fears

Extraordinary Potential of Fusion

By Donn Dears, Power For USA, Oct 21, 2014

<https://dddusmma.wordpress.com/2014/10/21/extraordinary-potential-of-fusion/>

Implications of Fusion Power

By Donn Dears, Power For USA, Oct 24, 2014

<https://dddusmma.wordpress.com/2014/10/24/implications-of-fusion-power/>

Nuclear Energy: The Once and Future Power Source

By Brandon Ott, Real Clear Politics, Oct 31, 2014

http://www.realclearpolitics.com/articles/2014/10/31/nuclear_energy_the_once_and_future_power_source_124508.html

Alternative, Green (“Clean”) Solar and Wind

The answer isn't blowing in the wind

By Martin Livermore, Adam Smith Institute, Oct 27, 2014 [H/t Bishop Hill]

<http://www.adamsmith.org/blog/energy-environment/the-answer-isnt-blowing-in-the-wind/>

Link to report: Wind Power Reassessed: A review of the UK wind resource for electricity generation

By Capell Aris, The Scientific Alliance and Adam Smith Institute, No Date

<http://www.adamsmith.org/wp-content/uploads/2014/10/Assessment7.pdf>

Although it is claimed that the wind is always blowing somewhere in the UK, the model reveals this ‘guaranteed’ output is only sufficient to generate something under 2% of nominal output. The most common power output of this 10GW model wind fleet is approximately 800MW. The probability that the wind fleet will produce full output is vanishingly small.

The preceding deficiencies suggest the model wind fleet would require an equal sized fossil fuel generation fleet operating alongside it, especially during winter months.

More Hot Air

By Donn Dears, Power For USA, Oct 31, 2014

<https://dddusmma.wordpress.com/2014/10/31/more-hot-air/>

[SEPP Comment: According to the author, the failure by US Energy Information Administration and the American Wind Energy Association (AWEA) to include all the costs embodied in the production and transmission of electricity from wind turbines is misleading to the point of being dishonest.]

Offshore Wind Power's Promising But Complicated Future

By John Connor Cleveland, Real Clear Politics, Oct 29, 2014

http://www.realclearpolitics.com/articles/2014/10/29/offshore_wind_powers_promising_but_complicated_future.html

[SEPP Comment: See link immediately above.]

Texas Comptroller Report Destroys Wind Industry Claims

By James Taylor, The Heartland Institute, Oct 21, 2014

<http://news.heartland.org/newspaper-article/2014/10/21/texas-comptroller-report-destroys-wind-industry-claims>

Carbon Schemes

Kemper County IGCC Project Costs Soar to \$6.1B

By Sonal Patel, Power, Oct 29, 2014

http://www.powermag.com/kemper-county-igcc-project-costs-soar-to-6-1b/?hq_e=el&hq_m=2971872&hq_l=11&hq_v=5e660500d0

US energy-related carbon emissions rose in 2013, feds say

By Laura Barron-Lopez, The Hill, Oct 21, 2014

<http://thehill.com/policy/energy-environment/221398-us-energy-related-carbon-emissions-rose-in-2013-feds-say>

Environmental Industry

EXPOSED: How a shadowy network funded by foreign millions is making our household energy bills soar - for a low-carbon Britain

Shadowy pro-green lobbyists working at every level of the Establishment Organisations are channelling tens of millions of pounds into green policies Elite lobby group linked to Friends of the Earth, Greenpeace and the WWF Current energy policies shaped by the Green Blob will cost up to £400billion If continued, there will be further eye-watering energy bill rises for Britons

By David Rose, Mail, UK, Oct 25, 2014 [H/t GWPF]

<http://www.dailymail.co.uk/news/article-2807849/EXPOSED-shadowy-network-funded-foreign-millions-making-household-energy-bills-soar-low-carbon-Britain.html>

Greens to spend record \$85M in midterms

By Laura Barron-Lopez, The Hill, Oct 27, 2014

<http://thehill.com/policy/energy-environment/221992-green-groups-set-to-spend-record-85m-in-midterms>

It's rarely about the environment anymore

It's about slashing our energy use, free enterprise, job creation, living standards and freedoms

By Paul Driessen, SPPI, Oct 26, 2014

<http://sppliblog.org/news/its-rarely-about-the-environment-anymore>

Other Scientific News

Chinese scientist proposes new scientific satellites

By Staff Writers, Beijing (XNA), Oct 16, 2014

http://www.spacedaily.com/reports/Chinese_scientist_proposes_new_scientific_satellites_999.html

Sophisticated Sensor Will Give NOAA Earlier Warnings of Severe Storms

By Staff Writers, Palo Alto CA (SPX), Oct 20, 2014

[http://www.spacedaily.com/reports/Sophisticated Sensor Will Give NOAA Earlier Warnings of Severe Storms 999.html](http://www.spacedaily.com/reports/Sophisticated_Sensor_Will_Give_NOAA_Earlier_Warnings_of_Severe_Storms_999.html)

Other News that May Be of Interest

Amherst Students Storm Out in Protest of Greenpeace Skeptic's Lecture

By Ashley Pratte, YAF, Oct 13, 2014 [H/t Timothy Wise]

<http://www.yaf.org/AmherstStudentsStormOutInProtestOfGreenpeaceSkepticsLecture.aspx>

[SEPP Comment: Learning tolerance of ideas the Amherst way.]

Antares Rocket Crash in Virginia Investigation to Take up to Year

By Staff Writers, Washington DC (RIA Novosti), Oct 30, 2014

[http://www.space-travel.com/reports/Antares Rocket Crash in Virginia Investigation to Take up to Year 999.html](http://www.space-travel.com/reports/Antares_Rocket_Crash_in_Virginia_Investigation_to_Take_up_to_Year_999.html)

Ebola idiocy and other (de)pressing matters: Part 1

By Staff Writers, ACSH, Oct 20, 2014

<http://acsh.org/2014/10/ebola-idiocy-depressing-matters-part-1/>

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BELOW THE BOTTOM LINE:

Government measures 'may have slowed down global warming': Energy minister claims policies are playing a role in curbing rising temperatures

Baroness Sandip Verma made the claims during a session in House of Lords

She said warming may have decreased, which could support the effectiveness of green policies

Assessment of Intergovernmental Panel On Climate Change report will be published Friday

It is expected to address how measures are impacting global temperatures

By Victoria Wollaston, Mail, UK, Oct 27, 2014 [H/t GWPF]

<http://www.dailymail.co.uk/sciencetech/article-2809995/Government-measures-slowed-global-warming-Energy-minister-claims-policies-playing-role-curbing-rising-temperature.html>

Lew fan gong

By Andrew Montford, Bishop Hill, Oct 27, 2014

<http://bishophill.squarespace.com/blog/2014/10/27/lew-fan-gong.html>

The snail paper

By Andrew Montford, Bishop Hill, Oct 20, 2014

<http://bishophill.squarespace.com/blog/2014/10/20/the-snail-paper.html>

“I think the Gerlach paper [on the extinction of the snail published by the Royal Society] may well fall into the category of ‘so bad that it would be too embarrassing to publish a rebuttal pointing out all the problems.’”

Eye roller: ‘Climate change shrinks goats’

By Anthony Watts, WUWT, Oct 21, 2014

<http://wattsupwiththat.com/2014/10/21/eye-roller-climate-change-shrinks-goats/>

Ho Hum. Blum is Glum

By Staff Writer, ACSH, Sep 26, 2014

<http://acsh.org/2014/09/ho-hum-blum-glum/>

Why Strange New Birds Are Appearing in Your Backyard

By Katharine Gammon , Yahoo, Oct 21, 2014 [H/t Clyde Spencer]

<http://news.yahoo.com/why-strange-birds-appearing-backyard-160510528.html>

[SEPP Comment: *If the new birds are penguins – be very worried!*]

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ARTICLES:

1. EU Leaders Agree to Long-Term Energy, Climate Change Targets

Leaders Gather at Summit to Hash Out Targets on Emissions, Renewable Energy

By Vanessa Mock, WSJ, Oct 23, 2014

[http://online.wsj.com/articles/eu-leaders-seek-to-bridge-divide-over-climate-goals-](http://online.wsj.com/articles/eu-leaders-seek-to-bridge-divide-over-climate-goals-1414087982?mod=WSJ_hps_sections_world)

[1414087982?mod=WSJ_hps_sections_world](http://online.wsj.com/articles/eu-leaders-seek-to-bridge-divide-over-climate-goals-1414087982?mod=WSJ_hps_sections_world)

BRUSSELS—European Union leaders agreed on a set of long-term targets on energy and climate change in the early hours of Friday, agreeing to financial sweeteners and weakening some objectives in order to get a deal.

The 28 leaders haggled for hours before clinching an agreement that they hope will set the tone ahead of global climate negotiations in Paris next year.

“It was not easy, not at all,” conceded the European Council President, Herman Van Rompuy after the talks ended. “But we managed to reach a fair decision. It sets Europe on an ambitious yet cost-effective energy path.”

EU leaders committed to cutting carbon emissions by at least 40% by 2030 compared with 1990 levels, which will be legally binding on every member state.

Leaders also agreed that the share of renewables such as wind and solar in the EU’s energy mix will be raised to 27% compared with 1990 levels, and a 27% improvement in energy efficiency.

The outcome will be enough to put the EU in pole position ahead of the Paris conference, but it fell short of the ambition demanded by Germany and Nordic countries, with Sweden holding up talks in the early hours of Friday on the grounds that the deal lacked teeth.

More progressive countries had pushed for a binding target to boost energy efficiency, arguing that this would also help the EU in reducing its dependence on Russian gas imports at a time of heightened tensions with Moscow. But the U.K. and others had balked at the high upfront costs of needed to meet the objective, such as insulating public buildings.

Poland and an alliance of other central and Eastern European countries secured greater financial support in order to meet the targets on the grounds that these countries have to carry out deeper overhauls of their energy systems.

The targets come at a critical moment in the EU’s energy policy as the continent tries to wean itself of gas and oil imports from Russia. But the subsidies needed for cleaner technologies such as wind and solar power have been blamed for ramping up energy costs for both consumers and industry, just when the shale gas boom in the U.S. has led to plummeting prices there.

2. Diesel Deregulation Frees Up Billions for Wiser Spending [India]

By Anant Vijay Kala, WSJ, Oct 22, 2014

<http://blogs.wsj.com/indiarealtime/2014/10/22/diesel-deregulation-frees-up-billions-for-india-to-spend-more-wisely/>

India's decision to end government control of diesel fuel prices will save the government billions of dollars which can be better spent on more pressing needs such as building schools, roads and ports, analysts say.

India announced over the weekend that it would end a decades-old policy of controlling the retail price of diesel fuel. Providing diesel at below-market rates cost the government about \$10 billion last year, hampering India's ability to spend on other things.

The government had given up control over the prices of gasoline back in 2010 but had continued to regulate prices of diesel – the primary fuel used in trucks and tractors as well as for running generators used to power irrigation pumps.

“It shields the government's finances from volatility in global oil prices, because of which the subsidy bill often went up,” said Radhika Rao, an economist at DBS Bank.

HSBC estimates that the diesel deregulation will drop fuel subsidy bill to around 0.4% of gross domestic product, half of the 0.8% of GDP it paid last year.

“Our estimate is that over the next few years, fuel subsidies should remain contained,” said Prithviraj Srinivas, an economist at HSBC.

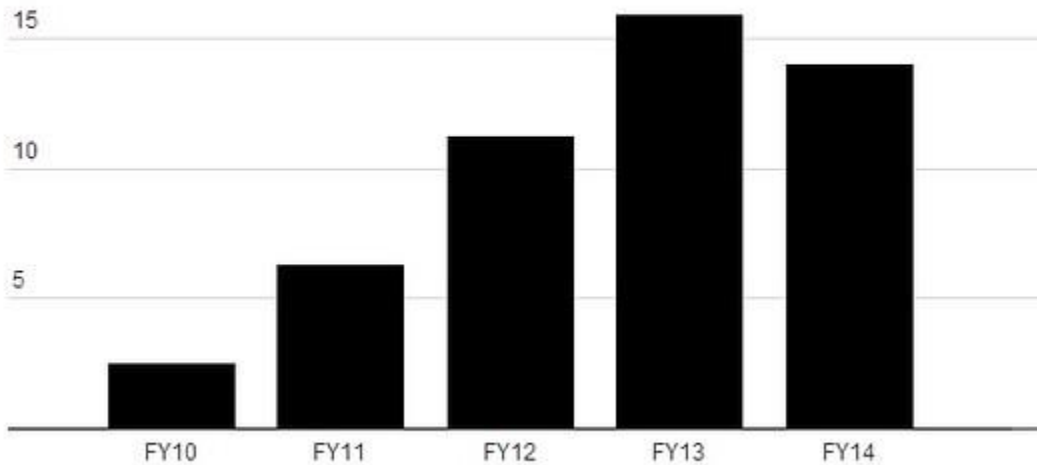
Diesel subsidies cost India close to \$50 billion over the last five years, economists say. If India sticks to its guns and lets fuel prices meander with global markets, it will no longer have to foot that kind of unproductive expense. Instead, it can now choose to lower its fiscal deficit or spend more on infrastructure development or social development programs.

Analysts say the government's fiscal deficit target of 4.1% of GDP this fiscal year – a level that many analysts had thought optimistic – now looks within reach.

“One should expect the diesel deregulation to have a positive impact on both government and household budgets,” said N.R. Bhanumurthy, an economist at think-tank National Institute of Public Finance and Policy. “There shouldn't be any hindrance in achieving the deficit target now.”

Fuel Bills

Amount Indian government spent on fuel subsidies (in billions of dollars)



3. The Oil Price Swoon Won't Stop the Shale Boom

Still profitable at lower prices, fracking is ripe for technology gains that would help it weather further declines.

By Mark Mills, WSJ, Oct 23, 2014

http://online.wsj.com/articles/mark-p-mills-the-oil-price-swoon-wont-stop-the-shale-boom-1414106473?mod=WSJ_hps_sections_opinion

With oil prices sliding, energy investors are worried, while Saudi Arabia and Russia no doubt hope, that low prices will cap America's boom in shale-oil production. Green-energy types sit by, happy to see turmoil in the fossil-fuel sector.

But price dips are common in oil and other markets subject to cyclical swings. True enough, sellers of any product prefer high prices to low; but the current slump sets the stage for what I call America's shale boom 2.0.

Three factors make it unlikely that the decline in oil prices will bring the shale revolution to an end.

First, shale production is profitable at today's lower prices. We know this because the boom began during the Great Recession years of 2008-09, when prices fell below \$50 a barrel. The price U.S. shale producers got for their oil during the boom averaged around \$85 to \$90, even though the world price stayed well over \$100.

That spread—the difference between the West Texas Intermediate (WTI) and world (Brent) price—was a direct consequence of too much domestic oil chasing too little capacity to move, store and use it. Yet in the past five years alone more than \$500 billion of private investment went into hydrocarbon infrastructure. U.S. shale output was obviously profitable enough to spur the

stunning growth in production and infrastructure when domestic prices were in the same range as world prices today.

Second, shale production is getting more efficient, which means that profits are possible at prices even lower than today. Smart drilling techniques—horizontal drilling, hydraulic fracturing and information technologies that accurately locate where to place rigs and enable precise steering of the drill through meandering horizontal hydrocarbon-rich shales—are far more productive than when the boom started.

According to the Energy Information Administration, the quantity of shale or natural gas produced per rig has increased by more than 300% over the past four years. This rise in productivity matches (in equivalent terms of capital cost per unit energy out) the improvements in solar power, but it took 15 years for solar's gains. Solar is now experiencing a slow-down in efficiency improvements; there is no sign of a slow-down in shale technology.

The third factor is the profound economic leverage afforded by the enormous scale and diversity of America's hydrocarbon infrastructure. Many oil-producing nations have only a few big oil fields and a handful of companies, sometimes just one. The U.S. has dozens of world-class fields, thousands of production companies, tens of thousands of related businesses, and millions of miles of pipe and rail.

Among the thousands of shale producers, you can guarantee there are pioneers just like those who started the shale revolution. As profit margins erode due to low or even lower future prices, the pioneers will try out the revolutionary new shale techniques that have yet to be deployed.

You might think that the latest drilling technologies are already in use, an easy sell when cash is gushing. Not so. Businesses rationally resist spending to disrupt existing machinery and operations simply to learn new tools and techniques. But they will chase profits through efficiency-boosting innovation in leaner times.

The pipeline of next-generation shale tech has been piling up with unfielded advances. These include automated drilling, micro drilling that allows for far faster deployment with a smaller rig footprint and new types of drills (some may use lasers soon), and big-data analytics to maximize yields by tapping into the surprising volume of data from complex shale operations. There is also nanotechnology to radically improve chemical formulations and safety, on-site water recycling and even water-free fracturing, and new classes of high-resolution subsurface imaging to radically improve exploration and production using real-time and microseismic imaging.

In a few years, as new technologies are adopted, journalists will be writing again about the "surprise" that U.S. production expanded by another three million barrels per day on top of that much growth over the past few years. The bounty will in due course spread to other nations where the geophysical shale resources easily match the thousands of billions of barrels in the U.S.

Oil prices will continue to experience cycles as technologies are deployed. And the world will stay awash in oil.

Mr. Mills, a physicist, is a Manhattan Institute senior fellow and co-author of "The Bottomless Well" (Basic, 2006).

4. Energy Boom Can Withstand Steeper Oil-Price Drop

Some Smaller U.S. Producers Are Likely to Face Pinch From a More-Modest Decline

By Russell Gold, Erin Ailworth, and Benoît Faucon, WSJ, Oct 29, 2014

<http://online.wsj.com/articles/energy-boom-can-withstand-steeper-oil-price-drop-1414627471>

Oil prices would need to fall at least another \$20 a barrel to choke off the U.S. energy boom, industry experts say, though some smaller American producers would face serious problems from a more modest decline.

Small and midsize companies—not global giants—are behind the surge in U.S. oil output, which hit 8.97 million barrels a day earlier this month, according to federal statistics. Some of these drillers have taken on a lot of debt, which was easier to justify when oil was going for as much as \$107 a barrel just four months ago.

Oil drilling in Texas's Eagle Ford Shale would remain economic at an oil price of \$53 to \$65 a barrel, one brokerage says.

U.S. crude closed Wednesday at \$82.20 a barrel, and far less in some parts of the country where few pipelines are available to move it to refineries. Lower oil prices mean drillers will have less cash to cover their borrowings, especially if crude prices tumble more.

So far, American companies haven't reacted to the recent oil-price drop: The number of drilling rigs searching for onshore oil in the U.S. has risen slightly since oil prices peaked June 20.

The Organization of the Petroleum Exporting Countries seems to be betting that will change soon. Abdalla Salem el-Badri, OPEC's secretary general, predicted Wednesday that if current prices hold, half of the U.S. oil that is fracked from shale formations will be uneconomic, leading companies to stop producing it.

That view is at odds with most U.S. forecasters, who say output can remain steady at current prices because companies have cut their costs by finding ways to produce oil more efficiently. For example, the amount of oil coming from each new well in South Texas has nearly doubled since 2012, federal data show.

Marianne Kah, chief economist of ConocoPhillips, said oil prices would need to fall to \$50 a barrel "to really harm oil production" in U.S. shale basins. She said 80% of the American shale sector—in which ConocoPhillips is a major operator—is profitable at prices between \$40 and \$80 a barrel for benchmark West Texas Intermediate crude.

Jason Bordoff, director of Columbia University's Center on Global Energy Policy, said he believed prices would have to fall much further to put significant pressure on the U.S. energy boom. "I am not sure if \$80 is enough," he said. "You might need \$60 or \$65 to really see a stress test."

Occidental Petroleum Corp.'s chief executive said last week that he saw plenty of drilling opportunities in the Permian Basin in West Texas at current prices. "We think there's a lot of economic oil at \$75," Steve Chazen said on a call with analysts. "Do I think there's a lot of economic oil at \$50? No, I don't."

The Permian, where U.S. drilling activity is heaviest, will be profitable for companies to drill at U.S. oil prices of \$57 to \$75 a barrel, depending on location, according to research from Robert W. Baird & Co. As a result, companies active there, such as Chevron Corp. , Apache Corp. and Pioneer Natural Resources Co. , are likely to keep drilling.

The Eagle Ford Shale, located farther south in Texas and home to Marathon Oil Corp. , Anadarko Petroleum Corp. and EOG Resources Inc., would remain economic at even lower prices—\$53 to \$65, according to Baird. North Dakota's Bakken Shale, which is the focus of companies including Continental Resources Inc., Whiting Petroleum Corp. and Hess Corp. comes in at \$61 to \$75 a barrel.

To be sure, even small price drops could begin to affect production around the margins. “The clear losers in a low-price environment are going to be smaller companies that are overleveraged,” said Daniel Katzenberg, a Baird analyst. The downturn will be particularly tough on companies drilling in areas without much history of oil production. Costs tend to be high in these areas, which include the Tuscaloosa Marine Shale in Louisiana and Mississippi and some relatively unexplored shale formations in Oklahoma.

Wall Street already is trying to sort out survivors from likely losers. Among the latter is Goodrich Petroleum Corp. , a relatively small Houston company whose shares have plunged nearly 70% since oil prices began falling in June. The New York Stock Exchange Energy Index has fallen 16% over the same stretch.

The company's problems? Most of the wells it drills are in the Tuscaloosa Shale, where the industry hasn't drilled enough to lower costs or improve efficiency. Making matters worse, Goodrich has burned through almost all of the \$49.2 million it had on hand at the end of 2013, and its debt compared with its cash flow is higher than normal for U.S. oil and gas companies.

Goodrich didn't respond to requests for comment.

The current price environment is a bit like a stress test to determine which companies have their financial and operating houses in order. Those that spent too much to lease property to drill, or have high operating costs, are most likely to suffer.

“If you didn't overpay for acreage, you will get by just fine,” said Ken Morgan, director of the TCU Energy Institute at Texas Christian University in Fort Worth. “But if you paid an arm and a leg to get in the game, banking on \$95 oil, there could be trouble and significant belt-tightening ahead.”

Even so, companies have strong incentives not to dial back on drilling. They are likely to be reluctant to let go of their well-site crews after training them to operate efficiently.

And nobody wants to be the first to cut production, a move that would help competitors. “If you think it's hard to get 12 OPEC nations to act in concert, try getting thousands of independent operators to agree to react to lower oil prices,” said R.T. Dukes, a senior analyst at Wood Mackenzie.

Many companies have hedged their oil production, ensuring a good price for part of it. And energy producers' debt typically isn't due for several years.

“They have clear sailing for 2015, but beyond that and I think many of them could be hurting,” said Robert Hefner III, founder and owner of GHK Co., an Oklahoma City energy company.

Noble Energy Inc. executives told investors earlier this week that the company would revisit its spending plans if oil prices continued to fall. But the Houston company said it had hedged its output to protect itself from price swings. Noble, which has a stock-market value of about \$21 billion, also drills offshore, so it can shift production in pursuit of the highest returns, an option many shale-focused drillers don’t have.

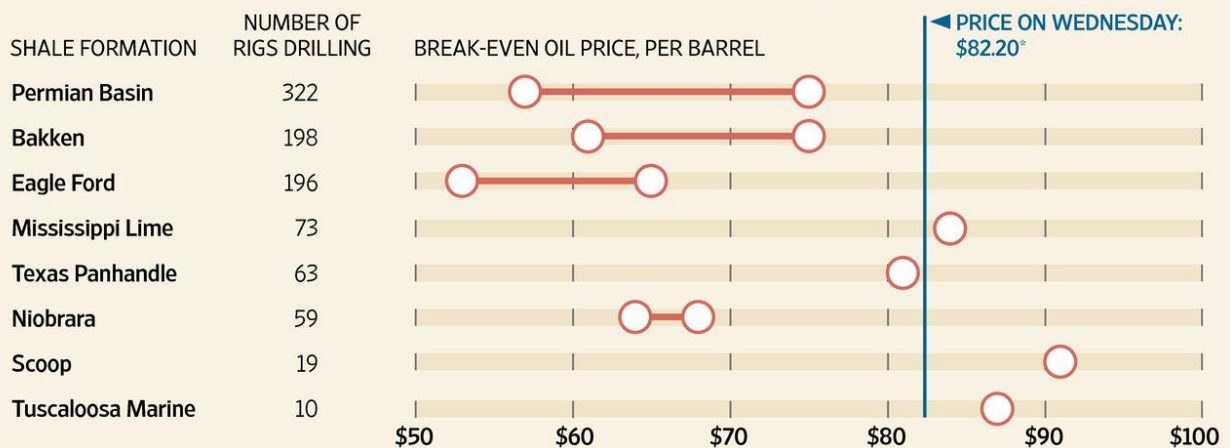
“We’re going to be sensitive to our balance sheet,” said Noble CEO David L. Stover.

The first pinch could be felt by oilfield-service providers, as producers seek to reduce their costs for services such as drilling and fracking. Halliburton Co. , which helps oil companies drill their wells, has significant exposure to the U.S. shale boom; its stock has fallen 23% since late June.

Dave Lesar, the company’s chairman and CEO, said on a conference call last week that Halliburton hasn’t detected any slowdown by its U.S. customers heading into 2015.

Room to Drill

Oil prices would need to drop even further to halt drilling in most of the biggest U.S. shale formations.



*Nymex front month settlement price Note: Select oil fields, doesn't include drilling for natural gas and some petroleum liquids. Source: Baird Oil & Gas Research The Wall Street Journal

5. Arctic Shipping Volume Rises as Ice Melts

Northern Sea Route Primarily Carries Oil, Much of the Cargo Involving Russia

By Chester Dawson, WSJ, Oct 29, 2014

<http://online.wsj.com/articles/arctic-cargo-shipping-volume-is-rising-as-ice-melts-1414612143>

[SEPP Comment: Might not see much commerce until summer ice melt is predictable.]

Cargo shipping volume through the Northern Sea Route is rising as Arctic ice melts, according to a new report.

The opening up of the Arctic for commercial cargo offers a faster route for some shipments between Europe and Asia, and holds the promise of increased trade for once icebound ports in the High North of Arctic countries such as Russia, Norway and Canada.

However, much of the new traffic through the Northern Sea Route is one-way shipments of fossil fuels from Northern Europe to Asia or is between Russian ports, according to a report to be released Friday by the Arctic Institute, a Washington think tank.

The institute said 71 ships carried 1.35 million tons of goods through the route last year. That was up from 46 vessels with 1.26 million tons of cargo the previous year.

The majority of ships originated in Russia and many were from one Russian port to another in the country. Only 41 vessels traveled the full length of the Arctic shipping lane, and of those, 30 ships carried cargo, the report said.

“There’s a lot of talk about it becoming a sort of highway from Europe to Asia, but that’s not really what we’re seeing yet,” said Malte Humpert, the institute’s executive director. Developing Arctic sea ports has become an important objective of the Russian government, he said.

The route, also known as the Northeast Passage, hugs Russia’s northern border and typically is easier to navigate and has less ice buildup than the Northwest Passage, another Arctic route that gets fewer ships and lies closer to Canada. Both routes are only traversable during a short season from late summer to early fall before freezing up again, though that season has lengthened because of climate change. Scientists have said burning fossil fuels helps to contribute to global warming, causing sea levels to rise.

Of the international cargo-bearing voyages using the Northern Sea Route, the Arctic Institute’s report said 67% involved shipments oil products. More goods were shipped from Europe to Asia than the other way around, with more ballast than cargo heading from Asia to Europe, it said.

That Arctic route shaves close to two weeks off a typical voyage from China to Europe—a trip that usually requires sailing through the Suez Canal. Companies whose ships plied the Northern Sea Route between Asia and Europe last year include Nordic Bulk Carriers, a unit of Newport, R.I.’s Pangea Logistics Solutions Ltd., and Athens-based Tsakos Columbia Ship Management SA, according to the NSR Information Office.

Last year, a coal-laden cargo ship became the first bulk carrier to traverse the Northwest Passage through Canadian Arctic waters. That journey cut four days of travel time from a trip between Vancouver, British Columbia, and Pori, Finland. Canada has been eager to assert its sovereignty over the waterway and requires registration for all ships weighing more than 500 tons that use the route.

The institute’s Mr. Humpert said that as recently as the early 1990s the Arctic was virtually impassible because of sea ice, but that there is still enough variability in ice conditions to make it difficult for shippers to forecast how long the routes will stay open each year. “The uncertainty doesn’t really make it feasible for global cargo where you need to book months ahead,” he said.

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