Global Warming: The Scientific View

As a scientist I have been asked to elaborate a bit on my position regarding the Global Warming proposition — and how it relates to wind energy. These are very legitimate (and important) questions.

The main hypothesis put forward is technically called Anthropogenic Global Warming (AGW), where the fancy term "anthropogenic" means "man-made."

Although I am not a climatologist, as a scientist **I know how to do thorough and objective research**. (BTW, skepticism is a key ingredient of true scientists.) In my capacity as a scientist, I have read literally hundreds of reports and studies on this climate issue, from numerous experts.

After digesting these studies and reports, it is very clear to me that AGW is still a scientifically unresolved matter. This is what is called a hypothesis.

A critically important point to understand is that although the terms are often interchanged, "Climate Change" is **not** the same as AGW. By *definition* the climate is **continually** changing, so for advocates of the AGW hypothesis to build a case to implement consequential political policy on "Climate Change" is an unscientific sleight-of-hand tactic that is deceptive at a minimum.

Consider this analogy. Let's say that you strongly believe that "A" is going to happen, *and* think that it poses a problem to our society. You'd like to get others (citizens and politicians) to be equally concerned — so that they take meaningful actions to prevent "A" from happening.

You then make your best case to the public that "A" is a major threat. After initial concern, the public's interest and responsiveness gradually drops off. The three main explanations for this change are that when other scientists investigated your concern they concluded:

- 1) that "A" wasn't as imminent and definite as you claimed,
- 2) the solutions for "A" were not only extraordinarily expensive, but unproven as to their effectiveness, *and*
- 3) that there are other problems our society needs to address right now that are very important (some more so than "A").

A true Scientist would objectively and fully deal with these three legitimate concerns. For instance, they would directly respond to any and all questions expressed, get more proof of the consequences, get independent proof of the efficacy of proposed solutions, etc.

On the other hand, an agenda promoter would respond quite differently. They would dismiss concerns out of hand, insist that others "take their word" that proposed solutions work, and then ratchet up the volume. When that got old, they would migrate to Plan B: which would be no more than a repackaged "A".

A benefit of that tactic is that all the significant evidence against "A" now seems to be largely irrelevant, as we are supposedly now talking about something different (i.e. "B"). Of course that is not true, as "A" = "B" — but when it comes to politics and public relations, appearances are everything.

In a nutshell, that's how AGW became "Climate Change."

We are not going to be fooled by this marketing tactic, and will continue to call a spade, a spade. AGW is the issue here, *not* climate change.

The basic AGW hypothesis is that our climate is now *significantly* changing from its norm, *primarily* due to human caused influences. This supposedly comes about due to our causing a substantial increase in CO2 into the atmosphere (through activities like burning fossil fuels). To be sure, there are good, credible people with sound scientific evidence to support this idea.

But the fact is that there are three big problems with this hypothesis:

1 - There is *considerable* scientific evidence that *contradicts* the assumptions and conclusions of this theory. Unfortunately, the main proponents of the AGW have not been able to provide credible scientific explanations for these contradictions. This seriously undermines the validity of their position.

Worse, when contradictory scientific evidence is put forward, the presenters are often characterized as "non-believers," "deniers," or worse — and are then excluded from the process (e.g. Kyoto). Allow me to repeat: sound science is based on **skepticism**, so all differing views should be *welcomed*. The nature of the AGW proponents response to other scientists' differing conclusions gives their hypothesis a bad name — and makes it sound more like a religion.

2 - AGW is **entirely** built upon computer modeling projections. This is based on an underlying **assumption** that *complex scenarios* (future climate, CO2 sources and sinks, forcings, etc.) can be **accurately** reduced to a collection of ones and zeroes. Why do we believe this unproven and highly speculative assumption? Because we'd like to be able to predict the future!

There is ample evidence that says that accurate modeling of such complex matters is **impossible** — yet we forge on, ignoring this reality.

3 - There are *other* theories that have been put forth by very qualified scientists, and these alternative explanations are also supported by significant scientific data. These other theories also have their weak points, but the fact is that they do explain some climate facets better than AGW does.

So to me, this is not yet a scientifically resolved matter. The jury is still out. AGW may indeed turn out to be accurate. It's also quite possible that it will be shown to be false. We all need to keep an open mind about this issue, and try to work together to work it out in a civilized, expeditious, objective **scientific** manner.

How does this relate to wind energy? Well, let's look at the two extremes:

- 1 If you were a strong advocate of the AGW hypothesis, you would also accept the dire imminent consequences postulated by its lead proponents (e.g. Hansen, Gore, Romm). As such you would be very committed to taking measures that were **sure** to result in **quick**, **large** reductions of CO2. But all independent scientific evidence to date says that wind energy only makes a trivial reduction of CO2 and well into the future at that. As such you would be **against wind energy** as a very inefficient use of time and money!
- 2 If, on the other hand, you believe that the AGW hypothesis is total bunk, then you would not be a believer in the concept that man-made CO2 is causing us problems. Since the main reason for wind power's existence is its promise to meaningfully reduce CO2, that would be of little value to you. As such you would be **against wind energy** as a waste of time and money!

So it seems to me that no matter which side of the Global Warming debate you fall on, wind energy is <u>not</u> the answer.

Then there are those who say something like: "but we need to be cautious here, and prepare for the worst." On the surface that seems to have some merit, but exactly what does being *cautious* mean — *and* what are its costs?

Let's look at an example that might put it into perspective. In the US there are some 40,000 people killed each year in motor vehicle accidents. It is an indisputable fact that slower speeds significantly reduce such fatalities — so lowering **all** highway speed limits to 30 MPH would save THOUSANDS of lives annually? So why isn't Greenpeace & UCS clamoring for this?

Clearly there would be MANY other SIGNIFICANT negative consequences for this "cautious" response. So, before we make an equally radical change to our electrical grid system (just to be "cautious"), we ought to be fully aware of ALL of the consequences — **almost all of which appear to be bad.**

Lastly, there are those who insist we must do something — *anything*! Indeed we should **not** continue on with business as usual, as we have serious energy and environmental issues. But these people confuse activity with accomplishment. We need to take measures that have **proven net benefits**! Wind energy does **not** have scientifically proven net benefits. None.

The same response applies to those who advocate an "all of the above" strategy. Why would we lump in good ideas as well as bad ones — which all-of-the-above does? We need to support all options **that have scientifically proven net societal benefits!**

That translates to us advocating for "all of the sensible" options. Wind energy (like some others) does **not** have scientifically proven net benefits, (which means it is not sensible) so should be dropped from our selections.

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— DISPELLING SOME GLOBAL WARMING MYTHS —

(Note: since we have all been inundated by media supporting the AGW, I am listing the links below to give this issue some balance.)

Considering that there are literally thousands of article on this topic, it may be a fool's errand to try to summarize them into anything meaningful. Further, links change all the time, and I will not be continually updating these. In any case, my goal is to provide a layman's overview. Here goes...

1 - Some people have the idea that the IPCC is an independent science-based organization.

FACT: the IPCC is much more of a political organization.

An excellent summary of just some (50) of the articles written about the IPCC's flawed process << http://mclean.ch/climate/IPCC.htm>.

For a superb historical overview of how we got here, please read this summary by climate expert John Coleman << http://tinyurl.com/77t5zyb>>.

"Hysteria is the Real Threat" puts this situation (and some of the hidden agendas) into a good perspective << http://tinyurl.com/nuulur>>.

2 - The public has repeatedly been told that the majority of scientists agree with the IPCC's position.

FACT: No such evidence exists, as no such poll has ever been taken.

See petition signed by 31,000+ scientists, stating that they do **not** believe that the AGW is a scientifically resolved matter << http://www.petitionproject.org/>

About peer review and AGW << http://tinyurl.com/7t4y8n6">>>.

Top Scientists Slam and Ridicule IPCC << http://tinyurl.com/ppzfsba>>.

A survey of 51,000 scientists and engineers << http://tinyurl.com/yvm3r3>>.

1350+ peer review studies support AGW skepticism << http://tinyurl.com/y9jrjaf>>.

Climate Consensus and Misinformation <http://tinyurl.com/lv8jv59>>.

This scientist explains why "Climate Change Science Isn't Settled" << http://tinyurl.com/ksj3r61>>.

Two interesting interviews with climate experts, and why they disagree with AGW <http://tinyurl.com/pwkymxc> and <http://tinyurl.com/rc5y9q>

"Separating Scientific Fact from Personal Opinion," is a detailed critique of James Hansen's 2007 US Congressional testimony (he is a principle AGW advocate): <>">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">.">http://tinyurl.com/d3gdzw>>">http://tinyurl.com/d3gdzw>">.">http://tinyurl.com/d3gdzw>">.">http://tinyurl.com/d3gdzw>">http:

3 - Some people have the idea that science is based on what is the consensus view among scientists.

FACT: Science has NOTHING to do with "consensus."

Michael Chrichton said it best:

"I regard consensus science as an extremely pernicious development that ought to be stopped cold in its tracks. Historically, the claim of *consensus* has been the first refuge of scoundrels; it is a way to avoid debate by claiming that the matter is already settled. Whenever you hear *the consensus of scientists agrees on...* something or other, reach for your wallet, because you're being had.

Let's be clear: the work of science has **nothing** whatever to do with *consensus*. **Consensus is the business of politics.** Science, on the contrary, requires only one investigator who happens to be right, which means that he or she has results that are verifiable by reference to the real world. In science, *consensus* is irrelevant. What is relevant is reproducible results. The greatest scientists in history are great precisely because they broke with the consensus."

This overviews the AGW consensus situation: << http://tinyurl.com/llhbfg>>.

A scientist's 2009 testimony before Congress << http://tinyurl.com/by7a2t>>.

4 - The majority of people have the idea that computer models can accurately model essentially anything.

FACT: Computer models do NOT have the ability to accurately model complex scenarios. In other words, extremely complex scenarios (like future climate) can not be reduced to 1's and 0's.

An excellent discussion about the limitations and accuracy of computer models << http://reformedmusings.wordpress.com/2008/12/30/anthropological-global-warming-rip/>>.

As a long time computer programmer, read my explanation as to why this is so: $<<\frac{http://tinyurl.com/6xsdd5h}>>$.

This is an EXTREMELY important article (and relates to what I wrote about computer models [before this came out]): "Global warming: Our best guess is likely wrong" by three independent experts: << http://tinyurl.com/m3acz8>>.

5 - Many people believe that the IPCC's computer model conclusions are based on accurate hard data.

FACT: Garbage in garbage out. In addition to the inherent limitations of the computer model concept, there are profound inaccuracies with the data submitted to the climate computer models. Of course these inaccuracies lead to false results.

A study of surface stations in the US (which are an important part of global warming data) is found here << http://www.surfacestations.org/>>, and elaborated on here << http://masterresource.org/?p=2632>>.

Here is a report about the quality of land temperature data taken in the US (which is a key part of the basis used to support Global Warming predictions): << http://tinyurl.com/ngo4zg>>.

This discusses some errors in tree-ring analyses, which is another key element in making conclusions about past climate <http://tinyurl.com/kmqzye.

6 - Most people are not aware that essentially ALL of the IPCC's position is based on computer models. Make sure that you understand that clearly: ALL of the IPCC's position is based on computer models.

FACT: Translated, this means that the IPCC's conclusions are HIGHLY speculative.

IPCC Models' Fatal Errors << http://www.rocketscientistsjournal.com/>>.

IPCC Model uncertainties << http://tinyurl.com/mpnhrj>.

"How Do Climate Models Work" by Dr. Roy Spencer, climatologist << http://www.drroyspencer.com/2009/07/how-do-climate-models-work/>>.

7 - Most people are of the opinion that the IPCC objectively considers all options before coming to any conclusions, and encourages inputs from scientists to make their position more accurate.

FACT: the IPCC has a political agenda, and has discouraged all inputs from those who have other information or perspectives.

This comes from scientists who were personally involved with the IPCC. Read what they have to say about whether the process was political or scientific. Remember that any **Science-based** theory WELCOMES skeptical criticism, as it gives them an opportunity to consider other perspectives and to provide objective proof. **Political-based** theories REJECT skeptical criticism, as they do not want the fallacies of their agenda to be exposed. Which is going on here?

The Triumph of Doublespeak << http://tinyurl.com/mal8go>>. This site also has over a hundred other papers on various aspects of global warming.

An MIT PhD finds the science seriously deficient: <http://arxiv.org/pdf/0809.3762v3>.

An expert is barred by AGW advocates << http://tinyurl.com/mv8rbj>.

Scientists contest IPCC's claims << http://tinyurl.com/nl76dv">>>.

Read "Climate Change Reconsidered: The 2009 Report of the Nongovernmental International Panel on Climate Change" <>">htt

"Forecasts by Scientists vs Scientific Forecasts": <>">>">>>"> "The Bullies of Global Warming" << http://tinyurl.com/nstymrq<>>. Another MIT PhD's views are stifled by the EPA, as being "against policy": <.. 8 - Most people are of the opinion that man-made CO2 emissions is the only plausible explanation for Global Warming. FACT: Not only is there a scientific dispute whether or not man-made CO2 emissions cause Global Warming, there are several other possible explanations for climate cycles, for example: a) Geo nuclear << http://climaterealists.com/index.php?id=3427>> b) Other natural forces << http://tinyurl.com/l8hma7>> c) Southern Oscillation Index << http://tinyurl.com/nf7uykg>> d) Soot <<http://tinyurl.com/luzzgo>> e) Sulfates << http://tinyurl.com/n54wv3>> f) Solar << http://tinyurl.com/qshbsu>>; << http://tinyurl.com/mvep6j>> g) Cosmic Rays << http://tinyurl.com/mk9maz>>. h) CFCs << http://arxiv.org/ftp/arxiv/papers/1210/1210.6844.pdf>> 9 - Now that you are thinking for yourself, here are some sample websites that have hundreds of articles about the science of global warming: a) Watts Up With That << http://wattsupwiththat.com/> b) Climate Sanity << http://climatesanity.wordpress.com/>> c) International Climate Science Coalition << http://tinyurl.com/9wxgsb>> d) Climate Depot << http://www.climatedepot.com/>> e) Climate Etc: Dr. Judith Curry << http://judithcurry.com/>>

f) Climate Audit << http://www.climateaudit.org/">>> g) CO2 Science << http://www.co2science.org/>

h) Friends of Science << http://www.friendsofscience.org/>> ... There are MANY more. Ask and I'll provide additional links.

10-If you'd like to go into even more detail, then:

Dr. Lindzen: Resisting Climate Hysteria << http://tinyurl.com/m8hgpd>>, & Climate Science: Is it currently designed to answer questions?

A timeline and a bibliography of the science and politics of climate science << http://tinyurl.com/nrw6fu>> and << http://tinyurl.com/nxybgz>>.

"Fallacies About Global Warming" (and MANY other related good articles at this site): << http://scienceandpublicpolicy.org/originals/fallacies.html>.

An excellent summary about Global Warming Facts: <http://www.ncpa.org/pdfs/GlobalWarmingPrimer.pdf>.

"The Real Inconvenient Truth" is a lengthy, technical overview << http://www.junkscience.com/Greenhouse/>>.

An informative Open Letter to McCain on Global Warming and its impact on the US energy policies: << http://tinyurl.com/5g4to7>>.

Global Temperature Trends From 2500 BC To 2008 AD: Harris-Mann Climatology: << http://tinyurl.com/28722m>>.

Climate Realists beat Alarmists in debate << http://tinyurl.com/8oh759v>>.

Movie: "The Great Global Warming Swindle" << http://tinyurl.com/46syw7e>>. Video: Global Warming and sex << http://tinyurl.com/psccobx>.

There are numerous books, e.g. —

"Climate Change - A Natural Hazard" << http://tinyurl.com/ld86ot>>.

"The Climate Caper" << http://tinyurl.com/m7hocj>>.

"Global Warming: False Alarm" << http://tinyurl.com/lctmb6">>>.

"Exposing Corruption of Climate Science" << http://tinyurl.com/nlpanrf>>.

So, the one thing that can NOT be said is that "Global Warming is resolved." ANY independent assessment of this situation would conclude that the matter of "man-made global warming" (AGW) is nowhere near being understood **or** resolved in any way or fashion.

One insightful observer commented that the whole AGW hypothesis was never about climate anyway — but rather it is ultimately about **control** (of population, lifestyle, energy use, etc.).