

The Peril of Accepting Global Warming Doomsday Propaganda

In late July, a document was released by the Union of Concerned Scientists (UCS) regarding the kind of future that Missouri faces as a result of global warming [1]. This is part of a series of reports they've issued about climate change in the Midwest [2]. Global warming is an issue that has gained more attention than usual within the last year, culminating in the late June passage by the US House of Representatives of the Waxman – Markey Clean Energy and Security Act. This has stimulated debate about combating climate change.

In the local newspaper, an alarmist scientist from the University of Illinois was quoted that we face a 14 degree Fahrenheit increase in summer temperatures as he relayed information from the UCS document “Confronting Climate Change in the US Midwest”[3]. He stated this as if it were a done deal, especially if we continue emitting carbon dioxide at the same rate we are today. This kind of hyperbole then becomes accepted by the media as reality, and comes with the implication that things are worse than we thought. These exaggerated claims are no doubt behind subsequent alarmist editorials in other major newspapers advocating even more severe measures than Waxman - Markey [4].

An increase in summer temperatures of that magnitude would surely scare mid-westerners into action about climate change. This would be like bringing the climate of Arizona or New Mexico to Missouri, and mixing it with our more humid climate. This would be a truly frightening scenario. Thus, some clarification of the aforementioned scientist's remarks is, however, certainly in order, and this can be done by examining the text of the UCS document itself and the 2007 Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment report [5].

The UCS document reports that two experiments were performed, one with higher carbon emissions (Fig. 1 right -UCS document) and one with lower emissions (Fig. 1 left - UCS document). The higher emissions scenario shows the scary future discussed above, but the lower emissions scenario comes in with a summer increase of about 7 degrees Fahrenheit. The document does not discuss the design of the actual model experiment. From my own experience in working with numerical models and knowledge about how they are built [6], something tells me these numbers under both emissions scenarios are “high end” numbers.

Many of these climate projections are obtained by running a model or several models, several times providing us with what we call an ensemble. The spread of the ensemble will be the difference between the highest and lowest value of a variable we are interested in, here Midwest temperature. In general, the more times we run a model and the longer the time frame, the greater the spread. This is due to the inherent behavior of the equations and physics used to build these models. If we consider each model outcome within the spread as equally likely, then for a model run 100 times, an individual “high end” scenario would have a 1% chance of occurring.

The UCS report also implies that the 14 degree rise is itself a bit low. Every time a new “report” comes out the news seems to be worse. The 2007 IPCC report gives a range of model temperature increases for our part of the country and that includes both high and low emission scenarios. Their range for the increase in summer temperatures was 4 – 12 degrees Fahrenheit with the middle 50% of the model runs having a spread of 5 – 9 degrees Fahrenheit. These scenarios would still be unpleasant to ponder, but nothing like the 14 degree Fahrenheit scenario that the UCS projects for our region.

So, the UCS document projects a possible increase in summer temperatures of 14 degree

Fahrenheit temperature rise over the next 90 years. Examining past climate records, both 150 years of observations and proxy records going back two millenia, infer that there is no precedent for a 90 year period of constant global temperature trends more severe than what occurred in the 20th century (rising or falling) within the record. An examination of the 20th century temperature records showed approximately a 1 degree Fahrenheit temperature rise overall, but with two distinct periods of temperature increases broken by a period of temperature decreases between 1940 and the late 1970s.

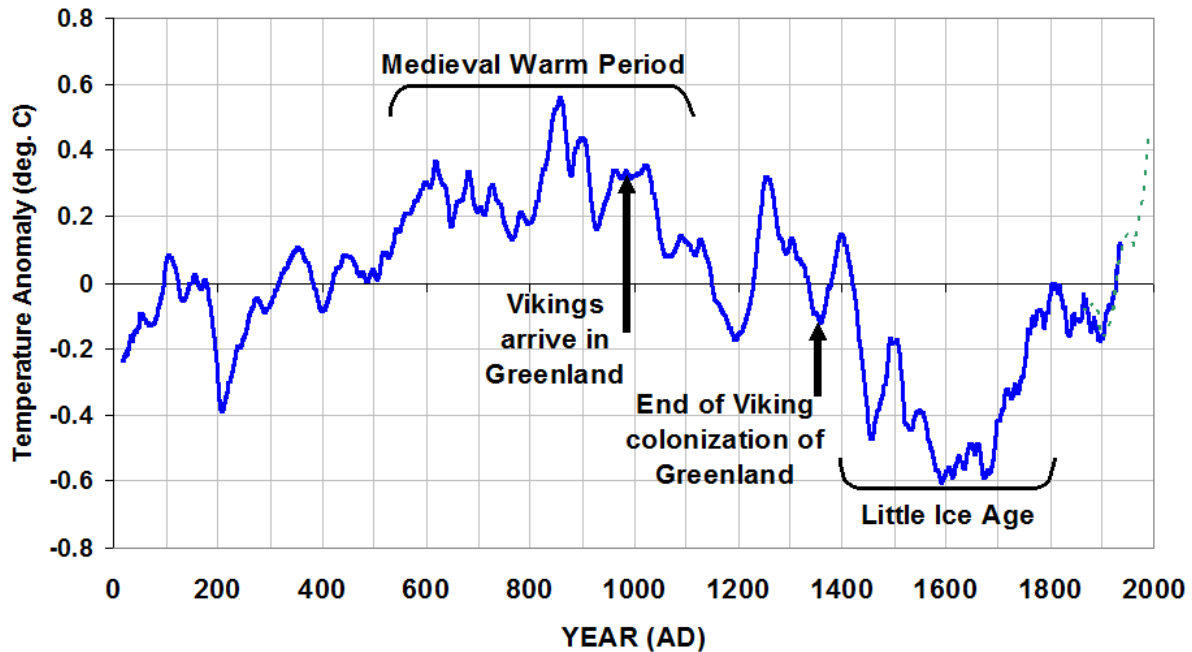


Figure 1. Global temperature anomaly reconstructions for the last 2000 years . Figure provide courtesy of Dr. Roy Spencer.

During both of these 20th century periods of global temperature increase, the total rise for each was about 0.5 degrees Fahrenheit or an average increase of about 0.2 degrees rise decade. Temperatures then reached a peak in the 1998-2000 time frame and have since leveled off, or even begun to fall [7]. This is due to natural variations such as a quieter sun, and changes occurring in the Pacific Ocean temperatures. This temperature trend is projected to continue for about 5 – 20 years by reputable scientists, even some supporters of anthropogenic global warming.

While this does not guarantee that we will not experience something truly extraordinary happening if human induced global warming does materialize as a dominant force, it does not look at all promising that we will ever experience the large increases in temperature forecast by the UCS or other alarmist publications.

Even, if we return to warming in 2020, and we do experience an 80 year period of unbroken increase in global temperatures at even double the rates of the 20th century, it would bring about a total global increase in temperatures of 3 – 4 degrees Fahrenheit. In our region, the climatic trend seems to be similar to or maybe even a little larger than the global average. The model projections for our region are fairly consistent across seasons as well [5].

To get the high-end UCS numbers, however, we would have to experience warming rates at more than seven times that observed in the 20th century and sustained for nearly three times the duration of either increase period. This is a scenario that I believe is highly unlikely.

This analysis here does not even take into consideration other factors that would tend to mitigate the amount of climate warming we may experience or would make the computer model forecasts less severe. Problems with the computer model forecasts are well-known[6], and these include the model's inability to forecast natural climate variations such as El Nino. Mitigating factors might include the influence of external natural forcings on climate, or the drive by innovators to find cheaper, cleaner, and more unlimited or reliable energy supplies, if we believe carbon dioxide is the problem.

Allowing the free market to develop these technologies is the best strategy. Late in the 1800's and the early 1900s, the automobile replaced the horse and buggy. This development eliminated the problem of horse manure piling up in growing cities. Similarly, new technologies are making households more energy efficient and allowing for the use of alternative energy. All of these advances will help to reduce the carbon dioxide emissions implicated in global warming.

Finally, if we accept global warming as given, Missourians and others could do their part to reduce greenhouse emissions. However, this in and of itself is not the whole answer [8]. Consider that the worldwide emissions were over 28,000 million metric tons (mmt) in 2005, and Missouri's were 111 mmt in 1990 (let's say 150 mmt today) [9]. If global emissions rise at even 1% per year (it's closer to 2%), the global yearly increases are greater than all of Missouri's alone. No reasonable person would suggest that Missouri or any other state cease all its emissions in order to combat climate change.

Thus, it is likely that any increase in global or regional temperatures by the year 2100 will be much less severe than the even the mid-range forecasts produced by computer models, and then used by today's global warming "alarmists" to scare us into action. Radical solutions such as Waxman-Markey are the result. It is hoped, however, that Americans will oppose such actions with the same vigor that they have with health care reform.

References:

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[5] Climate Change 2007: The Scientific Basis, Contributions of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Edited by: S. Solomon, D. Qin, M. Manning, M. Marquis, K. Avery, M.M.B. Tignor, H.L. Miller, Jr., and Z. Chen. Cambridge University Press, Cambridge, UK. 996 pp.

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[7] AMS State of the Climate Report 2008. <http://www.ametsoc.org/AMS> see publications

[8] SPPI - Science and Public Policy Institute,2009: <http://www.scienceandpublicpolicy.org> - see state reports

[9] Greenhouse Gas Emission Trends and Projections for Missouri, 1990-2015 Technical Report, 1999:
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