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The Global Warming Smoking Gun

By **Norman Rogers**

The global warming narrative is straightforward. Carbon dioxide, (CO₂), released by burning coal, oil and natural gas, is increasing in the atmosphere. The increased concentration of CO₂ in the atmosphere will cause the globe to warm. The warming will create [numerous bad effects](#). Therefore, we must reduce the emissions of CO₂ by switching to green energy such as windmills, solar power and crops that can be burned for energy.

The global warming idea has caught on, at least in left-leaning circles. Millions of people believe that global warming is solid science. If you doubt the global warming idea, you will be accused of not believing in science. According to the promoters of global warming, doubters are like the people who put Galileo on trial, or the people who think the Earth is flat.

The global warming narrative consists of assertions, supposedly based on science, and proposed actions that will avert the (purported) disaster. The narrative is very fragile and is susceptible to collapse if the assertions or proposed actions are faulty.

There are a lot of faults in the narrative. For example, the [alternative energy](#) proposed is too expensive by an order of magnitude. Carbon dioxide increase could be stopped by switching coal electricity to nuclear electricity because it is only necessary to reduce CO2 emissions by about half, because the other half of the CO2 emitted disappears into the ocean. (See [this](#).) But, most of the global warmers [hate nuclear](#), so nuclear is not on the menu.

The global warming program to reduce CO2 emissions and change the world's energy sources is a political impossibility because China and India are not going to participate beyond selling windmills to us and to the Europeans. China burns 4 times as much coal as we do.

Then, it is not clear that warming is a bad thing. It might be very beneficial. Some of the supposed bad effects, such as the [oceans rising](#) and flooding the coasts, are so silly as to be not deserving of refutation. It is well-established that adding CO2 to the atmosphere helps agriculture, because [plants grow better, with less water](#), in an atmosphere with enhanced CO2. The most vulnerable item in the global warming narrative is the assertion that CO2 is going to cause substantial warming.

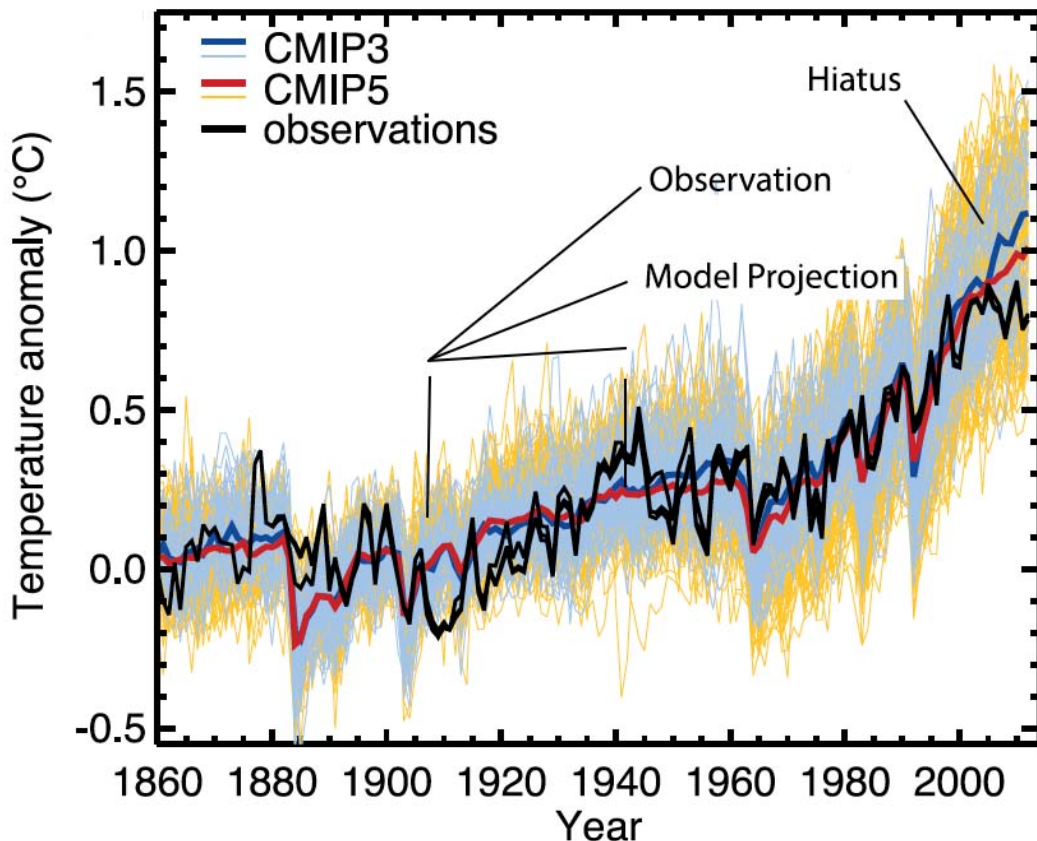
It is not unreasonable to expect CO₂ to create warming. The real question is *how much*. The high priests of global warming, the United Nations Intergovernmental Panel on Climate Change or IPCC, say that doubling the CO₂ concentration in the atmosphere will raise the average global temperature by 3 degrees Celsius or 5+ degrees Fahrenheit. The scientific basis for this claim is extremely shaky. The claim is based solely on computer models of the Earth's atmosphere.

A perspective on the climate models from a prominent scientist, [Kevin Trenberth](#), who is allied with the global warmers, can be seen [here](#). He says there is a lot wrong with the models and the IPCC is not actually making predictions with the models.

The climate models include many approximations and assumptions that are not necessarily well grounded in atmospheric physics. As a result, there are many adjustable parameters the value of which must be set by a “tuning” process. The tuning is accomplished by running the models against the past, adjusting the parameters to make the model output agree with the known past climate. The past climate is also not well known in many respects, so estimating is used, and different modelers have different past climate estimates. The great danger is that the model may be tuned to agree with the past but then fail to predict the future. This can happen if the model is based on faulty assumptions, but that there is enough spare adjusting capacity inherent in the parameters so

that the model can be forced to agree with the past even though the model is faulty.

The situation with the climate models used by the IPCC is that they cannot be made to even agree with the past climate. The illustration below is from the 2013 report of the IPCC (AR5: 10.3.1.1.2). It plots the climate temperature observations against the averaged output of the various models used by the IPCC. There are two areas of serious disagreement illustrated by added annotation. From 1910 to 1940 the Earth warmed strongly, but the models do not generate a match to that warming. The other area of disagreement is the period starting in 1998 when global warming stopped, called the “Hiatus” or



the “Pause.” The models project global warming continuing, not stopping in 1998.

The climate models attribute the strong warming trend from 1975 to 1998, the late 20th century warming, to the influence of CO₂ (and minor greenhouse gases). However, the very similar warming from 1910 to 1940, the early 20th century warming, cannot be blamed on CO₂ because in that less industrialized time there was not enough increase in CO₂ to account for more than a tiny part of that warming. Although there are plenty of theories, the cause of the early 20th century warming is unknown. Some modelers incorporate speculative theories to try to make their models better match observations. But, the average of the models still cannot fit to the early 20th century warming. The obvious important question is how do we know the late 20th century warming was caused by CO₂ and not by the same unknown force that caused the early 20th century warming?

The inability to explain the early 20th century warming, and the real probability that the late 20th century warming may be forced by factors other than CO₂, constitute a *smoking gun* type of evidence, casting doubt on the predictions of global warming forced by CO₂. Doubt concerning the viability of the climate models is further reinforced by the lack of warming during the last 18 years, the Hiatus.

What other forces may be driving the Earth’s climate?

Exchange of heat with the oceans can potentially have a large

effect on climate. Vast quantities of cold, salty water sink to the bottom of the ocean in the polar regions. That sinking water tends to warm the Earth because cold water is removed from the surface environment. However cold water is upwelling to the surface in various places. That cools the Earth. In the short term the sinking and up welling are not necessarily in balance, resulting in net storage or net emission of cold water from the subsurface ocean. The promoters of global warming try to use ocean heat storage to explain model failure. The ocean can “explain” any failure of the models. But, that is speculation because there are not good observations of the interchange of heat between the atmosphere and the oceans. The ocean influence cuts both ways, explaining away the model failures, or else providing an alternative, non-CO₂, explanation for the warming and cooling of the Earth.

The sun may have an effect on the Earth’s climate not acknowledged by the models. It is known the sun has various cycles, the 11-year sunspot cycle being most prominent. It is known that an exceptionally cold period from 1645 to 1715, the *Maunder Minimum*, was accompanied by the near absence of sunspots. But good measurements of the sun only began in the satellite era, so we have a lack of knowledge concerning the effect of the sun. The Danish physicist, Henrik Svensmark, has a pretty good theory suggesting that cycles in the strength of the sun’s magnetic field modulate the arrival of cosmic rays to the Earth and the cosmic rays provide nuclei for the formation of cloud droplets. Clouds affect climate.

The *pacific decadal oscillation* changes the temperature of parts of the Pacific Ocean about every 30 years. It was only discovered in the 1990's by a biologist investigating variation in the Alaska salmon catch. That and a similar oscillation in the Atlantic are probably driven by ocean circulation and may drive climate. There may be, and probably are, forces driving climate that are yet to be discovered.

As one [professor said](#), to err is human, but to really foul up you need a computer.

Norman Rogers writes often about environmental issues. He has a [website](#).