

Greenhouse Gases in the Atmosphere Cool the Earth!

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Introduction

In 2001, the United Nation's Intergovernmental Panel on Climate Change (IPCC) announced that carbon dioxide (CO₂) was causing the earth to warm and developed computer models to predict how much the earth would warm in the future. Does any empirical scientific evidence exist to support this premise of the IPCC? The answer is no, in fact it is just the opposite, CO₂ has a cooling effect.

The major components in the atmosphere that cause the earth to be cooler than it would be otherwise are the so-called greenhouse gases. Calling these gases greenhouse gases are misnomers. Yet, many meteorologists have blamed water vapor and carbon dioxide in the atmosphere for warming the earth. Below is an excerpt from a paper ¹ written by meteorologists from the National Oceanic and Atmospheric Administration (NOAA). *“Water vapor plays the central role in the atmospheric branch of the global hydrologic cycle and is the most abundant greenhouse gas. Climate models used for estimating effects of increases in greenhouse gases show substantial increases in water vapor as the globe warms and this increased moisture would further increase the warming.”* They got it backwards about water vapor just as Al Gore did about CO₂ in his “Inconvenient Truth” presentation of the Vostok Ice Core data.

Gore's "Inconvenient Truth" Documentary had Cause and Effect Reversed

In Al Gore's presentation of his "Inconvenient Truth" documentary, he conveniently separated the Vostok Ice core temperature and CO₂ graphs so you could not see which came first, a warming spike or a CO₂ spike. He said that a CO₂ spike came first but alas, it was the just the opposite as shown in the Vostok Ice Core graph in Figure 1.

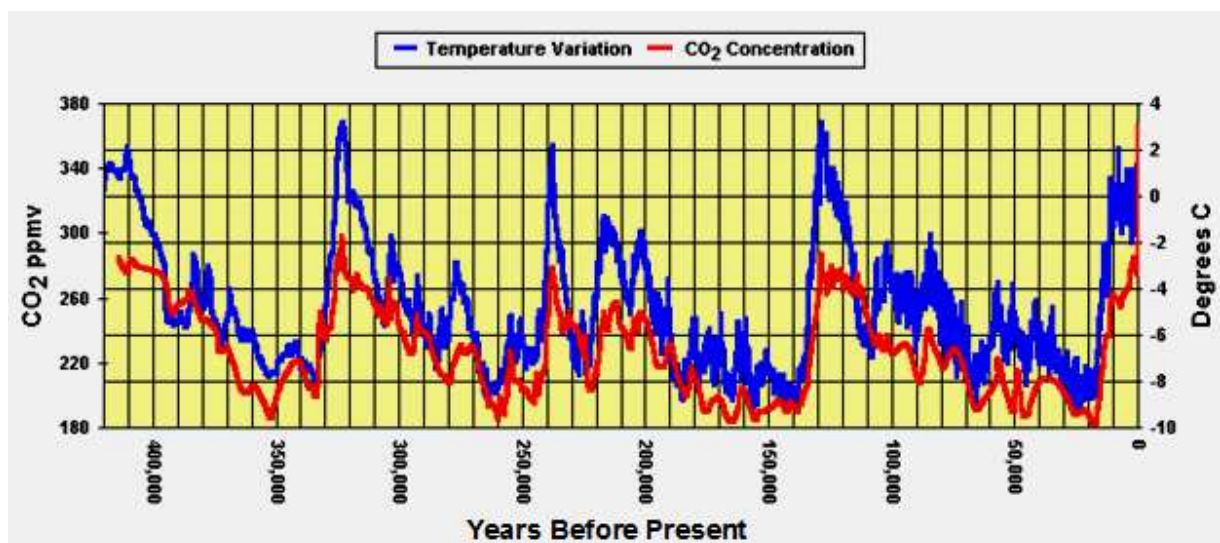


Fig. 1. Vostok, Antarctica Ice Core Data ².

When both lines are combined on one graph, suitably enlarged and viewed in the correct direction from left to right, it is clearly seen that a warming spike always comes first (blue line) followed by a CO₂ increase (red line) some 800 years later.

There are many reasons for the oceans to warm and cool over long periods of time and those influences are not the subject of this paper. Warming of the oceans reduces the solubility of CO₂ in water which results in the liberation of CO₂. An additional effect of the oceans warming up is that more water vaporizes and for each pound of water evaporated 1,000 Btu of cooling occurs. Increased water vapor and CO₂ in the atmosphere then causes a further cooling effect through the reflection of more radiation back to outer space. Nature has this under control.

Gore also gave no explanation what would cause a CO₂ spike to occur in the first place. What is so disturbing here is that, just like Al Gore, many climatologists and meteorologists seem to have a problem discerning cause and effect. It is very simple, if what you call an effect comes first, you have it backwards; a cause always comes first to produce the effect.

Proof Greenhouse Gases Cool the Earth

Proof 1: 9-11 Analysis

NASA scientists claimed Cirrus clouds, formed by contrails from aircraft engine exhaust, are capable of increasing average surface temperatures enough to account for the warming trend in the United States that occurred between 1975 and 1994. *“According to Patrick Minnis, a senior research scientist at NASA’s Langley Research Center in Hampton, Va., there has been a one percent per decade increase in cirrus cloud cover over the United States, likely due to air traffic. Cirrus clouds exert a warming influence on the surface by allowing most of the sun’s rays to pass through but then trapping some of the resulting heat emitted by the surface and lower atmosphere.”*³

This explanation is wrong. These clouds will cool the earth, not warm it. There is more radiant energy coming from the sun to the earth than from the earth to the sky. More radiant energy will be blocked during the day than will be blocked leaving the earth at night (insulating effect). The overall effect is cooling, not warming.

This cooling effect of water vapor was proved following the 9-11 terrorist attacks. Atmospheric scientists studied the effect of water vapor on temperature in the wake of the attacks. The Federal Aviation Administration (FAA) prohibited commercial aviation over the United States for three days following the attacks and this presented a unique opportunity to study the temperature of the earth without airplanes and their contrails.

Dr. David Travis, an atmospheric scientist at the University of Wisconsin, along with two other scientists, looked at how temperatures for those three days compared to other days when planes were flying. They analyzed maximum and minimum temperature data from about 4,000 weather stations throughout the conterminous (48 states) United States for the period 1971–2000, and compared those to the conditions that prevailed during the three-day aircraft grounding period and the three days when planes were flying before and after the grounding period. This research effort was sponsored by grants from the National Science Foundation.

They found that the average daily temperature range between highs and lows was 1.1 degrees C higher during September 11-14 (shown graphically in Figure 2) compared to September 8-11 and September 14-17 with normal air traffic.

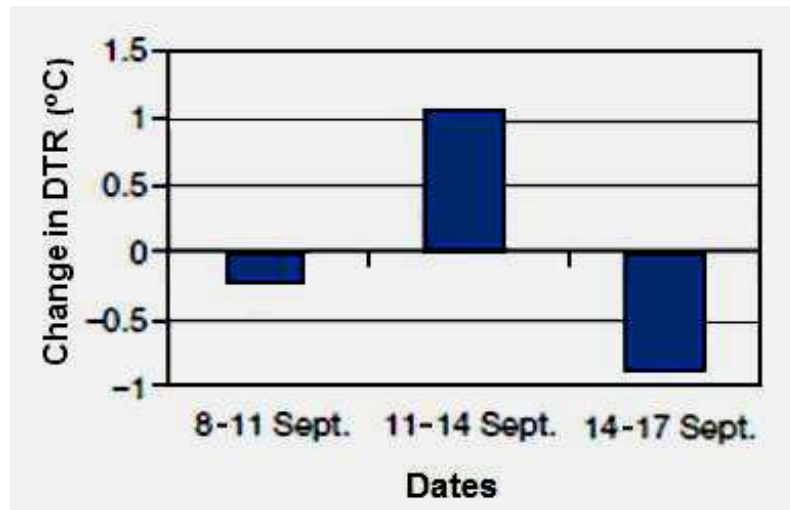


Fig. 2. Average diurnal (daily) temperature range (DTR)⁴

The data proved that contrails (condensed water vapor trails) have a net cooling effect. You cannot just look at a nighttime effect only, like the IPCC climatologists and meteorologists have done, both day and night must be included to determine the overall effect. Water vapor, CO₂ and particulates in the atmosphere all reflect as well as scatter some radiant energy back to outer space and this causes cooling.

Here is a simple test, go outside when the sun is shining, see how warm you feel when you are in the direct sunlight and compare that with how warm you feel when a cloud goes overhead and you are in the shade of the cloud. Of course you feel cooler in the shade of the cloud; a child knows this. So Dr. Travis confirmed this with scientific analysis of real data that most people on this planet already know.

Everyone also knows that cloud cover at night (more insulation) prevents the earth from cooling off as fast as it does when there are no clouds. However, on a relatively clear night if a cloud goes overhead you cannot feel any warming effect of the cloud, so this insulating effect is shown to be minimal compared to the daytime effect.

Another simple observation that shows Minnis and other warming supporters have it backwards. However, Minnis acknowledged the cooling effect found by Travis⁵. He and three other authors wrote, “Instantaneously, contrail radiative forcing can warm the atmosphere and warm or cool the earth’s surface, apparently reducing the diurnal range of surface temperature.” This is like saying if you light a fire you may get warmer or cooler from radiative forcing.

Is this flawed logic why they have developed such illogical conclusions about the climate?

Proof 2: Comparison of Earth And Mars average temperatures

Both Earth and Mars rotate around the Sun and also rotate on their axes. The rotation time for Earth is 23.9 hours and for Mars is 24.6 hours so they are similar but Mars is only around 10% of the mass of the Earth. The atmospheric pressure on Earth is 1 atmosphere and the atmospheric pressure on Mars is 0.007 times the earth's atmosphere. The atmosphere on earth is primarily nitrogen (79%) and oxygen (21%) and on Mars it is approximately 95% carbon dioxide and 5% nitrogen. So the Mars atmosphere is a very small fraction of the Earth's. There is approximately 400 ppmv of CO₂ in the Earth's atmosphere or $(400/1000000) \times 1 = 0.0004$ atmospheres (earth). The CO₂ in the Mars' Atmosphere is $0.95 \times 0.007 = 0.00665$ atmospheres (earth). However if you add water vapor which they also call a greenhouse gas the partial pressure of CO₂ plus water vapor at say 1 vol.% in the earth's atmosphere the total partial pressure for the two is $(0.01 + 0.0004)$ or 0.0104 compared to the 0.00665 for CO₂ on Mars, so if greenhouse gases caused warming, the earth's atmosphere would warm more than the Mars atmosphere when hit by radiant energy.

Is this what happens? No! The earth gets hit on average by 1367.5 watts/m² and Mars by 589.2 watts/m² of solar irradiance ⁶. The average temperature on earth is 288.3K* and the average temperature on Mars is 208.3K ⁷. Now then, if the Earth had the same composition (no free water) and atmosphere as Mars, based on the solar irradiance hitting it, compared to Mars, the average temperature on earth would be $(1367.6/589.2) \times 208.3 = 483.5K$. The earth's atmosphere is shown by this analysis to have a cooling effect of $(483.5K - 288.3K)$ or 195°C more than the Mars atmosphere.

*K is the symbol for Kelvin, the absolute temperature scale used in scientific calculations and zero K is equivalent to minus 273.15°C. Convention has it that no degree symbol is used for K.

Does Atmospheric CO₂ Change Correlate with Earth Temperature Change?

Having conclusively proved that water vapor and clouds have a cooling effect, does a correlation of real data exist between the concentration of CO₂ in the atmosphere and the earth's temperature? No, that does not exist either, look at Figure 3 below developed by Joseph D'Aleo a certified meteorologist that was extended by the authors from 2008 through November 2010.

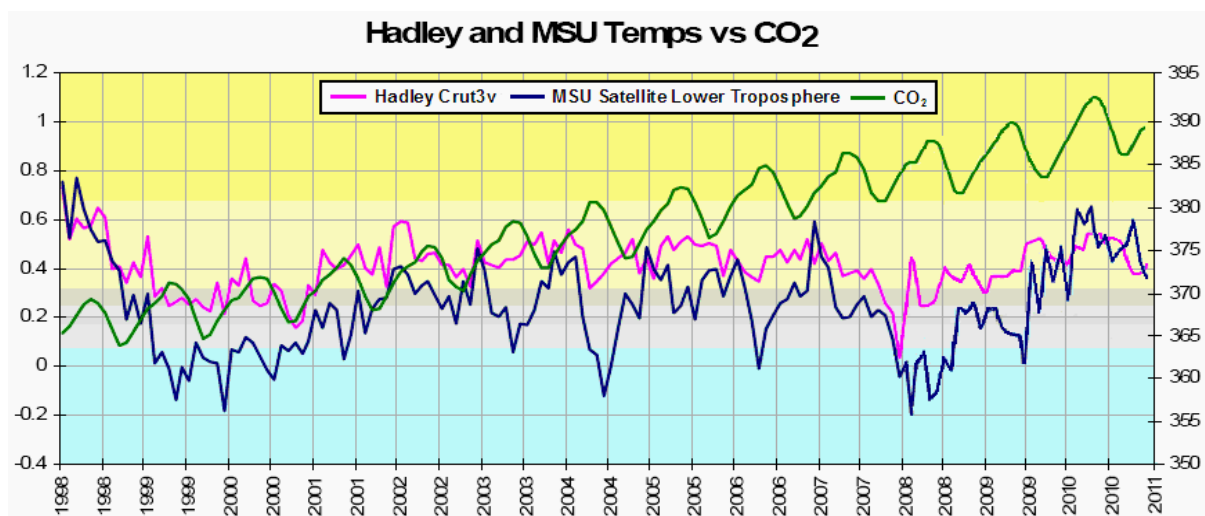


Fig. 3. Earth Temperature and Atmospheric CO₂ Concentration ⁸.

Even a non-scientist can see there is no correlation between CO₂ concentration in the atmosphere and the earth's temperature. The CO₂ has been on a continuous upward trend - not true for the earth's temperature. CO₂ cools the earth like water vapor does but since it is in parts per million in the atmosphere, unlike water vapor, the effect is so minimal it cannot be detected.

Atmospheric concentrations of CO₂ were taken at the Mauna Loa Observatory in Hawaii. Two sets of temperature measurements are included, one set by NASA's Microwave Sounding Unit (MSU) for the troposphere and the other by the UK's Hadley Climate Research Unit for the land and sea. Both show normal temperature variations over time as CO₂ increased from 366 ppmv in January 1998 to 389 ppmv in November 2010. Note as well that the lower troposphere temperature (blue line) in November 2010 was some 0.37°C lower than it was in the normally colder month of January in 1998, so overall there is no global warming trend anyway.

Man-made global warming advocates also say that CO₂ builds up in the atmosphere over a 50 to 250 year period, but this is not true. The graph above shows that the CO₂ concentration oscillates based on the growing seasons. The cycles of the CO₂ concentration swing is in the 5 to 8 ppmv range. If CO₂ stayed in the atmosphere for long periods before being consumed, the cyclical effect of the growing seasons would not be seen. It is clear that nature reacts very fast in its consumption of carbon dioxide. The steady rise in atmospheric CO₂ is most likely linked with the time period known as the Medieval Warm Period, some 800 years ago, as that would confirm the ice-core records where higher atmospheric CO₂ slowly follows higher ocean temperatures.

Figure 4 shows the likely reality of this warmer period with the unlikely hockey-stick illusion developed by Michael Mann through data manipulation and once used by the UN IPCC.

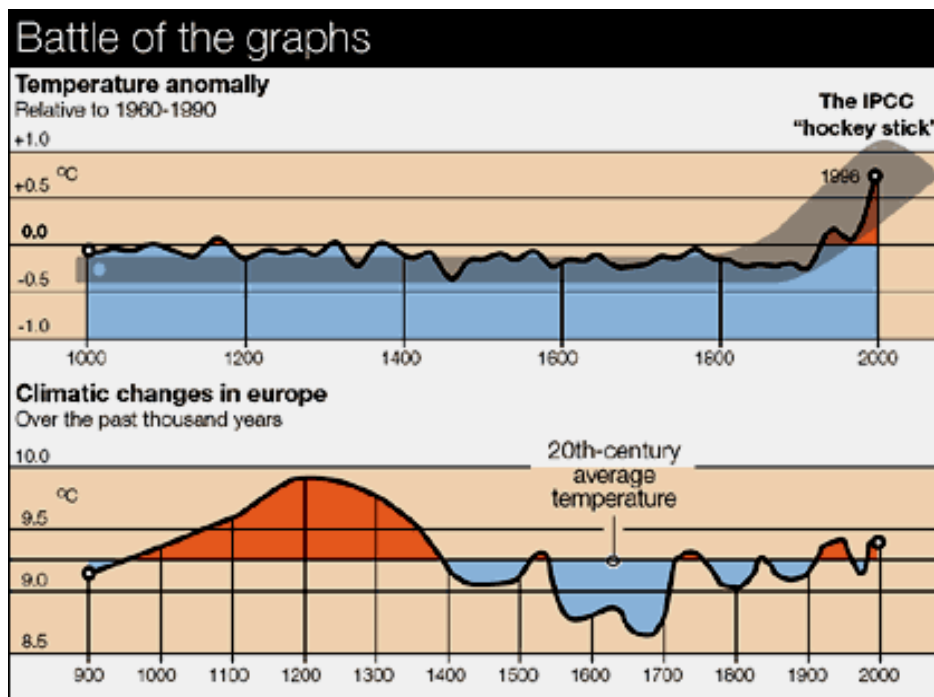


Fig. 4. Propaganda graphics versus reality⁹.

Do UN IPCC Predictions fit in with Actual Observations?

The graph in Figure 5 shows the IPCC computer modeling projections from the year 2000 to 2100 based on various assumptions linked to increasing CO₂ in the atmosphere. The black line from 1998 to 2010 was added by the authors to the IPCC graph; it shows the actual measured surface temperatures.

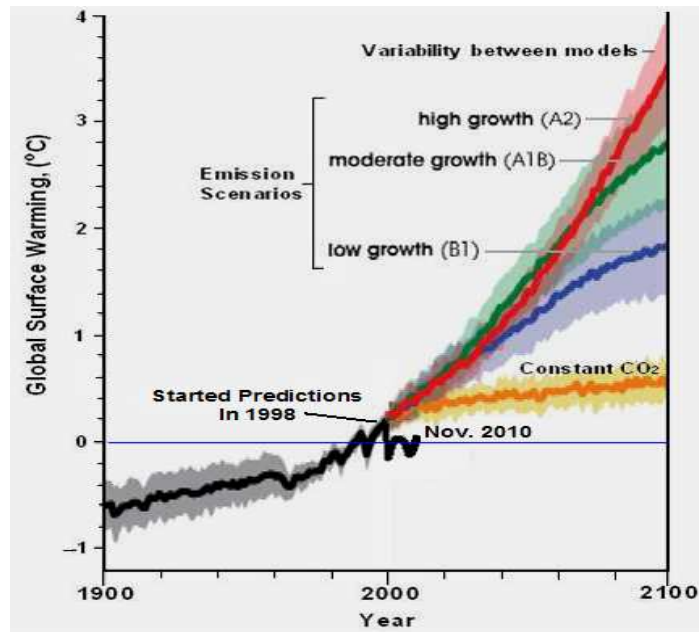


Fig. 5. IPCC Predictions compared to Actual Surface Temperature Measurements¹⁰.

The actual temperature for November, 2010 was some 0.32 °C cooler than the IPCC projection based on the lowest assumed growth rate of CO₂ they used. On an actual temperature basis, one sees that the IPCC models predict temperatures that are not even close to actual measurements. Yet they continue to use these flawed computer models, while dismissing the actual temperature measurements by claiming they cover too short a time period. We will wait and see who is right.

It reminds one of the computer models used to predict where Hurricane Ike would hit the U. S. in 2008. Five meteorological models all predicted the hurricane would hit the west coast of Florida, then changed it to New Orleans, then to Galveston, down to Corpus Christi and then back up to Galveston, where it finally hit, all of this over a five day period. Here again, historically, most meteorological models have not proven trustworthy. These IPCC predictions are a result of a head-in-the-sand approach that produces the classic "garbage in - garbage out" analysis for computer models.

Human Made Emissions of Carbon Dioxide (CO₂)

You may not realize this, but CO₂ emissions created by human activities such as combustion of fuels, etc. (called anthropogenic emissions) are miniscule compared to the emissions of CO₂ from nature. Table 1 was developed by the UN IPCC. It shows annual CO₂ emissions to the atmosphere from both nature and human-made sources and how much of the CO₂ emitted is re-absorbed by nature.

TABLE 1. GLOBAL SOURCES AND ABSORPTION OF CO₂

Carbon Dioxide:	<u>Natural</u>	<u>Human-Made</u>	<u>Total</u>	<u>Absorption</u>
Annual Million Metric Tons	770,000	23,100	793,100	781,400
% of Total	97.1%	2.9%	100%	98.5%

Source: Intergovernmental Panel on Climate Change, Climate Change 2001: The Scientific Basis (Cambridge, UK Cambridge University Press, 2001), Figure 3.1, p. 188.

So Nature absorbs 98.5% of the CO₂ that is emitted by nature and humans. There were many claims about how long man-made CO₂ remained in the atmosphere in the IPCC reports and they varied from a few years to as much as a 100 years in the political summary of the 2007 IPCC report and even more wild claims outside of the IPCC reports mentioned more than a thousand years. Let us fill a container with 1 unit of CO₂ generated at a uniform rate in a year. Now we will drain that container at a rate that removes 98.5% of it in a year, but we will keep removing it at that rate until the container is empty.

The time to empty the container is $(1/0.985)$ years or 1.015 years. Seeing that 1.015 years is 370.73 days - with 365.25 days per year – and knowing that the drain rate was constant, this means that a half unit of CO₂ was drained in $370.73 / 2 = 185.36$ days. This rate of removal calculation is pretty simple compared to the gyrations people go through to get the many years numbers, which makes this number much more believable.

Using the table above in combination with the average concentration of 373 ppmv of CO₂ seen in the atmosphere in 2001, one sees that the CO₂ caused by all of our activities amounts to only 10.8 ppmv for 2001. If, on a worldwide basis, we eliminated all anthropogenic CO₂ emissions in November 2010 (see Figure 3), we would go back to the level we had in 2004, making carbon dioxide emission reductions counter-productive and a complete waste of resources.

As CO₂ increases in the atmosphere, nature's controlling mechanism causes plant growth to increase via photosynthesis; CO₂ is absorbed, and oxygen is liberated. Photosynthesis is an endothermic (cooling) reaction. Furthermore, a doubling of CO₂ will increase the photosynthesis rate by 30 to 100%, depending on other environmental conditions such as temperature and available moisture¹¹.

More CO₂ is absorbed by the plants due to the increased concentration of CO₂ in the atmosphere available for conversion to carbohydrates. Nature therefore has in place a built-in mechanism to regulate the CO₂ concentration in the atmosphere that will always completely dwarf our feeble attempts to regulate it. Even the US Dept of Energy knows this, yet gets it all wrong when they write a paper on it, see page 13 and reference 28.

Further, no regulation by us is necessary because CO₂ is not a pollutant; it is part of the animal and plant life cycle. Without it, there would be no life on earth. Increased CO₂ in the atmosphere increases plant growth, which is a good thing during continued world population growth and an increasing demand for food

No Greenhouse Signature in the Atmosphere

The IPCC developed a theoretical greenhouse signature through a computer model. Their theoretical greenhouse signature is very distinct - see Figure 6. If this signature were present, warming would be concentrated in a distinct "hot spot" about 8 to 12 km up over the tropics, with less warming further away, turning to cooling above 18 km.

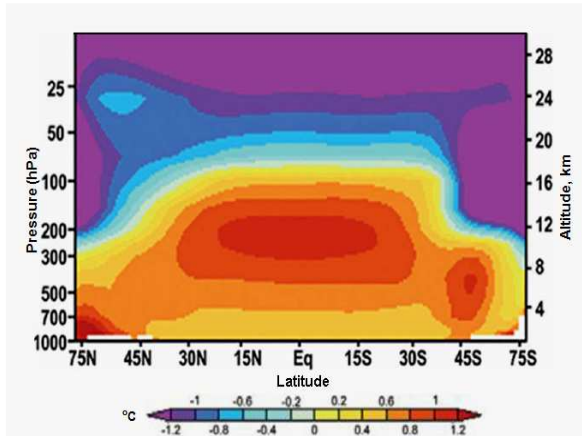


Fig. 6. Theoretical Greenhouse Signature (UN climate models)¹².

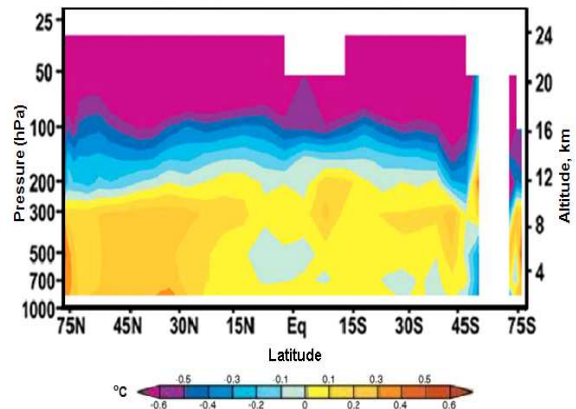


Fig. 7. Actual Observed Signature¹³.

Actual measurements have been taken where the warming should be occurring according to the models using satellites and balloons. The real observed signature is shown in Figure 7. As one can clearly see, the predicted IPCC "Greenhouse" signature is not seen - no "hot spot" exists!

Heat Transfer by Radiation from Gas to Solid

The Stefan-Boltzmann Law, that has been verified experimentally, states that the total radiation from a black body is proportional to the fourth power of its absolute temperature. For non black bodies there is an emissivity correction that must be applied based on the emissivity of the non black body compared to a black body at the same temperature.

Radiation between gases does not follow the Stefan-Boltzmann law for radiation between solid surfaces¹⁴. When radiant energy passes through certain gases and vapors an appreciable portion within certain frequencies may be absorbed but practically no radiant energy will be absorbed within other frequencies.

The following method of estimating the rate of heat transfer by radiation from carbon dioxide and water vapor to a bounding solid surface was developed by Hottel and Egbert¹⁴.

The rate of heat transfer by radiation between a hemispherical mass of gas with a radius (L), partial pressure of gas emitting radiation of (p) atmospheres, at the uniform absolute temperature of the gas (T_g), and a small element of solid surface at its absolute temperature (T_s) with a surface emissivity (e_s) located on the base of the hemisphere at its center is:

$$Q/A = 0.173 e_s * [e_{gg} *(Tg/100)^4 - e_{gs} *(Ts/100)^4]$$

Where, Q = Rate of heat transfer between gas and solid
 A = Area of heat absorbing surface
 e_{gg} = emissivity of the gas at T_g
 e_{gs} = emissivity of the gas at T_s

The emissivity of the gas depends on the temperature of the gas and the product pL. When the gas contains a mixture of CO₂ and water vapor, the combined radiation from these two gases is less than the sum of their separate effects and a correction factor is applied based on the partial pressures of the two gases.

One can see from this equation that the net heat transfer is always from the more intense emitter to the less intense emitter, never vice versa. So one cannot show a balance where a cooler body is heating a warmer body; that is impossible and is a violation of the second law of thermodynamics!

Many scientists are confused over thermal equilibrium issues associated with analyzing the climate. There are two fundamental errors on how many handle the physical concepts of the Earth's thermal equilibrium and of blackbodies. The Earth cannot reach thermal equilibrium for many reasons, but mainly because the Earth is not a blackbody because, simply, it does not absorb all the energy it receives¹⁵. For the same reason, the atmosphere is not, and does not behave like, a blackbody and it is not even a near-blackbody system.

Let us examine the first mistake. Thermal equilibrium refers to the approaching to almost the same temperature of two interrelated systems, where one of them is warmer than the other system and the warmer system transfers some of its energy to the colder system¹⁶. In other words, between two interrelated systems, the warmer system does work, in the form of heat, on the colder system, not the other way around^{16, 17}.

On planet Earth, which has a great diversity of subsystems¹⁸, it is physically impossible to obtain thermal equilibrium spontaneously, i.e. in nature. Simply, let us measure the energy contained by two or more small adjacent volumes of air; one will offer an energy density higher or lower than the other adjacent air volumes. This is considering solely one of those subsystems, the atmosphere.

The Earth rotates over its own axis, giving place to the alternating diurnal and nocturnal periods. We cannot speak of a planetary thermal equilibrium when a half of the terrestrial sphere receives solar light, gaining energy incoming from the Sun, whereas the other is in darkness, losing the solar energy that it had received during the daytime. We always find differences of the density of energy between one hemisphere and the other.

Besides, the thermal equilibrium concept only happens when the temperature of both systems keeps constant¹⁷. When have we seen the temperature of the Earth being constant? The answer is nowhere and never. The temperature suffers fluctuations many times a second all day long. Whichever subsystem we examine, even the temperature of the endothermic living beings, which self-regulate their body temperature, fluctuates many times a second¹⁹.

On the other hand, if AGW hypothesis proponents are referring to a thermal equilibrium between the density of the incident solar energy on the Earth's surface and the Earth's surface density of

energy, they are making a most important mistake because the Earth's surface never reaches the density of energy that the incoming stream from the Sun has. The density of energy of the solar stream is always higher than the density of energy of the surface. The absorbent system disperses the energy that it does not "use", like work, towards other systems; to outer space, for example. We know this class of energy as "heat", i.e. energy in transit.

Obviously, the energy in transit, or in the very moment of the transferring process, by any means, cannot be stored; it is energy in transit from one energized system to another less-energized system.

As a result, thermal equilibrium only occurs in mathematically isolated systems where the primary source of energy for both systems, the emitter and the absorber, has been artificially eliminated. The real Earth system cannot ever reach a thermal equilibrium because its primary source of energy is always present and the Earth rotates. The Sun is this source in this case and, as we have observed in the last decades, it is not too stable. With the latter assertion, it is not being said that the Sun is a meta-stable system, not even in the long term and this statement must be clear. Have we ever seen the global climate as being stable or, at least, quasi-stable? No, we have never seen such a phenomenon.

Regarding the concept of blackbody systems, the actual physical concept says that a blackbody is an idealized system that "absorbs" all the energy, at all spectral bands and wavelengths and all temperatures that it receives from a source²⁰, which, consequently must be in a higher energy density level than the absorbent blackbody. We cannot say the atmosphere is a blackbody because it has a very limited (low) absorptivity.

By applying the scientifically accepted algorithms, which derive from experimentation¹⁶, to calculate the absorptivity of the air, we find that it is 0.01, at the best composition of the air, i.e. mixed with dust particles and 4% of water vapor. Could anyone of us argue that the atmosphere is a near-blackbody system? No, for the only case of a near-blackbody system, but not one of those idealized systems, is moistened clay with organic matter that has an absorptivity of 0.95²⁰ or water vapor, with an absorptivity of 0.75²⁰.

Carbon dioxide, on its own, has an absorptivity of 0.002; in the overall panorama, Oxygen, with its 0.007 of absorptivity/emissivity, is 3.5 times a better absorber/emitter than carbon dioxide. For that reason alone, carbon dioxide *is not* a blackbody or even a "near-blackbody" system.

Greenhouse Effect is Impossible

The IPCC adopted the work completed by Kiehl and Trenberth of the National Center for Atmospheric Research, Boulder Colorado to show how radiative forcing from greenhouse gases causes the earth to warm²¹. Here is a statement from that paper:

The long wave radiative forcing of the climate system for both clear [125 W/m² (watts/square meter)] and cloudy (155 W/m²) conditions are discussed. We find that for the clear sky case the contribution due to water vapor to the total long wave radiative forcing is 75 W/m², while for carbon dioxide it is 32 W/m².

Really, when the water vapor concentration in the atmosphere averages around 1 volume % (or 10,000 ppmv) and carbon dioxide concentration is less than 400 ppmv? The CO₂ concentration is only 4% of the water vapor concentration. In the Hottel and Egbert correlation the only

difference between water vapor and carbon dioxide regarding the radiation effect is their partial pressures. Partial pressures of gases are proportional to their volumetric concentrations. Based on this and using the water vapor effect as a basis at 75 W/m^2 then the CO_2 effect would be 3 W/m^2 , not the 32 W/m^2 stated. Figure 8 shows an updated graph from the original work completed by Kiehl and Trenberth in 1997.

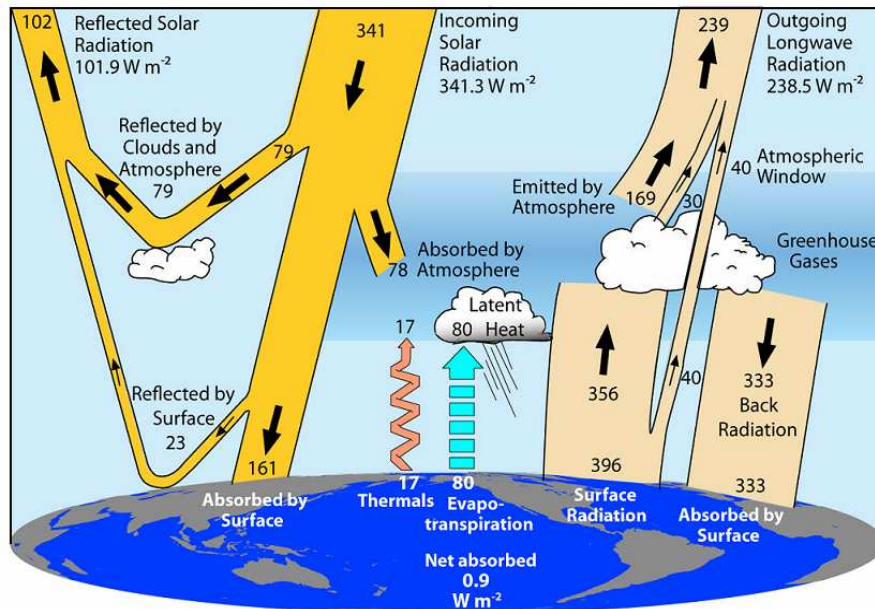


Figure 8. The Global Annual Mean Earth's Energy Budget for March 2000 to May 2004²².

The first problem seen in this graph is a serious violation of the First Law of Thermodynamics. Completing a balance only on the energy entering and leaving the earth, one sees on the middle to left side of the graph that 161 W/m^2 hits the earth from the sun. The earth then loses 97.9 W/m^2 to thermal and evaporation/transpiration losses with 0.9 W/m^2 being retained by the earth. This leaves only 63.1 W/m^2 not accounted for. However, on the right side of the earth it shows 396 W/m^2 leaving the earth. If you only have 63.1 W/m^2 available, no more than that can leave the earth. Well you say an additional 333 W/m^2 in back radiation from the clouds hits the earth and this then provides the balance. Mathematically you can do anything you like of course, as long as input equals output, but where is the reality in such a computation?

The only problem here is, where did this added energy come from? It came from the bogus 396 W/m^2 shown radiating from the earth's surface to the clouds. If what was presented here were true, for every unit of energy in, one would get back an additional $(396 \div 63.1) = 6.28$ units of energy. The First Law of Thermodynamics states that energy can be transformed from one form to another but cannot be created nor destroyed. Therefore, the graph violates the First Law of Thermodynamics.

It also violates the Second Law of Thermodynamics by showing energy radiating from cooler clouds back to a warmer earth. One version of the second law states no process is possible where the sole result is the transfer of heat from a body of lower temperature to a body of higher temperature. Maybe they are still counting on the non-existent hot spot in the greenhouse

signature to accomplish this. Real data shows the IPCC computer models, both for predicting the effect of CO₂ on the earth's temperature and the climate signature, are misconstrued..

As a final rebuttal of the influence of carbon dioxide over the climate, the alleged IPCC greenhouse effect is a non-existent effect. No greenhouse, whether made from glass, plastic, cardboard or steel will reach a higher inside temperature due to the magic of re-radiated IR energy. If it did, engineers would have long ago been able to design power stations made from air, mirrors and glass, extracting more energy out of it than was put into it - if only!

Is the Climate Change Agenda a Fraud?

There is supporting evidence that indicates that the Climate Change agenda is and always has been just a fraud²³. Why do we call it a fraud? An event now referred to as Climategate publicly began on November 19, 2009, when a whistle-blower leaked thousands of emails and documents central to a Freedom of Information request placed with the Climatic Research Unit of the University of East Anglia in the United Kingdom. This institution had played a central role in the "climate change" debate: its scientists, together with their international colleagues, quite literally put the "warming" into Global Warming: they were responsible for analyzing and collating the measurements of temperature from around the globe from the present to the distant past.

Dr. John Costello relays²³, "Climategate has shattered that myth (*the myth of global warming*). It gives us a peephole into the work of the scientists investigating possibly the most important issue ever to face mankind. Instead of seeing large collaborations of meticulous, careful, critical scientists, we instead see a small team abusing almost every aspect of the framework of science to build a fortress around their 'old boys club', to prevent real scientists from seeing the shambles of their research. Most people are aghast that this could have happened; and it is only because climate science exploded from a relatively tiny corner of academia into a hugely funded industry in a matter of mere years that the perpetrators were able to get away with it for so long."

Stephen McIntyre, a University of Toronto mathematics graduate first questioned the accuracy of the "hockey stick" temperature graph mentioned previously. He wondered how Michael Mann, head of Penn State's Earth System Science Centre, reconstructed the temperatures to produce such a detailed graph. McIntyre then sent an e-mail to Michael Mann in the spring of 2003²⁴, asking him for the location of the data used in his study. "Mann replied that he had forgotten the location," he said. "However, he said that he would ask his colleague Scott Rutherford to locate the data. Rutherford then said that the information did not exist in any one location, but that he would assemble it for me. McIntyre thought this was bizarre and so do we.

Here is what was later found concerning the temperature data Mann used. Five organizations publish global temperature data²⁵. Two – Remote Sensing Systems (RSS) and the University of Alabama at Huntsville (UAH) – are satellite datasets. The three terrestrial institutions – NOAA's National Climatic Data Center (NCDC), NASA's Goddard Institute for Space Studies (GISS), and the University of East Anglia's Climatic Research Unit (CRU) – all depend on data supplied by ground stations via NOAA.

Around 1990, NOAA began weeding out more than three-quarters of the climate measuring stations around the world. It can be shown that systematically and purposefully, country by country, they removed higher-latitude, higher-altitude and rural locations, all of which had a

tendency to be cooler. The thermometers kept were near the tropics, the sea, and airports near bigger cities. These data were then used to determine the global average temperature and to initialize climate models. From 1960 through 1980, there were more than 6000 stations providing temperature information. The NOAA reduced these to fewer than 1500. Calculating the average temperatures this way ensured that the mean global surface temperature for each month and year would show a false-positive temperature anomaly, a bogus warming trend. Interestingly, the very same stations that were deleted from the world climate network were retained for computing the average-temperature base periods, further increasing the bias towards warming.

An internal study of the U.S. EPA²⁶ completed by Dr. Alan Carlin and John Davidson concluded the IPCC was wrong about global warming. One statement in the executive summary stated that a 2009 paper²⁷ found that the crucial assumption in the Greenhouse Climate Models (GCM) used by the IPCC concerning a strong positive feedback from water vapor is not supported by empirical evidence and that the feedback is actually negative. This is exactly what we have shown here, water vapor in the atmosphere causes a cooling effect, not a warming one.

EPA tried to bury the report. An email from Al McGartland, Office Director of EPA's National Center for Environmental Economics (NCEE), to Dr. Alan Carlin, Senior Operations Research Analyst at NCEE, forbade him from speaking to anyone outside NCEE on endangerment issues. In a March 17 email from McGartland to Carlin, stated that he will not forward Carlin's study. *"The time for such discussion of fundamental issues has passed for this round. The administrator (Lisa Jackson) and the administration have decided to move forward on endangerment, and your comments do not help the legal or policy case for this decision. I can only see one impact of your comments given where we are in the process, and that would be a very negative impact on our office."* A second email from McGartland stated *"I don't want you to spend any additional EPA time on climate change."*

McGartland's emails demonstrate that he was rejecting Dr. Carlin's study because its conclusions ran counter to the EPA's current position. Yet this study had its basis in three prior reports by Carlin (two in 2007 and one in 2008) that were accepted. Another government cover-up, just what the United States does not need.

The US Dept of Energy knows what is going on: "Based on preliminary data from satellite measurements, Ramanathan and his colleagues concluded that clouds appear to cool Earth's climate, possibly offsetting the atmospheric greenhouse effect."²⁸ Yet they continue to make basic errors, even stating that "The decay time or residence time for carbon dioxide ranges from around 150 to about 500 years. Without carbon dioxide absorbers (sinks), the carbon dioxide residence time would be only 3.9 years, which is precisely its exchange rate." What they ought to state is that *with carbon dioxide absorbers (sinks), the carbon dioxide residence time is only 3.9 years*. They know the truth but can't say it, why?

Further, Dr. Noor van Andel in January 2011 updated his paper, *CO₂ and Climate Change*²⁹, and explains in detail how climate scientists adjusted radiosonde (weather balloon) data to try to bring it into agreement with their computer models to show greenhouse gas induced global warming. This is quite the opposite of the normal scientific procedure of adjusting the models to fit the data. The unadjusted data does not show the elusive "hot spot" (*greenhouse gas signature*) predicted by climate models and conventional 'greenhouse' theory.

Most of the U.S. House of representatives agree with the fraud assessment. On February 19, 2011 they voted to eliminate U.S. funding for the Intergovernmental Panel on Climate Change. With a vote of 244-179, they said that it no longer wishes to have the IPCC prepare its comprehensive international climate science assessments.

The amendment was sponsored by Rep. Blaine Luetkemeyer (R-Missouri). He said;

“The IPCC scientists manipulated climate data, suppressed legitimate arguments in peer-reviewed journals, and researchers were asked to destroy emails, so that a small number of climate alarmists could continue to advance their environmental agenda. Since then, more than 700 acclaimed international scientists have challenged the claims made by the IPCC, in this comprehensive 740-page report. These scientists represent some of the most respected institutions at home and around the world, including the U.S. Departments of Energy and Defense, U.S. Air Force and Navy, and even the Environmental Protection Agency”.

Conclusion

Based on empirical data, CO₂ causing global warming is clearly a figment of the UN IPCC's imagination. The only actual physical attribute that can be ascribed to atmospheric carbon dioxide is one of increasing the cooling efficiency of the total atmosphere, as recently demonstrated by Dr Noor van Andel²⁹. For that matter, as discussed, all greenhouse gases, including the most notorious water vapor and carbon dioxide, cool the planet. Taxing carbon will have a deleterious effect on the economies of the world.

Many scientists, including the authors, see global warming from CO₂ as a cruel global hoax.

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