Why the Earth is not getting warmer

By Arthur Middleton Hughes

The temperature of the earth has not increased in the last 16 years. I predict that it also will not increase in the next sixteen years. Why not? Because of water vapor. Let me explain.

There are five "greenhouse gasses" according to all scientists today: Carbon Dioxide, Methane, Ozone, Nitrous Oxide and Water Vapor. Carbon dioxide has been singled out as the bad guy by climate change scientists, because that is the only one that we know to be and can measure to be increasing due to human activity. How do we cause this increase? By driving our cars, air conditioning our homes, flying around the world, and living our heedless modern lifestyle. Carbon Dioxide (otherwise known as CO2) is put into the atmosphere by burning coal, oil and natural gas—which are the basic fuels that power the modern world. These fuels ("fossil fuels") are found underground (or under the sea) because they were put there during the Carboniferous period (from about 359 million years ago, to about 299 million years ago. During those sixty million years, the earth was wet and swampy. Plants and animal life grew in profusion. They were eventually buried under the ground by shifting of the earth due to plate tectonics. In the process they were turned into coal, oil or natural gas. Mankind discovered these fuels about 150 years ago (for oil and gas) and a couple of thousand years ago (for coal). There is only so much down there, but every year we discover more, so we have at least a 300 years' worth of energy which we can continue to unearth and burn up before it is all gone. What will we do then? We will have to turn to nuclear power which, as long as the uranium lasts, is about 30,000 years more. Not a problem to worry about right now.

The CO2 from our burning these fuels goes up into the atmosphere. Today the air we breathe (the atmosphere) consists of 78.09% nitrogen, 20.95% oxygen, 0.93% argon, 0.039% carbon dioxide, and small amounts of other gases. Air also contains a variable amount of water vapor, on average around 2% to 3%-- not more than 4%. Note those estimates for water vapor: 2% to 3%. This means that today there are about 50 to 75 times more water vapor molecules in the air on the average than there are CO2 molecules. The CO2 is worldwide. Any fuels burned in China or Sweden will increase the CO2 in the air over New York after a few days. Water vapor, on the other hand is local. It does not spread around the world in the same way as CO2.

Why isn't the amount of water vapor in the air ever greater than 4%? The answer is because temperature sets a limit to how much water vapor can be in the air. Even in tropical air, once the volume of water vapor in the atmosphere approaches 4% it condenses and becomes water.

A greenhouse gas is one that becomes hot when exposed to low frequency heat waves. Picture in your mind the situation. Sunlight warms the earth with high frequency waves. The heated earth reflects back part of that heat as low frequency heat waves. These low frequency waves, if nothing stopped them, would go out into space taking the heat with them and therefore cool the earth. Without this cooling process, the earth would get too hot for life. When these low frequency waves hit CO2 molecules, (or other greenhouse gas molecules) they warm them. This warms the earth. This is good. Without these greenhouse gasses the average temperature of the earth would be minus 2 degrees Fahrenheit instead of plus 51 degrees as it is now. With an earth this cold, we would not be here. Some of these low frequency heat waves also hit the water in the oceans or lakes and turn a little bit of the water into water vapor. As they do this they cool the water.

It takes heat to get water to evaporate and become water vapor. Water vapor is different from other greenhouse gasses. CO2 is put into the air by burning fossil fuels. Water vapor molecules are put into the air in a two-step process. First the heat has to heat the water by enough to create water vapor molecules. When the molecule evaporates it leaves the water cooler than it was. Once it is in the air, the water vapor may be further warmed by low frequency heat just as CO2 is.

Water vapor also creates clouds. Clouds are condensed water vapor. In the clouds the water vapor may form droplets or ice crystals. After cloud droplets or ice crystals form they may collide with each other and grow by joining together to such a large size that they fall to the ground as rain or snow, or they may evaporate and change back into water vapor. It is estimated that, on average, about one-half of all cloud material in precipitation systems eventually falls to the Earth as precipitation, while the other half re-evaporates back into water vapor. In general, precipitation (snow or rain) cools the earth.

Clouds have a tremendous impact on the temperature of the earth. The reason clouds are so important is because they have the potential to block our source of heat, the sun. The obvious result with a lot of cloud cover or overcast skies is that the sunlight energy is reflected back out to space or even absorbed by the clouds. With less sunlight reaching the surface, the temperature of the earth becomes cooler.

But clouds are porous, meaning they don't block 100% of the sun's energy. That's why even on a cloudy day temperatures warm even a little bit. Clouds, or lack of clouds, during the nighttime also have a big impact on temperature. During the night the heat absorbed by earth during the day continues to be emitted from earth to the air. And with no cloud cover, this heat will rise and eventually go out into space. This leaves the surface colder, because the heat is rising out to space. Typically on clear nights with little wind, you get those very cold and sometimes record low temperatures.

However, with cloudy skies at night the clouds can act like a blanket trapping some heat between the clouds and the surface. Thus, you end up with a more mild morning low temperature.

Clouds cool the Earth by reflecting incoming sunlight. The tiny drops or ice particles in clouds scatter between 20 and 90 percent of the sunlight that strikes them, giving them their bright, white appearance. From space, clouds look bright whereas large bodies of water look dark. A cloud-free Earth would absorb nearly 20 percent more heat from the sun than the present Earth does. **Clouds cool the planet by about 12 degrees C** by reflecting sunlight back into space, much as they chill a summer's day at the beach.

Clouds warm the Earth by absorbing infrared radiation emitted from the surface and reradiating it back down. The process traps heat like a blanket and slows the rate at which the surface can cool. The blanketing effect warms Earth's surface by some 7 degrees C.

Thus the net effect of clouds on the climate is to cool the surface by about 5 degrees C. Clouds reflect about 50 Watts per square meter of solar radiation up into space, and radiate about 30 watts per square meter down to the ground, so the net effect is 20 watts per square meter cooling on average. This greatly exceeds the 4 watts per square meter of warming due to doubling the atmosphere's carbon dioxide from 300 to 600 parts per million.
CO2 is an odorless, invisible, and non-flammable gas. It is also safe for humans in the maximum concentrations recommended for plant growth. The average level of CO2 in the atmosphere is about 390 PPM (parts per million). If the level decreases down below 200 PPM in an enclosed growing area,

plant growth slows to a halt. Through the years of testing and research, the optimum enrichment level of CO2 for plant growth has been agreed to be about 1500 PPM. With CO2 enrichment, under good conditions, plant growth rates and flowering will increase 20-100%. CO2 can be used from seedling right through harvest. It may take a hundred years for CO2 to get up to 1500 PPM. During that time, plant growth will flourish.

Conclusions:

1) CO2 spreads evenly in the atmosphere whether it is put there in China or in France.
2) It is easy to measure accurately.
3) It has grown from 0.025% to 0.039% (250 PPM to 390 PPM) in the past 50 years and will probably continue to grow at that rate for the next 100 years or more.
4) The increase is caused by man's activity in burning fossil fuels.
5) The climate models created to predict global warming leave out water vapor. The main reason is because it is impossible to measure. Water vapor is local and not worldwide. There is very little water vapor in the Sahara Desert. There is lots of water vapor over the oceans. There is no accurate reading of worldwide water vapor. It does not spread out worldwide the way CO2 does.
6) In general, water vapor tends to cool the earth. CO2 tends to warm the earth.
7) There are about 50 to 75 times more water vapor molecules in the air around inhabited areas than there are CO2 molecules.
8) Clouds both warm and cool Earth's atmosphere by absorbing heat emitted from the surface and radiating it to space.
9) So far, the models that predict the warming of the earth have not been verified by experience. The earth has not warmed and probably will not do so.
10) The main reason why the earth has not warmed is because water vapor has kept it cool.
11) Water vapor has kept the earth cool for millions of years. With 70% of the world's surface water, this situation will probably continue for millions of years into the future.
12) Conclusion: the man-made CO2 increase will not lead to global warming. It will make plants grow faster and better. Since there will be no warming, there are no known harmful results from the increase in CO2.
13) Since the inevitable increase in CO2 does no harm, there is no reason for us to try to reduce it through Cap and Trade, or Carbon Capture and Sequestration. Billions of dollars are being wasted in a futile and mistaken attempt to reduce CO2 in the atmosphere.

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