

Arrow Stage Lines was one of the first companies to put a wrap on a coach for the new Get Motorcoachified campaign. The only possible change from new developments might be less concern about carbon in the atmosphere. Operators can continue to brag about new engines and other programs that help our environment. THEMOTORCOACHCOUNCIL.

ver since the disclosure of information from the University of East Anglia in ■ November, we have received numerous requests asking about what is going on and how it will affect bus industry patronage, Going Green programs and EPA regulations. While we usually try to comply with these requests, this one will be difficult. On the negative side, to try to explain what is going on we must get involved with both science and politics. In addition, I am sure some readers have strong feelings on some of these topics which will only make our work more difficult. On the positive side, we have been involved with others who have done some research into Anthropogenic Global Warming so we do have some answers.

The Climate Research Unit at East Anglia

The Climate Research Unit of the University of East Anglia in England was regularly cited as the leading authority on "global climate analysis." In November, e-mails and data from the CRU were dumped on the Internet for public access. Some people

claimed that this was the work of a hacker while others suggested that this may be the work of an insider who was unhappy with what was taking place. Among other things, these records disclosed that the CRU and fellow researchers were manipulating figures to show temperature increases where none existed and were hiding information and reports that did not show temperature increases. In addition, this information shows that they worked to block other researchers who had data disproving a warming trend.

Much of the public and some of the news media were shocked that reputable scientists would do this. It might be noted that this disclosure did not upset those scientists and researchers who disbelieved in a warming trend. For many years they said that the data simpy did not support global warming and that temperatures have actually been declining in recent years.

It is interesting that the original temperature data over many years that was used as a basis for the work of the CRU has some-

how disappeared so it can no longer be used to verify the accuracy of figures. The head of the CRU has relinquished his position pending an investigation that he overstated the case for man-made climate change. It is expected that this will eventually have repercussions all over the world. Already in Australia a climate skeptic has replaced the leader of the liberal party. Al Gore has also cancelled his speaking engagement at the climate meeting in Copenhagen.

Three questions are appropriate.

First, why did the scientists modify the numbers to suggest increasing temperatures, and then eliminate the original data? The answer is money. Reports indicate that the CRU received more than \$23 million in taxpayer funds for its work on global warming. As ridiculous as it sounds, think about what you would do if you were paid to prove that elephants fly. All you need is a two-step procedure. One, you collect data on the distance of elephants off the ground and then you manipulate the numbers to add in five or 10 feet. Two, you work to block

any data that does not support your position. This is effectively what happened at the CRU but with temperatures. One wonders whether we should make scientists take an oath to be responsible in their occupation like doctors do.

Second, why is government money and why are grants available to prove global warming but not disprove it? Sadly, the answer is because some governments want to make money off of global warming, particularly in the area of Cap and Trade. If you pay 10 lawyers to represent the plaintiff in court but pay none for the defendant, it is almost certain that the plaintiff will prevail. Two recent polls from Rasmussen tend to show substantial animosity between American voters and American politicians. One poll indicated that only four percent of American voters believe that politicians do not lie. A more recent poll indicated that 71 percent of American voters are at least somewhat angry about the current policies of their federal government.

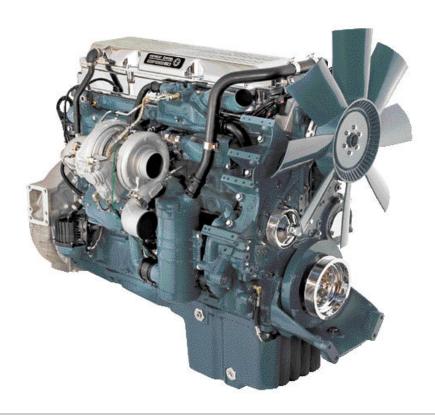
The third question we need to ask is why is it that the observed data at CRU did not confirm the warming predictions? The answer to that is bad science and radiative transfer.

Radiative Transfer

Global warming theory has been under fire for years for suggesting that the earth's climate is so delicate and fragile that mankind can do major damage. Many scientists have pointed out that if this were true, none of us would be here. Millions of years ago, CO₂ and other green house gases were at a level far greater than they are today, yet the earth's climate survived. The earth has come through wide volcanic activity that released more green house gases than man has ever released in his entire history. There have also been massive asteroid strikes large enough to cause mass extinctions. Yet our climate has survived.

Much of the theory behind global warming is based on computer models and projections indicating what should happen or what is expected to happen rather than on what is happening. These computer models and projections have been questioned for years. No one has been able to make them work backwards and, as can be seen by the situation at CRU, they do not seem to match reality going forward either. A major reason for this problem is because global warming theory is based on the premise that our atmosphere is opaque and that carbon in our atmosphere acts like a blanket and holds in heat that causes the earth to warm.

However, it has been pointed out that the amount of carbon in our atmosphere is only something like 350 parts per million. This makes the carbon considerably less of a blanket and more like a fish net with huge holes.



American engines are amazingly clean and "green," and certainly worth bragging about. If and when people begin accepting the fact that carbon is not a big factor in our environment, we may see more emphasis placed on particulates. Shown is a recent Detroit Diesel engine. DETROITDIESEL.

The answer to all of this came in 2007 when Dr. Ferenc M. Miskolczi from Hungary released his work on radiative transfer called *Greenhouse Effect in Semi-Transparent Planetary Atmospheres*. What this work shows, and then proves, is that our atmosphere is neither opaque nor completely transparent; it is semi-transparent. Even more interesting, Dr. Miskolczi shows how the earth has its own natural air conditioner that keeps things on equilibrium or returns them to equilibrium.

What helps us a great deal is that 71 percent of the surface of the earth is water. When the earth warms, water vapor is released from water surfaces around the planet. This water vapor then rises to the upper atmosphere where it releases heat and infrared radiation into space. The water vapor then condenses and returns to earth as rain or snow. When the earth cools, less water vapor is released and hence less infrared radiation is passed into space. Some people have suggested that this amazing system that tends to stabilize our climate might be the work of intelligent design rather than pure chance.

This system has been functioning for billions of years. The amount of water vapor is so overwhelming that it effectively makes carbon in the atmosphere meaningless. If CO₂ increases, the water vapor side goes down. If CO₂ decreases, then the water vapor side increases. Some scientists have now suggested that methane from cow flat-

ulence may be of more interest than carbon in the atmosphere.

It has also been noted that carbon in our atmosphere may not remain there. Some of us may remember our high school biology. Green plants and other organisms synthesize carbohydrates from carbon dioxide and water using light as an energy source. This is called photosynthesis and it typically releases oxygen as a byproduct. Hence, the green plants on our earth are constantly removing carbon dioxide from our atmosphere and replacing it with oxygen. Those same people suggest that this amazing system that turns carbon dioxide to oxygen might be the work of intelligent design rather than pure chance.

Earth Radiation Budget Experiment

Professor Richard Lindzen of MIT recently published a paper that shows that heat is radiated out into space at a far higher rate than any modeling system to date can account for.

Many scientists believe that any warming not showing up in the atmosphere would definitely be found in the top 400 fathoms of the world's oceans, where at least 80 percent of any surplus heat would be stored. As a result, Argo bathythermograph buoys were placed in the world's oceans since late 2003 to measure water temperatures. Records show that there is no warm-

ing because the water has been cooling for the past six years.

The Earth Radiation Budget Experiment has been going on for 15 years and compares real measurements made by satellite with real measurements made on sea temperatures. It should be noted that these are real numbers, not computer models and projections. This ERBE data proves that as seas warm on earth, the satellites detect more heat being sent into space. This shows the earth at an equilibrium rather than an opaque atmosphere with carbon capturing heat as proposed by the global warming theory. Professor Lindzen's work states: "We now know that the effect of CO₂ on temperature is small, we know why it is small, and we know that it is having very little effect on the climate."

While this means that carbon may essentially be meaningless in regard to climate, none of this should be a reason for not improving our environment. The big problem is that politicians tend to spend money and effort in the wrong places. Our columnist Jan van Eck points out that it would be absurd to hammer away at the last fragments of engine exhaust in America when that same investment in money and effort would produce much better results elsewhere. For example, engine and powerhouse exhausts in the United States pale when compared with ongoing coal mine fires in China. Another target would be ocean vessels, reported to comprise six percent of all gasses discharged because they burn low grade bunker oil.

The current concern of those watching climate is actually not warming but a prolonged cold spell. Current measurements show that the Sun's output is about one percent less than normal. While this may seem slight, it has some impact on earth's weather. In spite of the global warming hysteria, direct temperature readings have shown that the earth has been cooling for the past several years. Numerous sources expect a cool period extending at least a half-century. Now is the time to think about getting your long johns out.

Cap and Trade

All of this brings us to the proposed federal Cap and Trade plan where industries would be penalized for polluting the atmosphere with carbon. The concept of Cap and Trade borders on the ridiculous because good science has shown that CO₂ is not an issue and our earth is actually cooling. Cap and Trade is simply another way to tax people. In this situation, the power companies would have to pay for their carbon emissions and this cost would be passed on to the consumer as higher energy prices.

Even if it helped the climate, which it will not, Cap and Trade is very unfair. Poor peo-

ple will pay a higher percentage of their income than the rich simply because more of their income goes to pay for energy. Moreover, what with special arrangements for the poor and those who cannot afford it, most of the financial burden for Cap and Trade will fall on the middle class. In some cases this could amount to an increase of several thousand dollars annually.

The real tragedy is that states generating power from coal would be hit much harder than those that generate power from other types of fuel. Currently, coal provides more than half of U.S. electricity, and half of the states get 50 percent or more of their electricity from conventional coal-fired power generating plants.

Based on currently available figures showing carbon output for energy, people in Wyoming may end up paying about 12 times as much as those in New York or California. People in North Dakota could end up paying about seven times as much as those in New York or California.

Impact on the Bus Industry

On the plus side, the actual impact on the bus industry should not be substantial since the only change would be less of a concern about carbon emissions. On the negative side, a great deal may depend on how our politicians react to this situation. As we go to press, Washington appears to be in a state of denial which may only confuse things.

Ridership

Even if we take carbon out of the equation, bus ridership is still in a good position

to improve. Our post-war baby boomers are getting to retirement age and hence increasing candidates for bus tours. No one expects the price of fuel to decline and it probably will increase, so the price of fuel is another reason why we will see more people consider the bus. The current state of the economy should also prompt more people to ride the bus to save money.

Going Green

There is no reason to stop bragging about our new "green" engines. Improving our environment is still a good idea. However, if the good science sinks in, I would expect to see a movement from concern over CO₂ to more concern over particulate matter which can cause smog and other undesirable things. Those people who understand the earth's climate system may also want to see more emphasis put on planting and taking care of trees and plants. Landscaping the area around your bus garage with trees and plants might be considered very positive.

EPA Regulations

Any major changes in EPA regulations would depend on major policy changes in Washington. As mentioned earlier, our bus engines are now already so clean that putting in any additional money and effort to improve them borders on the absurd when there are other places where that same money and effort could accomplish a great deal more.

We would welcome any additional suggestions and may be to share them with our readers. Please e-mail to input@busmag.com. q

If Cap and Trade is passed, it most likely will increase energy costs for some Americans, particularly those in areas that depend on coal for generating electricity. Nuclear plants like the one shown below would be in a much better position from the standpoint of pollution. This particular nuclear plant is located near Byron, Illinois. NBT.



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