

My wife Nancy and I recently enjoyed a couple of great days with Burt Rutan and his wife Tonya at their beautiful new home in Coeur d'Alene, Idaho. The visit afforded an opportunity to discuss many topics of keenly shared interest, including the global warming "debate". Although Burt is world renowned for his remarkable record-setting achievements in aircraft and spacecraft design, he has devoted a great deal of attention to this subject as well.

By way of brief introduction, Burt Rutan designed Voyager, the first aircraft to fly around the globe without stopping or refueling. He also designed SpaceShipOne financed by [Microsoft](#) co-founder [Paul Allen](#) which won the \$10 million Ansari X-Prize in 2004 for becoming the first privately-funded manned craft to enter the realm of space twice within a two-week period. Both, along with three other of his aircraft, are on display at the National Air and Space Museum in [Washington, D.C.](#) Burt's recent projects include a flying car, and the Virgin GlobalFlyer which broke Voyager's time for a non-stop solo flight around the world.

Burt, as someone with such intense involvement in aerospace design and development, what got you interested in climate issues?

Even though I've been very busy throughout my entire career developing and flight-testing airplanes for the Air Force, I've always pursued other research hobbies in my time away from work. Since I'm very accustomed to analyzing a lot of data, about three or four years ago many alarmist claims by some climate scientists caught my attention. Since this is such an important topic, I began to look into it firsthand.

Although I have no climate science credentials, I do have considerable expertise in processing and presenting data. I have also had extensive opportunities to observe how other people present data and use it to make their points. There is a rampant tendency in any industry where someone is trying to sell something with a bunch of data, where they cherry pick a little bit...bias a little bit. This becomes quite easy when there is an enormous amount of data to cherry pick from.

The first thing that got my attention, a lot of people's attention, was statements that the entire planet is heading towards a future climate catastrophe that is attributable to human carbon dioxide emissions. So I decided to take a look at that and just see if this conclusion was arrived at ethically. It's obviously an extremely important issue which has gotten a huge amount of media attention. I was particularly concerned because the proposed solutions will have enormous impacts upon costs of energy, which of course, will increase costs of everything.

Many people seem to get much of their information from what they see in newspapers, with variously biased viewpoints presented in the [New York Times](#), [Wall Street Journal](#), [Investor's Business Daily](#), [Canadian Free Press](#), etc. I may be considerably different, in that I always like to look at both sides of things that I take special interest in. So when I decided to look closely at the anthropogenic [man-made] global warming crisis claims, I avoided focusing on media reports, and instead, went directly to available raw climate data. The intent was to see if that data might just as reasonably be interpreted differently.

Then, what really drew me into the subject, was when I found that I couldn't obtain the raw data that I was looking for. I was shocked to find that there were actually climate scientists who wouldn't share the raw data, but would only share their conclusions in summary graphs that were used to prove their various theories about planet warming. In fact I began to smell something really bad, and the worse that smell got, the deeper I looked.

I even read Al Gore's book, which was very enlightening...but not in a good way. When you look for data to back up his claims, you immediately discover that they are totally unsubstantiated. This was frankly astonishing because analyzing data is something I'm very good at. All my professional life I have been analyzing complex flight test data, interpreting it and presenting it. Something that I always did in flight test is to make a chart that shows every bit of the data, and only then, decide later on the basis of real observed results which parts of the data were valid.

Tragically, policymakers have thrown horrendous amounts of taxpayer money needed for other purposes at solving an unsubstantiated emergency. It is scandalous that so many climate scientists who fully knew that Al Gore had no basis for his irresponsible claims stood mute. Meanwhile, that alarmism has generated billions of dollars more to finance a rapidly growing climate science industry with budgets that have risen by a factor of 40 since the early 1990s. I consider this failure to speak up just as unethical as the behavior of those who put out the false catastrophic claims.

Burt, what was most astonishing to you in the disconnect between what you were seeing in the raw data you were able to obtain and what you're seeing in various report conclusions and in the media?

Well, one of the first things I did was to get out the [U.N. Intergovernmental Panel on Climate Change] IPCC summary for policymaker's reports. Inexplicably, the Medieval Warm Period appearing in the first report which was warmer than today's temperatures, disappeared from the second. The last Little Ice Age disappeared as well. They were replaced by the infamous "hockey stick" graph, which appeared multiple times. That was a big disconnect.

Actually, looking back over the past 11,000 or so years since Earth began to recover from the last big Ice Age, we're experiencing a very moderate and stable climate stage. And going back nearly half of the past million years, a long Ice Age occurred about every 90,000 years or so with a large percentage of the planet uninhabitable. We're talking about ice as much as a mile or more thick covering large portions of North America and Europe. Any local warming that alarmists talk about is only a brief and tiny blip.

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There's certainly nothing alarming about the stable period we currently enjoy. I was struck by claims that we are experiencing unprecedented warming caused by Man, where data clearly shows that our recent warming isn't unprecedented. I think that's the main thing that drove me into an obsession to look at this climate subject very closely during my early investigations. I don't do so much nowadays, and hardly did anything last year, but in those early years I spent

an enormous amount of time researching data and comparing it with what I was seeing in the IPCC summary reports as products from the alarmists.

Another important thing that caught my attention was that the increased atmospheric CO2 that all this alarmism centers on is of huge benefit for agriculture. Green houses actually supplement CO2 to make plants grow better. It has been shown that crop yields actually go up some 30% or more with doubling of CO2 in the atmosphere. So I'm a very confused as to what's wrong with CO2. It's the food plants need to grow and feed all animals, including us.

I'm very impressed by all the data that you have made available on charts you prepared for your website. Readers can find that and much more at: www.burtrutan.com

What I'm doing really, is just put out all of the data I can in order to enable anyone to look at everything before arriving at a conclusion. If someone forms a conclusion at the onset, they can always find and focus only on data that supports their theory.

I recognize that you feel very strongly about the importance of this topic. What happened when you began to speak publicly about this and let your conclusions be known?

Good question Larry. I first decided to present the results of my study and my data at the Oshkosh Air Show, an event that I have been continuously going to ever since 1971. Of course I have had an enormous following there, and I had always previously spoken on the subject of aircraft development. But on this occasion I thought that the global warming subject was too important not to mention because it was indeed fraudulent. Its effect on America's competitiveness and economy would be enormous compared to anything else that I have ever seen in my lifetime.

The interesting thing is that I decided to preview this talk for a totally unusual audience, in fact one that would be considered to be opposite of any I normally address. This was on the occasion of receiving a lifetime design achievement award at the Pasadena Art College in July 2009. That was to be a very liberal crowd, mostly college students. The event was about design as it related to what they design in an art college... things like automobiles and motorcycles primarily involving styling rather than dealing with engineering. They had some phenomenal talents for showing beautiful shapes applied to transportation. My designs, which many consider beautiful, are determined by complex flight dynamics and laws of physics.

The transportation design theme attracted Jay Leno to bring one of his very rare cars to the event, a steam-powered vehicle that was absolutely beautiful. Jay sat right in the front row for my presentation. I had previously been on his show twice, appearances related to our SpaceShipOne program. The audience had obviously expected me to present my designs and my philosophy... discuss how I approached creative design. So I did that for maybe five minutes, and then I launched into showing what I have found with my climate hobby. I included chart after chart of data that clearly showed there was fraud and cherry picking bias used by alarmists presenting climate data in order to try to make their point...namely that the Earth faces a catastrophe because of emissions into the atmosphere by Man.

I didn't really know what to expect, because this was the first time I had ever made a public presentation of any of my hobbies. And when I looked out into the audience, what I saw might best be described as stunned silence. I clearly knew that audience was generally liberal, and had assumed that Jay Leno was also. But as soon as I was done, he rushed to the stage, took me off to the side, and told me that he didn't know anything about this, or that the subject was even debatable.

It really surprised me that someone who reaches millions of people every evening could be so totally insulated from any skeptical views on what the alarmists were trying to sell as a future catastrophe. What shocked me most is that I had originally been thinking that the average viewer was at least aware that there are two sides to the issue, rather than almost universally accepting alarmist positions as absolute truth.

But also keep in mind that this was before the East Anglia University Climategate e-mails were released which clearly showed some of the IPCC folks were indeed fraudulent in their science... before there was any way to make a big case that there is a large problem here.

Burt, I'm aware that when you joined with many others in signing a letter about this that was published in the Wall Street Journal, you were taken back by the hostile responses directed your way. Can you comment about that experience?

The skeptic community was actually already starting to pay attention to me because they tended to appreciate my large data presentation effort. So I got an e-mail from someone who had rounded up a dozen or so climate scientists that agreed there is no need for alarm regarding catastrophic human-caused global warming to be co-signers, and had gotten approval to have it published in the *Wall Street Journal*. When asked to join them, I wrote back and said that while I enthusiastically agreed with everything the letter said, I didn't want to sign it because I would be in a group of people who were all climate scientists, and I'm not a climate scientist. I finally agreed to allow them to put my name under it only if they made it clear that I am an engineer, not a climate scientist. I still receive a lot of flak from alarmists who challenge how an airplane designer can have the temerity to disagree with their views of science.

Larry, I wasn't really taken back so much by the hostile responses. I expected some of that. But later when I decided to answer some of the more than 150 comments posted at the Scholars and Rogues website, I was surprised that I was often attacked in a very personal way which denigrated my intelligence and accused me of bias. I have no reason to have any bias. Some said I was obviously being paid for by oil companies, which seemed like a joke. If you go through and read my responses you will find that I did so with hard data that alarmists will not publish. But they don't hesitate to publish personal attacks.

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So Burt, what are some of the most important points that you wish to emphasize to readers?

One of the most important is to have the general public, the media, and policymakers understand is that any claims that 97%, 98%, or whatever, of all climate scientists agree that our planet is heading for a climate catastrophe are totally bogus. Have humans had any influence on climate? Sure, probably so, although no one has ever succeeded in accurately measuring them. In the absence of everything else, would adding carbon dioxide to the atmosphere have produced some warming? Again, yes. Answering these two questions, and these two questions only, you will see a very large consensus, not only among alarmists, but essentially, every skeptic would also agree.

But none of this presumed warming should be taken to suggest that the results will be catastrophic, causing terribly dangerous things to happen...like serious heat waves and droughts which cause crops to fail...or that when they occur they are “unprecedented”. It doesn’t require anyone with a climate science-related degree to recognize, for example, that 1938 was the warmest year in recent times, and that CO2 levels were much lower then. These consensus issues are discussed in some detail in three PowerPoint charts included near the end of my “An Engineer’s Critique of Global Warming Science” report. The bottom line: there is no consensus on the claims of planet catastrophe.

Even prominent former global warming doomsayers, are finally seeing the light of reason. One is my good friend James Lovelock who once said that within the next 50 years or so the few remaining humans will be huddled up in high latitudes to escape the heat of the lower latitudes. He has recently said the alarmists were wrong, and has moved to a new coastal home, unafraid of rising seas.

In-so-far as your involvement in this subject, what’s next for Burt Rutan?

Larry, I’ve done all I plan to do on this for now, and have moved on to other interests. This debate will all get sorted out, and I am confident it will be for the better. When I started, I strongly believed that the debate needed me because I didn’t see anyone out there really looking at the data the way an engineer looks at. Then, about a year ago, I realized that I really can’t continue to play a significant role in this, although I do believe what I have done has indeed been worthwhile. For example, if you Google AGW, out of 8 million hits, my presentation for download shows up on the first or second page. This is far above what I thought would ever happen, far above what I thought I could be able to contribute to help in this debate. Now I see that other people are doing this, including climate scientists and non-scientists the world over by the tens of thousands, people who are actually looking at the real data just like I have. I still follow the status of the debate, and occasionally comment on it.

After working an average of 60 to 70 hours a week for 46 years, having a lot of fun starting in flight testing Air Force airplanes during the Vietnam War, and then developing some 45 new airplane types, I decided that I wanted an enormous change in retirement. I have now cleared my calendar entirely, even de-emphasizing golf, so that I am free to investigate and do absolutely whatever interests me the most. However, after designing 372 new types of aircraft, of which 45 have been built and taken through flight test, I realize I can’t quite get that urge out of my system. So right now I’m designing a seaplane, just for myself, which I can use to explore

the hundreds of small lakes and rivers around this beautiful area of north Idaho where I now live.

You can bet that it will be very different than any standard seaplane. Hell, if I wanted something conventional, I would just buy a Super Cub on floats. I do look forward to building and enjoying that fun new airplane within the next year.

Burt, I want a ride!