
Howard C. Hayden
785 S. McCoy Drive
Pueblo West, CO 81007

October 27, 2009

The Honorable Lisa P. Jackson, Administrator
Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Dear Administrator Jackson:

I write in regard to the *Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, Proposed Rule*, 74 Fed. Reg. 18,886 (Apr. 24, 2009), the so-called “Endangerment Finding.”

It has been often said that the “science is settled” on the issue of CO₂ and climate. Let me put this claim to rest with a simple one-letter proof that it is false.

The letter is *s*, the one that changes *model* into *models*. If the science were settled, there would be precisely *one* model, and it would be in agreement with measurements.

Alternatively, one may ask which one of the twenty-some models settled the science so that all the rest could be discarded along with the research funds that have kept those models alive.

We can take this further. Not a single climate model predicted the current cooling phase. If the science were settled, *the model* (singular) would have predicted it.

Let me next address the horror story that we are approaching (or have passed) a “tipping point.” Anybody who has worked with amplifiers knows about tipping points. The output “goes to the rail.” Not only that, but *it stays there*. That’s the official worry coming from the likes of James Hansen (of NASA-GISS) and Al Gore.

But therein lies the proof that we are nowhere near a tipping point. The earth, it seems, has seen times when the CO₂ concentration was up to 8,000 ppm, *and that did not lead to a tipping point. If it did, we would not be here talking about it.* In fact, seen on the long scale, the CO₂ concentration in the present cycle of glacials (ca. 200 ppm) and interglacials (ca. 300-400 ppm) is *lower than it has been for the last 300 million years*.

Global-warming alarmists tell us that the rising CO₂ concentration is (A) anthropogenic and (B) leading to global warming.

- (A) CO₂ concentration has risen and fallen in the past with no help from mankind. The present rise began in the 1700s, long before humans could have made a meaningful contribution. Alarmists have failed to ask, let alone answer, what the CO₂ level would be today if we had never burned any fuels. They simply *assume* that it would be the “pre-industrial” value.
 - a. The solubility of CO₂ in water decreases as water warms, and increases as water cools. The warming of the earth since the Little Ice Age has thus caused the oceans to emit CO₂ into the atmosphere.

- (B) The first principle of causality is that the cause has to come before the effect. The historical record shows that climate changes *precede* CO₂ changes. How, then, can one conclude that CO₂ is responsible for the current warming?

Nobody doubts that CO₂ has *some* greenhouse effect, and nobody doubts that CO₂ concentration is increasing. But what would we have to fear if CO₂ and temperature actually increased?

- A warmer world is a better world. Look at weather-related death rates in winter and in summer, and the case is overwhelming that warmer is better.
- The higher the CO₂ levels, the more vibrant is the biosphere, as numerous experiments in greenhouses have shown. But a quick trip to the museum can make that case in spades. Those huge dinosaurs could not exist anywhere on the earth today because the land is not productive enough. CO₂ is plant food, pure and simple.
- CO₂ is *not* pollution by any reasonable definition.
- A warmer world begets more precipitation.
- All computer models predict a smaller temperature gradient between the poles and the equator. Necessarily, this would mean fewer and less violent storms.
- The melting point of ice is 0 °C in Antarctica, just as it is everywhere else. The highest recorded temperature at the South Pole is –14 °C, and the lowest is –117 °C. How, pray, will a putative few degrees of warming melt all the ice and inundate Florida, as is claimed by the warming alarmists?

Consider the change in vocabulary that has occurred. The term *global warming* has given way to the term *climate change*, because the former is not supported by the data. The latter term, *climate change*, admits of all kinds of illogical attributions. If it warms up, that's climate change. If it cools down, ditto. Any change whatsoever can be said by alarmists to be proof of climate change.

In a way, we have been here before. Lord Kelvin “proved” that the earth could not possibly be as old as the geologists said. He “proved” it using the conservation of energy. What he didn't know was that nuclear energy, not gravitation, provides the internal heat of the sun and the earth.

Similarly, the global-warming alarmists have “proved” that CO₂ causes global warming.
Except when it doesn't.

To put it fairly but bluntly, the global-warming alarmists have relied on a pathetic version of science in which computer models take precedence over data, and numerical averages of computer outputs are believed to be able to predict the future climate. It would be a travesty if the EPA were to countenance such nonsense.

Best Regards,

Howard C. Hayden
Professor Emeritus of Physics, UConn