

# The Great Global Warming Blunder

by Roy W. Spencer

*reviewed by Thomas P. Sheahan*

Roy Spencer is “taking his case to the public” with this book, which presents his very thorough explanation of why the climate models are wrong, and why the PDO (Pacific Decadal Oscillation) is the cause of the temperature pattern seen in the 20<sup>th</sup> century.

The book is written for the layman, which just about triples its length. Of course, a scientist need not read all that. Spencer gives a few elementary explanations about water heating on a stove, about a car with its windows rolled up, etc., in order to introduce the reader to the distinction between *forcing* and *feedback* regarding climate. This is background education so that the reader new to the subject can grasp chapters 5 and 6, which is the important scientific content of the book.

With the distinction between *feedback* and *forcing* established, Spencer moves into the scientific content of the book, which is devoted to explaining his pertinent recent technical publications. Spencer points out that with a simple model and a single equation he was able to model the climate adequately using *Microsoft Excel* on his home computer, as contrasted to the very expensive supercomputers used to run GCMs. In publishing, the aphorism “every equation cuts sales by a factor of 2” rules over the preferences of authors, and so the equation of that model appears only on p. 168 in the “notes” section. It is

$$d(\Delta T) / dt = [ F - \lambda \Delta T ] C_p$$

He dare not call this a first-order differential equation in the body of the text.

Chapters 5 & 6 span about 1/3 of the book, from roughly p. 60 to p. 120. Chapter 5 is entitled “How Mother Nature Fooled the World's Top Climate Scientists” and there Spencer brings out the great importance of clouds. He distinguishes between radiative and non-radiative feedback. He displays some data, tells how one conventionally would draw a straight line through a scatter plot to obtain a slope, and then explains why doing so gives the wrong answer. When graphed differently, a new pattern emerges in the data that shows a very different slope, and hence reveals negative feedback in the climate sensitivity. Using recent satellite data (*Terra*, *ERBS*), Spencer argues convincingly that *forcing by clouds* upon temperature has been confused with temperature *feedback into clouds*, and that is responsible for the very high estimates of climate sensitivity proffered by the IPCC.

Spencer reaches this conclusion: “...when there is a mixture of radiative and non-radiative forcings of temperature occurring, natural cloud fluctuations in the climate system will cause a bias in the diagnosed feedback in the direction of positive feedback, thus giving the illusion of an overly sensitive climate system.” His argument is based on a new way of examining relatively new data, and creates an “aha” moment. This new insight into the role of clouds provides a good reason for a reader to say “I used to accept the IPCC conclusion, but new information has come forth that changed my mind about climate sensitivity.”

In Chapter 6, Spencer tackles the question “if not CO<sub>2</sub>, what *is* responsible?” and there he explains the importance of the Pacific Decadal Oscillation, a totally natural temperature pattern with a period of about 70 years, which will be in its “negative” phase until 2030 or so. This is where Spencer

puts his simple desktop model to work: With only 4 adjustable parameters, notably including the PDO which changes cloud cover and provides the forcing (F), he obtains a graph that explains 75% of the 20<sup>th</sup> century temperature history. He also shows recent satellite data that confirm the role of the PDO. The bottom line is "...a mere 1% change in naturally occurring processes can cause global warming or cooling." Moreover, Spencer invites people to download his model and run it themselves.

There are additional later chapters, but the real content is in Chapters 5 and 6. The book would be about half its length were it not for repeated criticism of the IPCC. Certainly Roy Spencer has earned the right to so criticize, but the scientific reader can skim all that and spend more time scrutinizing the important graphs about the feedback-vs.-forcing confusion and recent satellite data.

Who should read this book? Well, it *is* accessible to a top-notch high-school student who cares enough to dig in and examine graphs containing intricate detail. With a "popular" book, that level of diligence is rare, but the reader who does so will come away with a much better understanding of climate science. However, no doubt there will be many other non-technical readers whose phobia for equations will lead them to glaze over at the graphs; and they'll leave with only a faint understanding of the form "clouds are important." Those readers will find the book enjoyable because of the many blasts at the IPCC, including a few funny ones toward the back.

Summarizing: I consider "The Great Global Warming Blunder" a valuable contribution because it so clearly explains some very essential points about feedback and climate sensitivity, which is *the* core issue of the climate change debate. I very much hope that Roy Spencer's goal of "taking his case to the public" will come true.

*Dr Tom Sheahan bio notes – I went to MIT (BS 1962 physics; PhD 1966 physics) and have completed a career mostly in energy-related sciences (conservation - demand side; nuclear; renewables), and I'm now retired. I wrote the textbook "Introduction to High Temperature Superconductivity" (Plenum Press: 1994) but that has nothing to do with global warming. Currently I write a weekly newspaper column entitled "Ask the Everyday Scientist") where I answer questions about science sent in by readers.*

*I'm on the board of directors of Fred Singer's group "Science and Environmental Policy Project."*

*A curious bit of trivia: I'm probably the last man alive who actually measured the infrared absorption by CO<sub>2</sub>; it was enroute to a very precise instrument calibration circa 1980. My results agreed perfectly with what's in every textbook, so it was barely worth a mention in the publication associated with that work. Mainly, I can claim that I found out first hand that absorption by CO<sub>2</sub> is mighty small. As a result, I was very cautious and unwilling to get on the bandwagon when global-warming-due-to-CO<sub>2</sub> became fashionable circa year 2000.*