

have worldviews and jobs at stake. Anything that is good for human progress is going to be portrayed as bad for the environment, period. In the real world, risk can never be eliminated, and so the worriers will never be satisfied.

The technological advances that we need will be considerably delayed if we do not encourage the continued generation of wealth. It is the wealthy countries of the world that can afford the large investments in research and technology that will bring about these advancements. Punitive policies such as mandated reductions in carbon dioxide emissions will have little impact on future global temperatures, and it could easily result in a global economic recession. This, in turn, could delay by many years the necessary technological advances we need. This is especially true in the private sector where, in the face of an economic downturn, the first place that companies cut investment is research and development.

The good news that you never hear about is that the United States government is already investing billions of your tax dollars in new energy technologies. Private industry is no doubt investing heavily as well. All of humanity requires access to affordable energy, and the need will never go away. As long as billions of the Earth's inhabitants continue to try to elevate themselves above poverty, there will be a continuing growth in energy use. And as long as there is a desire for cleaner energy, new technologies will provide our only way of getting there.



## Chapter 10: Summary

WE ARE RAPIDLY entering an age where too much free time, too much faith in the ability of science to predict the future, and too little spiritual fulfillment are leading too many people to believe in pseudo-scientific predictions of environmental disasters. As the mother of all these threats, global warming is now perceived to be the ultimate global crisis against which all mankind must unite. There is a religious fervor that accompanies this belief, and as a result we are now scaring ourselves (and our children) to death with the new state-supported religion and its teachings of mankind's sins against Mother Earth.

I have nothing against people's religious beliefs—only their labeling them as "science."

Environmentalists, politicians, movie stars, and the media all want you to believe that currently proposed solutions to global warming will save the Earth, help the poor, and keep humanity from destroying itself. This book has explained why I believe that the Earth's climate system is not nearly as sensitive to humanity's greenhouse gas emissions as many scientists think it is.

But even if those scientists are correct, and dangerous levels of

global warming await us, the solution to the global warming problem will not be found in the Kyoto treaty, or in any of the policy changes currently being proposed in congress. Our only real hope of substantially reducing greenhouse gas emissions will be through our "ultimate resource": human ingenuity.

#### THE SCIENCE

Belief in catastrophic global warming has little scientific basis, and perpetuates the bad habit that scientists have of predicting environmental doom. Great significance is attached to some short-term change that is observed by science, for instance a change in the amount of ice in the Greenland ice sheet or increased melting of Arctic sea ice in the summer, and then it is extrapolated far into the future. Long ago, in 1874, Mark Twain noted this bad habit of scientists when he wrote,

There is something fascinating about science. One gets such wholesale returns of conjecture out of such a trifling investment of fact.

The science of climate change is still in its infancy, and most climate scientists still do not appreciate the full complexity of the climate system. While computerized climate models do indeed contain enough physical processes to mimic many average aspects of the Earth's climate, there are good reasons to believe that they do not yet contain all of the important stabilizing processes that really exist in nature. As a result, those models tend to produce too much climate change in response to the small, 1 percent enhancement of the Earth's natural greenhouse effect that will result from humanity's doubling of the atmospheric carbon dioxide concentration sometime late in this century.

In this book I have tried to explain, in as simple terms as possible, the "big picture" of how the climate system operates, and let you decide whether projections of catastrophic climate change can be believed.

Let's review the big picture. In response to solar heating, weather (wind, evaporation, precipitation, clouds, etc.) act to cool the Earth's globally averaged surface temperature to well below what the natural greenhouse effect tries to make it: 57° Fahrenheit, rather than 140° Fahrenheit. Published back in the 1960s, this is one of the first research findings regarding the operation of the climate system. As a result of this cooling, the oft-repeated claim that the Earth's "greenhouse effect makes the Earth habitably warm" is less true, quantitatively, than the fact that "weather keeps the Earth habitably cool."

Note that, at this point, we already see the bias that exists in scientists' explanation of the "greenhouse effect" to the public.

Yes, the Earth's natural greenhouse effect does make the surface of the Earth warmer than if there was no greenhouse effect. But it is not some benign, static, self-existent quantity. Dominated by water vapor and clouds, the natural greenhouse effect is constantly being adjusted by weather processes, which directly or indirectly control how much of each of those is produced.

Take Earth's dominant greenhouse gas, water vapor, as an example. Despite the continuous evaporation of water from the Earth's surface in response to solar heating, the atmosphere never fills up with it. Theoretically, nature could allow it to keep accumulating, causing a runaway greenhouse effect that would warm the Earth much more than it in fact does. Why doesn't this happen? Because that vapor is continuously kept in check by the only atmospheric process that depletes it: precipitation.

Precipitation processes act as nature's thermostat, adjusting how much vapor will be allowed to remain in the atmosphere, thereby controlling most of the Earth's greenhouse effect.

And guess which atmospheric process we understand the least? Precipitation!

Take clouds, the second largest component of the Earth's greenhouse effect, and the component that cools the Earth by reflecting sunlight back to outer space, as the second example. Many climate scientists don't realize it, but even clouds far away from any precipitation activity are controlled by precipitation processes. The

millions of square miles of low stratus clouds over the cooler parts of the subtropical oceans form underneath a lower atmospheric temperature inversion (warm air layer). That inversion is caused by air being forced to sink in response to warm air rising in precipitation systems, possibly thousands of miles away. In general, it is precipitation (how much is formed, and at what altitude) that controls the vertical temperature structure of the atmosphere, and that temperature structure, in turn, influences cloud formation.

So we see that, ultimately, precipitation systems exert the largest single controlling influence on Earth's average climate. I believe that control is a thermostatic one. If the Earth gets too warm, precipitation processes change in such a way to cool it down. If the Earth gets too cool, those systems change their behavior to warm it up again.

The thermostatic control system in your house might be small and somewhat complex, but you know it must be understood in order to explain the temperature of the air in your house. Very few climate researchers are actively trying to understand how the Earth's thermostatic control system operates. It is so complex, and so little is understood about it, we just sweep it under the rug and hope that it's not too important.

As a result, the climate modelers' belief in a sensitive climate system is due to a misplaced faith in overly simplistic climate models. It takes a higher level of understanding to include in those models all of the stabilizing processes that exist in the real climate system. That climate models still have a tendency to drift away from the real climate state is evidence of this overly simplistic behavior. The models are precariously balanced on a knife-edge, overly sensitive to any disturbance such as mankind's tiny enhancement of the greenhouse effect.

In climate parlance, the models still do not contain all of the negative feedbacks that exist in nature. Like a weight hanging from the end of a spring, or a marble rolling around in the bottom of a bowl, these negative feedbacks are restoring forces which keep the system from departing too far from its average state.

Global warming pessimists will no doubt claim that I have too

much faith in the existence of stabilizing processes in the climate system, processes that have not yet been discovered. I would counter that those scientists have too much faith in crude climate models. Extraordinary claims require extraordinary evidence. Even the modelers admit that clouds are still a big wild card in projections of future climate change.

I predict that there will be an increasing number of scientific publications in the coming years describing "newly found" stabilizing processes in the climate system. These stabilizing mechanisms, of course, have always existed—it is merely the scientists' discovery of them that will be new. I further predict that the most important stabilizing processes will be traced to the behavior precipitation systems.

#### THE POLITICAL PLAYERS

If we are looking for a disastrous positive feedback mechanism in global warming, we need look no further than the interactions between worried scientists, the eager media, and pandering politicians, all of whom have vested interests.

Scientists are funded by these government programs to research the problem of manmade global warming, and so everything they find ends up being put in that context. They are supposed to be investigating the *problem* of global warming, not the lack of a problem. The vast majority of published scientific research simply *assumes* that current warming is manmade, and not substantially the result of natural climate variability. To demonstrate otherwise, we would need to identify and understand natural climate variability—which, for the most part, we don't.

Most scientists researching global warming (including me) receive a continuous flow of funding from government programs, and have built careers and theories that they would like to continue. They want to believe that their jobs are important to humanity, and that their research really will help humanity keep from destroying itself. Their emotions color their judgment when talking to reporters. Uncertainties are minimized, and sound bites

are carefully constructed to sound as dramatic as possible while remaining factually correct.

The media are not unbiased, either, as their sensationalizing of the problem helps their careers. They are out to make the world a better place, and how better to accomplish that than to warn readers and viewers that it is time for us to change our evil environment-destroying ways?—in between ads for new SUVs.

Fears of catastrophic global warming and claims that the global warming science has been “settled” have been so amplified by the media that global warming skeptics like me are being increasingly demonized. I fear it is only a matter of time before congressional hearings are held to investigate why some skeptical scientists have not jumped onto the global warming bandwagon—inquisitions to pressure all scientists into having politically correct views on the subject.

Even the environmental lobbying groups are not unbiased, because their jobs are totally dependent upon the existence of threats to the environment, and what could be a bigger threat than global environmental collapse from catastrophic warming? Many of them depend upon donations from charitable foundations that do not have to answer to any public desires or priorities, just the whims and political biases of the foundation board members. And guess what? Many of them also get money from (gasp) Big Oil!

Although they claim to hold the moral high ground on the issue, professional environmentalists have more to lose than anyone if the global warming problem goes away.

Politicians recognize that their power and influence can be enhanced by getting involved in the global warming debate. There will be huge winners and losers financially as a result of any legislation to curb carbon dioxide emissions. Unfortunately, some of these politicians are simply pandering to widespread public opinion that we need to “do something now,” despite the fact that we are already spending billions of dollars on new energy research and technologies.

On the international level, the United Nations’ desire to control

the affairs of nations has never been closer to reality, now that the world is supposedly faced with a global environmental catastrophe. Most of the countries of the world that have signed the Kyoto Treaty have only done so in anticipation of large transfers of wealth to them from the developed countries. The wealthy countries will, in effect, be paying the poor countries for the right to pollute.

Even some major corporations are planning on what they consider to be inevitable governmental controls on carbon dioxide emissions, and they want to position themselves to fare better than their competitors. Thus, British Petroleum (BP) becomes “Beyond Petroleum.” Follow the money.

I don’t want to make it sound like everyone involved in the global warming debate has corrupt motives. I merely want to dispel the myth that any one of the players can claim the moral high ground. Everyone is biased by their own self-interests. The widespread practice of demonizing global warming skeptics simply because some (but not all) of them might have received some limited funding from private industry is hypocritical, and is little more than an *ad hominem* tactic that allows the demonizers to avoid having to discuss the real issues. In reality, the real money has been made by several high-profile global warming alarmists who have received large, no-strings-attached monetary awards from left-leaning philanthropic foundations. No such right-leaning awards exist.

#### THE POLICIES

Our inability to deal with global warming policy in a realistic manner is partly due to our modern risk-averse culture. This risk adversity is, in the end, more dangerous for humanity than the risk itself. It is time to start standing up for the benefits of modern technology and energy use when confronting those who would only complain about the risks. Those who complain only do so from the health, comfort, and convenience of their modern lifestyles.

As John Stossel has pointed out, when we give a disproportionate amount of our finite wealth to some exaggerated threat, we can literally end up “scaring ourselves to death.” Media hype over the global warming issue might sell magazines and increase viewership, but it has the power to kill people. Anytime we divert wealth to misguided policies because of public sentiment based upon misinformation, that wealth is no longer available to address more important problems.

And, remember, it is only the vibrant and growing economies of the world that can afford the research and development activities that will lead to cleaner sources of energy. Only the wealthy countries of the world can afford to clean up their environmental messes. Unfortunately, carbon taxes and international income redistribution schemes like the Kyoto Protocol instead destroy existing wealth and prevent the creation of new wealth. These punitive policies then become economically counterproductive, possibly even delaying the development of the new energy technologies that we need.

The most infamous example of the unintended negative consequences of environmental policies based upon exaggerated fears is DDT, a relative safe and very effective pesticide used to stop the spread of malaria by mosquitoes. Knee-jerk reactionary bans on DDT by many countries are directly responsible for up to one million malaria deaths in Africa each year. As long as this modern-day holocaust is ignored by the mainstream media, I will continue to accuse them of being more concerned with the radical environmentalist agenda than they are with alleviating human suffering. They certainly do *not* hold the moral high ground.

Some will ask, “But shouldn’t we greatly reduce our production of greenhouse gases—just in case? After all, we buy insurance to protect the investment we have in our homes.” Sure, if it was that easy, that cheap, and if we had any assurance that the insurance policy would actually pay up if we ever had to make a claim. Unfortunately, most of the currently proposed “solutions” to the global warming problem are both expensive and ineffective, and so the analogy to insurance for those solutions is a poor one.

Substantially reducing humanity’s emissions of carbon dioxide will be extremely difficult for at least the next twenty years. One of the most basic human needs is access to affordable energy, which then allows people to engage in a variety of activities that are necessary for humanity to thrive. Like it or not, human emissions of CO<sub>2</sub> will continue to rise during this time no matter what we do. Billions of people in the world are just now lifting themselves up out of poverty, and they will not stop just because a scientist’s computer program says they should.

The economic policies that most of the global warming alarmists advocate are now failing to achieve their goals of emissions reductions. The European Union is learning that it is not so easy to simply mandate the reduction of carbon emissions based upon the desires of bureaucrats. Within one year of implementation, the Kyoto Protocol was mostly failing at ever reaching its goal of reduced emissions by 2012. Furthermore, the environmentalists’ pressure against the construction of new power plants will very likely lead to energy shortages there in the coming years.

And even if the emissions reduction goals were obtained, the effort is so feeble that the effect on future global temperatures would be unmeasurable anyway. And now, some in the United States Congress seem intent on to emulating this failure with a variety of bills that are even weaker than the Kyoto treaty.

Some states such as California are not going to wait for federal legislation; they are claiming to be taking the lead on emissions reductions. But if they are successful, they will merely force polluting industries to move elsewhere.

It is not sufficient that environmental goals might have been born of noble intentions. While good intentions to help both humanity and the environment are laudable, we must be smart about our policy actions. People need to understand that the only benefit these policies will have is to make ourselves feel better that we “doing something” about the problem. What matters are results, and we have had a long enough history of making mistakes to enable us to start making more intelligent decisions.

## THE PHILOSOPHICAL MOTIVATIONS

Modern environmentalism in general is couched in buzz words and terms that sound noble, but end up being hypocritical attempts to keep humanity from prospering. I'll have more sympathy for environmentalists' calls for draconian solutions to the global warming problem when they have stopped using automobiles, airplanes, electricity, modern medicines, and all the other benefits that a strong market-based economy has brought to their lives.

Environmentalists' invocation of the "precautionary principle" is nothing more than a stealthy ploy to prevent further human development. People do not actually live their lives and make their decisions based upon this principle, because it unrealistically assumes we can have benefits with no risks.

Similarly, sustainability is an illusion that also stifles economic progress. For the few natural resources that are truly limited, the only way to avoid running out of them is to stop using them altogether. Fortunately, human ingenuity combined with free markets always finds a way to provide goods and services that require a minimum of scarce resources. This is simply because scarce resources become expensive compared to alternative resources and technologies.

In general, environmental policy decisions that favor nature over people are based upon worldviews or religious beliefs that are separate from the science. Like it or not, humans must alter their environment to fit their needs. It is what we do, and we should not apologize or feel guilty about it. Science doesn't care what we do about our environment—only people care. Any rights that we confer upon nature through environmental policies should only be those that benefit humanity. Anything else verges on a state-supported Pagan religion.

It seems that many of those who support the currently proposed global warming policies carry around some sort of self-loathing angst over their prosperous positions in the world. But if we are not smart about our policy decisions, that angst over

environmental problems could be replaced with the angst that one to two billion of the poorest people in this world must endure on a daily basis. Their children are dying from disease; from spoiled food due to a lack of refrigeration; from mosquito bites because their country has been threatened with trade sanctions if they use DDT; or from respiratory disease and death due to smoke from the indoor burning of wood and dung. Entire countries are being denuded in the search for more wood. These are a few of the sources of angst for most of the world's poor.

## THE GOOD NEWS

The good news is that, even if global warming ends up being a real problem, we are already "doing something" to solve the problem. New and cleaner ways of providing the energy that humanity needs are now being actively researched and developed. The U.S. government is investing hundreds of millions of your tax dollars each year in new energy technology research. Private industry is also investing in research, knowing that there will be great profit potential for anyone who develops new energy technologies, since everyone needs energy.

To the extent that global warming will be a problem, it is human ingenuity and the development of new energy technologies that will solve that problem. Any efforts that divert us from technological advances not only waste time and wealth, but also threaten personal health and well being. Unless you are part of that radical sect of environmentalists that wants modern society to be destroyed, new technologies are the only hope for the carbon-free energy sources we seek.

We are now approaching a decision point. Do we want to solve the global warming problem, or just pretend we are doing something about it? Do we want humanity to thrive, or to wither? As the calls for action to fight global warming become louder and more shrill, it is imperative that the public start asking two critical questions: "How much will the proposed solution cost?" and "How much future warming will it alleviate?" We must not let the

pushers of harmful and impotent policies get their way with feel-good platitudes and generalities about "addressing" the problem.

I often wonder: What motivates politicians and environmentalists who advocate policies that are not only doomed to failure, but also hurt so many other people ... especially the poor?

I'll leave it up to you to figure that one out.

## *Epilogue*

IMAGINE ...

... somewhere in Africa there is a six-year-old girl playing with her best friend in a small, remote village. Tragically, she will not live to see her seventh birthday. In three months, malaria will snuff out her short life. Her country has been prevented, through economic threats made by environmentally conscious foreign countries, from using a small amount of pesticide on the doorposts of her family's hut. As a result, during the night while she sleeps, a mosquito will inject her with deadly malaria.

The rest of the world will never benefit from what this little girl had to offer humanity. Thirty years hence, as a professional chemist working for a major petroleum company, she would have spearheaded the development of a revolutionary new energy technology that humanity desperately needed. But instead, only death awaits her.

Your voice, empowered by knowledge, is what humanity now needs to keep us from continuing to sacrifice innocent lives at the altar of radical environmentalism.

## ILLUSTRATION CREDITS

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A NOTE ON THE TYPE

CLIMATE CONFUSION has been set in *Nofret*, a type designed by Gertrude Zapf von Hesse, the noted German Calligrapher, type designer, and book artist. Strongly reminiscent of the designer's calligraphic hand, *Nofret roman* is beautiful at both text and display sizes. The *italic* is especially spirited and elegant, and together the types contribute a lively, contemporary energy to even the simplest page of text.

DESIGN AND COMPOSITION BY CARL W. SCARBROUGH