

## The Climate Fix: What Scientists And Politicians Won't Tell You About Global Warming

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## **Book Review**

THE CLIMATE FIX: WHAT SCIENTISTS AND POLITICIANS WON'T TELL YOU ABOUT GLOBAL WARMING. By Roger Pielke, Jr. New York: Basic Books, 2011. 276 pp. \$16.99 (paperback). ISBN 978-0-465-02519-0.

The reader interested in following the science and policy issues relating to anthropogenic climate change has numerous, sometimes conflicting sources to consider. In the two decades since the signing of the United Nations Framework Convention on Climate Change in Rio de Janeiro, there has been a proliferation of books by politicians, environmentalists, and scientists that seek to both inform and influence action with respect to the perceived dangers to humanity of global warming. Most are pessimistic if not despairing as to what the future holds for humanity in the absence of immediate and effective action. James Hansen's STORMS OF MY GRANDCHILDREN (Hansen, 2009) is a good example.

There is, of course, little room for optimism if one is convinced of the potential dangers of a continued increase in greenhouse gases in the atmosphere, along with failure of our collective national and international policies to do much about it. In this context, Roger Pielke Jr.'s THE CLIMATE FIX is something of a tonic. Pielke is a political scientist specializing in science policy. He has a good understanding of the different roles scientists play in advising and advocating for particular policies, including that of "honest broker." Based on his experience, Pielke is able to present a wellconsidered assessment of the dilemma we face, and offer a course of action that has some hope of being successful. He begins with a brief discussion of "dinner table climate science," noting that there is fairly general agreement, even among climate-change sceptics, that human activities, including increasing levels of carbon dioxide, are influencing the global climate system. Subsequent discussion considers aspects of the climate problem that are not well understood, while acknowledging the uncertainties. This leads to a focus on the policy process; specifically, toward mitigating climate change through policies leading to decarbonization of the global economy-i.e. a significantly reduced dependency on fossil fuels-while addressing a broader range of climate-related issues.

The key message here is that it is "effective politics and a healthy policy process," more so than a general understanding and appreciation for the science, that has led to successes in the climate policy area. Examples Pielke cites are the Montreal Protocol of 1987 to address stratospheric ozone depletion, and clean air legislation in the U.S.A. to deal with acid precipitation. He demonstrates three *un*truths about the state of climate policy: that we lack political will, that we must trade-off the economy for the environment, and that we have all the technology we need. In particular, what he calls the "iron law of climate policy" means that, with so many people in the world still lacking sufficient energy for their basic needs, any policy that has a negative impact on the global energy economy is doomed to fail.

Instead, Pielke proposes a course of action toward an increased rate of decarbonization that provides for a more equitable sharing

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of energy resources, coupled with improved efficiencies in energy production and use. Investment, funded from an "upstream" carbon tax on the fossil fuel industry, is to be directed at innovation in the form of "clean" energy and technological solutions that already seem to show promise, such as carbon sequestration through carbon capture and storage (CCS), as opposed to more fanciful and untested "climate management" forms of geoengineering. This would necessarily be a vast public works project, but with costs in relation to GDP within the range of projects undertaken in the past. For such a course, the narrower measure of success will be stabilization and eventual lowering of atmospheric carbon dioxide concentrations below a target such as 350 ppm. The broader measure will be the benefits flowing from an evolving, diversified policy framework that leads to solutions to a wide range of environmental and social problems.

The fifth semi-decadal Report of the Intergovernmental Panel on Climate Change is scheduled to appear later this year, and indications are that it will provide further evidence of the role of humankind in changing the global climate (IPCC, 2012), thus adding to the case for action. Recent events, however, have tended to retard the pace of decarbonization. In Japan, the Fukushima Daiichi nuclear disaster following the tsunami of March 2011 has resulted in an uncertain future for nuclear power, as more reactors are shut down and energy suppliers return to fossil fuels. In Canada, the present government has withdrawn from the Kyoto Accord and is setting a retrogressive example by promoting the energy-intensive, environmentally destructive extraction of bitumen from oil sands, mainly for export. Globally, efforts to develop CCS technology have stalled at 2009 levels of funding, with the storage capacity of currently operational and planned installations estimated to be only 0.5% of 2010 energy production emissions (Worldwatch Institute, 2012). These are not hopeful signs.

The Climate Fix is a well-written book that sheds much light on the complex relationships at work shaping climate change policy. It is a useful guide as we contemplate the next stages in this unfolding drama of which we are all a part.

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