



**Robert Socolow is Professor Emeritus and Senior Research Scientist at Princeton University, where he was on the faculty in the Department of Mechanical and Aerospace Engineering (MAE) for 42 years.**

Socolow's current research focuses on the characteristics of a global energy system responsive to global and local environmental and security constraints. His specific areas of interest include global carbon management, carbon dioxide capture from fossil fuels and storage in geological formations, nuclear power, energy efficiency in buildings, and the acceleration of deployment of advanced technologies in developing countries. He is the co-principal investigator (with ecologist, Stephen Pacala) of Princeton University's Carbon Mitigation Initiative, [www.princeton.edu/~cmi/](http://www.princeton.edu/~cmi/), a twenty-year (2001-2020) project, supported by BP. He teaches a graduate course in the Woodrow Wilson School of Public and International Affairs (WWS), co-listed in MAE.

Socolow was the chair of the Panel on Public Affairs of the American Physical Society (APS) and the co-chair of the APS study: *Direct Air Capture of CO<sub>2</sub> with Chemicals*. He was a member of the National Academies' Committee on America's Climate Choices and its Committee on America's Energy Future.

Socolow serves on the Advisory Board of Lawrence Berkeley National Laboratory (LBNL), the Editorial Board of *Energy and Environmental Science*, and the Deutsche Bank Climate Change Advisory Board. He was the editor of *Annual Review of Energy and the Environment*, 1992-2002.

Among Socolow's recent awards are the 2010 Leadership in the Environment Award from Keystone Center; the 2009 Frank Kreith Energy Award from the American Society of Mechanical Engineers; the 2005 Axelson Johnson Commemorative Lecture award (for "outstanding research in global carbon management and the hydrogen economy") from the Royal Academy of Engineering Sciences of Sweden (IVA) and the Axel Axelson Johnson Endowment; and the 2003 Leo Szilard Lectureship Award ("for leadership in establishing energy and environmental problems as legitimate research fields for physicists, and for demonstrating that these broadly defined problems can be addressed with the highest scientific standards") from the American Physical Society. He is a Fellow of the American Association for the Advancement of Science and a Fellow of the American Physical Society.

Socolow has a B.A. (summa cum laude, 1959) and a Ph.D. in theoretical high energy physics (1964) from Harvard University. He was an assistant professor of physics at Yale University from 1966 to 1971.

**Abstract: Technology, Policy, and Values for Living in a Greenhouse.**

Ten year olds love the paradox: “What happens when an irresistible force meets an immovable object?” The paradox applies to climate change today at least as much as 22 years ago, when the U.N. Framework Convention on Climate Change was placed before the nations of the world in Rio de Janeiro. Fossil fuels dominate the global energy system as much now as then, and they have gained new vitality by the commercialization of the oil and gas available in abundance in shale formations. In short, the fossil fuel future appears to be irresistible. Meanwhile, climate change looms in our future at least as ominously as ever. Its reality is immovable. If the paradox cannot now be resolved, surely there are productive ways of looking at it.