

Going It Alone

The agreement on carbon emissions targets miraculously reached in Bonn on 23 July 2001 left the United States right where President Bush apparently thinks it should be: all alone on climate change. The deal agreed to by the other industrial nations has imperfections, to be sure, such as the dubious credits for regrowing forests. But it commits the world's other big emitters to a serious course of action and leaves the United States on the sidelines.

That leaves open an interesting question: What might we do by ourselves? Congress is pondering that now, so the suggestion box may be open. Unilateral actions here could provide a double dividend, as the Policy Forum by Cifuentes *et al.* (p. 1257) suggests. Reducing emissions generally—for example, by improving the efficiency of power-generating facilities—may simultaneously slow emission rates, yielding a global climate benefit, and reduce sulfur dioxide, NO_x, and other pollutants, yielding a local or regional public health benefit. In a recent statement in the *New York Times* (27 July 2001), Environmental Protection Agency Administrator Christine Whitman said she prefers to focus on the local pollutants and wait on carbon dioxide, as though these were alternatives. In fact, they can be pursued simultaneously.

Modernizing industrial and power-generating facilities and moving to less carbon-intensive fuels (from coal to oil and from oil to gas) help with the global climate objective; efficiency improvements, if made carefully, can yield both local and global benefits. It is worth noting, however, that this approach requires careful thought. In the United States and Europe, for example, the transportation sector is a major source of greenhouse gas emissions. Diesel automobiles and trucks, used heavily in Europe and increasingly in the United States, may help with carbon dioxide through improved mileage. At the same time, however, they emit more fine soot particles than conventional engines. These particles, often coated with volatile organic compounds, may increase local health risks; there is also growing evidence implicating tropospheric black carbon as a contributor to global warming.

As a lone player, the United States can restore some credibility with its friends and trading partners by demonstrating a serious commitment to mitigating the global warming problem. The policy approaches suggested so far by the Bush administration offer little in the way of incentives for conservation, research on renewable energy sources, or new resources for the development research directed at carbon-sparing technologies. Congress should create some pressure by creating new authorities where necessary, with appropriations, to pursue these avenues.

The Bonn agreement has breathed new life into the hopes for progress on global climate change. Those hopes are tempered, however, by U.S. abstinence and by the lack of a real compliance mechanism to support the commitments of the participating nations. Moreover, even achievement of the modified targets will leave us, in mid-century, with atmospheric carbon dioxide concentrations more than twice preindustrial levels and still growing.

That suggests an additional set of actions. We are now undertaking a vast experiment with Earth's climate. We're not doing it to test a hypothesis or achieve a result, and it doesn't have a design. We're doing it because we can't help it. But since we are doing it, we can at least start behaving like good experimenters: Collect the data carefully, examine the background factors that have taken us to where we are, and prepare ourselves for mid-course modification in the protocol if the need for that becomes clear. Continued validation and improvement of the General Circulation Models are important. So is intensified monitoring of the atmosphere and the oceans with respect to temperature and circulation. We need to improve long-term monitoring systems for environmental variables such as stream hydrology, for which the number of monitoring stations has been reduced. We should be collecting data from vanishing resources such as mountain glaciers and threatened ecosystems before they become unavailable to us.

Of course that won't change where we're going, but it's a place to start. Combined with some firmer commitments to research and an improved energy policy, such steps could help persuade the rest of the world that the United States, despite its isolation from the treaty nations, at least believes there's a problem. It would be better still if, having made a gesture at that level, the administration decided that being a player is better than being a critic.

Donald Kennedy



The United States is all alone on climate change.