

Dear President-elect . . .

George Bush received some unsolicited advice last week from the upper echelons of the scientific community, in the form of a quartet of "white papers" from the National Academies of Sciences and Engineering and the Institute of Medicine. Relatively pithy documents, the reports dispense policy recommendations in four areas that the organizations believe will require critical decisions in the next 4 years. They are AIDS, the global environment, space policy, and arrangements for channeling science advice to the President. It is the first time the academies have joined the chorus of advice that greets an incoming Administration. Frank Press, president of the National Academy of Sciences, called the move "a sign of the times," a recognition of the fact that the President's agenda will be filled with issues that have a technological component. The four topics are not necessarily the highest priority areas, Press said, but they are ones to which the organizations have already devoted a lot of attention. Press, together with NAE president Robert White and IOM president Samuel Thier, briefed Richard Darman, Bush's budget chief, last week. They came away encouraged.

A Place at the Head Table

Shortly before the election, George Bush promised to elevate the status of his science adviser, making him (or her) an assistant to the President. That would be a splendid move, say the heads of the Academies and the Institute of Medicine in a white paper on science advice in the White House. But they urge that the appointment be made soon, and recommend that the appointee be given sufficient resources to do the job.

The Academy presidents argue for a science adviser with a high professional standing in the scientific community, and they note that unless the post has a senior status in the White House, "an individual with the stature and experience required . . . would decline to serve."

The science adviser's office, the white paper says, should be comparable in size to those of the National Security Council and the Council of Economic Advisers, which have between 30 and 60 full-time staff. The Office of Science and Technology Policy currently has a full-time staff of only 11.

Finally, the Academy presidents urge an early appointment so that the science adviser

can help in the selection of the dozen or so people in subcabinet positions with responsibility for science programs. Equally important, Bush will be preparing revisions to President Reagan's lame-duck budget over the next 2 or 3 weeks, and the Academy presidents want a science adviser in place to help ensure that science programs get due attention.

The white paper points out that the new Administration will be faced with critical decisions in a broad range of areas where the President would benefit from scientific advice. Moreover, many key policy issues involving science and technology span several agencies, which means that top-level coordination will be required. Such issues have not always been handled well in recent years, the white paper suggests, citing "the uncoordinated response to the precipitous loss of world market share in semiconductors," and "the tepid response to breakthroughs in the field of high-temperature superconducting materials."

The Academies have submitted to the President-elect's office a list of candidates to consider for the science adviser's post.

■ COLIN NORMAN

Slowing an Irreversible Experiment

"We are already irrevocably committed to major global change in the years ahead," say the authors of the white paper on the environment, and though much uncertainty still exists about the extent of the damage, "the future welfare of human society is to an unknown degree at risk."

As if George Bush did not have enough to worry about, the white paper presents him with a rather grim scenario of a warming earth, complete with summer drought in the middle latitudes, rising sea levels, migrating

crop zones, infiltrating rodents, and melting sea ice. "A navigable Arctic Ocean would have major national security implications," the President-elect is told.

That's only part of the bad news. The white paper, prepared by an ad hoc committee chaired by C. J. Pings of the University of Southern California, also points out that slowing the pace of global environmental change is particularly challenging for a president because its consequences are "probably decades away" and "unclear in nature," meaning that "remedial and adaptive actions are likely to be expensive in the short term, whereas their full benefits may be enjoyed only by future generations." Such a tune cannot be music to Bush's ears.

The group, however, believes that the pace of global change can be slowed. The white paper stresses that reductions in fossil fuel use would ameliorate not only the greenhouse warming caused by the buildup of atmospheric carbon, but would help reduce acid deposition, improve regional air quality, and lower our dependence on foreign oil.

The white paper notes that previous Administrations have deferred action on acid rain for more study, but "we believe that the sources of acid deposition, the technology to limit emissions, and the associated costs and political risks are now sufficiently understood that further deferral in favor of more analysis is unwarranted."

The panel pushes for increased use of such "clean" fossil fuels as natural gas, and the vigorous development of energy sources that do not produce carbon dioxide: geothermal, wind, solar, and the modular high-temperature gas reactor, the so-called "safe reactor."

There is also a call for even deeper cuts in the production of chlorofluorocarbons (CFCs) than those agreed upon by 31 nations in the Montreal Protocol, which calls for cutting world consumption of CFCs by 50% by 1999. The Montreal Protocol does contain provisions that allow for greater reductions.

As for the deforestation that is presently burning up the tropical world and adding to the buildup of atmospheric carbon, the white paper recommends that aid policies should foster an indigenous scientific base that could help developing countries grow in ways that sustain the environment, not destroy it.

Finally, the panel sees a lack of coordination between government agencies. The White House's Committee on Earth Science may be able to do the trick. Robert White, president of the National Academy of Engineering, also suggested that one federal agency take the lead. ■ WILLIAM BOOTH



Back to the good old days? Eisenhower with science adviser George Kistiakowsky.