

National Academies Committee Sets Steps for Bringing Best Science Advice to Washington

The president's science adviser needs higher status, and candidates for science advisory boards should not be asked their political party or who they voted for, the National Academy of Sciences says in a new report.

After several months of controversy about claims that the Bush administration has politicized the makeup of science advisory panels to reflect the administration's policies, the National Academy of Sciences (NAS) has issued a report with recommendations that would ensure the president and federal agencies receive unbiased and complete science and technology advice. The report, the third academy study since 1992 on the role of science advisers in the federal government, focuses on two topics: the appointment process for the top S&T posts, including science adviser to the president; and the selection process used to appoint individuals to federal S&T advisory panels.

"Despite the tremendous opportunities provided by public service, there are administrative and procedural obstacles to recruiting the best and brightest into top S&T posts," the NAS report says. "With regard to appointing scientists and engineers to federal advisory committees, charges have surfaced recently that the process of making these appointments has become politicized and results in a skewing of the impartial perspective critical to independent advice." It is essential, the report says, that the federal government's ability to get and incorporate good science advice into policy decisions "not be compromised by unnecessary obstacles."

In a public briefing when the report was released in mid-November, former Republican congressman John Porter, chairman of the NAS committee that issued the study, said that several of the recommendations to streamline the appointment process are similar to proposals made in the earlier reports, done in 1992 and 2000. "Unfortunately, little progress has been made on these past recommendations, and many of the concerns raised over a decade ago persist today," he said.

But the new NAS study was warranted, he said, because of changes since the 2000 report that include

"the 2001 terrorist attacks, the anthrax deaths, the reorganization of homeland-security activities in the federal government, new developments in science and technology, and, unfortunately, some concerns about the politicization of science and technology decision making and advice."

Unlike the earlier NAS reports, the new report includes recommendations on how individuals are selected for the roughly 500 S&T-related advisory panels spread throughout federal agencies. The decision to include advisory panels was prompted in part by allegations made several months ago by the Union of Concerned Scientists that there has been a systematic effort within the administration to change the makeup of the advisory panels so that their scientific advice would be in sync with the administration's political goals (see *PHYSICS TODAY*, April 2004, page 30). John Marburger, director of the Office of Science and Technology Policy (OSTP), answered the UCS claims with a detailed paper defending the administration's science record (see *PHYSICS TODAY*, May 2004, page 29).

Representative Henry Waxman (D-CA), one of the most vocal critics of the administration's handling of science appointments, echoed the UCS charges in his statement to Porter's NAS committee in July. "On issue after issue, this administration seems to start with the policies it is planning to pursue, and then seek advice that justifies these predetermined choices," Waxman said.

Air of distrust

Rep. Vern Ehlers (R-MI), a physicist, told the committee that "there is an air of distrust between the scientific and government communities. Perhaps 'distrust' is too strong a characterization for the lack of understanding and the misgivings that pervade the current scientific and government nexus. Whatever word you choose, the atmosphere is chilly, and the impact on the decision-making process is negative."

Ehlers said problems between the science and government communities "stem from a failure in education and understanding. While we have done a poor job of educating one another about the thought processes and value systems that govern our respective fields, we appear to have learned even less about their intersections and boundaries."

He said scientists "must understand the political field, admit that the scientific and political arenas are inherently different, and be prepared to work within the boundaries and rules of the political environment." He reminded scientists that "scientific evidence and ideas are but one input in the calculus that gives rise to good science policy decisions—it is both arrogant and naive of the scientific community to pretend otherwise."

The NAS report makes four recommendations for presidential S&T appointments:

- Shortly after the election, the president or president-elect should identify a candidate for the position of assistant to the president for science and technology. The president should also nominate that person as the director of OSTP.

- The president and the senate should streamline and accelerate the appointment process for S&T personnel . . . to reduce the personal and financial burdens on nominees and to allow important positions to be filled promptly.

- Appointment policies and procedures should be consolidated "to reduce the financial and vocational obstacles to government service."

- The presidential science adviser and other senior administration officials "should actively seek input from accomplished and recognized S&T leaders . . . when seeking candidates for S&T appointments."

While the recommendations sound straightforward, the first one touches on a sensitive issue with Marburger, whom Bush nominated as director of OSTP six months after his first inauguration. Marburger, a physicist and former director of Brookhaven National Laboratory, was not given the same "assistant to the president" status that a number of earlier science advisers had,

and that was seen as a bad sign by science lobbyists in Washington.

Marburger said the perception by some in the science community that he doesn't have the same job title and status in the White House as some of his predecessors is "a naive point of view. I am the president's science adviser. The president calls me his science adviser, and I'm paid by this White House to do that, and I was paid to do that before I was confirmed by the senate to be the director of OSTP."

Marburger said he had "no idea" why the NAS committee raised the title issue. "You know, this idea of titles has puzzled me from the very beginning. I don't understand it. I think it's irrelevant. It doesn't seem to have had any impact on my ability to get things done in this White House and I think it's a red herring, so I just tend to ignore it."

Appointing panels

The NAS report makes three recommendations for appointments to federal S&T advisory committees, and

the first one deals directly with the concerns that science advisory panels are being shaped by ideology. The recommendation says individuals should be selected for such panels "on the basis of their scientific and technical knowledge and credentials," as well as their professional and personal integrity. "It is inappropriate," the recommendation says, "to ask them to provide nonrelevant information, such as voting record, political-party affiliation, or position on particular policies."

At the July forum of the NAS committee, Porter asked Ehlers if it was acceptable to ask candidates for science advisory panels about their party affiliation or who they voted for in a presidential election. "I think it's an appropriate question," Ehlers said.

Marburger said recently that "in general, we think it is not appropriate to ask questions that are irrelevant to a person's service on a panel." The difficulty, he said, is that the "law requires that those panels be balanced,

but the law doesn't say what balanced means. So there is a judgment call on how balance should be achieved." But, he added, "I don't think people should ever be asked who they voted for. We have secret ballots in this country."

The report concludes with two recommendations, one urging that the nominating process for advisory panels be more "explicit and visible," and another recommending that "department and agency heads should establish an [advisory panel] appointment process supported by explicit policies and procedures and hold staff accountable for its implementation."

Asked if the report would lead the administration to change any of its procedures for seeking science advice, Marburger said, "the practices described in the report are practices that we tend to adhere to. I don't think it requires any huge policy change because the report seeks to identify best practices." The report, he said, "is a good guide for people who are involved with this process." **Jim Dawson**

After Serious Accident, SLAC Experiments Remain Shut Down and DOE Report Faults Lab's Safety Oversight

All the accelerators and storage rings at SLAC have been shut down since 11 October, when an electrical accident at the laboratory severely injured an electrician working for a subcontractor. SLAC director Jonathan Dorfman ordered the shutdown immediately after the accident, and he has decided that all experimental facilities should remain closed pending the findings of a Department of Energy accident-investigation board and implementation of the remedies it mandates.

SLAC is funded by DOE. The investigation board, headed by DOE's Richard Stark, was charged with investigating the proximate and root causes of the accident.

The board's report was released on 15 December. (It can be requested at <http://www.eh.doe.gov/csa/reports/accidents>.) It expresses some harsh judgments about safety oversight and procedures at the lab. Among its conclusions is the finding that "SLAC's emphasis on the scientific mission as a means to secure funding from the [DOE] Office of Science and compete with other laboratories reached [the

field-supervisor] level as direction to 'just get the job done.'"

The most visible competition in which SLAC is at present involved is the rivalry between the laboratory's flagship BaBar experiment and the very similar Belle experiment at the KEK laboratory in Tsukuba, Japan (see *PHYSICS TODAY*, May 2001, page 17). Both ongoing experiments, dedicated to the investigation of fundamental symmetry violation in the decay of B mesons, are based on novel electron-positron storage ring colliders called asymmetric B factories. BaBar's collider, named PEP-II, is filled with high-energy electrons and positrons from SLAC's 3-km-long linear accelerator.

BaBar and Belle both began taking data in 1999, and each group is loath to fall behind its rival in the accumulation of data. The accident report suggests that SLAC has been cutting safety corners in the pursuit of maximal data acquisition. "The significant breakdown in the enforcement of health and safety requirements is indicative of a work environment where occupational safety and health poli-

cies, programs, and procedures are not fully implemented," says the report. "The [site engineering and maintenance department], in particular, has not balanced the priorities of accelerator operation and worker protection."

The accident

On the morning of 11 October, a SLAC field supervisor asked David Simon, an electrician employed by a local maintenance contractor, to install a circuit breaker for a ventilation fan in a 480-volt electrical panel in the linear accelerator's klystron gallery (see the figure on page 25). The linac was running in preparation for the startup of the PEP-II collider after a 15-week summer shutdown for routine maintenance, and the panel was energized. Such "hot work" is sometimes justified because it avoids the delays involved in shutting off electric power. But because it can be risky, SLAC safety rules mandate a special permit for each such task.

As Simon was installing the circuit breaker in the energized panel, an arc flash ignited his clothing. He was wearing protective gloves, but not the appropriate fire-retardant clothing. The pressure burst from the arc also knocked down a fellow worker nearby. A third worker in the room attempted to smother the flames, but Simon suffered second- and third-degree burns over about half his body. The 51-year-



Dorfman