

# Corralling Federal R&D

## How would a Department of Science reshape federal research?

By JANET RALOFF

**T**here is something very wrong with American science," charges Reagan White House Science Advisor George A. Keyworth II.

"Preserving the status quo has become the overarching goal, replacing the pursuit of excellence," he continues. In addition, U.S. science suffers from "a deeply ingrained lack of [public] accountability" and "ingratitude for two generations of unparalleled federal largesse.

"A major overhaul is needed." And the restructuring implicit in the creation of a Department of Science (DOS) "is the only way I know to restore coherent policies, research dedicated to excellence, and the public trust," Keyworth told the House Science Committee late last month.

It was just what committee chairman Robert S. Walker (R-Pa.) wanted to hear. Walker had convened the hearing as the first in a series to explore how best to design such a cabinet-level agency.

While the proposal won overwhelming endorsement from most committee members present—and from all invited witnesses—the June 28 hearing also highlighted some major issues that must be resolved before the long-term implications of such a restructuring can be evaluated.

What no one, including Walker, knows yet is whether the bill he's drafting to establish a DOS (SN: 3/25/95, p.183) will be introduced in Congress before or after these issues have been thrashed out.

R&D Obligations of Federal Departments and Agencies, 1993			
Department or Agency	Basic Research (\$ billions)	Applied R&D (\$ billions)	Percentage of Total R&D
Defense*	1.16	35.00	51.8
Health and Human Services* (National Institutes of Health)	5.85 (5.33)	5.29 (3.56)	16.0 (12.7)
NASA	2.06	6.57	12.4
Energy	1.87	4.86	9.6
National Science Foundation	2.09	0.15	3.2
Agriculture*	0.64	0.70	1.9
Commerce	0.04	0.58	0.9
Environmental Protection Agency	0.12	0.40	0.7
Others†	0.34	2.02	3.4
<b>TOTAL</b>	<b>14.18</b>	<b>55.57</b>	<b>100.0</b>

Source: House Science Committee

\* Agencies excluded from Walker's working draft at this time.

† Includes U.S. Geological Survey and Patent and Trademark Office, now in proposed Department of Science.

**A**dvocates of a DOS claim that a science department could not only salvage programs within agencies that have been threatened with extinction—from the august Departments of Energy (DOE) and Commerce to the tiny Office of Technology Assessment—but could also confer greater prestige on research. Treated largely as an important stepchild of regulatory and service activities today, research would be designated a vital responsibility in its own right.

Moreover, Walker estimates that the coordination and streamlining of policy made possible by merging many research responsibilities could, over 7 years, save Uncle Sam more than \$2 billion and eliminate more than 5,000 federal jobs.

But whose jobs? Which activities would be streamlined out of existence? Who would set research priorities?

These questions currently lack answers.

Yet such ambiguities contribute to the attractiveness of the proposed reorganization, testified W. Henson Moore, a deputy secretary of DOE during the Bush administration.

During his stint at DOE, Moore led an abortive attempt to reorganize the agency into a Department of Energy, Science & Technology that would consolidate all federal research. In no time, he says, "we realized the political scrap we were about to get into with the science community, as well as the administration, and decided we didn't have the political chits or time to fight that battle."

So in 1991 he scaled back those plans and set research priorities just for DOE. Even so, he told SCIENCE NEWS, "I ran into all of the problems that [Walker's proposal] is going to run into. Which is: Nobody wants centralization because they'll lose something—control, power, money, jobs, or turf." So expect battles as details of a DOS emerge, he warned.

**O**ne issue sure to kindle protectionist passions among people currently engaged in federal research and development (R&D) is how much applied research—the "D" in R&D—a DOS should undertake.

Applied research took a big hit in the civilian R&D budget bill sent on to the full House by the Science Committee on June 30. That bill would eliminate the

\$341 million Advanced Technology Program and the \$90.6 million Manufacturing Extension Program, both administered by the National Institute of Standards and Technology. It would also terminate at least 19 programs at DOE, including the Clean Coal Technology Program, Solar Technology Transfer program, Technology Partnerships program, and civilian radioactive waste R&D.

Today, nearly 80 percent of the federal R&D budget goes to applied research, including technology development (see table).

Joseph J. Spigai, director of the engineering management program at the University of Maryland in College Park, testified that any DOS should retain applied programs and technology development. It would ease the transition from the creation of new knowledge—basic research—to the eventual development of products that stem from this knowledge.

Keyworth would relinquish the development of technologies designed to aid U.S. commerce or industrial competitiveness. Moore agrees—with one important caveat: The federal government should fund applied research that supports existing federal policy “but wouldn’t happen without federal funding.” He points to DOE’s support of advanced automotive batteries for electric vehicles as a case in point. Lukewarm to electric cars, U.S. automakers placed no priority on

these batteries. But concerned about energy independence and the environment, DOE did.

Basic research, conducted for the most part by universities, exemplifies the kinds of programs the nation needs but can’t count on nonfederal sources to fund, said Science Committee members and invited witnesses alike.

As such, “I think most universities are looking at this [proposed DOS] as something of a sidebar,” says David J. Morse, vice president for policy planning at the University of Pennsylvania in Philadelphia. The core issue is “what programs are going to be funded, as opposed to what the structure [of the entity providing those funds] is.”

Indeed, says Morse, universities may benefit from not having so many federal agencies responsible for science budgets. Because different congressional committees tend to oversee each budget, “we have to follow six or seven appropriations bills—just in the research area,” he continues. “It’s a logistical difficulty having to convince so many different people of the importance of basic research.” Never in recent years has that been truer than now, he says, pointing to the almost 20 percent turnover in House members during the last election.

However, Walker’s planned consolidation falls far short of Moore’s dream: putting all federal science under one

roof. Research conducted by the Departments of Defense and Health and Human Services—including all National Institutes of Health programs—would remain independent of any DOS. So, too, would R&D at the Departments of Agriculture, Interior, and Transportation.

Why? The politics Moore spoke of. Trying to wrest control of science from these agencies threatens to prove a bigger fight than Walker and his committee think they can win—at least for now.

**M**oore anticipates that the new department’s leader would replace the White House Science Advisor. That would probably spell an end to the White House Office of Science and Technology Policy (OSTP) as well, he says. One of the chief advantages of a DOS would be to merge science policy making and program implementation into a single structure.

But John H. Gibbons, the current White House Science Advisor and head of OSTP notes that “this administration unequivocally opposes the creation of a DOS of the kind now being discussed.” Its savings and projected efficiencies are “as yet undocumented,” he says. Moreover, he charges, it would risk divorcing research from the specific priorities and missions of the individual agencies that would use it. □



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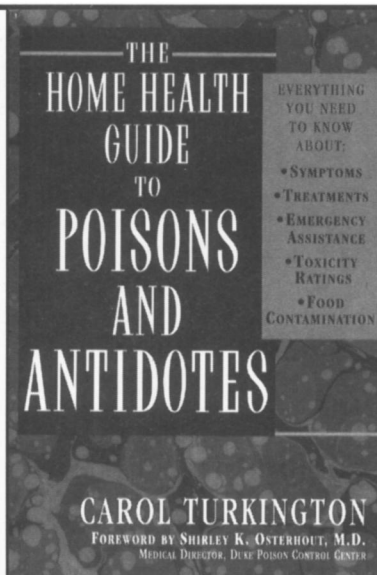
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