Looking Out for Science Policy

House committee is source of bill to break 1-year cycle and of move to encourage longer term planning for science

Four mornings of hearings on long-term planning for national science policy were the most recent manifestation of efforts centered in the House to unshackle science and technology from the short cycle of federal decision-making.

The hearings, 28 through 31 July, were called by Representative George Brown (D-Calif.), chairman of the subcommittee on science, research, and technology, and a persistent advocate of making planning a more effective part of the science policy process. The hearings gave Brown an opportunity to air his feeling that the Executive has fallen down on the job of making full use of the policy tools available, a failing for which he has chided the President's science adviser Frank Press.

The subcommittee heard witnesses from government and industry and, for purposes of comparison, were told something of how Canada and Japan conduct their science policy business. However, as the announcement of the hearings put it, "A special focus" was the "role of specific, statutorily mandated report requirements in regular planning cycles, such as the congressional authorization, appropriation, and oversight process."

The reports referred to were mainly those mandated by the 1976 National Science, Engineering, and Technology Policy and Priorities Act, which restored the President's science adviser to the White House and created the Office of Science and Technology Policy (OSTP). The act required that OSTP prepare as soon as possible a comprehensive "Five Year Outlook" describing matters warranting special attention in science and technology during the next 5 years. Also required of OSTP was an annual report on trends in science and on emerging problems and opportunities.

The first Five Year Outlook appeared late this spring, almost 3 years late. One annual report was delivered about 2 years ago and a second is now stuck in the White House. Shortly after Carter took office he delegated responsibility for the reports to the National Science Foundation. Brown has been voicing his view that the performance on the reports has not been satisfactory. He has been pointedly unsympathetic with what he sees as Press's position that OSTP is too small to carry out the reporting responsibilities and that Carter's emphasis on cabinet government precludes invasion by the White House of agency turf. Brown now seems to have adopted a wait-and-see attitude pending the election.

Brown's views on the reports also put him slightly at odds with the chairman of the full Science and Technology Committee. Chairman Don Fuqua (D-Fla.) is the sponsor of a bill to permit multiyear authorizations for major R & D programs. The bill, The Research and Development Authorization Estimates Act (H.R. 7689), passed the House in June and has been referred to the Senate. The pressure of business in the waning session makes it unlikely that the Senate will give the bill serious attention this year.

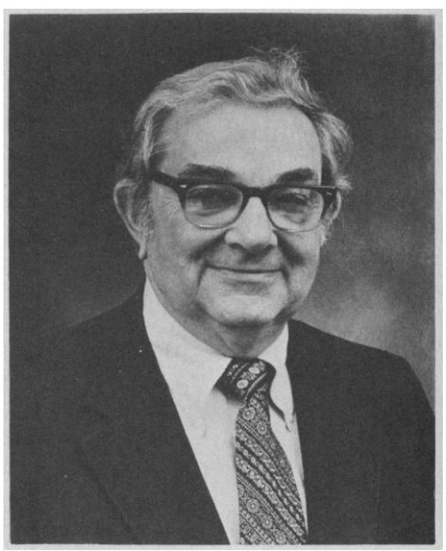
Fuqua's bill requires the White House to provide second-year budget estimates for major R & D programs in time to be included in the President's budget at the start of each new Congress, that is, every 2 years. The bill changes the timing of the reports in the cause of supporting the 2-year authorizations, cutting costs, and alleviating work loads.

Brown endorses the bill's main objective of opening the way to multiyear authorization but, in a dissenting view included in the report on Fuqua's bill, he and Harold C. Hollenbeck, ranking Republican member of Brown's subcommittee, entered this demurrer:

> We do not question the need to review the demands for existing reports, and the desirability of eliminating or modifying reports which have proved to be ineffective in use, if unnecessarily cumbersome in preparation. But we do question the wisdom of making extensive changes without careful analysis of user needs and the relationship of those reports to other planning and reporting requirements.

Although multiyear authorization is seen as a step in the right direction, it does not go very far toward what Brown and most other people mean by planning in the science policy process. Brown made clear that he regarded the hearings themselves as a modest start, saying in the announcement that "It is our hope that these hearings will provide a foundation for improving policy in this very important area of basic and applied science."

Although the subject of science policy has been a staple item on the agenda on Capitol Hill, Congress characteristically shies away from the subject of planning when too plainly labeled as such. Operationally, Congress is tied to the single-year appropriations cycle by habit and organization. Federal agencies are accustomed to the short budget cycle and suspicious of longer term planning because it implies a central planning authority interposed between them and the budget.



Representative George Brown

Congress also unquestionably is influenced by an uncomfortable feeling that government planning goes against the American grain. Talk of the planned society or planned economy stirs visions of the totalitarian state. Even without the authoritarian connotations, there is a conviction that circumstances change and planners make mistakes. And legislators share their constituents' lack of reverence for the disinterested wisdom of federal bureaucrats.

Perhaps most important are the practical difficulties of planning in this country's proverbially pluralistic system. In

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science and technology, government, industry, and the universities are linked by labyrinthine relations whose complexity stymies planners.

At the hearings, these complications were fully acknowledged. Testimony tended to swing from general problems of planning to specifics of how to do it. Industry witnesses sought to describe how corporate planning practices can be relevant to national planning activities. Discussion of issues such as whether planning should be "top down or bottom up" tended to be a bit abstract, but there was a clear consensus, for example, on the general principle that, in any sphere, planners and managers must be in continual, close touch or plans will not be converted into action.

Planning experience in other countries seemed, in the case of Canada, mostly cautionary. Canada began taking a serious interest in science policy in the mid 1960's, but apparently this interest became such a preoccupation that action to support science and technology was delayed. The early 1970's seem to have been a period of trial and error with both institutions and programs with very mixed results. Now things may be looking up; requirement of 5-year plans for science and technology from government departments, for example, seems promising.

In the case of Japan, science and technology policy has never been separate from economic policy. In the post World War II era, science and technology was mobilized to serve the national strategy of restructuring industry, first, to build up basic industry and heavy manufacturing and then, from about 1970 onward, to move to nonpolluting, investment-intensive, high-technology industry. Planning in Japan is not carried out by government fiat, but by a goal-setting consensus process. Science and technology have performed a different function in Japan than they have in the West; Japanese industry, for example, has depended heavily on the import of Western technology and great emphasis has been placed on engineering. Concern is increasing in the United States about the contribution of science and technology to productivity and industrial competitiveness, areas in which Japan has been notably successful. Although Japan is an example, because of social and economic differences, it can hardly be a model.

To succeed in the United States, planners will have to devise strategies that take into account both the strengths and the recalcitrance of the system. The immediate concern here, as evidenced in the Fuqua bill, is to give science funding continuity and stability at a time when constraints on federal funding make the sector particularly vulnerable. Multiyear funding is seen, in part, as a means to that end.

In a comment printed in the report on the bill Frank Press is quoted on the point:

> In my view, you are not being parochial in singling out research and development for implementing multi-year authorization. By its nature, most research and development has to be planned and implemented over a lengthy time frame. There consequently appears to be little purpose served in much of the annual effort that leads to routine extensions of authorizations. Annual authorization reviews across the spectrum of research and development cannot but be superficial much of the time. Moreover, there may be little to evaluate on an annual basis if the work has not yet progressed to its next logical stage for a substantive review. I believe that in both the Executive and the Legislative Branches we need to schedule the reviews so that selected program areas receive intensive attention at critical stages of the research and development process.

Press makes a case for multiyear authorizations for R & D which is also an argument for much broader planning authority. The difficulty is that anyone who considers the case for planning and the obstacles to it could easily conclude that real science planning in the United States is both necessary and impossible.—JOHN WALSH

Energy Standards for Buildings Face Delay

Conservation performance standards draw fire from builders and electric utilities; they may be made purely voluntary

Nothing else rivals energy conservation as an environmentally benign and relatively low-cost, quick-payback way to reduce the need for foreign oil. But it lacks the macho appeal of big-buck energy supply programs and seems not to get the same support from politicians. The troubled status of the Buildings Energy Performance Standards (BEPS) program represents an excellent case in point.

BEPS is a particularly promising conservation program that is capable of reducing national energy needs by the equivalent of at least 440,000 barrels of oil per day by the year 2000. Yet it now faces high risk of delay and possibly weakening changes from a Congress that has just approved a synthetic fuels program that will cost billions, have substantial environmental impacts, and, according to many energy specialists, fall far short of its production goal of 2 million barrels per day by 1992. The BEPS program, as presently proposed, is under strong attack from influential industry lobbies for the home builders and the electric utilities. Moreover, there are no signs anywhere on Capitol Hill of a countervailing fervor that could push forward a strong program of energy conservation for buildings.

Established under the Energy Conservation and Production Act of 1976, the BEPS program was supposed to have been well along by now. The standards were to have been promulgated this August and—it was hoped—to have been adopted as part of state and local building codes by August 1981.

Development of the standards (which apply only to new buildings) has proved far more complicated than anyone expected, and some delay in getting them out was perhaps inevitable. But Congress, urged on by the home builders and utilities, seems likely to prescribe a 1-year program of prototype testing. This could delay, by $1\frac{1}{2}$ years or longer, even a start by state and local officials in having the standards incorporated in their building codes. The testing, to be carried out in at least two different climatic regions, would be intended to show the impact of the standards on building designs and costs, on builders and home buyers, and on energy savings.

Representative Thomas L. Ashley (D–Ohio), chairman of the subcommittee on housing and community development,

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