

Section I.-Statements by the Chairman and Vice Chairman of the Board, TAAC Chairman, and the Director of OTA

CHAIRMAN'S STATEMENT- CONGRESSMAN MORRIS K. UDALL

In the period of one decade, the Office of Technology Assessment has proved itself to be an influential organization in an international network of people and organizations who are concerned about the technical, social, and economic impact of a high-technology information society. OTA has proved its worth to its initial critics and it has more than gratified those of us who nurtured the agency through its early years.

During fiscal year 1984 the agency has helped Congress wrestle with such diverse subjects as postal zip codes, the causes and cures of airport delays, and the policy choices necessary for a useful space program.

VICE CHAIRMAN'S STATEMENT- SENATOR TED STEVENS

As we complete the 98th Congress it is apparent that Congress will continue to need technical analysis of issues which it will face in the coming year. Many of the issues which the 98th Congress faced will be revisited in the 99th Congress. These include: natural gas policy, clean air legislation and the problem of acid rain, and the cleanup of hazardous waste sites, just to name a few. These are in addition to the many budget and defense decisions which will have to be made—decisions which also include some technological considerations.

The incoming Congress will be closely examining all programs in the executive and the legislative branches to ensure that they are meeting the goals in the most efficient method possible. OTA should be able to assist in that process. Congress will also examine it along with the other congressional support agencies to ensure they are providing the type of information Congress requires to meet the new and changing demands facing our Nation.

TAAC CHAIRMANS STATEMENT- CHARLES N. KIMBALL

In the more than seven years that I have served on the Technology Assessment Advisory Council, OTA has grown from a small experimental agency to one with an international reputation for high-quality work. Under the leadership of the Technology Assessment Board and Dr. John Gibbons, the agency has attracted and retained a high calibre staff, and recruited many of the Nation's outstanding people to serve on advisory panels and participate in workshops.

With this annual report I will complete four years as Chairman of TAAC and am pleased to turn over leadership responsibilities to Dr. William J. Perry, managing partner of Hambrecht & Quist, Inc., of San Francisco, and former Under Secretary of Defense for Research and Engineering. The TAAC has also selected as Vice-Chairman Dr. David S. Potter, Vice President and Group Executive of General Motors Corp. and former Under Secretary of the Navy.

This year the Technology Assessment Advisory Council examined the utilization of OTA's work by Congress and the public. We believe that congressional confidence in OTA's ability was reiterated when it assigned the Office the task of selecting the members of the Prospective Payment Commission and responsibility for overseeing the Commission, as mandated by the Social Security Amendments of 1983.

The Council also met with the staff of OTA's program areas to talk about how they plan their work. We found that these programs are paying the price of their success in being useful to Congress. Over the past several years there has been a steady increase in the number of committees served, and in request for full assessments, short responses and special analyses. Studies required by legislation are having a significant impact on the OTA staffs ability to plan ahead and schedule work within the program areas. TAAC urged OTA to expend greater effort to minimize the number of such mandated studies and to cooperate with other congressional agencies in so doing.

OTA has now proved its ability to provide critical and helpful analysis of tough technical issues that concern Congress. In view of this success, TAAC believes that OTA may want to increase the number of studies involving broad national issues. Members of TAAC also believe that OTA should draw on its past and ongoing assessments to provide Congress with broader strategic advice on important national and international issues. For example, they suggested that OTA incorporate insights from its extensive experience in energy technology analysis to complete a broad assessment of the kind of energy policy issues that are likely to be serious over the next decade. They also suggested that OTA assess several broad strategic approaches to health policy.

In summary, OTA has moved out of its initial survival stages and is regarded far and wide as an agency of competence and respect. I am pleased to have been associated with it during this process.

DIRECTOR'S STATEMENT-JOHN H. GIBBONS

In my past career as an experimental physicist, I could give a direct and unambiguous answer to the question, "How are things going?" Sometimes I'd have to give a rather disappointing response; on other occasions the response was honestly enthusiastic. But it was a rare occasion when I didn't have a well-defined basis for my reply. When that same question is asked of me as OTA's Director, I have to think a lot longer before deciding how to respond, because the work at OTA—and the measure of its progress—is much more complicated. Nevertheless, it's a fair question, important to address periodically. After five years as Director of OTA, I am pleased to write about that question in this report to Congress.

OTA is in the midst of some of the thorniest technical issues before Congress. The fact that it is contributing to these debates is one of the best indications of "how OTA is doing." As it has grown in capability and trust, OTA has moved from the periphery of the hot issues into the center of most of those that involve technology.

The breadth of the congressional agenda linked to technology is overwhelming. While many of OTA's peers in academia and industry despair at the thought of doing meaningful analysis on so many issues within the short time available to us, Members and staff of Congress, who must deal with far more encompassing issues and even shorter times, often wonder why OTA seems to need so much time. Thus OTA plays an intermediary role—between the perspectives of different stakeholders in private and public sectors, and between levels of detail. We must dig into the finer points of an issue in order to synthesize, integrate and translate issues in terms of necessarily broad public policy decisions.

The current pace of developments in science and technology is astonishing, and may be accelerating. For example, recent progress in science stretches from the megascale of understanding the universe, the Sun, and the planet Earth, to the microscale of elementary particles, crystals, exotic solids, and "living" molecules. These features seem to stand out: First, the participants in this grand adventure now span the globe; simultaneous, independent discovery by researchers in different countries is now commonplace. The United States no longer dominates the field. It competes for leadership and is successfully challenged in numerous fields. This situation is not all bad, for it creates opportunities for the United States to learn as well as teach in the international domain. Second, the rate at which many of the advances in basic science are successfully converted to technology has never been faster, and this is particularly the case in the United States and Japan. Third, this rapid

conversion of knowledge into technology reinforces the great dilemma—virtually all powerful new ideas can (and usually will) be used for both constructive and destructive purposes. For example, the same computer and electronics technology used to dramatically improve medical diagnosis or to help save billions of barrels of oil each year can be used by a criminal to steal large sums of money or divert private information on individuals which can threaten our basic liberties.

The complexity of society—the degree of interdependence between people; the extent to which the “commons,” such as air and water, are used; population density; rate of introduction of new chemicals and forms of life; etc.—is also expanding around the globe. It therefore may be that the governance to ensure freedom, justice, and care for the environment needs even greater insight in the future. Little wonder, then, that the U.S. Congress is under constant pressure to deal with the growing number of policy issues related to science and technology.

The process of decisionmaking becomes particularly confusing when the technical experts disagree. Most key questions of policy are, however, largely trans-scientific, not satisfied by purely technical answers. Analysis can reveal the technical or economic impacts of a particular course of action, but understanding the social and cultural impacts, the most value-laden dimensions of major issues, requires interpretation of that analysis, the most difficult part of our legislators’ jobs. OTA was created, in part, to provide an in-house, nonpartisan source of expertise for all committees so that conflicting views might be understood. Thus OTA tries to set the facts straight, illuminate areas where strong consensus exists, and to explain where and why knowledgeable experts disagree. When it works, that process raises the level of the policy debate. Analysis will continue as long as the issue is unresolved.

Criteria to measure success in OTA’s business are not as definitive as the marketplace is for industry, or peer recognition is for scientific research. But there are some figures of merit that stand out in evaluating OTA’s progress: How relevant to Congress are the issues being addressed? How accurate, comprehensive, and nonpartisan is the analysis? How helpful is the content of the findings? How timely are the results? Responses to these questions can be interpreted from the strong interest shown by Committees and Members (we served over 64 committees and subcommittees in fiscal year 1984); resources provided OTA to support its work (143 slots and \$14.65 million were appropriated for fiscal year 1984); requests for testimony and briefings (more than 75 in fiscal year 1984); active support from the private sector, academia, and public interest groups (about 1,200 noncongressional experts helped OTA in fiscal year 1984); and intense interest from a growing number of foreign governments (in fiscal year 1984 we had high level visits from 23 different nations).

By these measures OTA seems to be doing fine. We understand that we must—and should—earn our keep year-by-year. But it is particularly gratifying that OTA is being utilized by such a diversity of committees and that so much international attention seems to be focusing on this small congressional investment in improving its understanding of complex issues and opportunities in technology.