
Section IV

OTHER SERVICES FOR CONGRESS

In addition to major assessments, OTA provides a wide variety of special responses to congressional needs, including testimony, briefings, technical memoranda on current issues, workshops, and responses by phone or mail to requests for specific information.

This section describes some of these short-term responses.

Section IV

OTHER SERVICES FOR CONGRESS

Through its comprehensive, long-term assessments of some of the most enduring and complicated issues facing the country, OTA has—during its 5 years as an operating agency—built up a broad base of expertise and information which it taps for a range of special responses to current congressional needs. For example, because of the knowledge it had acquired through specific assessments, OTA was called on to testify more than 20 times before congressional committees in 1979. Reflecting the fact that energy was among the most dominant congressional concerns, OTA testified 15 times on energy issues alone.

OTA's special responses to congressional needs fall into three basic categories:

1. Spinoff studies in which OTA draws on knowledge and insight derived from earlier or ongoing major assessments. These may take such forms as congressional testimony, brief technical memoranda (relatively short analyses on specific subjects covered in larger assessments), or staff briefings.
2. In-process reports, which draw on specific elements of an ongoing study. Often a long-term study can be organized into a series of tasks, each of which can constitute an interim output useful to Congress. Generally these responses take the form of a technical memorandum.
3. OTA also provides limited services in which the Office serves as an arbitrator or expert witness concerning technical matters on which conflicting testimony has been presented to Congress.

The technical memorandum is a new form of communication with Congress, initiated in 1979, in an effort to make the results of OTA's longer and larger studies available in a more timely fashion. OTA issued two technical memoranda in 1979: *Gasohol* and the Benefits of Increased Use of Continuous Casting by the U.S. Steel Industry.

Gasohol

In October 1979, OTA delivered a 71-page technical memorandum on Gasohol to requesters, Senators Wendell Ford and Frank Church, both members of committees and chairmen of subcommittees with gasohol responsibilities. This memorandum was an interim product of the OTA *Energy From Biological Processes* report scheduled for delivery to Congress in early 1980. (Gasohol is a mixture of one part ethanol, commonly known as "grain alcohol" or beverage alcohol, and nine parts unleaded gasoline.)

The gasohol memorandum looks at the potential for gasohol and the major technical, economic, environmental, and social factors involved.

Some of its key points are:

- In the 1980's, OTA estimates that 1 billion to 2 billion gallons of ethanol per year (10 billion to 20 billion gallons of gasohol, enough ethanol to displace 1 to 2 percent of the current gasoline consumption of 110 billion gallons per year) can be produced without a significant impact on food prices. Perhaps more can be produced, but it is not known how much new cropland can actually be brought into production without inflating farm commodity prices.

In the 1990's, the land available for the production of crops for uses other than food, feed, and fiber is likely to drop. Maintaining a large fuel ethanol industry (several billion gallons per year) will probably require shifting to grasses, crop residues, wood, and municipal solid waste as feedstocks.

- The effectiveness of gasohol as a substitute for premium fuel (oil and natural gas) depends on: 1) the fuel used at the distillery and 2) whether the ethanol is used as an octane booster. If distilleries are fueled with coal or solar energy (including biomass) and the octane of the gasoline blended to gasohol is lowered to exactly compensate for

ethanol's octane-boosting effect, then nearly 1 gallon of gasoline and natural gas energy equivalent is displaced by each gallon of ethanol used (i. e., for every 10 gallons of gasohol). On the other hand, if the ethanol is produced in an energy-inefficient distillery fueled with oil or natural gas, and the ethanol is used to produce a fuel of higher octane than would otherwise have been produced, then the use of gasohol could result in an increased consumption of oil and the energy equivalent to natural gas.

- Depending on the method of financing, distilleries should be able to sell ethanol (from \$2.50/bu. corn) at between \$0.91 and \$1.11 per gallon plus delivery (currently \$0.10 to \$0.30 per gallon for service stations outside the distillery's immediate locale). With the current Federal subsidy at \$0.04 per gallon of gasohol—\$16.80 per barrel of ethanol—gasohol is competitive with gasoline at today's ethanol production costs and gasoline prices.
- The environmental effects of producing gasohol feedstocks are those associated with conventional farming: increased soil erosion and pollution of ground water with nutrients, pesticides, and herbicides. However, these impacts may be magnified since the average quality of marginal cropland is less than that of current cropland. The environmental impacts of a 50-million-gallon-per-year coal-fired distillery would be similar to those of a 50 MW coal-fired electric-generating plant. The effects on automotive emissions of using gasohol are mixed and cannot be unambiguously classified as good or bad.
- If the demand for fuel ethanol increases beyond the supply of feedstocks, competition between energy and food uses of land could result in more rapidly rising food prices and, eventually, more rapidly rising land prices. Low- and middle-income groups would bear the greatest share of these costs because food and fuel costs are a greater portion of their expenses. Furthermore, historic experience indicates that rising land prices would absorb much of the farmer's profit.

If market imbalances are avoided, the overall social and economic impacts of fuel ethanol production could be positive. On-farm and distillery employment could help to stabilize those rural communities that are currently experiencing unemployment problems.

Benefits of Increased Use of Continuous Steel Casting by the U.S. Steel Industry

In October 1979, OTA delivered a technical memorandum on the Benefits of Increased Use of Continuous Steel Casting by the U.S. Steel Industry to requesters, Senator John Heinz; Representative Joseph M. Gaydas, Chairman of the Congressional Steel Caucus; and Representative Charles A. Vanik, Chairman of the Subcommittee on Trade of the House Committee on Ways and Means. This memorandum was an interim product of the U.S. industrial competitiveness project. (Continuous casting is the use of an open-ended mold to cast an indefinite length of solid steel; it is a one-step technology which replaces a much more complex process.)

The memorandum first describes continuous casting, contrasting it with the older ingot casting process. It then explains the advantages of the continuous casting process, contrasts the rate of adoption of this technology in the U.S. steel industry with that in foreign steel industries, and examines the level of continuous casting that the United States might reach in 1990. The factors that have constrained the greater adoption of continuous casting in the United States are briefly discussed and the economic costs and benefits of converting existing capacity to this new process are analyzed.

The memorandum does not discuss the more advanced technologies for steelmaking that would be applicable only in the longer term. Nor does it analyze congressional policy options that could help the U.S. steel industry to improve its technical and economic performance. These analyses will appear in the complete steel assessment.

Some of the key points of the memorandum are:

- For integrated steelmaker, the most important technological change in prospect over the next 10 years is the greater adoption of continuous casting. Continuous casting is the preferred choice in new steelmaking plants, although there are still some types of steels that have not been converted from the older ingot casting method to continuous casting.
- The U.S. steel industry has fallen behind almost all other steel industries in the adoption of continuous casting although the process saves energy, produces less scrap, boosts labor productivity, and increases domestic steelmaking capacities. For example, in 1978 the Japanese made about 50 percent of their steel by the continuous casting method, the European community 29 percent, and the United States only 14 percent.
- OTA's analysis indicates that the overall economic benefits of continuous casting justify its greater adoption. A key question is how much continuous casting could and should be adopted by the U.S. steel industry, and in what time frame? OTA's conclusion is that to achieve a minimum of cost and technological competitiveness with foreign producers, 50-percent continuous casting for the whole industry is needed by 1990. This goal of 50-percent continuous casting appears feasible. However, even though returns on investments could be approximately 20 percent or greater, there is probably insufficient capital now and in the foreseeable future, given present price levels, import levels, and Government policies, to finance the achievement of this goal.

Workshop on R&D and Auto Fuel Efficiency

In September 1979, OTA conducted a 3-day workshop on the needs and opportunities for R&D in auto fuel efficiency. Jointly sponsored with the Senate Commerce and House Science

and Technology Committees, this workshop brought together some of the most knowledgeable technical people from this country and abroad to look at the prospects for technological improvement in six basic areas of auto engineering and to assess the comparative advantages and disadvantages of those prospects.

The Health Program: An Example of Interactions Between OTA and Congress

A complete description of all the short-term interactions between OTA and Congress would be both long and repetitive. The following profile of the interactions between the Health Program people and Congress during 1979 is presented as a typical example of the interactions all OTA programs have with Congress.

Briefings, Testimony

The Health Program maintains close relationships with four committees of Congress: Senate Committee on Labor and Human Resources, Senate Committee on Finance, House Interstate and Foreign Commerce Committee, and House Ways and Means Committee. These four committees have jurisdiction over the major health care and public health programs, including all of those in the Department of Health, Education, and Welfare (HEW). Program staff members meet with staff of these committees periodically to discuss present and emerging issues and future legislative concerns. During 1979, the Health Program staff held 11 formal meetings with committee staff.

At the completion of each health project, the staff of the four committees is offered a formal briefing.

In the planning of the assessment of technologies for determining cancer risk from the environment, in addition to the four committees listed above, the following committees were visited: House Science and Technology; Senate Agriculture, Nutrition, and Forestry; Senate Commerce, Science, and Transportation; and Senate Environment and Public Works. All of these committees are kept informed about progress in the study.

On March 12, staff from the Health Program briefed Congressman Andrew McGuire and his staff, at their request, on issues concerning health promotion and disease prevention.

On March 16, staff discussed toxic chemicals and problems of their disposal with Congressman Blanchard and his staff, at the Congressman's request.

On April 4, staff of the technologies for determining cancer risk from the environment assessment testified in hearings before the Subcommittee on Investigations of the House Committee on Post Office and Civil Service.

Staff of several committees expressed interest in an update of the 1978 CT scanner report, covering the areas of distribution of CT scanners and Federal policies toward scanners.

Finally, the Program has continual informal contact with congressional staff. These focus primarily on issues concerning medical technology and cancer causation. For example, when the Nobel prize was awarded to the developers of the CT scanner, several congressional staff called to learn more about the scanner. In addition, whenever a Congressman makes a speech or floor statement indicating interest in an area under study by OTA, the Health Program staff provides it.

The Program also attempts to maintain close liaison with its "sister" congressional agencies. Program staff contact the Congressional Budget Office (CBO), the Congressional Research Service (CRS), and the General Accounting Office (GAO) at the onset of any assessment to share information and to ensure cooperation. Program staff meet periodically (about once every month or two) with GAO staff to discuss projects underway and future plans.

Workshops

As part of the development of a case study of the cost-effectiveness of psychotherapy, two workshops were held to identify central issues in the current debate **about** mental health services and to ensure balanced treatment of the current state of research. In addition to outside experts, a number of congressional staff participated in various aspects of the workshops (from the

Senate Committee on Finance, the House Interstate and Foreign Commerce Committee, the House Select Committee on Aging, GAO, and CBO). Workshop panelists reached consensus on a number of issues, including the importance of establishing the cost-effectiveness of psychotherapies and whether it is possible to do so, given particular mental health problems and therapies.

Other Activities

The Health Program manager has had ongoing contacts with the Director of the Health Policy Forum, a privately funded educational seminar for Washington, D. C., health policy makers, including congressional staff.

A senior program member has participated for the past year in a program on pharmaceutical R&D. Administered by the Institute for Alternative Futures. The program involves a series of seminars for congressional staff.

In addition, the Health Program maintains close contact with other agencies and programs that may present information to Congress in areas of our expertise. In particular, the Program has assisted the Institute of Medicine in developing its own activities in medical technology and consulted with a number of HEW agencies and commissions on issues concerned with medical technology.

Other Special Responses

Following is a small sample of special OTA congressional interactions, other than testimony, during 1979:

Briefings

- For members of the Congressional Steel Caucus, Representative Adam Benjamin, Jr., Senator John Heinz, and several other interested committees and members on the OTA assessment, "The Impact of Technology on the Competitiveness of the U.S. Steel Industry."
- For staff of the Senate Banking Committee on the OTA study, "Technology and East-West Trade."

- For staff in the Speaker's Office on the status and prospects of oil shale.
- For several House committee staff members on the OTA study, "Environmental Contaminants in Food."
- For several Senate and House committee chairmen and their staffs on the OTA assessment, "Technology and World Population."
- For Senate and House health staff on the vaccine report.
- For several Senate and House committee chairmen and their staff on the OTA assessment, "Impacts of Applied Genetics."
- For counsel of the House Subcommittee on Oversight and Investigations which is conducting hearings on polychlorinated biphenyl contamination, on the "Environmental Contaminants in Food" assessment.
- For the Chairman of the Subcommittee on Science, Research, and Technology, House Committee on Science and Technology on the telecommunications study.
- For Senate Committee on Government Operations staff concerning administration-proposed Institute for Scientific and Technological Cooperation (ISTC).
- For Congressional Clearing House on the Future, Management of *Technology in a Democratic Society*.
- For the Chairman of the Subcommittee on Science, Research, and Technology, House Committee on Science and Technology, on use of telecommunication technologies for development.

Other Interactions

- Provided substantial parts of a CRS study on "Satellite Communications: Technological System and Services for Developing Countries" prepared for the Chairman of the Subcommittee on Science, Research, and Technology, House Committee on Science and Technology.
- Prepared a summary of issues on synthetic fuels for the Senate Budget Committee which was subsequently requested by other congressional committees and members.
- Began work on a paper on oil shale for use during the current congressional deliberations on synthetic fuels.
- Convened a task force of specialists in and outside of OTA to review and comment on specific problems highlighted by the Senate Judiciary Committee in connection with the Federal Bureau of Investigation's procurement of a front-end processor for the computerized files of the National Crime Information Center. Results of the task force evaluation were sent by letter to the Chairman, Senate Judiciary Committee.
- Provided an analysis of the proposed ISTC to the staffs of the Senate Foreign Relations and Commerce Committees. The paper derived from work OTA had underway concerning North-South technology transfer.
- Convened a workshop on solar power satellite systems to aid the House Science and Technology Committee in developing questions for hearings on relevant legislation as well as to help to plan OTA's assessment on this topic.
- Prepared a note on the potential for energy savings by small business at the request of the Senate Select Committee on Small Business.
- Participated in a symposium on gasohol sponsored by staff of the House Agriculture Committee.