OTA Office of Technology Assessment **Newsletter**

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Gibbons Appointed New OTA Director

The Technology Assessment Board has appointed Dr. John H. Gibbons, a nationally known scientist and environmentalist, as OTA Director. Gibbons succeeds Russell W. Peterson, who resigned March 31 to become president of the National Audubon Society.

Gibbons is currently director of the Environment Center at the University of Tennessee. Prior to that, he served as director of conservation programs at the Federal Energy Administration and as a research physicist and program director at Oak Ridge National Laboratory.

Gibbons has also been a consultant and advisor to several OTA studies, most recently serving as chairman of the advisory panel for the just-completed residential energy conservation assessment. He will begin his duties at OTA in about 30 days.

In addition to his work on OTA advisory panels, Gibbons has served on committees studying energy and environmental issues for the National Science Foundation, National Academy of Sciences, Department of Energy, and the Aspen Institute.

Holding a Ph. D. in physics from Duke University, Gibbons has published more than 50 scholarly articles on energy conservation, the environment, resource management, and nuclear physics, among others. A Fellow of the American Association for the Advancement of Science (AAAS) and the American Physical Society, Gibbons also holds memberships in Phi Beta Kappa, Sigma Xi, and the Cosmos Club.

In announcing Dr. Gibbons' appointment, Rep. Morris Udall (D-Ariz.), OTA Board chairman, said: "I am gratified that Jack Gibbons will accept our offer to be the director of OTA. We are fortunate indeed to be able to find and attract to this position a man of his demonstrated leadership, scientific contributions, and nationally recognized expertise on energy and environmental matters.

Sen. Ted Stevens (R-Alaska), OTA Board vice chairman, also praised the appointment: "Jack Gibbons is a very experienced and highly qualified individual who will provide essential leadership to the Office of Technology Assessment. We were fortunate that there were a number of highly qualified persons from which to choose, and it was a difficult decision. The OTA has a key role advising Congress of its options when considering legislation dealing with technology, and I am very pleased that Dr. Gibbons has accepted this position."

Board Approves Two New Projects

New studies of technologies to determine cancer risks and the applications of technology in space were approved by the OTA Congressional Board at its March 8 meeting.

The cancer study will focus on technologies for determining the risks of developing cancer from environmental causes. It will examine the process by which chemicals are selected for testing to determine if they cause cancer, the tests used, how results are extrapolated from laboratory tests to human risk, and methods by which the reasonableness of the cancer risk can be determined.

Part of a larger assessment of health promotion and disease prevention still being developed, the study will be carried out by the OTA Health Group. Michael Gough will be the project leader. It is scheduled for completion in late 1980.

The space study will address technologies that are Earth oriented and that have potential economic or social benefits, such as communications, remote sensing, and materials processing in space. OTA will examine the requirements for making such use of space, as well as the policy options to promote the applications of technology in space. The study will also assess the possible impacts of space technology.

In this project, OTA will not address issues related to space science or to military technologies. Similarly, the project will not assess the solar power satellite concept, which is the subject of another study in OTA's Energy Group.

The space applications study will be conducted by the new Space Technology Group, headed by Tom Burke. It is expected to be completed in early 1981.

OTA Involved in AT&T Suit

In connection with the antitrust action brought by the Federal Government against American Telephone and Telegraph, Bell Laboratories, and Western Electric, OTA has been subpenaed by AT&T.

The subpena requires that OTA identify and make available to AT&T any materials concerning telecommunications and related areas. To meet the requirements of the subpena, Administrative Officer Tom McGurn asked each OTA group to search its files and catalog documents that relate to telecommunications. A coordinator in each group was appointed and the search has been completed.

AT&T will bring in personnel and its own reproducing equipment to copy the documents on OTA premises during May.

The Department of Justice has been assisting the Office in its response to the AT&T subpena.

Parham Appointed to Head Food Group

Walter Parham has been appointed the new group manager for food and renewable resources in the health and life science division.

Parham joined OTA in December to head the planning effort for a study of the productivity of U.S. croplands, forests, and wetlands. Previously, he had been the representative of the Agency for International Development on President Carter's "Global 2000" study.

Annual Report Published

OTA's annual report covering calendar year 1978 was distributed to Congress on March 13. The report discusses changes made in OTA organization, methods of communication, and procedures for undertaking new studies. It describes reports completed in 1978 and projects underway at the end of the year. Copies of the annual report can be obtained by writing to the Public Affairs Office, Office of Technology Assessment, U.S. Congress, Washington, D.C. 20510.

Staff Seminar:

Live Cheaper and Save Energy

Yes, you can be comfortable in your house and save energy and money at the same time. So reports Nancy Shirk, project leader of OTA's study of residential energy conservation, at a recent OTA staff seminar.

Reducing home energy use by as much as 50 percent in most newer houses is not a technical problem, Shirk said. It merely involves such straightforward techniques as installing storm windows and doors, caulking in places where air can come in from the outside, and maintaining heating and cooling systems, among others.

New houses could be built to take advantage of the Sun's rays and avoid the prevalent path of winds, Shirk noted. Nationally, conservation would be enhanced if builders, architects, remodelers, Government officials, and consumers had more information on how to conserve energy.

Shirk said the Federal Government has erred in equating energy conservation with moral sacrifice. Rather, people are motivated by saving money. If the Government were to allow energy prices to reflect actual costs. conservation would proceed on its own, she added.

One problem of the better-insulated house is that the air inside deteriorates in quality, particularly in kitchens with gas stoves. Attention needs to be paid to proper air exchange systems, Shirk said.

Pacing is a major problem facing conservation efforts, Shirk pointed out. Typically, Americans overreact to such a problem by first not knowing what to do, making snap decisions on what to do, and then rushing out to do it. This inceases demand and pushes prices up, Shirk said.

Indeed, Shirk said, many people missed opportunities to save money by waiting for Government tax credits. In so doing, they passed up sales on insulation materials, caulking, and other conservation products. When the credits were finally passed and people rushed out to take advantage of them, the sales were over and prices much higher than before.

Loan programs are unlikely to encourage much conservation since most people use savings or credit to make such home improvements. Shirk said it may be better to give grants to poor people who wouldn't insulate their houses otherwise because of a lack of money.

Energy conservation will be a major issue in the 96th Congress, Shirk reported. At issue will be whether to establish mandatory standards for energy efficiency in new houses. The housing industry opposes such standards, saying it has already adopted its own standards.

While some Federal regulations, standards, and incentives may be necessary, most Government efforts will be at the State and local levels, Shirk pointed out. She said the best role for the Federal Government might be to remove roadblocks to conservation rather than initiating new programs.

Auto, Alaska Lands Reports Issued

Two long-awaited reports were released by OTA in the past month, One deals with the future role and characteristics of the automobile and its support system in the face of energy, environmental, safety, and cost concerns. The second report analyzes Federal laws, regulations, and policies affecting access across Federal lands to mineral and other natural resources on non-Federal lands, particularly in Alaska.

The auto report concludes that unless chronic oil shortages become prohibitively severe, the private car will continue to dominate personal transportation in the United States at least through the year 2000. However, changes may be needed to meet national energy, environmental, and safety objectives.

The Alaska lands report points out options Congress could choose from in reconciling the desire to protect Alaska's fragile environment with the need to extract her valuable natural resources.

Copies of both reports are available from the U.S. Government Printing Office.

For the report, "Changes in the Future Use and Characteristics of the Automobile Transportation System," the GPO stock number and price for the summary volume are 052-003-00649-9 and $1.80; for the technical volume, they are 052-003-00650-2 and $6.00.

For the report, "Analysis of Laws Governing Access Across Federal Lands: Options for Access in Alaska," the GPO stock number and price are 052-003-00647-2 and $4.50.

Robbins, Wiesner Elected to New TAAC Posts

Frederick C. Robbins was elected chairman of OTA's Advisory Council at its March 7 meeting. Robbins succeeds Jerome B. Wiesner, who now becomes vice chairman of the Council.

Robbins, a medical doctor who has served as the Council's vice chairman since February 1978, is dean of the medical school at Case Western Reserve University in Cleveland, Ohio. A member of the Council since 1974, he also serves as chairman of OTA's Health Advisory Committee and chaired the OTA advisory panel that assisted work on the cancer testing technology and saccharin study. He was awarded the Nobel Prize for physiology in 1954.

Wiesner is president of the Massachusetts Institute of Technology. He served as science advisor to Presidents Kennedy and Johnson from 1961 to 1964. He has been a member of the Advisory Council since 1974 and had been its chairman since 1976.

Energy Conservation Report Released

OTA released a final draft of its residential energy conservation report to Congress on April 9.

In releasing the report to Congress, OTA Board Chairman Morris Udall (D-Ariz.) said: "At a time when the nuclear industry is under unparalleled scrutiny and when the Nation's economy is imperiled by increasing costly oil imports, it behooves every American to do what he or she can to conserve energy. At the same time, faced with ever rising energy costs, conservation makes good economic sense."

OTA Board Vice Chairman Ted Stevens (R-Alaska) noted that the report "should prove useful to the Congress in the coming discussions on national energy policy."

Copies of the OTA report, "Residential Energy Conservation," will be available from the U.S. Government Printing Office in a few weeks.

The OTA newsletter is published monthly to help keep staff members and congressional personnel informed about matters of interest. It is available to others interested in the Office by writing to:

Congress of the United States
Office of Technology Assessment
Public Affairs Office
Washington, D.C. 20510

[INSIDE OTA—This part of the newsletter is intended for internal distribution. The front part is designed to be of more general interest.]

PROFILES—who we are

OTA is filled with people who possess not only keen but often multifaceted talents. To help us to know one another better, the newsletter will run brief sketches of people.

ALAN CRANE (Energy)

Recent Accomplishment: Getting the coal utilization report published.

Roots: Born in Peekskill, N.Y.

Education: B.S., Haverford College, just outside Philadelphia; M.S., mechanical engineering, New York University.

Professional Background: Worked as an engineer in the nuclear safety program at Bechtel Corp.

How Came to OTA: Heard about the Office through a friend. "The more I heard about the place the more I liked it. I was getting tired of straight engineering."

Work at OTA: Came to OTA in December 1974—"That makes me a real oldtimer." Was project leader for the study of nuclear proliferation and safeguards, published in 1977.

Interests: Fixing up his old Triumph; also skiing and camping.

On Life in Washington: "I like it, but I could live either here or in New York."

Best Recent Experience: Getting out from under coal soon.

CATHY WOTEKI (Food)

Recent Accomplishment: Appearing on the Larry King radio show to speak on nutrition—1 to 3 a.m.

Born: Born at Fort Leavenworth, Kans.—in a psychiatric ward. "I was an Air Force brat." Attended 10 schools before college, 3 in 1 year.

Education: B.S., chemistry and biology, Mary Washington College, Fredericksburg, Va.; M.S. and Ph. D., human nutrition, Virginia Polytechnic Institute.

Professional Background: Spent 2 yrs. at the Univ. of Texas medical school at San Antonio on postdoctoral fellowship; taught nutrition at Drexel Univ., Philadelphia.

How Came to OTA: Heard Walter Wilcox speak and became interested in technology assessment. "I came because I found out that I hated teaching."

Interests: Ballet student and attendee. Loves to eat her husband's cooking (a shocking admission for a nutritionist).

On Life in Washington: "It's a much more livable city than New York. But the restaurants are not as good as those in New York."

Best Recent Experience: The great Washington snowstorm after having learned how to ski.

Worst Recent Experience: The rain after the snow: "That was awful."

Volunteered Quote: "I really am a good cook."

HENRY KELLY (Technology and World Trade)

Magnum Opus: OTA's massive two-volume, 5-year study of onsite solar energy systems.

Born: Boston, Mass.

Education: B.S. in physics, Cornell University; Ph. D., Harvard.

Professional Background: Worked at the U.S. Arms Control and Disarmament Agency, 1971 to 1975.

How Came to OTA: Began as an American Association for the Advancement of Science Congressional Fellow in 1975. Worked on the study of the effects of limited nuclear warfare. Became project leader on the solar energy study in late 1975. Appointed group manager for technology and world trade in 1978.

Interests: Shakespeare, travel.

Recent Book Read: *The Education of Henry Adams.*

Recent Notable Experience: "Black tie and hammer" party with guests to help work on his home-built solar tower.

Noted About Kelly: "Things seem to happen when Henry's around" (by an old friend): He can be seen in the early morning and evening hours furiously pedalling his bicycle on the Mall to and from work.

Volunteered Quote: "Wixom, this isn't going to work."

Landry, Burke, Dexter Appointed To New Posts

Three appointments have been announced recently at OTA.

Al Landry joined the Office March 26 as assistant administrative officer for contracts. He succeeds Joe Fitzgerald, who resigned to become a contract officer for Boeing Computer Services Co. in McLean, Va. A former career officer with the Coast Guard, Landry was director for administrative services and finance at the U.S. Metric Board before coming to OTA.

Tom Burke has been appointed group manager for space technology. Burke came to OTA in February to develop a study of the application of technology in space. He will report to Eric Willis, assistant director for science, information, and transportation.

Effective April 10, Martha Dexter was appointed chief librarian in OTA's Information Services. An assistant librarian since August 1977, Dexter succeeds Robin Johnson who left OTA for Dallas, Tex., where her husband now works for Texas Instruments. Before joining OTA, Dexter was an assistant librarian at the Kennedy Institute Center for Bioethics at Georgetown Univ.

Transitions

Reita Crossen, erstwhile of the Public Affairs Office, has fled Washington to return to married life in her native State of Texas. OTA's loss is Vander Zee's gain. Deborah Carl succeeded Reita on April 23 . . . The Health Group welcomes its new secretary Shirley Gayheart . . . Dave Cahn has left OTA to become Director of Commerce for the Marshall Islands . . . Joel Hirschhorn is now onboard as a full-time OTA staffer . . . Betty Albury of the Materials Group and Ray Hoehle of the Food Group have left OTA . . . Mary Joy Breton has joined Russell Peterson at the National Audubon Society in New York.

Said about OTA:

Editorial in Annals of Internal Medicine, January 1979:

"In August 1978, the Office of Technology Assessment of the Congress of the United States published its report on the policy implications of the computed tomography scanner. This wide-ranging and well-organized document . . . is one of the most extensive treatments of policy issues related to any new medical technology.

" . . . The report accomplishes its purpose, giving the physician reader, no less than the congressional staffer, much to contemplate."

Residential Energy Conservation

Sen. John Durkin (D.—N.H.), chairman of the Senate Subcommittee on Energy Conservation and Regulation, told OTA staff April 10 regarding the residential energy conservation report: "I think you do excellent work. I appreciate the work you've done. You can be proud of your work."

Application of Solar Technology to Today's Energy Needs, Vol. I

"This report is a block-buster, a gold-mine. Almost an encyclopedia. It contains 530 pages, but with its double-column format and compact style, it is equivalent to about 1,000 pages. It includes about 400 excellent photographs, drawings, and tables. Above all, it is meaty: It is a gigantic compressed mass of up-to-date, accurate, clearly expressed facts. One looks in vain for gobbledegook, vague generalities, pious hopes, unsupported predictions.

"The book is remarkable for what it includes and for what it does not include. It includes large sections on flat-plate collectors, focusing collectors, solar heating systems, photovoltaic cells, solar thermal plants, onsite electrical generating plants, Rankine and Stirling engines, methods of storing thermal energy at low, medium, and high temperature. It takes up system costs, overall economies, role of the utilities, significance to the public and to labor, land-use, and effects on national security. Always the issues of practicality and cost are tackled head-on: the volume bristles with detailed cost comparisons, and state-of-the-art summaries. The latest research trends are described in detail.

"Mercifully, the authors have omitted various unrelated subjects such as wind power, geothermal power, ocean thermal power, biomass power.

"Of all the books published by the Government on solar energy and its implications, this is by far **the best I have seen.**"

"William A. Shurcliff
19 Appleton Street
Cambridge, MA 02138"

— in *Alternative Sources of Energy*
Issue No. 34, October 1978

(NOTE: Have you received similar notices about your reports? If so, the newsletter would like to run them.)

OTA Begins Fourth Softball Season

With temperatures rising, soft breezes blowing, green grass a-growin, and birds chirping away in the early hours of the morn once again, can softball season be far away? No, a thousand times, no!!

OTA's "Juggernauts" enter their fourth season of play with a constantly improving record behind them. Following a dismal 1-win rookie season in 1976, OTA rebounded to a 9-7 record in 1977. In 1978, OTA posted a 14-7 record, including 7-3 and a second-place finish in Senate league play.

This year, new coach Chuck Wixom has announced a tough policy of physical and mental fitness designed to propel the Juggernauts into their first playoff appearance. As coach, Wixom succeeds Carol Drohan, who performed brilliantly in the past. Experts expect Wixom to lead OTA to even greater heights.

However, OTA opened its 1979 season on a losing note, dropping games to teams from the National Journal and the White House 11-1 and 6-5 respectively. The National Journal fielded a sharp team led by former OTAer Dick Kirschten. In the game against the White House, OTA rallied from a 5-0 deficit but fell 1 run short. A third nonleague game is set for Tuesday, May 1, against the Small Business Administration.

The Senate league season officially begins May 8 with a game against Sen. Gravel's office. Five other league games have been set so far and others will be announced shortly. Also, four other nonleague games have been scheduled.

Coverage of OTA Reports

The Office has received extensive coverage from the news media on several recent reports.

The automobile assessment, released in March, was covered on page 1 of the *New York Times* March 11. *The Washington Post* carried two stories on the auto report, one by UPI on March 11 and another from Reuters on March 12. Major stories also appeared in *Automotive News, The Washington Star,* the *Detroit Free Press,* and the *Baltimore News American.* The story was carried on the *New York Times,* UPI, AP, Reuters, Newhouse, and Gannett news services. It was also the subject of a news magazine report on WPGC radio in Washington.

Similarly, stories on the residential energy conservation report were carried in the *Christian Science Monitor* (where it appeared on page one), *New York Times, The Washington Star,* and *Chicago Tribune.* The OTA report was also cited in an editorial in *The Washington Post* on April 10.

In another editorial March 2, *The Washington Post* said: "We don't doubt that Congress can get along without an Office of Technology Assessment. But we think that in dealing with innumerable technological complexities—the list ranges from radiation safety to off-shore drilling—it quite likely could get along better with a well-functioning technology-assessment service."

"It is therefore hoped that a new director will be swiftly appointed," the *Post* editorial continued, "and that OTA will emerge from a troubled infancy to fulfill its potential in the legislative process."

In a new story on a continuing subject, the April 23 issue of *Newsweek* cites David Banta and co-author Stephen Thacker on electronic fetal monitoring. *Newsweek* states that Drs. Banta and Thacker "raised serious questions about these techniques."

Finally, the *Wall Street Journal* noted: "A congressional report, in all seriousness describes a 'relevance tree' approach to policy making; its a 'hierarchical classification of issues, response strategies, general policies and specific measures.' " Could that be from an OTA report?

Peterson Appointed to Nuclear Commission

Former OTA Director Russell W. Peterson has been appointed by President Carter to an 11-member commission to study the recent accident at the Three Mile Island nuclear powerplant. Peterson resigned from the OTA post to become president of the National Audubon Society March 31. The commission will report back to the President in 6 months.

OPINION

We solicit views and opinions of OTA people for this "forum."

A Year Spent at OTA

by Charles M. Overby

(Editors Note: Charles M. Overby is a professor of industrial and systems engineering at Ohio University in Athens, Ohio. On sabbatical leave from Ohio University from October 1977 to September 1978, he worked at OTA on the resource recovery and materials conservation studies. He remains a contractor to OTA for those assessments. The following article is an excerpt of his sabbatical report, which summarizes Overby's reaction to the year he spent with OTA.)

I am happy to report that . . . I was able to arrange a slot with the Office of Technology Assessment (OTA). This year was spent in Washington as a staff person working on several projects dealing with materials and energy conservation issues of interest to the Congress.

This year was perhaps the most interesting, meaningful, and important professional year I have ever spent. The adjectives in front of "professional year" in the above sentence do not necessarily mean that it was all one grand happy bash. It was a year of very intense hard work and long hours.

This first hand involvement is one part of the process by which public policy and technology are linked helped me to integrate some things and develop insights and understanding of this process that could be obtained in no other way than through direct participation. My work in this area in my classes and seminars here at Ohio University was substantially enhanced by this year of leave.

This year was important in that the engineering faculty needs a more adequate understanding of the major role of legislation in than we now have—both as faculty members and as practitioners. In my opinion, more engineering faculty should have the opportunity and experience that I had so that our views of the process of legislating in technology areas is more firmly grounded.

It essentially isn't enough to simply overwhelm elected legislators with reams of scientific and technical data to support our technical point of view. First of all, they will probably never have time to read it. They receive much of their information through their filters called "staff people." Legislators are also concerned with other trade-offs, which in our "democratic society" are sometimes more important (as they see it) than pure technical fact. Even the idea of "pure technical fact" is somewhat of a fantasy in that, especially in controversial issues, it is not at all difficult to find technical experts who will generate "pure technical facts" to support polar ends of a particular issue in dispute.

In my opinion, it is important that, having gained insight into some of the relationships between legislation and that which we do as engineers, we as faculty more effectively convey that understanding to our students. Engineering does not exist in a social vacuum. Ultimately, the costs and benefits of technology get allocated to all of us through the process of government. As things get more interconnected and complicated, the role of government seems to grow whether we like it or not.

Congress as well as State and local legislatures find themselves increasingly having to deal with issues having a technology dimension. In my opinion, there is a need to have more engineering input to this process. Engineering perspectives are important in assisting in the creation of legislation having technological components.

I am not arguing here as a technological chauvinist. Engineering perceptions are no more important than are those of persons who concern themselves with issues of "justice" and "equity." In some ways engineering ideas may be even less important than ideas of justice and equity in our democratic society. However, engineering input is important. I have a sense that in my year of work at OTA, I did have some small impact in this process of legislation relating to the technological areas in which I worked.

Book by Former OTA Staffer Published

A book by former OTA staffer Mary Ames has recently been published on the relationship between science and government. The book, *Outcome Uncertain: Science and the Political Process*, uses case studies of such issues as the supersonic transport, nuclear powerplant construction, recombinant DNA, and saccharin to show the fundamental problems in building such a relationship.

The book includes a section on OTA, its origins, purpose, and problems. Ames writes of OTA: "The OTA exists because dramatic new technologies like recombinant DNA have arisen and will continue to arise and will be used, to understand the world and change it. The OTA was to be the voice of prudence among all the others on Capitol Hill clamoring for expedience."

A copy is available in the OTA Library, or may be purchased from Communications Press, 1346 Connecticut Ave. N.W., Washington, D.C., 20036.

Mitchell Prize Competition

Competition for the third biennial Mitchell Prize has been announced. The prize is awarded to individuals demonstrating "the highest degree of creativity in designing workable strategies to achieve sustainable societies." A total of $100,000 will be awarded to the winners at the Woodlands Conference on Growth Policy to be held October 28-31 at Woodlands, Tex. For more information, contact Judith Angerman in Administration or write Woodlands Conference Office, University of Houston, Central Campus, 312 C&O, Houston, TX 77004.