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Editorial

President Clinton's Science Adviser

In the selection of his future Science and Technology Adviser, President Bill Clinton chose quickly and well. Jack Gibbons was in the spotlight in Little Rock on 24 December, along with major Cabinet designees. Gibbons brings to the president a unique mixture of knowledge and experience. The quality of his judgment and managerial skills in directing the Office of Technology Assessment (OTA) has won admiration on Capitol Hill and among observers elsewhere. In many instances OTA assessments have been influential in the drafting of legislation. During Gibbons's 13-year leadership at OTA, more than 500 assessments were issued. They dealt with such matters as renewable resources, energy, materials, agriculture, health, environment, computers, and education.

The OTA is an analytical support agency of the U.S. Congress. Governed by a 12member bipartisan board (six senators and six representatives), OTA works directly with and for congressional committees. The basic function of OTA is to provide early indications of the probable beneficial and adverse impacts of technology. Thus its director and staff are challenged to be future-oriented and aware of scientific developments that may affect society.

The lengths of assessment reports vary; the median is approximately 150 pages. They contain a rich body of factual material, some of it provided by experts at universities and elsewhere. In part because of the use of such temporary help, OTA, with a staff of only about 140 persons, has been able to produce drafts of reports in an unusually timely fashion. The drafts are subjected to numerous reviews by inside and outside experts to guarantee objective analyses. The reputation of OTA owes much to Gibbons's fostering of political nonpartisanship and his refusal to allow the analytical quality of OTA documents to be influenced by political expediency. For Gibbons and the OTA staff, the past 13 years have been a stimulating set of learning experiences.

In addition to good rapport with Congress and a broad spectrum of knowledge gained during his 13 years at OTA, Gibbons brings useful special expertise in areas that are likely to concern President Clinton. No future U.S. president can escape dealing with nuclear-related issues or with the need to foster orderly evolution of the nation's supply and utilization of energy. Before directing OTA, Gibbons was active in both nuclear and other energy matters.

After receiving the Ph.D. degree in 1954 at Duke University, Gibbons spent 15 years in nuclear research at Oak Ridge National Laboratory that included interdisciplinary work. His studies of mechanisms of nuclear synthesis of the heavy elements involved measuring nuclear cross sections for capture of neutrons having energies of the order of 25,000 electron volts. It was necessary to develop techniques for determining the velocity of neutrons traveling at 8 million kilometers per hour over a flight path of as little as 7 centimeters.* The techniques and results were important to nuclear theory and engineering. The results were relevant to understanding processes in stars and nuclear reactors.

As early as the late 1960s, Gibbons began studies of U.S. energy efficiency and conservation. In 1973, during the energy crisis of that year, he was named the first director of the U.S. Office of Energy Conservation. The office began a major research and development program on energy efficiency leading toward a drop in the nation's energy consumption per unit of gross national product. Going to Knoxville in 1974, he established the Energy, Environment, and Resources Center at the University of Tennessee. From 1974 to 1979, he served on many advisory committees and chaired the panel on conservation of the National Academy of Sciences–National Research Council Committee on Nuclear and Alternative Energy Systems. A paper based on a report of that panel[†] demonstrated a deep understanding of the problems and time constraints involved in modifying a nation's energy system.

To maintain his usefulness with Congress, Gibbons wisely kept a low media profile. His style is nonconfrontational and quietly factual. He is a good listener. He possesses an enormous fund of stories and sayings, which he offers at the appropriate moment. He is capable of managing well in the new situation. If his knowledge and judgment are utilized appropriately, the nation, the president, and science will be well served.

Philip H. Abelson

*J. H. Gibbons and R. L. Macklin, *Science* **156**, 1039 (1967). [†]Demand and Conservation Panel of the Committee on Nuclear and Alternative Energy Systems, *Science* **200**, 142 (1978).