

**School of International and Public Affairs
Columbia University
Office of Career Services**

**CAREER OPPORTUNITIES IN
SCIENCE & TECHNOLOGY & PUBLIC POLICY**

Description of Field

Science & Technology & Public Policy is a maturing field of public policy which focuses on the interactions among scientific developments, technological and social change, values, and governmental activities at both international and domestic levels. It is concerned with the ways in which professionals in industry, government, labor, and non-profit organizations understand these interactions and apply their understanding to solve social and economic problems and manage scientific and technological systems.

Typical Entry-Level Positions

Recent graduates work in research, analysis, or management with such job titles as “research analyst,” “program or policy analyst,” “legislative analyst,” or the more specific “environmental protection specialist.” Beginning salaries range from the low thirties to low forties. Salary differentials may exist for candidates who have technical or scientific undergraduate or graduate degrees or significant work experience in the field, on Capitol Hill, or in federal agencies.

Career Paths

Career paths in policy making, policy analysis, and policy research require different kinds of skills and capabilities as well as different kinds of training and orientation. Also, career paths leading to similar positions may differ. For example, senior executive-level policy making positions in federal agencies usually require scientific or technical credentials, whereas senior congressional committee policy making positions are less demanding of technical qualifications and more demanding of political skills. The same may be said of policy management careers. A person entering the field as a research or policy assistant might expect to move to analyst or technical consultant, to project director or senior professional staff, and ultimately to policy making positions such as assistant secretary, executive director, or vice president.

Demand

Public sector employers have traditionally hired more S&T graduates without technical backgrounds than any other group. Federal agency demand can be characterized as slow and steady growth; however, the numbers are still small and concentrated in a few departments. Recently there have been growth spurts in hiring in development, high technology, health, education, and environmental issues. Continuing growth in demand at the state level is contingent on the ability of states to overcome present fiscal cutbacks. In the international arena, there continues to be a limited demand for S&T specialists to assist with bilateral negotiations, agreements, and grants management.

Private sector employers have tended to hire S&T graduates with engineering or technical backgrounds. Currently there is a modest demand for non-technical specialists in companies such as aircraft manufacturers whose businesses are closely tied to federal legislation and policy making. Openings occur in strategic planning or external relations departments for candidates with extensive congressional or federal experience. In research and consulting organizations that serve the federal government, there is a growing demand for S&T specialists, especially for those with expertise in the environment, telecommunications, the conversion of defense industries, and technology transfer.

Qualifications Necessary to Enter the Field

- Analytic skills, both qualitative and quantitative.
- Knowledge of the policy environment and the significant issues affecting policies.
- Information management skills.
- Effective reporting and communicating skills, verbal and written.
- Strong background in economics.
- Political and persuasive skills.
- Good group and networking skills.
- Substantive knowledge of a specialized area such as defense, space or the environment.
- A Ph.D. or a technical graduate or undergraduate degree (e.g., physics or engineering) is required for positions in some S&T organizations.

Sample Group of Employers

American Association for the Advancement of Science	NASA
American Physical Society	National Academy of Sciences
Anser Corporation	National Science Foundation
Battelle Memorial Institute	Office of Science & Tech. Policy
Congressional Research Service	RAND Corporation
Department of Commerce	Rockwell International
Department of Defense	Science Applications Int'l., Inc.
Department of Energy	SRI International
Environmental Protection Agency	Stockholm Environmental Institute
General Accounting Office	Tellus Institute
House Committee on Science, Space & Technology	Winrock International
Lockheed Martin	World Bank

Future Challenges to the Profession

There is increasing awareness of the economic, political, and social consequences of decisions in the S&T public policy field in such areas as computers and telecommunication regulation as well as other technological areas. The need to build bridges and integrate diverse national and international institutions linking governments and universities with the private sector and with newly emerging consortia of businesses and research organizations is becoming increasingly important. Expertise in S&T public policy field will be needed to help nations and companies recognize their common interdependence, their common problems and to agree on solutions and ways to pay for them.

To Obtain More Information

Publications:

AAAS Guide to Graduate Education in Science and Engineering and Public Policy - the American Association for the Advancement of Science (1995)

Graduate Education and Career Directions in Science, Engineering, and Public Policy, - Teich, Albert H., Barry D. Gold, and June M. Wiaz, (1986).