Energy Seminars Address a Range of Concerns

Two Regional Energy Seminars directed at the energy concerns of Native Americans in the northeastern United States and the impacts of energy on health were held during May.

Dartmouth College was the site for "Northeast Tribes and Communities: Energy Needs and Alternatives." The seminar featured discussions of the special energy problems facing Native Americans in the region as well as the opportunities and alternatives open to them.

John G. Kemeny, president of Dartmouth College, opened the meeting with a talk on "Decision Making on Complex Technological Issues." He urged that a wide range of sources, including universities and affected communities, take part in energy policy decisions.

Some of the particular energy concerns and difficulties of Native Americans were presented by John Peters, commissioner of Indian Affairs, State of Massachusetts; Ernest Benedict, chief, Mohawk Nation, St. Regis (Canada); and Timothy Love, governor of the Penobscot Nation of Maine. The Penobscot have recently won a lengthy court battle to reclaim pieces of tribal land in Maine and are now studying options for the development of their energy resources, primarily timber and water.

Energy projects in the planning and early implementation stages include the Half-Moon Cove Tidal Project of the Passamaquoddy Tribe and several wind, wood, and hydroelectric operations. The Shinnecock Tribal Oyster Project represents a new venture in aquiculture and energy use. The tribe, located on Long Island, is beginning the operation of a solar-heated hatchery.

A. David Lester, commissioner, Administration for Native Americans, U.S. Department of Health and Human Services, addressed the question of "Indian Strategies for the Future." Calling the 1980's a decade of opportunities for Native Americans, he proposed a less paternalistic relationship between the federal government and the tribes. Describing a scenario in which tribes become dependent on the government for their welfare, and thus more likely to be exploited, Lester said, self-determination itself becomes a government program. The goal of Native Americans, he believes, should be to achieve happy, secure, working communities. Through less dependency on the government and better communication among Indians, government, and non-Indians, Lester predicted, this goal will be achieved.

Lawyers and environmental mediators discussed methods and problems in conflict resolution cases and suggested ways of getting involved in facility siting decisions.

The 7–8 May seminar was cosponsored by the AAAS and the Native American Science Center at Dartmouth College; Sigma Xi, the Scientific Research Society; and Dartmouth College.

"Energy Independence: Consequences for Human Health" brought together energy policy and health-planning interests in Berkeley, California, 28–29 May. The implications for human health and health care delivery systems, of a variety of conservation and energy plans, was the central theme of the seminar.

E. Margaret Burbidge, director, Center for Astrophysics and Space Sciences, University of California, San Diego, and president-elect, AAAS, welcomed participants to the seminar. Such meetings are useful, she said, because "we human beings have a deplorable tendency to look into the future no further than our own life spans. That just won't do."

As the United States pursues a goal of energy independence, said John Holdren, professor of energy and resources, University of California, Berkeley, the costs of each technology must be assessed in terms of dollars and potential impacts on society. Holdren recommended a series of questions to ask relative to the adoption of any particular policy. (i) How versatile is the potential source? (ii) What is the timing and how soon can the source be expanded? (iii) How compatible is the source with the social and political realities? (iv) What are the costs—financial, environmental, and sociopolitical? (v) What is the certainty of the source, does it work, and can it be controlled? Holdren's conclusion is that after applying the above criteria, conservation is the best energy alternative. He urged that conversation be thought of as an "active" energy source rather than as "passive," belt-tightening measures.

The health consequences of various energy technologies were outlined by Edward Alpen, director, Donner Laboratory of the Lawrence Berkeley Laboratory. Conservation and energy shortfalls, said James McCarroll, manager, Health Effects Program, Electric Power Research Institute, can have tragic results for the very old and very young. Cutting the thermostat back a relatively few degrees can, especially in the elderly, produce hypothermia.

Russell W. Peterson, president of the National Audubon Society, and member, AAAS Board of Directors, presented the Audubon Energy Plan. Describing energy as "one of the overriding environmental and health issues of our times," Peterson recommended a new mix of energy technologies for the year 2000. The Audubon Plan calls for a reduced reliance on oil and gas, a short-term increase in coal and nuclear energy, and a large increase in "solar renewables" (including biomass, solar collectors, hydropower, wind power, and photovoltaics). In addition to natural market forces, Peterson wants regulations, incentives, and education to encourage energy efficiency and conservation.

"We're in an era of transition for the deliverers of health care," proposed Burt Kline, director, Division of Energy Policy and Programs, Bureau of Health Facilities, U.S. Department of Health and Human Services. Our health care delivery system, he said, was built on the assumption that energy would always be cheap and plentiful. While hospitals and other health agencies grapple with the problems of rising costs and possible energy shortfalls, Kline warns that no solution will be painless.

Judith Davenport, associate professor and acting head, Department of Social Work, University of Wyoming, described the phenomenon of energy boomtowns. These small towns of several hundred or a thousand people triple, quadruple, or more almost overnight. This places an incredible strain on the social structure of the town. Health care facilities are rarely equipped to handle the deluge of demands placed upon them. As new energy development sites are opened up, Davenport urged, long-range planning must be done to assess the situation and avoid serious problems.

Joel Snow, senior science associate, Office of Energy Research, U.S. Department of Energy (DOE) described that department's health and environmental effects studies program. Through this program outside experts work with DOE staff scientists to prepare risk assessments for different energy technologies.

Other participants discussed energy conservation measures now planned or under way in health care facilities, and local and national energy conservation strategies.

Cosponsors with the AAAS of the Berkeley seminar were the Western Center for Health Planning; American Lung Association of California; Bureau of Health Facilities, U.S. Department of Health and Human Services; California Energy Resources, Conservation, and Development Commission; Intermountain Consortium for Energy; National Alliance for Energy Contingency Planning for Health Resources; School of Public Health, University of California, Berkeley; and Sigma Xi, the Scientific Research Society. Funding for the AAAS Regional Energy Seminar Series is provided by a grant from the U.S. Department of Energy.

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Media Fellows Begin Assignments

The 1981 AAAS Mass Media Science Fellows gathered in Washington, D.C., in June for a 4-day orientation program prior to beginning their summer assignments (see *Science*, 11 July 1980, p. 263).

The Fellows, their most recent academic affiliation, and fellowship site are: front row, left to right: Joseph Menosky, University of Washington, National Public Radio (Washington, D.C.); and James Dray, Wesleyan University, (Portland) *Oregonian*.

Second row: Mary Ann Stanley, University of Kansas, *Detroit Free Press*; Jennifer Lynn Hall, Massachusetts Institute of Technology, *Newsweek* (New York); Chris Raymond, Cornell University, *San Francisco Chronicle*; Mary DeAngelis, University of New Hampshire, *Richmond* (Virginia) *Times-Dispatch*; Greta Bunin, University of California, San Francisco, *Milwaukee Journal*; and Elizabeth Parks Hahn, University of North Carolina, KSAT-TV (San Antonio, Texas).

Third row: Catherine Macek, University of Texas Graduate School, Houston, *Denver Post*; Faye Ginsburg, City University of New York, WCCO-TV (Minneapolis, Minnesota); Debra Dobkowski, Oberlin College, *Charlotte* (North Carolina) *Observer*; Joan Stephenson Graf, Tufts University, *Washington* (D.C.) *Star*; Joseph Palca, University of California, Santa Cruz, WDVM-TV (Washington, D.C.); and Colleen Fitzpatrick, Stanford University, *San Jose* (California) *Mercury*.

Fourth row: Robert Sanders, University of California, Berkeley, KUNC-FM (Greeley, Colorado); Robert Hueter, University of Florida, California Public Radio (San Francisco); Craig Decker, Massachusetts Institute of Technology, WOSU Radio (Columbus, Ohio); Samuel D. Johnson, Jr., Columbia University, Teleprompter Corporation (New York); Richard Brandt, University of Delaware, *Business Week* (New York); and Richard Rice, Michigan State University, Omni Productions (New York).

AAAS/NASW Host Chinese Science Writers Delegation

The AAAS and the National Association of Science Writers (NASW) co-hosted a delegation of science writers and journalists from China 22 April to 14 May 1981. This first delegation of Chinese science journalists to visit the United States was a reciprocal delegation for a group of American science writers which toured China under AAAS and NASW auspices in September, 1979 (see *Science*, 26 October 1979, pp. 426–430).

The nine-member delegation was headed by Ye Zhishan, vice president of the Chinese Association of Popular Science Writers, and deputy director, Chinese Children's Publishing House. Deputy leaders were Huang Zongying, a former actress who now writes features about scientists and is a special science policy research fellow for the State Scientific and Technological Commission, and Bao Yujun, science writer and director, Department of Science and Education, for the *People's Daily*. The remaining delegates were Zhang Daoyi, standing council member and deputy secretary-general of the Chinese Association of Popular Science Writers; Lin Shouping, editor-in-chief of the *Beijing Scientific and Technological News* and secretary-general of the Beijing Association for Science and Technology; Zhao Zhi, science writer and deputy chief of the Education and Science Section of *China Youth News*; Rao Zhonghua, science editor and director of *Science Pictorial's* editorial board; Kong Deyong, science editor and head of the Central People's Broadcasting Station's Section on Science and Technology; and Zhu Baochen, from the International Department of China Association for Science and Technology. In addition, Kou Zhizhong, permanent U.S. correspondent for the *Guangming Daily*, was with the group in Washington, D.C.; his associate, Xue Fukang, accompanied them both in Washington and New York.