

# University creates unit to study utility problems

## Public Utilities Institute at Michigan State will focus on industry economics

Twenty-one major utility firms have joined with Michigan State University's graduate school of business administration to form a Public Utilities Institute, designed to study the complex problems facing the nation's utility industry.

Groundwork for the institute was laid in 1965 when the utilities throughout the nation pledged \$60,000 annually, or \$300,000 over the next five years, to underwrite research in problems of mutual concern.

Dr. Harry M. Trebing, formerly of Indiana University, has been named the first director of the Institute. In the year between the organization of the Institute and Trebing's arrival on the MSU campus, grants were awarded for two research projects, both of which are now in progress.

The first deals with the development of econometric or mathematical models suitable for estimating natural gas consumption in residential, commercial, industrial and steam-electric generating markets. The second project involves an effort to measure the impact of rate regulation on resource allocation in the electric utility industry.

The grant for the first study was awarded to a doctoral student in the graduate school of business administration, while the second project is being carried out by a member of the faculty in MSU's department of economics. Such grants, Trebing points out, are not limited to persons at Michigan State, rather they are available on a nation-wide basis.

In addition, on specific subjects the Institute aims to promote teaching in the field, and sponsor conferences and seminars to explore facets of the industry in depth. The research programs will be backed up with a series of attendant publications.

More emphasis will be placed on the economic problems facing utilities than on technological studies, Trebing says. "The Institute not only plans to investigate the broader problems associated with regulation, but also intends to support studies dealing with management practices and administration. These studies will be concerned, in part, with the adaptation of new de-



Dr. Harry M. Trebing is head of PUI

velopments in the fields of finance, marketing and management, as well as the operational problems faced by utility management."

Presently under consideration by the Institute are a number of possible studies dealing with selected problems in the electric, gas and communications industries, plus subjects having general applicability to all utility industries. Some of these include standards for minimum rate regulation, and the development of a system of incentive rewards for superior performance by individual utilities. The latter project would involve an allowance in the rate of return as a reward for relatively greater records of efficiency and innovation.

While public utility commissions and utilities the nation over are carrying out studies of many of these topics on a limited basis, Trebing says the Institute's contribution can be unique because "we can approach them from a point of academic objectivity, searching for a broad solution in the public interest, and not be out to prove a point or win a case. Too much in the past has been tied to the emotions. Here, the Institute will call the shots, not industry or the local government."

Accompanying the aim of searching out solutions to problems facing utilities is the goal of developing course material for students who want to enter public utility work. "While the

field is not in a total eclipse of academic interest," says Trebing, "there is a general diminishing of concern which can be corrected."

The principal originators of the Institute were: A. H. Aymond, chairman of the board of Consumers Power Company of Jackson, Mich., and M. V. Burlingame, executive vice-president of Natural Gas Pipeline Company of America, Chicago, Ill.

They are on the Institute's executive committee, which also includes: Richard A. Roan, vice-president and counsel, the Columbia Gas System, Inc., New York; Carl A. Ulfers, Jr., assistant vice-president of American Telephone and Telegraph Company, New York; Dr. Robert F. Lanzillotti, chairman of the MSU Department of Economics; Dr. Reed Moyer, MSU Associate Professor of Marketing, and Dr. Harold H. Wein, MSU Professor of Management.

## Isotopes map water flow

Harmless amounts of radioactive isotopes are being used in an experiment at Flaming Gorge Dam in Utah in an effort to perfect a new and more economical method of measuring flow.

The tests by the US Bureau of Reclamation will yield data which is expected to help solve important hydraulic engineering problems including characteristics of water flow under turbulent conditions and the design and efficiency of high-head turbines in hydro facilities.

The experiment involves dispersing small liquid amounts of isotopes into water flowing through a penstock of the 108-Mw dam near Dutch John, Utah. The movement of the radioactive material is traced with calibrated detectors to determine water velocity.

Similar tests under idealized laboratory conditions have indicated water-flow measurements with less than 1% error.

USBR said precise measurement of water flow is necessary to enable reclamation projects to deliver prescribed amounts to municipal and irrigation users and to determine quantities of water to be allocated.

The isotopes are released through an injection device located 90 feet below the water surface in a penstock—the 10-ft dia. steel pipe inside the concrete dam which carries water to the turbine. The materials are mixed with the flowing water and dispersed in the tailwaters below the dam.

Excerpt from "Tomorrow's Regulatory Accountants --  
Micros or Macros?" by Arthur L. Litke, Chief Accountant  
for the Federal Power Commission. Public Utilities  
Fortnightly, February 29, 1968, pp. 16 and 17.  
must be kept firmly in mind if industry is to bene-  
fit from such co-operative efforts.

### **Institute of Public Utilities**

**A**LACK of interest in the study of public utilities has always been apparent in academic circles. A major step forward in remedying this apathy of the educators was the formation of the Institute of Public Utilities by the Graduate School of Business Administration at Michigan State University and twenty-one major utility firms in 1965. Since that time, six more utility firms have joined the institute.

According to Harry M. Trebing, director of the institute, the efforts of the institute are directed toward stimulating new thinking by promoting programs in three areas. First, the institute sponsors research through a system of grants and fellowships to faculty members and doctoral candidates at colleges and universities throughout the nation. Second, it sponsors a series of conferences devoted to topics of current interest in the field of public utilities. Attendance at these conferences is open to members of the regulatory agencies, the academic community, and industry. Third, it endeavors to publish studies and monographs that will be of particular interest to students in the field of public utilities and regulation.

**To date, the institute has made ten grants to faculty members and doctoral candidates at various schools. The subjects range from econometric studies of economies-of-scale in electricity, statistical estimates of cross elasticities of demand between natural gas and alternative energy sources, etc., to more qualitative studies, such as an evaluation of the adequacy of state regulatory agencies. Since the institute is relatively new, most of these grants cover research currently in progress. Upon completion the monographs will be considered for publication by the institute.**

With respect to the program of conferences, the institute has held a conference devoted to inducements for superior performance under regulation. The feature papers were presented by noted academic economists, and covered such problems as measurements of productivity, the impact of the regulatory process, the possibility of promoting greater competition, and utility pricing practices. The papers from this conference are currently being prepared for publication. The institute's next conference is scheduled for April, 1968, and will be devoted to new developments in the measurement and definition of the rate of return.