## TRANSPORTATION INSTITUTE LECTURES

ONE of the projects of the National Transportation Institute has been made an actuality by the starting of the institute's lecture course on transportation. The course is to be given by leading educators at colleges and universities throughout the country. The program was inaugurated by the giving of the first lecture at Fairmount College, Wichita, Kans., by Carleton B. Hutchings, secretary of the institute. The second lecture at Fairmount College was by Professor Arthur H. Blanchard, professor of highway engineering and highway transport at the University of Michigan. The third lecture at Fairmount was by Professor Charles L. Raper, dean of the College of Business Administration of Syracuse University.

These short courses of lectures are scheduled already at sixteen colleges and universities in the Middle West, and are being arranged at other institutions. Colleges that have arranged for lecture courses include: Fairmount College, Wichita, Kans.; Ottawa University, Ottawa, Kans.; Kansas Agricultural College, Manhattan, Kans.; Bethany College, Lindsborg, Kans.; Cornell College, Mt. Vernon, Ia.; Coe College, Cedar Rapids, Ia.; Simpson College, Indianola, Ia.; Grinnell College, Grinnell, Ia.; Penn College, Oskaloosa, Ia.; University of Detroit, Detroit, Mich.; Albion College, Albion, Mich.; Hillsdale College, Hillsdale, Mich.; Kalamazoo College, Kalamazoo, Mich.; Adrian College, Adrian, Mich.; Alma College, Alma, Mich.

University professors of transportation and nationally known authorities on economics have joined with the institute to give the courses. Those already engaged in the work, besides Professor Blanchard and Professor Raper, include: Professor Frank H. Dixon, professor of economics and social institutions, Princeton University; Professor G. W. Dyer, professor of sociology, Vanderbilt University, Nashville, Tenn.; Dr. David Friday, director of research, National Transportation Institute, former president Michigan Agricultural College; Professor Emory R. Johnson, professor of transportation, University of Pennsylvania; Professor H. G. Moulton, director, Institute of Economics, Washington, D. C.; Professor C. O. Ruggles, professor of transportation and public utilities. Ohio State University; Professor T. W. Van Metre, professor of transportation, Columbia University, and Professor Harold Whitehead, Boston University.

## POWER SURVEY OF PENNSYLVANIA

As a commission from Governor Gifford Pinchot a power survey of the state of Pennsylvania has been' instituted by the commercial engineering department of the Carnegie Institute of Technology. Dr. W. F. Rittman, head of the department, and Professor Sumner B. Ely are making the survey under the directorship of Morris L. Cooke, of Philadelphia.

The purpose of the study is to determine the approximate consumption of horse power necessary to operate Pennsylvania industries over a given period of future years. In order to make such an estimate possible, the engineers of the Carnegie Institute of Technology have been asked to survey the total consumption of power used in the state industries in the past twenty years.

An important possibility coming from the survey concerns the conservation of power and energy in the operation of the state industries. The need of power conservation, either through drastic curtailment of energy or by methods of distribution to the points most needed, is receiving serious consideration by the U. S. government, and by many state engineering departments. In Pennsylvania, power conservation is considered to be even more serious than elsewhere because of the tremendous consumption of energy in the Pittsburgh District.

Because of the relative importance of the state survey, Dr. Rittman and Professor Ely have been assured of the utmost cooperation by engineers and heads of industries throughout the commonwealth. They have completed a power survey of the Pittsburgh District upon their own initiative, and will have the information derived from this study at their disposal. It is planned to complete the survey by the end of summer of 1924.

Governor Pinchot's faith in the possibilities of a power survey of the state is expressed in the following statement:

In an advancing social order, power must be both cheap and plentiful. Therefore every possible economy must be practiced. This implies the conception of a state-wide (and ultimately a nation-wide) reservoir or pool of power into which we may pour energy from whatever source, and from which storage we may take out energy to meet widely diversified scattered needs.

Giant power means cutting out waste. The burning of raw coal in power plants and on our railroads has come to be recognized as waste, involving as it does the loss of by-products, such as ammonia, needed for fertilizer on the farm; tar for road-building, and other hydrocarbons useful as dyestuffs and otherwise in the industries. If these economies can be realized through building large scale by-product distillation and power plants at the mines, it will mean cheaper power because of the reduction in the cost of fuel, which to-day constitutes upward of three quarters of the whole cost of steamdeveloped electric current. Such giant power plants will accomplish the further economy of utilizing the coal near the mines, and thereby releasing all facilities for other purposes.