

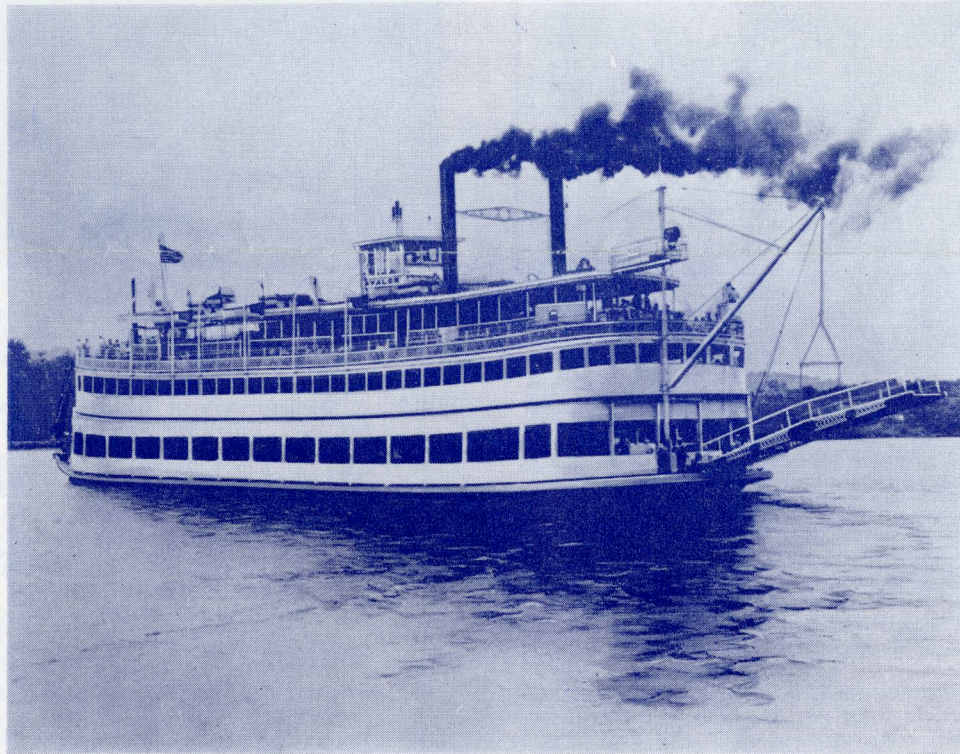


EAST CENTRAL DISTRICT MEETING

May 13 - 15, 1958

Huntington, West Virginia

Headquarters
Prichard Hotel
Huntington, West Virginia



Steamer Avalon leaving Huntington, West Virginia

Huntington, W. Va. is the site of the AIEE East Central District 11 Meeting May 13-15, 1958.

Located in the Central Ohio Valley, Huntington serves as a trading center for the West Virginia-Ohio-Kentucky Tri-State Area. It is situated in the center of a rapidly expanding industrial section and is a major railway center and river port. The City is noted for its wide thoroughfares, well planned parks, and beautiful residential areas.

The Technical Program will offer a wide variety of papers of interest to members from all fields. A few subjects to be covered are A.C. Distribution for Underground Mining, Cathodic Protection, High Voltage Transmission, Induction Heating, Safety, and Computers. In addition, a full program of inspection trips is planned. Among these is a tour of the Ravenswood Works of Kaiser Aluminum & Chemical Corporation, and a visit to one of the world's largest steam generating stations at Kyger Creek, near Gallipolis, Ohio. The Program also features a full calendar of events for the ladies, who will enjoy a complete program of social events highlighted by the Early-Bird Reception, Dinner, and a truly unique moonlight cruise on the Ohio River.

ENTERTAINMENT: Monday, May 12, 8 P.M. Early-Bird Reception, Frederick Hotel. This will be a social event for all early arrivals to the Meeting. Light refreshments will be served without charge.

GENERAL SESSION LUNCHEON: The General Session Luncheon will convene in the Georgian Terrace Room of the Frederick Hotel at 11:30 A.M., Tuesday, May 13, with John Reeves of Westinghouse Electric Corporation presiding. The Address of Welcome will be given by Mayor Frankel of Huntington, and J. K. Hodnette of Westinghouse Electric Corporation will present the keynote talk on "Today's Challenge to Engineering Initiative." This luncheon will be open to all members, their wives and guests. Tickets will be \$2.75 per person.

Mr. Hodnette is Executive Vice President and a member of the Board of Directors and acts as deputy to the president in supervising the operation of the company's atomic power, consumer, general and apparatus product groups. He is well known in the transformer field and one of his outstanding achievements was the development of the completely self-protected transformer.

Mr. Hodnette has been a member of AIEE since 1925 and holds the grade of Fellow. In 1957 he was awarded the AIEE Edison Medal for significant contributions to the electrical industry through his work in the transformer apparatus field.

Tuesday, May 13, 6 P.M. Informal Cocktail Party and Dinner, Prichard Hotel. The Dinner will be served in the Ballroom with Hugh D. Stillman, Huntington Division Manager of Appalachian Electric Power Company, presiding as Toastmaster. Following the Dinner there will be a program of entertainment to which all members, their wives and guests are welcome. Tickets will be \$4.00 per person.

Wednesday, May 14, 12 Noon Luncheon, Prichard Hotel. The Portsmouth (Ohio) Subsection of AIEE will sponsor this luncheon, which is open to all members, their wives and guests. J. K. Boughton, Supt. of Electrical and Instrument Maintenance, Goodyear Atomic Corporation, Portsmouth, Ohio, will speak on the "Portsmouth Atomic Story." Tickets will be \$2.75 per person.

Wednesday, May 14, 7:30 P.M. Ohio River Cruise on the Steamer Avalon. The Steamer Avalon, once a proud Mississippi River Packet, was converted to a modern excursion boat and is the only large excursion steamer on the river today. It is a twin-stacked sternwheeler, with a capacity of 1370. There are four decks on which to stroll, or sit and relax and view cities along the Ohio River. The Marine Ballroom Deck features an eight-piece orchestra who will play for this trip. The Community Players will present an old-fashioned showboat drama, "Curse You Jack Dalton." Door prizes will be given and the dress is strictly informal. Tickets will be \$2.00 per person and \$3.00 per couple. *Continued on page 4*

EAST CENTRAL DISTRICT MEETING - PROGRAM - Huntington, West Virginia, May 13 - 15, 1958

ADVANCE COPIES OF PAPERS

Members may obtain preprints of numbered papers at the uniform price of 40c each (80c each to nonmembers), by sending enclosed order form and remittance to the AIEE Order Department, 33 West 39th Street, New York 18, N. Y. Mail orders (particularly from out-of-town members) are advisable, inasmuch as an adequate supply of each paper at the meeting cannot be assured. Coupon books in \$10 denominations are available for those who wish to avoid remittance by check or otherwise. The Transactions Papers will also be published in the bimonthly publications.

Note: Unnumbered District Papers (DP.*) may be available at or after the meeting, if copies are provided by the author. They are not intended for publication in the Transactions and are not presently scheduled for reproduction in any form by the Institute.

Note: The TRANSACTIONS papers will be printed in the bimonthly publications as follows:

- I COMMUNICATIONS AND ELECTRONICS.
- II APPLICATIONS AND INDUSTRY.
- III POWER APPARATUS AND SYSTEMS.

Tuesday, May 13

11:30 A.M.—General Session Luncheon

Georgian Terrace—Frederick Hotel
Chairman: JOHN H. REEVES

Address of Welcome: Honorable Harold L. Frankel, Mayor, City of Huntington, West Virginia.

DP.* Address: "Today's Challenge to Engineering Initiative," John K. Hodnette, Executive Vice-President, Westinghouse Electric Corp.

2:00 P.M.—High Voltage Transmission

Ball Room—Prichard Hotel
Chairman: H. D. STILLMAN

DP.* Arrestor Standards and Development—Their Mutual Effect in Providing Lightning Protection, G. W. Cooper, Line Material Co.

DP.* General Design and Construction of Ohio Valley Electric Co. 345 KV Lines, R. L. Retallack, American Gas and Electric Corp.

57-1087. 1956 Lightning Field Investigation on the Ohio Valley Electric Co. 345 KV System, J. G. Anderson, General Electric Co.

57-1079. Factors Affecting the Lightning Performance of Transmission Lines, J. H. Hagenguth and J. G. Anderson, General Electric Co.

2:00 P.M.—Industrial Lighting

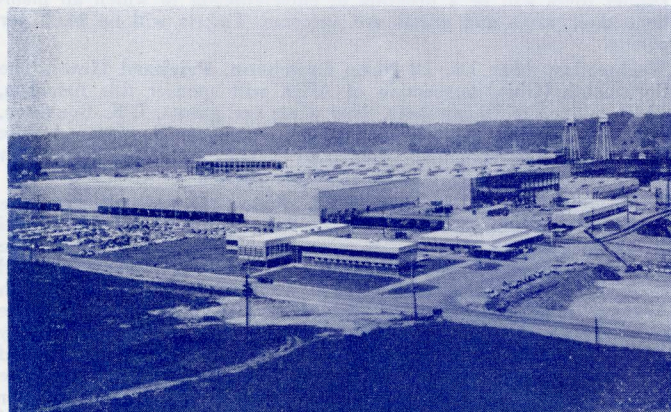
Room 208-9—Prichard Hotel
Chairman: GEORGE D. WILHOIT

DP.* Fundamental Principles of Industrial Lighting, H. L. Logan, Holopane Co., Inc.

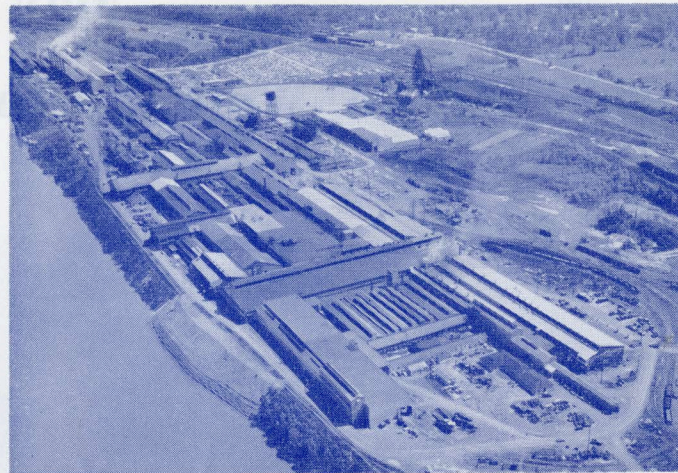
DP.* Application of Super-Hi Lamps and High Frequency to Interior Lighting, W. H. Johnson, Westinghouse Electric Corp.

DP.* Techniques of the Application of Mercury Lighting in Industrial Areas, C. M. Crysler, General Electric Co.

DP.* Tailoring Fluorescent Sources to Industrial Lighting Needs, T. C. Sargent, Sylvania Electric Products, Inc.



Ravenswood Works, Kaiser Aluminum & Chemical Corp.



Ashland Works, Armco Steel Corporation Elam

2:00 P.M.—Cathodic Protection

Ball Room—Governor Cabell Hotel
Chairman: L. S. VAN DELINDER

DP.* Cathodic Protection of Underground Structures, B. Husock, HARCO Corp.

DP.* A Demonstration of Electro-Chemical Corrosion Reactions, Col. G. C. Cox, Consulting Engineer.

Wednesday, May 14

9:30 A.M.—Induction Heating

Room 208-9—Prichard Hotel
Chairman: N. A. BAKER

DP.* Power Sources for Induction Heating, C. F. Schwan and A. J. Humphrey, Reliance Electric & Eng. Co.

DP.* Latest Developments in the Use of Induction Heating, Dr. H. B. Osborn, Jr., TOCCO Div. of Ohio Crankshaft Co.

DP.* Dielectric Heating—Progress in Profits through Losses, Carl R. Looper, Allis-Chalmers Mfg. Co.

DP.* Design of Inductors for Induction Heating, C. A. Tudbury, New Rochelle Tool Corp.

9:30 A.M.—A.C. Distribution in Underground Mines

Ball Room—Prichard Hotel
Chairman: A. C. MUIR

DP.* Why Consider A.C. Mining Underground, R. C. Berger, General Electric Co.

DP58-716. Power Distribution for A.C. Mines, A. C. Lordi, Westinghouse Electric Corp.

DP.* Voltage Regulation in A.C. Mining, J. A. Dunn, Island Creek Coal Co.

DP.* National and State Electrical Requirements for A.C. Mining, C. Brown, U. S. Bureau of Mines and L. H. Harrison, U. S. Dept. of Interior.

9:30 A.M.—Motors

Ball Room—Governor Cabell Hotel
Chairman: JAMES G. HAWES

DP.* Silicone Insulation for Mine Motors, Lee A. Teichthesen, Dow Corning Corp.

DP.* Motor Bearings and Lubrication, J. E. Youch, Wagner Electric Corp.

DP.* Overload Protection for Electric Motors, M. R. Brice, Cutler Hammer, Inc.

2:00 P.M.—Application Of Motors In Industry

Room 208-9—Prichard Hotel
Chairman: DARWIN A. ENSIGN

DP.* Selection of A.C. Motors by Torque Requirements, C. H. Buchanan, General Electric Co.

DP.* Selection and Application of Motors in Industry—Chemical, Mining and Standard Motors, R. G. Marsh, Allis-Chalmers Mfg Co.

DP.* Reversing Electronic Drive for Automatic Feed Applications, B. B. Finigan, Reliance Electric & Eng. Co.

2:00 P.M.—A.C. Distribution In Underground Mines

Ball Room—Prichard Hotel
Chairman: D. E. HAMILTON

DP.* Operation of an A.C. Mine, C. L. Sarff, Hanna Coal Co., Division Pittsburgh Consolidated Coal Co.

DP.* Operation of an A.C. Mine, Chester Conrad, Consolidated Coal Division Pittsburgh Consolidated Coal Co.

DP.* Operation of A.C. Mines, W. Painter, Joy Mfg. Co.
DP58-714. A.C. Powered Mining Machines, R. M. Buckeridge, Goodman Mfg. Co.

2:00 P.M.—Communications

Ball Room—Governor Cabell Hotel
Chairman: A. C. PORTER

DP.* A PBX Telephone Switchboard for Dispatching Service, F. W. Treptow, Bell Telephone Laboratories.

DP.* New Electronic Techniques in Communication, P. W. Sinsel, Chesapeake and Potomac Telephone Co.

DP.* Some Features of Data Transmission, R. M. Beer, Chesapeake and Potomac Telephone Co.

2:00 P.M.—Telemetering Systems

Mezzanine—Governor Cabell Hotel
Chairman: RONALD HIVELEY

DP.* Today's Industrial Telemetering Systems, Herman Wittenberg, Control Corp.

DP.* A Reverse Application of Storage Type Telemetering, Edgar W. Dennis, Cincinnati Gas & Electric Co.

DP.* Telemetering KWH for use in Tie Line Load Regulation, Arthur L. Hayley, Jr., Louisville Gas & Electric Co.

Thursday, May 15

9:30 A.M.—The Coal Industry

Room 208-9—Prichard Hotel
Chairman: J. C. NORTON

DP.* Underground Lighting, Today and Tomorrow, R. E. Havener and D. A. Green, Mine Safety Appliance Co.

DP.* Application of Electronics in Coal Mining, C. H. Reynolds, Stromberg-Carlson Co.

DP.* Accelerated Testing of Mining Machine Cable, W. G. Dahlstrom and A. L. Duna, American Steel & Wire Div.

9:30 A.M.—Safety

Ball Room—Governor Cabell Hotel
Chairman: JACK MILLER

DP.* Some Aspects of Safety in the use of Electrical Equipment in Coal Mines, L. H. Harrison, U. S. Dept. of Interior

DP.* An Evaluation of Safety Performance, W. H. Brady, Jr., E. I. DuPont de Nemours & Co.

58-715. New Data on Resuscitation, Dr. Peter Safar, Baltimore City III. Hospitals.

DP.* Electrical Shock and its Effect on the Human Body, P. E. Hilliard, Appalachian Electric Power Co.

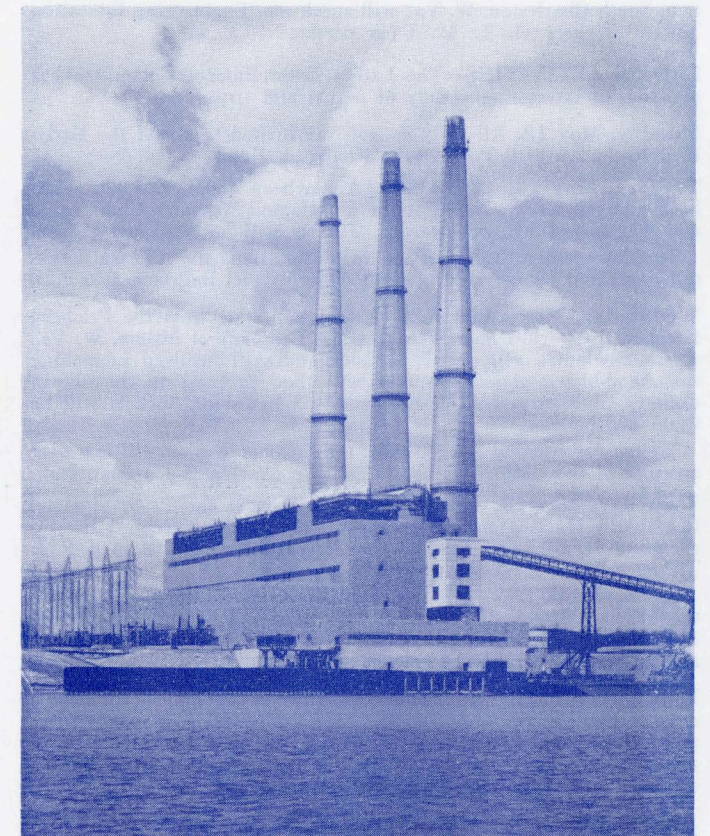
9:30 A.M.—Distribution Of Power

Ball Room—Prichard Hotel
Chairman: S. R. PRITCHARD

DP.* Application of Distribution Overcurrent Protection on A. G. & E. System, T. J. Meler, American Gas and Electric Service Corp.



Chesapeake and Ohio Railway's Car Location Information Center



OVEC, Kyger Creek Plant

DP.* Load Switching's Future—Unlimited, Jack B. Castle, S and C Electric Co.

DP.* Bus Plus Supplementary Regulation Offers Economics over Individual Feeder Regulation, H. E. Lokay, Westinghouse Electric Corp.

2:00 P.M.—Power Cables and Connectors

Ball Room—Prichard Hotel
Chairman: H. H. KINCAID

DP.* Recent Developments in High Density Polyethylene Insulating Materials, B. H. Krevsky, Bakelite Company.

DP.* Aluminum vs. Copper for Industrial Cable Applications, J. W. St. Andre and H. Esch, Kaiser Aluminum & Chemical Corp.

DP58-713. Design of Aluminum Connectors, Morris Brenner, Penn-Union Electric Corp.

DP58-717. A New ACSR Splicing Method, E. S. Raila, Burndy Corp.

2:00 P.M.—Computer Applications

Ball Room—Governor Cabell Hotel
Chairman: N. F. EICHENBERGER

DP.* Economic Load Dispatching with Computers, R. E. Gilbreath, Westinghouse Electric Corp.

DP.* Engineers, Computers, and Time, J. S. Fouch, International Business Machines Corp.

DP.* Application of Digital Computers to Cooling Tower Problems, R. W. Gausmann, Indianapolis Power & Light Co.

DP.* Application of Digital Computers to System Planning Problems, A. F. Gabrielle and G. W. Stagg, American Gas & Electric Corp.

2:00 P.M.—Voltage Stabilization

Room 208-9—Prichard Hotel
Chairman: HAROLD AUSTIN

DP.* Solving Voltage Problems in Industrial Plants, B. G. Bailey, Allis-Chalmers Mfg. Co.

DP.* Power Supply for Automatic Processing—The Voltage Dip Problem, C. E. Quick, The Detroit Edison Co.

DP.* Switching Motors with Capacitors, G. W. Walsh, General Electric Corp.

Thursday, May 15, 12 Noon Luncheon, Prichard Hotel. The West Virginia Section of AIEE will sponsor this luncheon, which is open to all members, their wives and guests. Dr. R. H. Crist, Director of Physical Processes Department, Union Carbide Chemical Corporation, South Charleston, W. Va., will speak on "Engineering Education Today." Tickets will be \$2.75 per person.

LADIES ACTIVITIES: The Ladies Entertainment Committee has planned an interesting variety of events and trips.

Monday, May 12. All early arrivals are invited to attend the Early-Bird Reception at 8 P.M. at the Frederick Hotel.

Tuesday, May 13, 12:30 P.M. A luncheon and bridge party has been planned for the ladies at the Huntington Woman's Club. Table and door prizes will be awarded. Tickets will be \$1.75 per person.

Tuesday evening the ladies are invited to attend the Informal Cocktail Party and Dinner held in the Prichard Hotel Ballroom at 6 P.M.

Wednesday, May 14, 9 A.M. A tour will start from the Prichard Hotel to the world-famous Blenko Glass Company at Milton, W. Va., where the ladies will see the artistry and skill involved in making this hand-blown glass. The tour will then progress to the Guyan Country Club for a 1 P.M. luncheon and hat show. Tickets will be \$3.00 per person.

Wednesday evening at 7:30 P.M. the Steamer Avalon will leave for a cruise of the Ohio River. There will be dancing and a floor show.

Thursday, May 15, 1 P.M. A tour will leave the Prichard Hotel to visit the Huntington Art Galleries, located in the scenic hills surrounding Huntington. Tea will be served there from 2 to 4 P.M. Tickets will be \$1.00 per person.

A Hospitality Room will be available each day for the ladies at the Prichard Hotel. Refreshments will be served continuously. Members of the Ladies Committee will be on hand at all times to assist and to help each other become acquainted.

INSPECTION TRIPS: These trips have been planned to show a cross-section of the industry in the Central Ohio Valley. Please make reservations on the enclosed card, in order that adequate transportation can be provided. Tickets for each of these trips will be available at the Registration Desk.

Armco Steel Corp., Tuesday, May 13, 1 P.M. The Ashland, Kentucky, Works of ARMCO Steel Corp. has an 80 inch hot strip mill. The first continuous rolling mill in the country with the capacity of 150,000 tons per month and will roll a 72 inch finished strip down to 20 gauge on the six-strand, 4-high finishing train. Other facilities are three blast furnaces, eight open hearth furnaces, a 54 inch reversing cold mill, and two continuous coating lines. The plant covers 498 acres and uses as much electricity and twenty times as much water as the entire City of Ashland, Ky., with a population of approximately 35,000. Tickets will be \$1.25 per person.

Huntington Publishing Co., Tuesday, May 13, 1:45 P.M. The new installation of the most up-to-date newspaper printing machinery available has a capacity of fifty thousand 64-page newspapers per hour.

Other points of interest in press operation will include a color printing device, new high speed chemical engraving machinery, safety devices, and machinery protective devices, and the interesting operation of mechanical handling of the printed newspapers in the mailing room.

In the Associated Press office you will see news received and transmitted from the world-wide services, also wire photos received and transmitted.

Kaiser Corporation, Wednesday, May 14, 8 A.M. Near Ravenswood, W. Va., the Kaiser Aluminum & Chemical Corp. is constructing a more than \$200 Million aluminum producing and fabricating facility, which will be one of the largest integrated operations of its type in the nation when completed. The Ravenswood Works is scheduled to go into production in steps, the initial operation began last year. The Reduction Division of this plant has an ultimate capacity to produce more than 440 million pounds of primary aluminum per year by an electrolytic process. Tickets will be \$2.00 per person.

Chesapeake and Ohio Railway Car Location Information Center, Wednesday, May 14, 9:15 A.M. By the use of the IBM and teletype equipment the Car Location Information Center, located in the Chafin Building in Huntington, keeps track of all cars loaded on or moving on the C & O Lines. C & O Traffic Officers in 54 cities throughout the United States and Canada can be notified by the CLIC within two hours after a car has moved on the Lines. In addition, the CLIC maintains a 24-hour, 7-day week tracing service for movement information of cars located on or moving over the C & O Lines. By combining teletype with IBM equipment, manual key punching of approximately 400,000 IBM cards per month is eliminated.

Chesapeake and Ohio Railway Shops, Wednesday, May 14, 10 A.M. The Huntington Shops of the Chesapeake and Ohio Railway exist now as one of the most modern installations of its kind in the world. The operation covers approximately 80 acres.

It is one of the world's largest centers under one roof equipped to handle major repair work on both passenger cars and diesel engines. It is the central location for major mechanical maintenance of C & O rolling stock, other than coal cars. All battery work is performed here, as is all electronic repairs of equipment on rolling stock. The Testing Laboratory and Chemistry Laboratory, among the most modern on any railroad, have accomplished a great deal in testing and research of various materials used in railroading today.

Ohio Valley Electric Corp. Kyger Creek Station, Thursday, May 15, 10:30 A.M. Kyger Creek Plant, operated by the OVEC, is one of two plants supplying the full electric power requirements of the Atomic Energy Commission's 1 1/4 Billion Dollar uranium 235 production plant in Pike County, Ohio.

The Kyger Creek Plant is at Cheshire, near Gallipolis, Ohio, on an 800 acre tract of land. Kyger Creek has five turbo-generating units of 200,000 KW each, totaling an even 1,000,000 KW. Steam entering the high pressure side of the cross-compound turbo-generators is heated to 1,050° F. and 2,000 pounds per square inch pressure. There are five huge boilers, each fired with pulverized coal, which produce 1 1/2 million pounds of steam per hour. The generators which produce power at 15,500 volts, feed directly to transformers that step it up to 330,000 volts for transmission.

The Kyger Creek Plant is the second largest steam-electric plant ever built by private enterprise, and the largest power plant in the State of Ohio. Lunch will be served upon arrival at the Kyger Creek Plant. Tickets will be \$2.50 per person.

WSAZ-TV Studio, Thursday, May 15, 1:15 P.M. WSAZ, Inc. is the representative of NBC Television and Radio for the Central Ohio Valley. The WSAZ facilities include a 5 KW RCA transmitter, a 10 KW RCA transmitter, a 25 KW RCA amplifier, a 1069 foot antenna tower with service elevator, a large assortment of microwave equipment, a 150 KW diesel standby generator, and other miscellaneous items. The trip will cover the complete AM and TV Studios, in which operation of three black and white live cameras, one live color camera, a black and white film chain, and a 3-V color film chain will be seen.

HOTEL RESERVATIONS: Reservations should be made directly with the hotel of your choice. Rooms with bath are available at the following minimum rates and up:

	Single	Double	Twin Beds	Suites
Hotel Prichard	\$5.00	\$ 6.50	\$ 8.50	\$15.00
Hotel Frederick	6.50	9.50	11.00	12.00
Hotel Gov. Cabell	4.50	7.50	7.50	11.00

The Hotel Prichard is the Convention Hotel, the Hotel Frederick is located in the center of the City 2 1/2 blocks from the Hotel Prichard, and the Hotel Governor Cabell is located 2 blocks from the Hotel Prichard.

REGISTRATION: The Registration Desk will open at 4:00 P.M. on Monday, May 12, in the Main Lobby of Meeting Headquarters, the Prichard Hotel. This Desk will be staffed from 7:45 A.M. to 4:45 P.M. on Tuesday, May 13; from 8:00 A.M. to 4:45 P.M. on Wednesday, May 14; and from 8:30 A.M. until 12 Noon Thursday, May 15. Tickets to all events will be available at this Desk.

Registration Fees for Members will be \$3.00 per person and for Non-Members the fee will be \$5.00 per person. Members are encouraged to take advantage of the pre-registration forms which will be sent with the Meeting Notice. For AIEE Student Members and families of members there will be no fee, but registration will be required.

TICKETS: Tickets for all events will be available at the Registration Desk in the Lobby at Prichard Hotel.

COMMITTEE CHAIRMEN: The members of the East Central District Meeting Committee are: P. C. Kelsey, General Chairman; W. R. Wagner, Vice Chairman; R. D. Crippen, Secretary; A. R. Neal, Jr., Boat Trip; J. H. Reeves, Inspection Trip; R. W. Hinshaw, Registration; H. C. Willey, Technical Papers; Carl Latta, Hotel; H. P. Hagaman, Jr., Student; Jack Steelman, Jr., Dinner and Luncheons; Mrs. P. C. Kelsey, Ladies; E. B. Ellerbe, Finance; and M. A. Fotos, Jr., Publicity.

Issued by

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
33 West 39th Street, New York 18, N. Y.

PRINTED IN U.S.A.