



NORTH EASTERN DISTRICT MEETING

May 2 - 4, 1956

Rochester, N. Y.

Headquarters

Sheraton Hotel



Rochester, New York

At 10:30 A.M. on Wednesday, May 2, 1956, the North Eastern District Meeting will open at the Sheraton Hotel in Rochester, New York. This opening session will be a general meeting at which Mr. Alexander M. Beebee, President of Rochester Gas and Electric Corporation, will be the principal speaker. Those attending will be welcomed to Rochester by the Honorable Peter Barry, Mayor, and the delegates will be welcomed on behalf of A.I.E.E. by Mr. M. D. Hooven, Institute President.

Rochester, the "Flower City," should be in full bloom to welcome its visitors during the month of May. Its numerous parks and many home gardens come into full flower at this time. Of particular interest should be its Highland Park where a little later in the month Rochester's well-known Lilac Festival takes place.

A well-rounded technical program has been planned, as well as numerous inspection trips through some of Rochester's major industrial plants. The social program will be complete in every respect. The morning of May 3rd will be devoted to the district student prize paper contest.

TECHNICAL SESSIONS

A total of 13 technical sessions are scheduled after the general session. They will cover such diversified subjects as Instrumentation, Insulators, and Insulation, Electronics, Communication, Transformers, Industrial Control, Transistors and Semi-conductors, and Illumination.

OPENING GENERAL SESSION

Alexander M. Beebee, President of the Rochester Gas and Electric Corporation, will deliver the principal address at the Opening General Session on Wednesday, May 4, at 10:30 A.M. in the hotel ballroom. His topic will be "Public Vs. Private Power—Which is Right." The Honorable Peter Barry, Mayor of Rochester, will welcome attending members to Rochester and Mr. M. D. Hooven, Institute President, will open the session.

SMORGASBORD

The dinner planned for Wednesday evening will be a smorgasbord in the hotel ballroom; following this, arrangements have been made for all members and their wives, who wish, to attend the American Bowling Congress—1956 Championships—at the Rochester Community War Memorial Building. Bus transportation will be provided.

Tickets costing \$5.50 each will be available covering the Smorgasbord, admission to the Bowling Championships, and transportation.

For those not wishing to attend the Bowling Championships, tickets will be available for the Smorgasbord for \$4.50 each.

DINNER DANCE

The outstanding social event of the Meeting will be an informal dinner-dance to be held in the hotel ballroom on

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AIEE NORTH EASTERN DISTRICT MEETING — PROGRAM — Rochester, N. Y., May 2-4 1956

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.

Wednesday, May 2

10:30 A.M.—General Session

2:00 P.M.—Insulators and Insulation

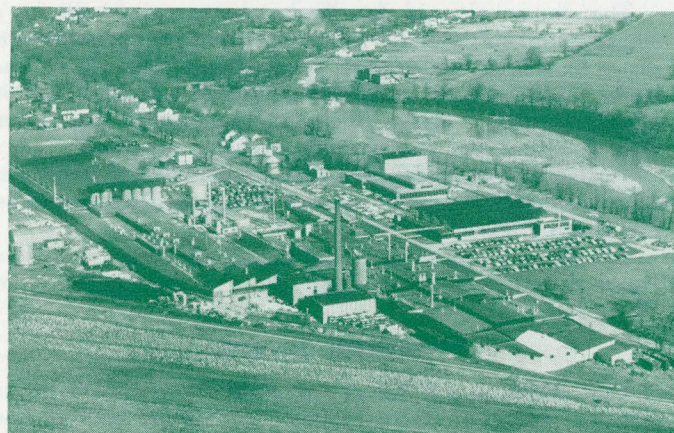
Bamboo Room
BRENT MILLS, Presiding

- DP.* Silco-Flex-New Insulation System for Electrical Rotating Equipment. J. Kuehlthian, Allis-Chalmers Mfg. Company.
- DP.* Corona Studies—In Relation to Insulation. T. W. Liao, General Electric Company.
- DP.* Recent Developments in Insulator Manufacture. D. Alexander, Victor Insulator Works.
- DP.* The New Lapp High Voltage Laboratory in High Voltage Insulation Design. J. H. Moran, Lapp Insulator Co.

2:00 P.M.—Instrumentation

Victorian Room
PROF. CHARLES DAWSON, Presiding

- DP.* Modern Pneumatic—Servo Control Systems—a demonstration of pneumatic components and basic circuits. G. F. Akins, Eastman Kodak Company.
- DP.* Digital Control System. W. M. Brittain, Westinghouse Electric Corporation.
- DP.* A Sub-Miniature FM Wireless Low Pressure Differential Telemetry System. R. Vosteen-Ossman Associates.
- DP.* Design of Control Systems for Nuclear Reactors. R. N. Brey, Leeds & Northrup.



Lapp Insulator Company, LeRoy, New York

2:00 P.M.—Power Line Equipment

Solarium
W. B. KENYON, Presiding

- DP.* Observation of European Electrical Practices. G. Steeb, Niagara Mohawk Power Corporation.
- DP.* Auxiliary Equipment for Power Transformers. Saul Bennon, Westinghouse Electric Corporation.

Thursday, May 3

9:30 A.M.—Transformers

Victorian Room
H. ESKIN, Presiding

- DP.* Choosing the Power Transformer. L. W. Schoenig, Allis-Chalmers Manufacturing Company.
- DP.* Gas and Moisture Equilibriums in Transformer Oil. R. B. Kaufman, E. J. Shimanski, and K. W. McFadyen, General Electric Company.
- DP.* Magnetization of Transformer Cores During Impulse Testing. M. F. Beavers, J. E. Holcomb, and L. C. Leoni, General Electric Company.
- DP.* Transformers for High Voltage Power Systems. C. W. Miller, Westinghouse Electric Corporation.

9:30 A.M.—Industrial Applications

Solarium
S. P. BARTLES, Presiding

- DP.* Electrical Equipment for Machine Tools. H. L. Lindstrom, Westinghouse Electric Corporation.
- DP.* An Improved Method of Phase Failure Protection of Electric Motors. Dr. W. Kniel, Allen Bradley Co.
- DP.* Current Trends in Modern Vertical Transportation. H. C. Hickock, Westinghouse Electric Corporation.
- DP.* Experience in Operating Industrial Distribution Systems Ungrounded. J. A. Gienger, Eastman Kodak Company.

9:30 A.M.—Wireless Communication

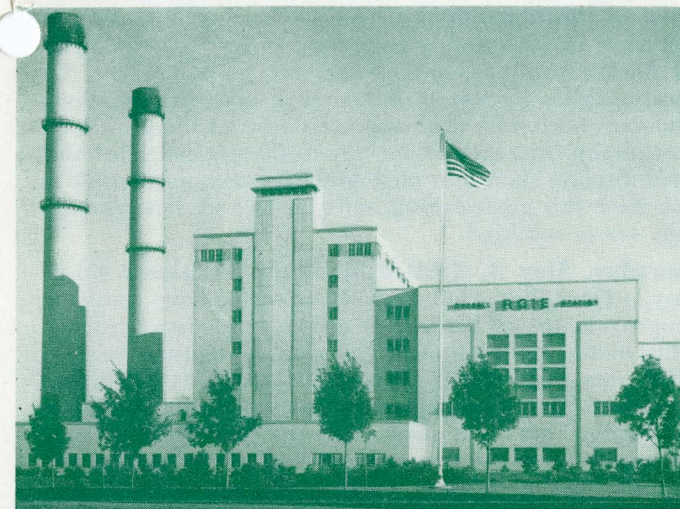
Bamboo Room
DON WILSON, Presiding

- DP.* Design of Electronic Equipment for Radio Interference Reduction. A. L. Albin and H. M. Sachs, Armour Research Foundation.
- DP.* A Device to Detect the Minimum Intelligible Signal in the Presence of Noise. L. M. Harris and J. E. Evans, Stromberg-Carlson Company.
- DP.* Wire Line Termination for Microwave Relay Systems. Mark Jordan, General Electric Co.
- DP.* Printed Microwave Circuits. L. D. Baldwin, Stromberg-Carlson Co.

2:00 P.M.—Wire Communications

Victorian Room
A. V. DASBURG, Presiding

- DP.* From Telegraphic Dot to Binary Bit. I. S. Coggeshall, Western Union Telegraph Company.
- DP56-582. Modern Trends in the Design of Wire Line Carrier Telephone Equipment. B. R. Stachiewicz, Stromberg-Carlson Company.
- DP.* The Synchroscan: A New High Speed Supervisory System for Railway Signaling. H. C. Sibley, General Railway Signal Company.



Russell Station, Rochester, Gas and Electric Company ARTHUR M. UNDERWOOD

- DP.* Power Line Carrier Communication for Electrical Utility and Industry Application. E. A. Sagan, Westinghouse Electric Corporation.

2:00 P.M.—Industrial Electronics and Control

Bamboo Room
JOHN RODGERS, Presiding

- DP.* The IBM Magnetic Drum Data-Processing Machine, Type 650, Engineering and Design Considerations. E. S. Hughs and R. W. Avery, presented by L. R. Smith, International Business Machines Corp.
- DP.* Repeated Stimulus Generator for Psychological Research. C. H. Dawson, University of Rochester.
- DP.* Recent Developments in Electrical Measurements and Control of Relative Humidity. C. E. Ohlheiser, American Instrument Co.
- DP.* Synchronous Differential Speed Regulator. S. P. Bartles, Eastman Kodak Co.

2:00 P.M.—Transmission and Distribution

Solarium
E. K. HUNTINGTON, Presiding

- DP.* Guiding Principles for Use of Horn Gap Air Break and Load Break Switches for Magnetizing and Network Load Currents on Pennsylvania Power and Light Company System. W. R. Smith, Pennsylvania Power and Light Company.
- DP.* Electrical Features of the Upper Raquette River Power Project. W. C. Van Dyke, Niagara Mohawk Power Corporation.
- 56-583. Loss Reduction from Capacitors Installed on Primary Feeders. N. M. Neagle and D. R. Samson, General Electric Co.

Friday, May 4

9:30 A.M.—Student Prize Papers

Solarium
C. E. TUITES, Presiding

9:30 A.M.—Ethics in Engineering

Victorian Room
P. T. ELLIOTT, Presiding

A Panel Discussion.

Panel Members

- Carey H. Brown—P. E. (Retired)
Donald E. Garr—General Electric Co.
Harold W. Bibber—Union College

2:00 P.M.—Illumination

Victorian Room
L. TWITCHELL, Presiding

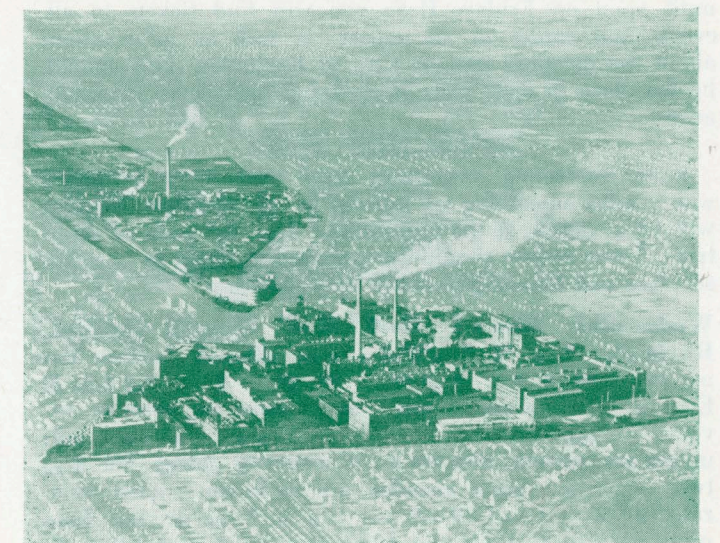
- DP.* High Frequency Operation of Fluorescent Lamps. A. H. Russell, Nela Park, General Electric Company.
- DP.* Trends in Fluorescent Lighting—Including Comments on Electroluminescence. Dr. E. F. Lowry, Sylvania Electric Products.
- DP.* Seeing Light and Color. R. M. Evans, Eastman Kodak Company.

2:00 P.M.—Transistors and Semi-Conductors

Bamboo Room
L. C. HOLMES, Presiding

- 56-584. The Ferro-Resonant Trigger Pair: Analysis and Design. C. F. Spitzer, General Electric Company.
- DP.* Semi-Conductor Devices. Dr. R. L. Bright, Westinghouse Electric Corp.
- 56-585. The Symmetrical Transistor as a Bilateral Switching Element. R. B. Trousdale, Stromberg-Carlson Co.
- DP.* A High Gain Transistorized Video Amplifier. A. T. Brennan, Stromberg-Carlson Co.
- 56-119. An Analysis and Design of the Ferroelectric Resonant Trigger Pair. G. E. Gremer, United States Naval Guided Missile School. Re-presented for discussion only.

* District Paper



Kodak Park Works, Eastman Kodak Company

Thursday, May 3rd, from 7:30 P.M. to 12:30 A.M. A well-known local band will furnish the music for dancing and music during dinner will be supplied by students from the Eastman School of Music.

A cocktail hour will precede the dinner-dance. It will be held in the Victorian Room of the hotel and will start at 6:30 P.M.

Price of the dinner-dance tickets (includes cocktail hour) will be \$6.00 per person.

LADIES EVENTS

Ladies who attend as guests will have a varied and interesting schedule. A daily morning coffee hour will be held Wednesday, Thursday, and Friday mornings from 9:00 to 10:30 A.M. in the Sagamore Room of the hotel. The ladies will be free to shop or otherwise enjoy themselves from 10:30 A.M. until 2:00 P.M. on Wednesday and after 10:30 A.M. on Friday.

On Wednesday afternoon at 2:00 P.M. they will visit "The Eastman House," considered the world's greatest photographic museum. (See information on "The Eastman House" under inspection trips.)

On Thursday at 1:00 P.M. there will be a luncheon and bridge party at Monroe Golf Club. The tickets for this luncheon will be \$2.50 each. Transportation to and from the Club will be provided in private cars by the local ladies committee.

The ladies are invited to take part in the Smorgasbord on Wednesday evening and to attend the American Bowling Congress—1956 Championships—with their husbands. They are also invited to attend the cocktail hour and dinner-dance on Thursday evening.

HOTEL RESERVATIONS

Rooms have been arranged for all members and guests at the headquarters hotel, the Sheraton. All members should make their reservations directly with the hotel. Hotel reservation cards will be included in the regular meeting mailing from headquarters.

Prices are as follows:

Single with bath	\$ 6.85-\$11.85
Double with bath	10.35- 13.35
Twin-bed with bath	12.85- 15.85
Suites (one to four persons)	20.85- 47.55

REGISTRATION

Registration facilities will be open at 8:00 A.M. on Wednesday, May 2nd, on the Starlight Roof of the Sheraton Hotel. This desk will be staffed from 8:00 A.M. to 5:00 P.M. on Wednesday and Thursday and from 8:00 A.M. until noon on Friday. Here you will find tickets to all events and copies of all papers, as well as information about the meeting and the City of Rochester. This should be the place to meet your friends and make new acquaintances.

INSPECTION TRIPS

Four interesting inspection trips have been arranged which offer something of interest to all members. Tickets will be available at the registration desk for each of these trips. These tickets should be procured as early as possible so plans can be completed for transportation.

Wednesday, May 2, 2:00 P.M., Russell Station, Rochester Gas & Electric Corp.—Russell Station, the newest of the Steam Generation Plants of Rochester Gas & Electric Corp., incorporates many recent engineering advances in high pressure power plant design. The plant will ultimately produce 230,000 kw of electrical power. The first two generation units installed are hydrogen cooled units rated at 40,000 and 50,000 kw. The turbines driving these units operate at 1250 and 1450 psig, 950° and 1000° F. respectively. Pulverized coal is used as fuel. This plant is

modern in all of its features and the second unit has a net plant heat rate of 9625 Btu/kwh. It is designed to blend into the lake front residential area in which it is located.

Thursday, May 3, 9:30 A.M., The George Eastman House of Photography.—This is the home of George Eastman, built in 1905 and is open free, as his memorial. The Old Master paintings he collected are on the walls; the concert organ is played Sundays. Twenty-five spacious rooms are filled with a unique exhibition of the growth of photography from the earliest day to the present time. Animated displays show how photography works, and how it is used. Visit this great exhibit and you will see how photography serves mankind.

Thursday, May 3, 2:00 P.M., Lapp Insulator Company.—The LeRoy, New York, Plant of the Lapp Insulator Company is one of the largest and most modern insulator plants in the United States. The plant is unusual because of the very large variety of pieces that are constantly in production. They manufacture not only a conventional line of insulators but have emphasized the production of Line and Station Posts for transmission line and substation use. They also produce a wide variety of special porcelain ranging in size from the very small to some of the largest plastic process bushing porcelains that have ever been produced.

In addition, their new high Voltage Laboratory, containing a 2¼ million volt impulse generator and 1,050,000 volt, 60 cycle transformer set, is the newest of the high voltage laboratories in the United States. The John Lapp High Voltage Insulator Museum is part of the laboratory.

Friday, May 4, 9:30 A.M., Kodak Park Works of Eastman Kodak Company.—This city within a city covers about 570 acres and employs approximately 20,000 people. Its interior production areas are kept spotlessly clean. Many of them are air conditioned and much of the work is done in the dark rooms for most photo products are sensitive to light. More than 2,000 different film items, 300 different kinds of paper, 220 kinds of photographic chemicals and 3,500 synthetic chemicals for research purposes are manufactured here. Seventeen tons of silver are used each week in manufacturing its sensitized photographic goods. About 1/3 of this production is for amateur use. The plant has its own power plant where it produces all its steam and electrical power. Its refrigeration plant produces sufficient refrigeration to supply all the homes in New York City. It uses 22 million gallons of water each day and has its own railroad and fire department. It has a dial telephone system of 5,200 telephones which service its 116 major manufacturing buildings. Its well-known photographic research laboratory employs more than 600 people.

STUDENT ACTIVITIES

On Friday, May 4, the Student District Prize Paper Contest will be held from 9:30 A.M. to noon.

COMMITTEES

The members of the North Eastern District Committee are: C. G. Plomasen—General Chairman; J. A. Gienger—Vice Chairman and Secretary; J. D. Hershey—Advisory; H. A. Brown—Chairman Rochester Section; E. M. Morecock—Meetings and Papers; R. H. Rankin—Registration and Hotel Reservations; C. E. Tuites—Student Meeting; R. A. Whitford—Finance; Mrs. R. A. Whitford—Women's Arrangements; Francis Drake—Publicity; George F. Gleason—Inspection Trips and Transportation; Joel T. Johnson—Treasurer and Budget; R. W. McCarty—Dinner Dance; J. A. Scott—Smorgasbord and ABC Bowling Party; Frank Starr—Meeting Room Arrangements.