

*Another Great*  
**Winter Convention**

WILL BE HELD BY THE

**American Institute of  
Electrical Engineers**

January 27-31, 1930

WITH HEADQUARTERS AT THE

Engineering Societies Building  
New York, N. Y.

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Among the attractive features of the program  
are the following :

**Technical Papers**

Lightning Investigations	Transocean Communication
Power-System Planning	Ultra-Violet Radiation
Lightning Arresters	Dielectrics
Circuit Breakers	Magnetic Units
Electrical Machinery	Induced Voltages
Welding	Cathode-Ray Oscillographs

**Inspection Trips**

Medal Presentation  
Lecture

Smoker  
Dinner-Dance



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# The 1930 Winter Convention

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**M**ANY OF THE newest developments and studies in electrical engineering will be discussed in the technical program of the coming Winter Convention of the Institute. This meeting, which promises to equal in interest any of the splendid Winter Conventions, will be held with headquarters in the Engineering Societies Building, New York, January 27 to 31.

In addition to the fine technical program there will be interesting inspection trips and enjoyable entertainment with a specially arranged program for the ladies.

## Live Technical Subjects

Reports on the field investigations of lighting made during 1929 will form the basis for one of the ten technical sessions.

Power-system planning is the subject of another well arranged symposium.

Lightning arresters and circuit breakers are the topics of another session.

Transoceanic telephone service and submarine telegraphy are covered in a session devoted to communication developments.

Electrical machinery papers will be presented in two sessions, one of particular interest to operating engineers and the other dealing with design.

Dielectrics is a subject to be treated in five papers.

Welding will be discussed in another session and another session will contain papers on magnetic units, induced voltages and cathode-ray oscillographs.

A list of the individual papers to be presented is given elsewhere in this announcement.

## Trips

Some of the most interesting engineering developments in and near New York City will be seen on the inspection trips.

Tickets must be secured in advance for all trips not later than 4.00 p.m. on the afternoon preceding the day in which the trips are to be taken. Tickets may be obtained at the Convention or reservations may be made by mail.

The number of tickets will be limited and all who wish to take trips should register and get tickets at an early date.

Trips which have been tentatively arranged for the afternoon of Wednesday, January 29, are as follows:

Roseland Switching Station, Public Service Company of New Jersey, with possible exhibit of portable laboratory used in checking lightning disturbances and records of data collected.

Fokker Airplane factory.

Demonstrations of equipment at Bell Telephone Laboratories.

Sperry Gyroscope Co.

Air Map Corporation of America.

Short-wave transatlantic telephone transmitting center of the American Telephone & Telegraph Co.

Transatlantic cable terminal—International Telephone & Telegraph Co.

The following daily inspection trips are tentatively planned:

Westinghouse Lighting Institute.

Chrysler Building and Vertical Distribution System.

Network switch exhibit

Lithographing plant of National Process Co.

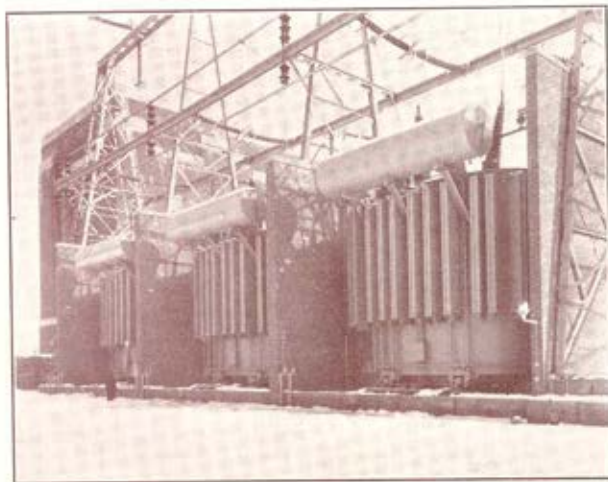
Electrical Testing Laboratories.

Hudson Avenue Generating Station and Research Laboratories of the Brooklyn Edison Company.

East River Generating Station of New York Edison Co.

Hell Gate Generating Station of United Electric Light & Power Co.

Automatic Stations of New York Edison Co.



220,000-volt Transformers at Roseland Switching Station of Public Service Electric & Gas Co.



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## The 1930 Winter Convention

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### PROGRAM

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#### Monday, January 27

- 10.00 a.m. Registration
- 2.00 p.m. Session on Protective Devices
- 8.15 p.m. Joint Session with Illuminating Engineering Society on Ultra Violet Radiation

#### Tuesday, January 28

- 10.00 a.m. Session on Power System Planning
- 2.00 p.m. Session on Selected Subjects
- 6.30 p.m. Smoker with Entertainment

#### Wednesday, January 29

- 10.00 a.m. Session on Lightning Investigations
- 2.00 p.m. Inspection Trips
- 8.30 p.m. Edison Medal Presentation and Lecture

#### Thursday, January 30

- 10.00 a.m. Session on Transoceanic Communication
- 2.00 p.m. Session on Welding
- 2.00 p.m. Session on Dielectrics
- 7.30 p.m. Dinner-Dance

#### Friday, January 31

- 10.00 a.m. Session on Electrical Machinery
- 2.00 p.m. Session on Electrical Machinery

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### Edison Medal Presentation

The Edison Medal will be presented to this year's recipient, Professor Charles F. Scott, in the Engineering Auditorium on the evening of Wednesday, January 29.

#### Lecture

A lecture on a subject of world-wide interest will be given on Wednesday evening, immediately following the presentation of the Edison Medal.

The speaker will be Dr. David M. Robinson, Professor of Archaeology at Johns Hopkins University. He will speak on *Discoveries in Olympus*, describing some of the remains of former civilizations which have been unearthed in upper Greece.

#### Smoker

A buffet dinner and a smoker will be held on Tuesday evening, January 28, in the Engineering Societies Building. Some of the best entertainers in the country will be presented. In order to allow more opportunity for congenial mixing with friends the buffet dinner will be served in advance of the entertainment program. Ample time will be allowed so that the meal may be eaten leisurely. Louis Sherry will serve the dinner. The charge will be \$3.00 for dinner and smoker.

### Ladies' Program

The Ladies' Entertainment Committee is formulating plans of unique interest to the lady guests of the convention. Some outstanding events are given below. These will be supplemented by other possibilities now being investigated to suit the varying desires for a "genuinely good time." A ladies' meeting room will be maintained where information of all kinds will be available.

#### Tuesday, January 28

- 10.00 a.m. Trips to the Westinghouse Lighting Institute and the Homemaking Center.
- 2.00 p.m. Tea at the Engineering Woman's Club.

#### Wednesday, January 29

- 2.00 p.m. Bridge and Tea on board an ocean liner.

#### Thursday, January 30

- A visit to the Roosevelt House where a special cinematographic delineation of the life of Roosevelt will be given.
- 7.00 p.m. Dinner-dance at the Hotel Astor.

### Dinner-Dance

The annual Winter Dinner-Dance will be held as usual at the Hotel Astor on the evening of Thursday, January 30.

No Institute function gives more pleasure than this annual dinner-dance with its combination of good friends, good food, and good music. Tickets will be \$6.00 per person. Reservations may be made for tickets seating eight people.

### Reduced Railroad Rates

Reduced rates for railroad transportation will be available under the certificate plan to members and guests who attend the Convention. Under this plan only half fare need be paid on the return trip over the same route provided 250 certificates are deposited by members at the Registration Desk. The rates apply to all members who attend the Convention and to dependent members of their families.

Each member or guest should obtain a certificate when purchasing his one-way ticket to New York. He should explain to the ticket agent that he wishes the certificate authorized by the passenger associations for the Winter

## The 1930 Winter Convention

Convention of the Institute. If more convenient, the slip accompanying this announcement may be presented to the agent when the certificate is requested.

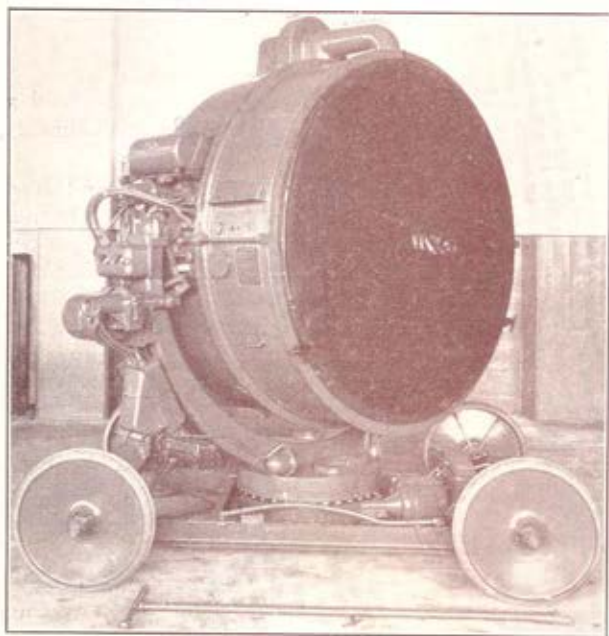
On arriving at the Convention the certificate should be deposited at the Registration Desk. Here it will be held for validation by a railroad representative and if 250 certificates are validated, the validated certificate will later be returned to the owner. By presenting the validated certificate when buying a return ticket only half fare will be charged.

Local ticket agents should be consulted regarding conditions affecting this plan, as it applies only within certain dates depending on the territory.

Everyone whose one-way fare is over 66 cents should get a certificate whether or not he intends to use it. By neglecting to do so he may deprive others of considerable saving.

### Register in Advance

Each member will save time for himself and the committee in charge if he will register by mail using the addressed card which accompanies this announcement.



Sperry 60-in. Anti-aircraft Searchlight

### Hotel Reservations

Reservations for hotel rooms should be made in advance in order to secure satisfactory accommodations. Members should write directly to the hotels which they prefer. Below is a table giving location and rates of some desirable New York hotels.

### Hotel Rates

HOTEL	Without Private Bath		With Private Bath	
	Single Room	Double Room	Single Room	Double Room
Ambassador	.....	.....	\$6.00	\$8.00
31st St. & Park Ave.	.....	.....	\$8.00	\$12.00
Astor	\$3.00	\$5.50	\$4.50	\$7.00
44th St. & Broadway	\$4.00	\$6.00	\$6.00	\$9.00
Belmont	\$4.00	\$6.00	\$6.00	\$9.00
42nd St. & Park Ave.	.....	.....	\$10.00	\$14.00
Biltmore	\$5.00	\$7.00	\$8.00	\$12.00
43rd St. & Madison Ave.	.....	.....	\$10.00	\$15.00
Breslin	\$2.50	\$4.00	\$3.50	\$5.00
1186 Broadway	.....	.....	.....	\$7.00
Collingwood	\$2.50	\$3.50	\$3.50	\$5.00
45 W. 35th St.	\$3.00	\$5.00	\$4.00	\$7.00
Commodore	.....	.....	\$5.00	\$7.00
42nd St. & Lexington Ave.	.....	.....	\$6.00	\$10.00
Great Northern	\$2.00	.....	\$3.50	\$4.50
109-121 W. 36th St.	.....	.....	\$5.00	\$6.00
Knickerbocker	\$3.00	\$4.50	\$3.50	\$5.00
45th St. near Broadway	.....	.....	\$5.00	\$7.00
Latham	\$2.00	\$3.50	\$3.00	\$4.00
29th St. & 5th Ave.	\$2.50	.....	\$3.50	\$6.00
Manger	\$2.50	\$3.50	\$3.50	\$5.00
50th St. & 7th Ave.	.....	.....	\$6.00	\$6.00
McAlpin	\$3.50	\$5.50	\$4.50	\$6.50
34th St. & Broadway	\$4.00	\$6.00	\$8.00	\$10.00
Murray Hill	\$3.00	\$6.00	\$4.00	\$7.00
40th St. & Park Ave.	\$5.00	\$8.00	\$8.00	\$12.00
Pennsylvania	.....	.....	\$4.50	\$6.50
32nd St. & 7th Ave.	.....	.....	\$7.00	\$10.00
Plaza	.....	.....	\$7.00	\$9.00
59th St. & 5th Ave.	.....	.....	\$9.00	\$12.00
Prince George	.....	.....	\$3.00	\$4.00
14 E. 28th St.	.....	.....	\$6.00	\$7.00
Savoy-Plaza	.....	.....	\$6.00	\$9.00
59th St. & 5th Ave.	.....	.....	.....	.....
Shelton	\$3.00	.....	\$4.00	\$6.50
49th St. & Lexington Ave.	\$3.50	.....	\$5.00	\$7.50
Vanderbilt	.....	.....	\$4.50	\$8.00
34th St. & Park Ave.	.....	.....	\$8.00	\$13.00
Wellington	\$2.50	\$3.50	\$3.00	\$5.00
58th St. & 7th Ave.	.....	.....	.....	.....
Wolcott	\$2.00	\$4.00	\$3.00	\$5.00
31st St. & 5th Ave.	\$2.50	.....	\$3.50	\$6.00
Woodstock	\$2.50	\$4.00	\$3.50	\$5.00
127 W. 43rd St.	\$3.00	.....	\$4.50	\$6.00
Woodward	\$2.50	.....	\$3.50	\$5.00
55th St. & Broadway	.....	.....	\$5.00	\$7.00

### Committees

The 1930 Winter Convention Committee is as follows: H. P. Charlesworth, Chairman; J. B. Bassett, S. P. Grace, C. R. Jones, H. A. Kidder, G. L. Knight, E. B. Meyer, and C. E. Stephens.

The chairmen of the subcommittees are, respectively: Entertainment, J. B. Bassett; Inspection Trips, F. Zogbaum; Dinner-Dance, C. R. Jones; Smoker, G. J. Read, and Ladies' Entertainment, Mrs. G. L. Knight.

F. L. HUTCHINSON,  
National Secretary



# TECHNICAL SESSIONS

## Protective Devices

January 27—2.00 p.m.

### Metal-Clad Switchgear at State Line Station

A. M. ROSSMAN  
Sargent & Lundy, Inc.

### Development of the New Autovalve Arrester

J. SLEPIAN, R. TANBERG AND C. E. KRAUSE  
Westinghouse Electric & Mfg. Co.

### Thyrite, A New Material for Lightning Arresters

K. B. McEACHRON  
General Electric Co.

### Extinction of a Long A-c. Arc

J. SLEPIAN  
Westinghouse Electric & Mfg. Co.

### Use of Oil in Arc Rupturing with Special Reference to System Stability

B. P. BAKER AND H. M. WILCOX  
Westinghouse Electric & Mfg. Co.

## Ultra-Violet Radiation

Joint Session with Illuminating Engineering Society

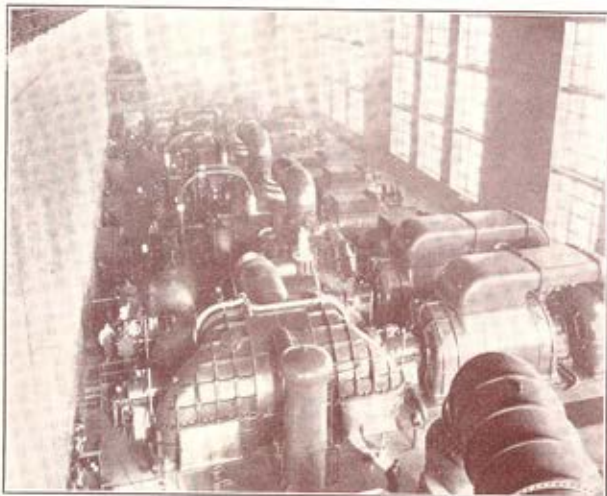
January 27—8.15 p.m.

### Simulating Sunlight

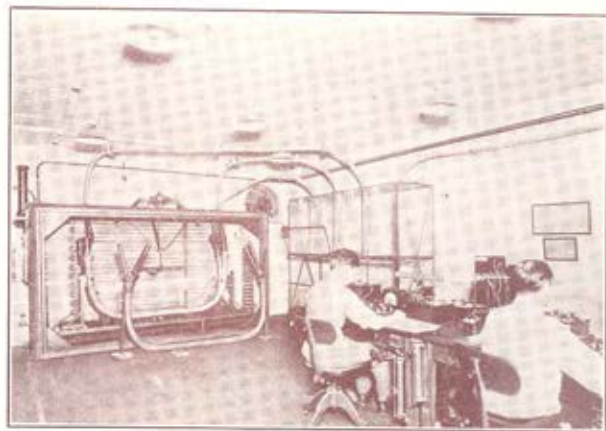
M. LUCKIESH  
National Lamp Works of General Electric Co.

### An Ultra-Violet Light Meter

H. C. RENTSCHLER  
Westinghouse Lamp Co.



600,000 kw. in generators at Hell Gate Station of  
United Electric Light & Power Co.  
160,000-kw. Unit in Foreground



Cable-testing Equipment at Electrical Testing Laboratories

## Power System Planning

January 28—10.00 a.m.

### System Connections and Interconnections in Chicago District

G. M. ARMBRUST AND T. G. LE CLAIR  
Commonwealth Edison Co.

### Fundamental Plan of Power Supply in the Detroit District

S. M. DEAN  
Detroit Edison Co.

### Fundamental Plan of Power Supply in the Philadelphia Area

RAYMOND BAILEY  
Philadelphia Electric Co.

### Turbine-Governor Tests at Colfax Power Station

T. C. PURCELL AND A. P. HAYWARD  
Duquesne Light Co.

### Controlling Power Flow with Phase-Shifting Equipment

W. J. LYMAN  
Duquesne Light Co.

## Selected Subjects

January 28—2.00 p.m.

### The Units of the Magnetic Circuit

A. E. KENNELLY  
Harvard University

### The Calculation of Induced Voltages in Metallic Conductors

H. B. DWIGHT  
Massachusetts Institute of Technology

### Induced Voltage of Electrical Machines

L. V. BEWLEY  
General Electric Co.

### Design and Application of a Cathode-Ray Oscillograph with Norinder Relay

O. ACKERMANN  
Westinghouse Electric & Mfg. Co.

# TECHNICAL SESSIONS—Continued

## Lightning Investigations

January 29—10.00 a.m.

### Cathode-Ray Oscillograph Studies of Lightning on Transmission Lines

J. H. GOX AND EDWARD BECK  
Westinghouse Electric & Mfg. Co.

### Surge Characteristics of Insulators and Gaps

J. J. TOROK  
Westinghouse Electric & Mfg. Co.

### Lightning Voltages on Transmission Lines

R. H. GEORGE  
Purdue University  
J. R. EATON  
Consumers Power Company

### Study of Traveling Waves on Transmission Lines with Artificial Lightning Surges

K. B. McEACHRON AND W. J. RUDGE  
General Electric Co.  
J. G. HEMSTREET  
Consumers Power Co.

### Lightning Investigation on 220-Kv. System of Pennsylvania Power and Light Co.

NICHOLAS N. SMELOFF  
Penn. Power & Light Co.  
A. L. PRICE  
General Electric Co.



Photo by Fairchild Aerial Surveys, Inc.

Short-Wave Transoceanic Telephone Transmitting Station of  
American Telephone & Telegraph Co.

### Lightning Investigation on Ohio Power Co. System

PHILIP SPORN  
American Gas & Elec. Co.  
W. L. LLOYD, Jr.  
General Electric Co.

### Lightning Investigation on Transmission Lines

W. W. LEWIS AND C. M. FOUST  
General Electric Company

In response to the great current interest in lightning investigation, opportunity will be provided for a continuation through the afternoon of the discussion of these papers.

## Transoceanic Communication

January 30—10.00 a.m.

### The Post-War Decade in Submarine Telegraphy

I. S. COGGESHALL  
Western Union Telegraph Co.

### Transoceanic Telephone Service—General Aspects

T. G. MILLER  
American Telephone & Telegraph Co.

### Short-Wave Radio Transoceanic Telephone Circuits

#### (a) Transmission Features of Short-Wave Radio Circuits

RALPH BOWN  
American Telephone & Telegraph Co.

#### (b) Technical Features of the New Short-Wave Radio Station of the Bell System

A. A. OSWALD  
Bell Telephone Laboratories, Inc.

#### (c) Plan and Construction of Short-Wave Radio Systems

F. A. COWAN  
American Telephone & Telegraph Co.

## Welding

January 30—2.00 p.m.

### Cathode Energy of the Iron Arc

G. E. DOAN  
Lehigh Univ.

### Calorimetric Study of the Arc

P. P. ALEXANDER  
General Electric Co.

### Resistance Welding

B. T. MOTTINGER  
Federal Machine & Welder Co.

### Electrically Welded Structures under Dynamic Stress

MORRIS STONE AND J. G. RITTER  
Westinghouse Electric & Mfg. Co.

### Welding with the Carbon Arc

J. C. LINCOLN  
Lincoln Electric Co.



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## TECHNICAL SESSIONS—Continued

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### Dielectrics

January 30—2.00 p.m.

#### Conductivity of Insulating Oils

J. B. WHITEHEAD AND R. H. MARVIN  
Johns Hopkins University

#### Behavior of Dielectrics

R. R. BENEDICT  
University of Wisconsin

#### Three Regions of Dielectric Breakdown

P. H. MOON AND A. S. NORCROSS  
Massachusetts Institute of Technology

#### Ionization Studies in Paper-Insulated Cables—III

C. L. DAWES AND P. H. HUMPHRIES  
Harvard Engineering School

#### High-Voltage Corona in Air

S. K. WALDORF  
Johns Hopkins University

### Electrical Machinery

January 31—10.00 a.m.

#### Loading Transformers by Temperature

V. M. MONTSINGER  
General Electric Co.

#### Recommendations for Safe Loading of Transformers by Temperature

W. M. DANN  
Westinghouse Electric & Mfg. Co.

#### Tap Changing Under Load for Voltage and Phase-Angle Control

H. B. WEST  
Westinghouse Electric & Mfg. Co.

#### Telephone Interference from A-c. Generators Feeding Directly on Line with Neutral Grounded

J. J. SMITH  
General Electric Co.

#### Inversion Currents and Voltages in Autotransformers

A. BOYAJIAN  
General Electric Co.



Model Street at Westinghouse Lighting Institute

### Electrical Machinery

January 31—2.00 p.m.

#### Generalized Theory of Electrical Machinery

GABRIEL KRON  
Lincoln Electric Co.

#### Quiet Induction Motors

L. E. HILDEBRAND  
General Electric Co.

#### Transient Torque-Angle Characteristics of Synchronous Machines

W. V. LYON AND H. E. EDGERTON  
Massachusetts Institute of Technology

#### Starting Performance of Salient-Pole Synchronous Machines

T. M. LINVILLE  
General Electric Co.

#### Ventilation of Revolving-Field Salient-Pole Alternators

C. J. FECHHEIMER  
Westinghouse Electric & Mfg. Co.

#### Synchronous Machines, V, (Three-Phase Short Circuit)

R. E. DOHERTY AND C. A. NICKLE  
General Electric Co.

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