



PACIFIC GENERAL MEETING

September 1-4, 1953

Vancouver, British Columbia

Headquarters:
Hotel Vancouver



Vancouver, British Columbia

Artray Photo

The Pacific General Meeting will be held in Vancouver, British Columbia, September 1-4 inclusive. Vancouver is situated on the shores of the Pacific with a spectacular backdrop of mountains rising five thousand feet from the ocean. The Vancouver Hotel has been chosen for the meeting headquarters and all technical sessions and social functions will be held in this hotel which is jointly operated by the Canadian National and Canadian Pacific Railways.

INSPECTION TRIPS

345 KV Transmission Line from Wahleach to T. Ingle-dow Station: This is one of the first transmission lines to be built in North America at this voltage. This line extends through the fertile Frazer River Valley to the generating station situated on the edge of the mountains.

Wahleach Supervised Automatic Generating Station: This station operates on the highest hydraulic head of any major unit in Canada. It is also the largest unit with vertical shaft impulse waterwheel. This station has been opened just recently and embraces many unique design features of general interest.

Lake Buntzen Automatic Supervised Generating Unit: This is the highest speed umbrella-type generator yet built. This station is reached after a picturesque boat trip through inland waters out of Vancouver.

Dal Grauer Substation: This interesting installation just completed in the heart of Vancouver is notable for its modern exterior design with a plate glass front enabling

passersby to observe the operations of a modern substation. Even the colors are a radical departure from the usual standards.

Oak Ridge Transportation Centre: This is the heart of one of the largest and most modern trolley bus and motor bus transportation centres on the continent. To those interested in the transportation field, many interesting features will be observed.

Forest Products Industry: Wood products is the most important industry in British Columbia and visits will be made to some of the larger sawmills and plywood mills. The electrical and mechanical features of these large operations which reduce six-foot logs to small pieces of lumber in a matter of minutes, is always an eye-opener to visitors from non-forest areas.

Howe Sound Boat Trip: A supervised inspection tour by steamship of two major industries, a large copper mine and a pulp mill, can be made in one day from Vancouver. The boat stops at Britannia Mining and Smelting Co., Ltd., and at Alaska Pine and Cellulose Co., Ltd., mills. A first-hand trip through either of these operations will be available.

Van de Graaf Generator at University of British Columbia: This Van de Graaf Generator has just been installed at the University and may be of interest to some visitors. Other facilities at the University will be open to AIEE delegates.

Mr. T. H. Crosby will be in charge of Inspection Trips.

Continued on page 4

AIEE PACIFIC GENERAL MEETING — PROGRAM — Vancouver, British Columbia, September 1-4, 1953

ADVANCE COPIES OF PAPERS

Members may obtain preprints of numbered papers at the uniform price of 30c each (60c 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 \$9 denominations are available for those who wish to avoid remittance by check or otherwise. Most of the papers ultimately will be published as AIEE Proceedings and in the Transactions. Conference Papers denoted by CP.** are intended for presentation only, and are not available.

Tuesday, September 1

10:00 a.m.—General Session

2:00 p.m.—Relays

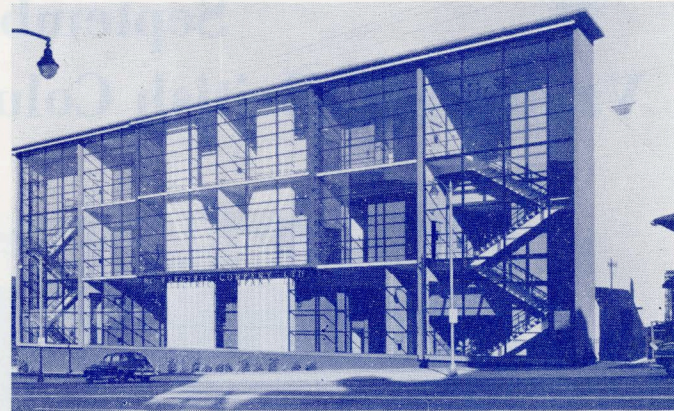
- 53-312. A Simplified Unit for Distance Relaying. A. W. Adams, Bonneville Power Administration and F. R. Bergseth, University of Washington.
- CP.** Limitations of Back-Up Relaying. A. Rohrmayer, Canadian Westinghouse Co., Ltd., and C. G. Mills, British Columbia Electric Co., Ltd.
- 53-314. Characteristics of Split-Phase Currents as a Source of Generator Protection. H. R. Sills and J. L. McKeever, Canadian General Electric Co., Ltd.
- 53-315. Dependable Pilot Wire Relay Operation. M. A. Bostwick, Portland General Electric Co.

2:00 p.m.—General Industry and Radio

- CP.** Development and Operation of Reda Submergible Pumps. Joe Carle, Reda Pump Co.
- 53-316. The Magnetic Amplifier Controlled Log Carriage Drive and The "Basic-Duty-Cycle" of Carriage Performance. H. A. Rose, Westinghouse Electric Corp.
- CP.** 170 MC Radiation Survey for Mobile Coverage of the Bonneville System. D. R. Wilson and D. E. Johanson, Portland, Oregon.
- 53-317. Some Aspects of Joint Use of Wood Pole Lines with Increasing Line Voltages. W. E. Bloecker, American Tel. & Tel. Co. and W. R. Bullard, Ebasco Services, Inc.
- 53-356. The Measurement of Random Monochrome Video Interference. J. M. Barstow and H. N. Christopher, Bell Telephone Labs., New York, N. Y.

2:00 p.m.—Rotating Equipment and Land Transportation

- 53-318. Techniques and Examples of High Voltage D-C Testing of Rotating Machine Windings. C. L. Sidway and B. R. Loxley, Southern California Edison Co.
- CP.** Rating Induction Motors for Reversing Service. T. N. Sakellariou, and E. Zucker, Canadian Westinghouse Co., Ltd.
- 53-320. Calculation of Dynamic Braking Characteristics of Wound Rotor Induction Motors. Paul Cochran, Westinghouse Electric Corp.
- CP.** Progress Report on the General Electric Gas-Turbine Electric Locomotive. J. E. Wilson, General Electric Co.



B. C. Electric's Dal Grauer Substation Lindsay Photo

Wednesday, September 2

9:30 a.m.—Power Generation

- 53-321. Electrical Aspects of Alcan's Kemano-Kitimat Hydro-Electric Power Development. F. L. Lawton, Aluminum Labs., Ltd.
- CP.** Application of the Induction Generator. J. V. Kresser, Westinghouse Electric Corp. and J. R. Downing, Portland General Electric Co.
- 53-322. Automatic Control of Hydroelectric Induction Generators. J. G. Kirwan, Westinghouse Electric Corp. and W. D. Smith, Portland General Electric Co.
- CP.** Tests and Operating Experiences at the Ottawa River Plants of the Hydro-Electric Power Commission of Ontario. J. J. Traill, F. C. Lawson, H. C. Ross and G. B. Tebo, The Hydro-Electric Power Commission of Ontario.

9:30 a.m.—Carrier Current—Microwave

Chairman: S. C. Leyland

Discussion Leader, together with a supporting panel of six specialists, will present a project subcommittee paper on the subject of "Installation and Operating Experience of Microwave for Power Systems." Discussion of this presentation will stimulate a question and answer period covering the various intricate problems that may be involved in the construction, operation and maintenance of microwave applications.

9:30 a.m.—Chemical and Electrochemical

- 53-323. Automatic Control of Gas Turbines for Natural Gas Pipeline Pumping. C. R. Ingemanson, Arne Loft and H. J. Wilt, General Electric Co.
- CP.** Electrical Utilization in the Alberta Oil Industry. G. H. Milligan, Calgary Power Ltd.
- CP.** Regulations Governing Electrical Installations in Oil Fields (Alberta). S. A. B. Kembry, Province of Alberta.

2:00 p.m.—Power Generation

- 53-326. Short-Range Economic Operation of a Combined Thermal and Hydro-Electric Power System. W. G. Chandler, P. L. Dandeno, Hydro-Electric Power Commission of Ontario; A. F. Glimm and L. K. Kirchmayer, General Electric Co.
- 53-327. The Wahleach Hydroelectric Development. T. Ingle-dow and J. H. Steede, British Columbia Electric Co., Ltd.

- 53-328. Experience Gained with the Swedish 400 Kv Power Transmission and the Novel Features of the System. B. G. Rathman and G. Jancke, Swedish State Power Board.

2:00 p.m.—Carrier Current

Chairman: C. W. Boadway

Discussion leader, together with a supporting panel of six specialists, will present a project subcommittee paper on the subject of "Application Guide for Power Line Carrier." Discussion of this presentation will stimulate a question and answer period covering the various intricate problems that may be involved in the construction, operations and maintenance of power line carrier applications.

2:00 p.m.—Chemical and Electrochemical, also Mining and Metal Industry

- 53-329. Grounding Practices on 480 Volt Portable Distribution Systems. R. B. Bennett, General Electric Co.
- CP.** Power for Reynolds Metals Company's Aluminum Reduction Plants at Longview, Washington and Troutdale, Oregon. George Perkins.
- CP.** Practical Welding Techniques for Aluminum Bus Bar Used in Aluminum Reduction Plants. R. O. Beaudette, Kaiser Aluminum and Chemical Corp.
- CP.** The Use of Aluminum Bus and Cable in a Modern Aluminum Smelting Plant. Waldo Porter, Aluminum Co. of America.

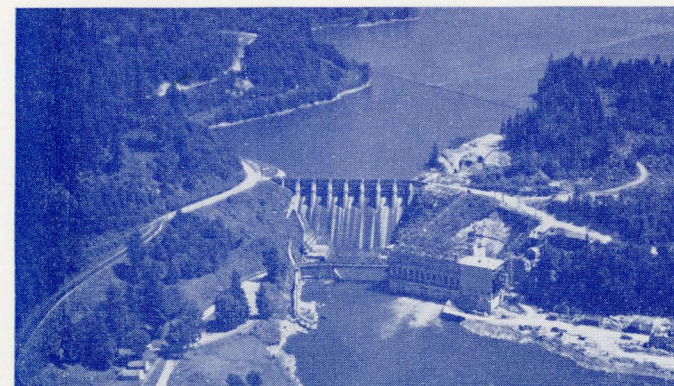
Thursday, September 3

9:30 a.m.—Transmission and Distribution

- 53-310. Aluminum Sheathed, Type S-A Gas Pressurized 69 Kv Cable for Vancouver. F. O. Wollaston, British Columbia Electric Railway Co., Ltd. and H. D. Short, Canada Wire & Cable Co.
- 53-330. Direct-Current Power Transmission. J. G. Holm, Quito, Ecuador.
- 53-331. Effect of Fault Resistance on Ground Current. M. J. Lantz, Bonneville Power Administration.
- 53-332. Location of Series Capacitors in High Voltage Transmission Systems. S. B. Crary and L. E. Saline, General Electric Co.

9:30 a.m.—Wire Communications

- CP.** 24 Channel Single Side Band System for Exchange and Toll Cable Use. R. S. Caruthers, Lenkurt Electric Co.
- 53-333. Type-ON Carrier Telephone. R. D. Fracassi, H. Kahl, Bell Telephone Labs., Inc.



B. C. Electric's Ruskin Generating Station Lindsay Photo

- 53-334. Type N Carrier Telephone Deviation Regulator. E. H. Perkins and J. J. Mahoney, Bell Telephone Labs., Inc.

- 53-335. Program Transmission over Type N Carrier Telephone. R. L. Case and Iden Kerney, Bell Telephone Labs., Inc.

9:30 a.m.—Magnetic Amplifiers

- 53-336. Fast Response with Magnetic Amplifiers. D. G. Scorgie, Naval Research Lab.
- 53-337. Flux Preset High Speed Magnetic Amplifiers. C. B. House, Naval Research Lab.
- 53-339. A Magnetic Amplifier for Synchros. R. L. Van Allen, Naval Research Lab.
- 53-311. The Influence of Magnetic Amplifier Circuitry Upon the Operating Hysteresis Loops. H. W. Lord, General Electric Co.

2:00 p.m.—Transmission and Distribution

- 53-338. Practical Concepts in Capability and Performance of Transmission Lines. H. P. St. Clair, American Gas & Electric Service Corp.
- 53-340. Shunt Capacitors in Large Transmission Networks. E. C. Starr, Oregon State College and E. J. Harrington, Bonneville Power Administration.
- 53-341. Economics of Transmission Line Maintenance and Repair by Helicopter. L. M. Alexander, Bureau of Reclamation Region III and O. K. Mangum, U. S. Bureau of Reclamation.
- CP.** Connector Corrosion and Aluminum to Copper Joints on Transmission and Distribution Circuits. D. C. Hubbard, A. B. Chance Co.

2:00 p.m.—Wire Communications

- 53-342. Railroad Communications Using High Power Carrier Technique. A. K. Hansen, Quebec North Shore & Labrador Railway; W. W. H. Dean, Canadian Westinghouse Co., Ltd. and F. G. Mullins, Westinghouse Elec. Corp.
- CP.** Inductance and Resistance Measurements on Small Size ACSR Cables at Frequencies from 10-160 Kilocycles per Second. S. B. Thomas and M. R. Pyne, Northern Electric Co., Ltd.
- CP.** Common Control and the Strowger System. C. F. Ffolliott, Automatic Electric Co.
- 53-344. Heat Dissipation from Toll Transmission Equipment. J. A. Coy, Bell Telephone Labs., Inc.

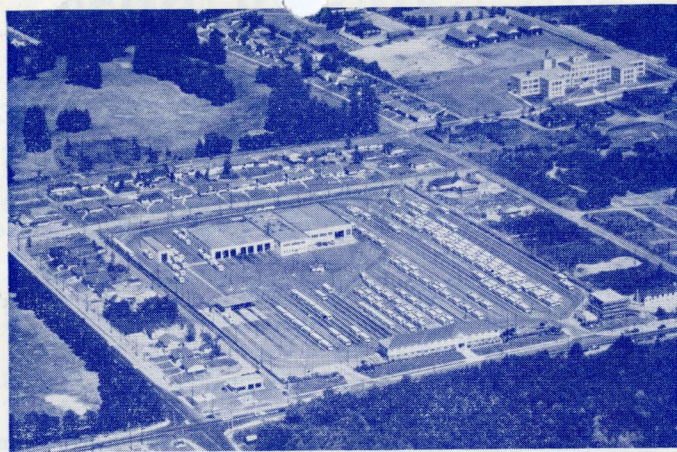
2:00 p.m.—Electrical Techniques in Medicine and Biology

- 53-313. A Study of the Hazards of Impulse Currents. C. F. Dalziel, University of California.
- CP.** Tracing the Electrical Activity of the Heart. A. M. Scher, R. R. Paton, A. C. Young, A. L. Malmgren and R. V. Erickson, University of Washington.
- CP.** Physical and Engineering Aspects of Cobalt 60 Beam Therapy. H. F. Batho, British Columbia Cancer Institute.
- CP.** Some Electrical Techniques Applied to Medicine. E. T. Feldsted and F. H. MacGillivray.

Friday, September 4

9:30 a.m.—Switchgear

- 53-346. Is the European Circuit Breaker Rating System Really More Conservative Than the American? R. C. Van Sickle, Westinghouse Electric Corp.



B. C. Electric's Oakridge Transit Centre Industrial Photo

- 53-347. Short-Time Impulse Voltage Characteristics of Tank Type Oil Circuit Breakers. V. E. Phillips and R. H. Miller, General Electric Co.
- CP.** The Application of Analytical Methods in Power Circuit Breaker Mechanism Design. R. R. Bush and G. K. Carter, General Electric Co.
- 53-349. A 230 KV-10,000 MVA Steel Clad Impulse Breaker—Another Rating in a Line of High Capacity High Voltage Breakers. C. J. Balentine and J. M. Milne, General Electric Co.
- 53-348. Oil Circuit Breaker for Switching 115 KV Shunt Capacitors. W. M. Leeds, J. H. Pehrson and C. F. Cromer, Westinghouse Electric Corp.

9:30 a.m.—Basic Sciences

- 53-351. Production of Unipolar Air with Radium Isotopes. T. L. Martin, Jr., University of New Mexico.
- 53-357. Gas Tube Filament Connections. Morris Brenner, Burndy Engineering Co. and H. G. Schmitt, Electrons, Inc.
- 53-352. Temperature Fields in Electrical Coils—Numerical Solutions. P. J. Schneider, State University of Iowa.
- 53-353. The Spreading and Interface Resistances of Electrical Contacts. C. W. Little, Jr. and W. B. Kouwenhoven, The Johns Hopkins University.

9:30 a.m.—Feedback Controls

- 53-354. Errors in Relay Servo Systems. L. F. Kazda, University of Michigan.
- 53-355. Effects of Friction in an Optimum Relay Servomechanism. T. M. Stout, University of Washington.
- CP.** Synchronous Flux Machine. O. J. M. Smith, University of California.
- CP.** The Douglas Aircraft Differential Analyzer. L. D. Kovach and F. M. Emerson, Douglas Aircraft Co., Inc.

CP.**—Conference paper; no advance copies are available; not intended for publication in TRANSACTIONS.

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SOCIAL ACTIVITIES

Several social activities have been arranged for both the ladies and the members under the chairmanship of Mr. C. E. Woolgar.

On Tuesday, cocktails will be followed by a dinner-dance in the Panorama Roof of the Vancouver Hotel. This will be followed by an outstanding program of entertainment by the famous "Theatre Under the Stars" group. Price per ticket is \$6.00 each at the Ticket Desk.

There will be no organized entertainment on Wednesday, September 2nd.

The President's reception will be held on Thursday, September 3rd and will consist of a cocktail hour followed by a dinner in the Banquet Room of the Vancouver Hotel. After the dinner there will be dancing in the Ballroom. Tickets for the entire evening's entertainment will be \$4.00 each.

The Information Committee will provide data as to various boat and sightseeing trips which are readily available.

The Ladies' Committee have made preparations for sightseeing tours and teas to be held on September 1st to 3rd inclusive.

SPORTS

This program will also be headed by the Entertainment Committee.

A golf tournament will be held at Quilchena Golf Club on Thursday afternoon, September 3rd. Green fees will be \$3.50 each.

Arrangements will be made for visitors to play on any of the Vancouver golf courses which they may favour during their stay in Vancouver.

A salmon derby has been organized and will be held on Friday, September 4th. An excellent fishing ground about 10 miles from Vancouver will be the site and transportation will be provided for all guests.

RESERVATIONS

Vancouver is part of the famed evergreen playground and hotel and transportation accommodations are of the best.

The city can be reached by train, plane or bus from the East and the South, and also by boat from the South.

Rooms have been set aside at the Vancouver, Georgia, Sylvia and Kamlo Apartment Hotels and the 2400 Auto Court. Early reservations will be advantageous and should only be made by means of the Hotel Reservation Card which accompanies this announcement. All requests should specify type of accommodations, number in party, date and time of arrival, and date of departure. Typical room rates are listed on the Hotel Reservation Card.

REGISTRATION

The Registration desk in the Hotel Vancouver will open on the evening of August 31 and will be open daily thereafter during convention hours. The Registration fee will be \$3.00 for members and \$5.00 for nonmembers. Student members and members' families may register without payment of a fee.

STUDENTS

A separate program has been outlined for student members which will involve both technical papers and entertainment.

COMMITTEE

The members of the Pacific General Meeting Committee are T. Ingledow, Vice-President, District No. 9; J. H. Steede, General Chairman; L. B. Stacey, Vice-Chairman and Finance; H. O. Bulmer, Secretary; W. J. Lind, Treasurer; F. O. Wollaston, Technical Program; T. H. Crosby, Inspection Trips; C. E. Woolgar, Entertainment; E. Wolstencroft, Registration; D. S. Smith, Hotels; F. D. Bolton, Publicity; J. T. Turner, Transportation; S. C. Morgan, Students; F. J. Bartholomew, J. B. Hadley, E. W. Johnson, Dr. H. J. MacLeod, Members-at-Large

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