

# PACIFIC GENERAL MEETING

Portland, Oregon, August 20-23, 1951



Headquarters:  
**Multnomah Hotel**



Portland, Oregon

*Ackroyd Photo*

## MEETING FEATURES

Portland is famous as a host city to vacationers in the Pacific Northwest for its lovely homes and gardens, for cool summers and mild winters, and as an important center of commerce and industry. Ideally situated in the center of vast hydroelectric installations and natural resources, members of the Institute and their families should long remember the 1951 Pacific General Meeting to be held August 20-23. Headquarters for the meeting will be the Multnomah Hotel, near the center of the city, where arrangements have been made for a wide variety of technical sessions, social events, and entertainment. Reservations have been made for sufficient space for technical sessions and social events. A block of rooms has been reserved in the Multnomah and overflow reservations have been arranged for in adjacent hotels.

The opening session Monday, August 20, will be presided over by C. B. Carpenter who is Chairman of the General Committee. Dorothy McCollough Lee, Mayor of Portland, will deliver the welcoming address, and J. A. McDonald, Vice President, District No. 9 of AIEE, will respond. Brigadier General O. E. Walsh, North Pacific Division Engineer, Corps of Engineers, U.S.A., will speak on "The Relationship of Hydroelectric Power to Water Development in the Columbia River Basin."

**TRANSPORTATION:** The "City of Roses" is easily accessible by all means of transportation. For those motoring to the meeting, there are numerous modern scenic highways leading through cool valleys and timber covered mountains. Many national parks and the natural beauty of the country lures many vacationers. The Oregon coast, Crater Lake, Columbia River Gorge, Oregon Caves, and Mt. Hood

are only a few of the breathtaking sights which will leave a lasting impression on the visitor. Major railroads and air lines serve the area.

**INSPECTION TRIPS:** The program of the 1951 Pacific General Meeting includes a wide variety of inspection trips to highlight the industry and natural resources of the Pacific Northwest. All those attending will want to take fullest possible advantage of the trips to supplement the technical sessions as well as view the beautiful scenery of the area while traveling to and from the sites. A nominal fee will be charged on most trips to cover transportation costs. Members are urged to sign up for the trips during registration as certain trips will be limited as to attendance. For security reasons, proof of citizenship will be required on several of the visitations as indicated in the descriptions following.

**Bonneville Power Administration's J. D. Ross Substation,** Vancouver, Washington (Monday 1:30 p.m.—4:30 p.m.) The J. D. Ross substation is a large modern transformer substation located a short distance from the northern city limits of Vancouver, Washington. It is the termination of two 230 kv lines from Bonneville Dam, where a tie-in is made with lines from Grand Coulee Dam, and of a single 230 kv line north to the Puget Sound area. Two 35,000 kva synchronous condensers and a 20,000 kvar bank of shunt capacitors are used for reactive control. The southern terminus of the Ross-Snohomish microwave system is located here and may be inspected. The load dispatching for the entire BPA system is also conducted here, and the new dispatching board may be seen.

**McNary Dam,** (Tuesday air flights—and Friday). The Corps of Engineers, U. S. Army, has this large structure well under way.

*Continued on page 5*



# AIEE PACIFIC GENERAL MEETING – PROGRAM – Portland, Oregon, August 19-23, 1956

## ADVANCE COPIES OF PAPERS

Members may obtain preprints of numbered pages 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.

## Monday, August 20

### 10:30 a.m.—Opening Session

CHARLES B. CARPENTER, Presiding

Address of Welcome: Mayor Dorothy McCollough Lee, Portland, Oregon.

Response to Welcome: J. A. McDonald, Vice-President, District No. 9.

Address: The Relationship of Hydroelectric Power to Water Resource Development in the Columbia River Basin. Brig. General O. E. Walsh, North Pacific Division Engineer, Corp of Engineers.

### 2:00 p.m.—Power

CP.\*\* Electrical Features of Modern Automatic Hydro Stations. C. L. Gamble, A. G. Mellor, General Electric Co.

51-287. Northwest Power Pool Interchange. L. B. Cowgill, Ebasco Services, Inc.

51-288. The Tracy Pumping Plant—Central Valley Project—California. P. E. Richardson, Bureau of Reclamation.

51-289. Rotating Amplifiers for Control of Bus Voltage Fluctuation. ACO.\* C. L. Sidway, Southern California Edison Co.; Jack W. Savage, Westinghouse Electric Corp.

51-290. Grounding Effectiveness at Grand Coulee 230-Kv Switchyards Verified by Staged Fault Tests. A. C. Conger, R. K. Seely, W. H. Claggett, Bureau of Reclamation.

### 2:00 p.m.—Industry

CP.\*\* Conversion of the Facilities of Geneva Steel Company to Peacetime Operations. M. E. Strate, Geneva Steel Co.

CP.\*\* Kilowatts and Atomic Energy. H. A. Carlberg, General Electric Co.

CP.\*\* The Pend Oreille Mines and Metal Company Conveyor System. N. H. Rayner, Pend Oreille Mines and Metal Co.

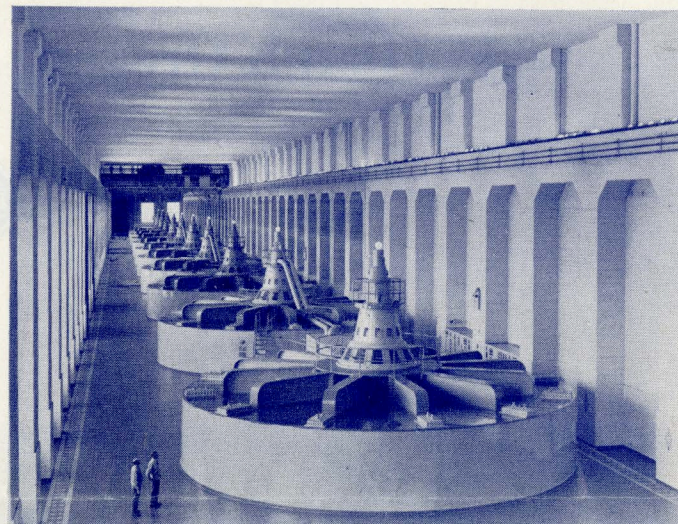
CP.\*\* Development in Variable Speed Pumping Units. T. B. Hayes, Cornell, Howland, Hayes and Merryfield, Consulting Engineers.

CP.\*\* The 480 Volt Delta System—Grounded or Ungrounded. C. B. Wagner, General Electric Co.

CP.\*\* The Application and Characteristics of Selenium Rectifier in a Cottrell Precipitation System. D. R. Allsop, D. R. Hoopes, Westinghouse Electric Corp.

### 2:00 p.m.—Computing Devices and Methods

CP.\*\* Applications of a Mechanical Differential Analyzer to Electrical Engineering. Earl Janssen, Don Lebell, University of California at Los Angeles.



Official Corps of Engineers Photo  
Generator Room of Bonneville Dam

CP.\*\* The Rayleigh Method in Network Calculations. F. W. Schott, J. Heilfron, University of California at Los Angeles.

51-291. The Use of High Speed Relays in Electric Analog Computers. R. R. Bennett, A. S. Fulton, Hughes Aircraft Co.

CP.\*\* Operational Experience with the SWAC. H. D. Huskey, Bureau of Standards.

CP.\*\* The MADDIDA44A Computer. C. B. Dennis, Northrup Aircraft, Inc.

## Tuesday, August 21

### 9:30 a.m.—Transmission

CP.\*\* Higher Transmission Voltages, Developments and Trends. P. L. Bellaschi, Consulting Engineer.

51-292. Experiences with 230 Kv on the System of the Bonneville ACO.\* Power Administration. A. A. Osipovich, H. L. Rorden, Bonneville Power Administration.

51-293. Cable Through Tunnel Under Continental Divide Links Power Systems. F. M. Wilson, R. A. Nelson, Bureau of Reclamation.

51-294. Incremental Method for Sag-Tension Calculations. Maurice Landau, Dept. of Water and Power, The City of Los Angeles.

### 9:30 a.m.—Industry—Chemical, Electrochemical and Electrothermal

CP.\*\* Historical Review of Power Supplies for the Aluminum Industry. Waldo Porter, Aluminum Company of America.

CP.\*\* Electrical Installations in an Aluminum Plant. G. B. Scheer, Kaiser Engineers, Inc.

CP.\*\* Cathodic Protection of Stainless Steel Buried in the Ground. F. J. Mollerus, J. F. Kane, General Electric Co.

CP.\*\* Economics of Cathodic Protection. R. M. Wainwright, University of Illinois.

### 9:30 a.m.—Aircraft Applications and Feedback Control Systems

51-295. Steady-State Characteristics of Carbon-Pile Voltage Regulators. D. G. Scorgie, D. H. Schaefer, Naval Research Laboratory.

51-296. Design of Permanent Magnet Alternators. R. M. Saunders, R. H. Weakley, University of California.

51-297. Servomechanism Characteristics of D-C Motor Driven by Controlled Rectifiers. L. D. Harris, University of Utah.

51-298. Transformation of Block Diagram Networks. T. D. Gray-ACO.\* beal, University of California.

### 2:00 p.m.—Transformers

CP.\*\* Transformer Tests as Related to the New Basic Impulse Levels. G. W. Clothier, Allis-Chalmers Mfg. Co.

51-299. Audio Noise of Power Transformers in Residential Areas. A. V. Lambert, Portland General Electric Co.

51-300. Some Methods of Obtaining Correct Line Drop Compensation on Single Phase Voltage Regulators Used on Three Phase Systems. H. L. Prescott, Westinghouse Electric Corp.

CP.\*\* Performance of a Mobile Oil Refinery. D. L. Brown, Portland General Electric Co.

### 2:00 p.m.—Industry—Pulp and Paper, Lumber

51-301. Protection of Electrical Equipment Against Corrosion in Industrial Plants. H. E. Springer, Rayonier, Inc.

CP.\*\* Motor Applications in the Pulp and Paper Industry. Don Platt, Crown-Zellerbach Corp.; J. A. Tudor, Westinghouse Electric Corp.

51-302. Handling Logs by Electric Motocylinders. H. A. Rose, Westinghouse Electric Corp.

CP.\*\* Amplidyne-Controlled Veneer Lathe Drive. W. D. Vincent, Fred Thompson, General Electric Co.



Oregon State Highway Commission Photo  
Mt. Hood

CP.\*\* Electric Log-Carriage Drives. T. M. Greer, H. A. Rose, Westinghouse Electric Corp.

### 2:00 p.m.—Student Technical Papers

## Wednesday, August 22

### 9:30 a.m.—Transmission and Series Capacitors

51-303. Functional Requirements of Series Capacitors in Long Distance Transmission Lines and a Description of Fundamental Features of the Installation in the Bonneville Power Administration System. Alexander Dvojnikov, Bonneville Power Administration; E. C. Starr, Oregon State College.

51-304. A 24,000 KVAR Series Capacitor in a 230 KV Transmission Line. R. E. Marbury, F. D. Johnson, Westinghouse Electric Corp.

51-305. Series Capacitors During Faults and Reclosing. E. L. Harder, J. E. Barkle, R. W. Ferguson, Westinghouse Electric Corp.

51-306. Development of Corona Measurements and Their Relation to the Dielectric Strength of Capacitors. R. J. Hopkins, T. R. Walters, M. E. Scoville, General Electric Co.

### 9:30 a.m.—Communication

CP.\*\* The N1 Carrier System. P. G. Edwards, Bell Telephone Labs., Inc.

CP.\*\* Radio Relay Graduates to Nation Wide Service. D. I. Cone, Pacific Telephone and Telegraph Co.

CP.\*\* The Coordinated Communication System of the Bonneville Power Administration. A. W. Adams, Bonneville Power Administration.

CP.\*\* Communication Requirements for Civil Defense. B. J. Willingham, General Electric Co.

### 9:30 a.m.—Instruments and Measurements

CP.\*\* A Fast Response Electronic Telemetry System. Carl Oman, Westinghouse Electric Corp.

CP.\*\* Performance Characteristics of High Speed Telemetry Systems. J. I. Holbeck, Bonneville Power Administration.

CP.\*\* Overload Protection of Alternating Current Instruments. Wilson Pritchett, Elazar Trau, University of California.

51-308. The Accuracy of Current Transformers Adjacent to High Current Buses. R. A. Pfuntner, General Electric Co.

CP.\*\* Mutual Reactors for Bus Differential Protection. Francis Irish, Central Arizona Light and Power Co.; Robert Hartley, Westinghouse Electric Corp.

### 2:00 p.m.—Transmission and Series Capacitors

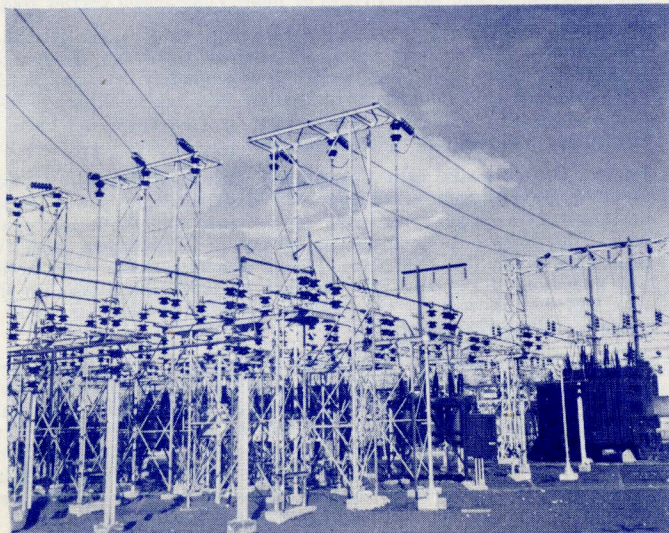
CP.\*\* Developments and Experience with Series Capacitors in Sweden. G. Jancke, K. F. Ackerström, Swedish State Power Board.

51-309. Economic Aspects of Series Capacitors in High Voltage Transmission. E. C. Starr, Oregon State College; R. S. Seymour, Bonneville Power Administration.

51-310. 230 Kv Series Capacitor Tests. C. C. Diamond, E. J. Harrington, J. R. Curtin, Bonneville Power Administration.

51-311. Transmission-Line Terminal-Voltage-Ratio for Best Economy. H. M. Rustebakke, University of Washington.





Albina Substation Switchgear, Pacific Power and Light

## 2:00 p.m.—Electronic Power Converters

- CP.\*\* A Method of Load Control for an Aluminum Reduction Plant. L. H. Wolgast, Reynolds Metal Co.
- CP.\*\* A Discussion of Corrosion Problems in Rectifier Cooling Systems. S. J. Pope, Kaiser Aluminum Co.
- CP.\*\* A Discussion of Some of the Factors Involved in Ignitor Erosion. Waldo Porter, Aluminum Co. of America.
- CP.\*\* A Trial of Resonance Shunts to Reduce Rectifier Harmonics in A-C Supply Lines. L. A. Carter, Pacific Power and Light Co.; D. A. Riechel, Pacific Telephone and Telegraph Co.
- CP.\*\* Ignitron Rectifier Locomotive. W. A. Brecht, Westinghouse Electric Corp.

## 2:00 p.m.—Student Technical Papers

# Thursday, August 23

## 9:30 a.m.—Power

- CP.\*\* Electrical Features of Pacific Gas and Electric Company Contra Costa Steam Plant. Melvin Lewis, Bechtel Corp.
- CP.\*\* The Gadsby Steam Plant. E. M. Naughton, Utah Power and Light Co.
- CP.\*\* Operation of Steam Generating Station Auxiliaries at Subnormal Speed. H. C. Austin, Southern California Edison Co.
- CP.\*\* Atomic Energy and the Role of the Electrical Engineer. W. J. Dowis, General Electric Co.

## 9:30 a.m.—Carrier Current and Microwave

- CP.\*\* Carrier or Microwave for System Relaying. T. M. Morong, Salt River Power District, Arizona; K. V. Fletcher, General Electric Co.
- CP.\*\* Operating Experience of Supervisory and Telemetry over 960 Megacycle Link. T. A. Phillips, Central Arizona Light and Power Co.

CP.\*\* Microwave System Design for Utilities. C. M. Backer, Philco Corp.

CP.\*\* Application of a Microwave Radio Link by Bonneville Power Administration. S. Metzger, N. Gottfried, R. Hughes, Federal Telecommunications Labs., Inc.

51-312. Traveling Wave Relations Applicable to Power-System Fault Locators. L. J. Lewis, University of Washington.

## 9:30 a.m.—Electric Space Heating

CP.\*\* Electric Space Heating Distribution Costs. O. D. Hurd, Benton County Public Utility District.

CP.\*\* Heat Pump Operating Costs for the Equitable Building. J. D. Kroeker, Consulting Engineer.

## 2:00 p.m.—Switchgear

51-313. Resistance Effect on 230-Kv Fault Values Relating to Circuit Breaker Application at Grand Coulee. A. C. Conger, Bureau of Reclamation.

51-314. New Design Oil Circuit Breaker for 7,500,000 KVA 230 KV Service. F. B. Johnson, R. E. Friedrich, Westinghouse Electric Corp.

51-315. High Voltage Interrupter Switch Applications. A. C. Schwager, Schwager-Wood Corp.

51-316. Switching of Large Shunt Capacitor Banks for 15 Kv Service by Compressed Air Circuit Breakers. B. P. Baker, Westinghouse Electric Corp.

CP.\*\* Heavy Duty High Voltage Dead Tank Circuit Breaker. D. M. Umphrey, Pacific Electric Mfg. Corp.

## 2:00 p.m.—Instruments and Measurements

51-317. Automatic Amplifying and Recording System for a Mass ACO.\* Spectrometer. P. S. Goodwin, R. L. Sink, Consolidated Engg. Corp.

51-318. Electrostatic Radiation Monitors. J. R. Bradburn, A. A. Lahti, Consolidated Engg. Corp.

51-307. A Magnetic Fluid Dynamometer. D. W. Brede, University of California.

## 2:00 p.m.—Conductor Vibration

CP.\*\* Analysis of Conductor Vibration. R. H. Nau, University of Illinois.

CP.\*\* An Analysis of Conductor Vibration Field Data. R. F. Steidel, Jr., Oregon State College; M. B. Elton, Bonneville Power Administration.

CP.\*\* Damped and Undamped Vibration Characteristics of Type H. H. Copper Conductor. Bernard Fried, M. A. Gudor, Washington State College.

CP.\*\* Analysis of Wind Induced Dynamic Stresses Observed in Field Tests. Bernard Fried, A. R. Hard, Washington State College.

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ACO.\* Advance copies only available; not intended for publication in TRANSACTIONS.

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



It is located 190 driving miles east of Portland on U. S. Highway 730. Air flights will be conducted Tuesday over the Columbia River Gorge to view this construction which was started in 1948. Majestic Mt. Hood and other snow-capped peaks of the Cascade range will provide a long to be remembered panorama. For those returning east by auto, or wishing to drive to the site, arrangements have been made for this "land" inspection on Friday. Ultimate installed capacity of 14 units will be 980,000 kw. The navigation lock will be the highest single lift lock—92 feet—in the world. McNary Dam is located 292 miles above the mouth of the Columbia River and its reservoir will provide slack water navigation for 67 miles into the Columbia and lower Snake Rivers. A fish ladder is provided for on both the Oregon and Washington shores to preserve the migratory fish, including the famed Columbia River salmon. The reservoir which will be created will lower water pumping costs and make feasible the irrigation of approximately 400,000 acres of land. Proof of citizenship will be required of those making the "land" inspection.

**Aluminum Company of America, Vancouver, Washington** (Tuesday 1:30 p.m.—5:00 p.m.). ALCOA will be host to the group attending this trip to show their very modern 175,000 kw mercury arc rectifier station, fabricating plant, rod mill, wire mill, and cable manufacturing equipment. Here is an opportunity to see one of the Pacific Northwest's mushrooming industries which reduces the raw material to the finished product. Cheap electric power has made possible the large industrial expansion of the area. Proof of citizenship will be required for this trip.

**Crown Zellerbach Corp., Camas, Washington** (Wednesday 8:30 a.m.—12 noon). Here you will see large logs converted into facial tissue. Those attending will view the Woodmill where logs start their journey by being chipped; the Paper Machine room where various grades of paper are produced from heavy wraps to fine tissue; the Bleach Plant where sulphite and sulphate pulps are bleached to the desired whiteness; the Converting Plants where napkins, toilet tissue, facial tissue, etc. are converted and packaged; and, the Bag Factory for producing any bag commercially used. Another interesting equipment to be seen is the electronic control on one of their paper machines as well as the steam plant with a new high pressure boiler. Proof of citizenship may be required.

**Bonneville Dam and Powerhouse,** (Wednesday 1:30 p.m.—5:00 p.m.). Located approximately 50 miles east of Portland in the beautiful Columbia River Gorge, Bonneville Dam harnesses the river for a total rated output of 518,400 kw from ten generators. This was the first of several projected Federal hydroelectric projects to be combined in furnishing the Pacific Northwest empire with abundant electric power. The dam has created a 50-mile lake and its navigation lock is presently the largest single-lift lock in the world making possible ocean ship navigation to The Dalles, Oregon, which is 200 miles inland from the Pacific Ocean. The world-renowned Columbia River salmon runs are passed over this dam by a huge fish ladder or stairway over a mile long and also by electrically operated fish elevators. Proof of citizenship will be required.

**Weyerhaeuser Timber Company, Longview, Washington** (Thursday—all day). This is the world's largest wood processing center. Here the log can be followed through the mill to the finished lumber and plywood. Among the machines in the operation is the hydraulic log barker where powerful jets of water tear the bark from rotated logs. The sawmill, planning mill, Presto-Log Plant, and plywood plant will be among the operations to be seen. Proof of citizenship may be required.

**Bonneville Power Administration, Chehalis, Washington** Substation (Thursday—all day). This station is located approximately 100 miles north of Portland and is the only installation of 230 kv series capacitors in America. There are also 35,000 kvar of 13.8 kv shunt capacitors, several high speed 230 kv 20 cycle reclosing oil circuit breakers, and several types of phase comparison carrier relays.

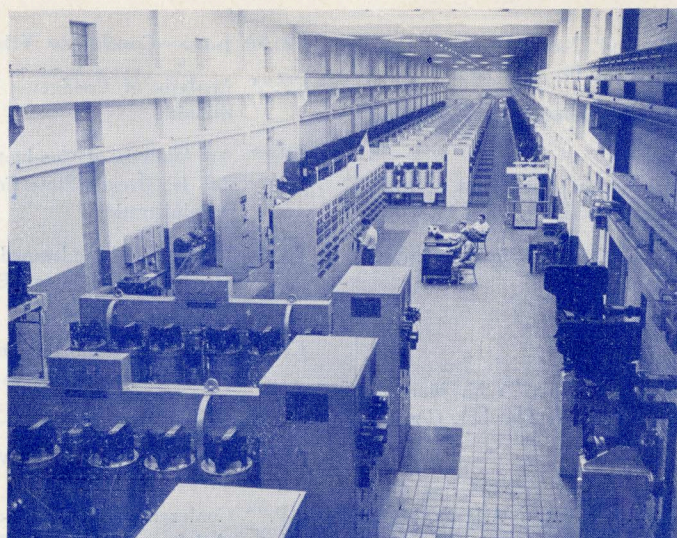
**Equitable Building, Portland** (Thursday 1:30 p.m.—5 p.m.). The nation's largest heat pump installation is in the newly constructed 12 story Equitable Building. Completely air-conditioned, this aluminum clad double-glazed window building is an engineering and architectural showplace where heat or cold from the earth is electrically pumped into the building to maintain year-round comfort.

**Pacific Power and Light Company's Yale and Merwin Hydroelectric Developments,** (Friday—all day). Private power in the northwest is a large contributor to the vast interconnected power pool. The Merwin project has an output of 112,500 kva from two generators while the Yale development which is under construction will add 108,000 kw from its two units by 1952. Attendance on this trip will be limited, so reservations should be made as soon as possible following arrival.

**Oregon State College, Corvallis, Oregon; U. S. Department of the Interior Bureau of Mines; and M and M Woodworking Company, Albany, Oregon,** (Friday—all day). AIEE President-Elect F. O. McMillan's home town and school will be visited here. O.S.S.'s newly completed electrical engineering building, Dearborn Hall, will be seen as well as the college's beautiful campus. During the return trip to Portland in the afternoon, a stop will be made at Albany to tour the Northwest Electrodevelopment Laboratory of the U. S. Bureau of Mines, where extensive electrometallurgical research is conducted. One outstanding project is a method developed for the production of ductile zirconium. Research and investigations of other processes and metals are supplemented with petrographic, metallographic, x-ray, spectrographic, chemical laboratories and full shop facilities. From here the group will visit the M and M Woodworking Company where the manufacture of plywood can be viewed from the log to the finished product, of special interest will be electronic heating where 600 kw of radio frequency is used in curing the plywood's glue. The trip to Corvallis will be made via highway 99W through McMinnville while the return trip will be via 99E and the cities of Albany, Salem, and Oregon City.

**Portland General Electric and Pacific Power and Light Co., Steam Plants and Substations,** (time as arranged by individuals with these utilities). Modern substations and practices can be viewed. Among the many points of interest will be Pacific Power and Light Company's treatment of objectionable substation noise.

**LADIES' EVENTS: Ladies' Headquarters:**—The Spruce room in the Multnomah Hotel has been reserved for the ladies. At all times there will be hostesses present to extend a welcome. Here the ladies may have a place to get acquainted and to seek information. **Monday, August 20:**—From 2:30 p.m. to 4:30 p.m. a reception for President-Elect McMillan's wife and the wives of the Board of Directors in the form of a get-acquainted tea will be held in the Portland Art Museum, and all the ladies are cordially invited to attend. Musical entertainment will be provided as well as conducted tours through the museum. The Portland Art Museum is one of the newer, more beautiful buildings in Portland. Since its inception in 1892 it has been an important factor in Portland's cultural life. Among the many exhibits, those of Indian Art of the Northwest



Control Room and Ignitron Rectifiers, Aluminum Company of America



620-foot Multnomah Falls on Columbia River Highway

Photo-Art

will show the imagination and craftsmanship which make this display unique and will prove of interest to those attending.

**Tuesday, August 21:**—Starting in the morning, a trip will be made to the Sanctuary of Our Sorrowful Mother. Here you will find the serene and enchanting beauty of a monastery garden. Continuing up the newly completed waterlevel or express route of the Columbia River Highway, the group will stop for refreshments at the well-known Multnomah Falls which drops 620 feet down the wall of the Columbia Gorge in a misty recess of green moss and delicate ferns. The return trip will be made via the scenic route passing numerous waterfalls and other beautiful scenery.

**Wednesday, August 22:**—A chartered bus will take the group to the Columbia Edgewater Country Club for luncheon and an afternoon of entertainment. Numerous prizes and surprises are scheduled.

**Thursday, August 23:**—Should there be sufficient interest expressed in a trip to Timberline Lodge and Mt. Hood, this trip has been tentatively scheduled for Thursday.

**STUDENT ACTIVITIES:** Students will be most welcome to attend the meeting, and time has been scheduled on Tuesday and Wednesday afternoons for presentation of their technical papers. In addition, there will be one Student delegate meeting, a Branch counselor's meeting and a dinner meeting for the Students and counselors.

**SOCIAL:** The evenings during the meeting have been left free of technical sessions in order that visitors might take full advantage of the entertainment being planned and have time for renewing old acquaintances while making new ones in the profession. The reception for the Portland Section's own AIEE President-Elect F. O. McMillan has been scheduled for Tuesday evening followed by special movies of a scenic nature. Wednesday evening will be highlighted by the banquet and dance at the Multnomah Hotel. All attending will not want to miss any of these events.

**SPORTS:** Golf has been arranged for the members and their guests attending the AIEE Pacific General Meeting. The annual golf tournament for the J. B. Fiskens cup will be held at the Alderwood golf club on Tuesday, August 21, 1951. Entries should be registered at the Sports Information Desk. Transportation will be arranged by the Sports Committee from the Multnomah Hotel to the golf club, and play will begin immediately after lunch. Locker space, some rental clubs and refreshments will be available at the club. Each player registering should register his handicap based on the average of scores made on his regular course. This average and the club's par must be turned in at the time of registration, and the handicap will be computed in accordance with the "National Handi-

cap Table." This handicap will be used for medal play. The J. B. Fiskens trophy will be presented to the AIEE member with the lowest net medal play. There will be other prizes awarded for players with low gross and low net scores. Portland is noted for its beautiful golf courses. Alderwood Golf Course, which is being used for the tournament, is one of the finest in the area, but there are also many others equally as beautiful. Arrangements may be made for non-competitive play on many of these courses.

**HOTEL ACCOMMODATIONS:** Rooms have been set aside at the Multnomah Hotel and other hostels. Sleeping rooms at the headquarters hotel are limited, but sufficient space has been promised for AIEE requirements. Early reservations will be advantageous and should be made through the hotel committee in accordance with the convention housing policy of the Portland Hotels. Advance registration should be made to Mr. C. L. Brown, Chairman, Hotel Committee, c/o Pacific Power and Light Company, Public Service Building, 920 S.W. 6th Avenue, Portland 4, Oregon. All requests should specify type of accommodations, number and names of persons, date and time of arrival, and date of departure.

Typical room rates are as follows—all with baths.  
 Single room—not listed under Portland Hotels Housing Policy.  
 Double rooms with double bed.....\$ 5.50 to \$10.00  
 Double rooms, twin beds..... 6.00 to 14.00  
 Deluxe doubles ..... 11.00  
 One bedroom suite..... 20.00 to 25.00  
 Deluxe twin and double connecting..... 18.00

Hotels will bill a flat fee of \$5.00 for unclaimed reservations not cancelled in sufficient time to assure re-rental.

**PACIFIC GENERAL MEETING COMMITTEE:** C. B. Carpenter, Chairman; M. M. Ewel, Vice-Chairman; D. A. Riechel, Secretary; F. O. McMillan, President-Elect; J. A. McDonald, Vice-President; H. E. Arnett, Chairman, Portland Section; W. E. Enns, Technical Programs; D. L. Brown, Registration; C. L. Brown, Hotels; A. O. Mangold, Finance and Treasurer; O. A. Demuth, Inspection Trips; M. G. Poland, Transportation; M. D. Duffy, Entertainment; R. B. Temple, Students; W. Porter, Sports; Mrs. M. M. Ewel, Ladies; R. R. Bracchi, Publicity.

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