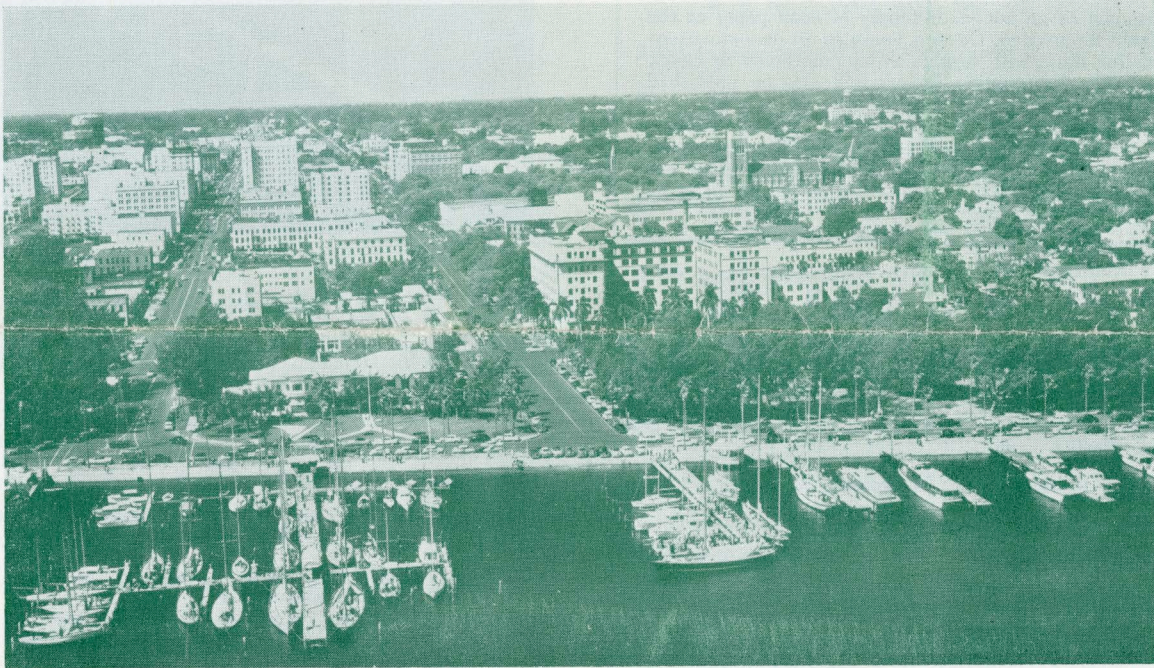


# SOUTHERN DISTRICT MEETING

St. Petersburg, Florida  
APRIL 13-15, 1955



Headquarters  
Soreno Hotel



Central Yacht Basin, St. Petersburg, Fla.

*St. Petersburg News Service*

The AIEE Southern District Meeting will be held in St. Petersburg, Florida, April 13, 14 and 15, 1955. The Soreno Hotel will serve as headquarters for the meeting and all technical sessions will be held there.

A well-rounded technical program will be presented, which will include public relations, power plant, power equipment, transmission lines, telephone, radio, television, atomic energy, phosphate mining, citrus canning, paper and pulp, semi-conductors and magnetic amplifiers.

**SOCIAL ACTIVITIES** for the members and their guests are complete in every respect. There will be a hospitality hour, two general luncheons, a cocktail party and dinner dance, and for the ladies there will be informal teas, social hours and a variety of sightseeing trips.

Dr. Theodore H. Blau, B.S., M.S., Ph.D., of Byron Harless & Associates, Inc. will be the speaker at the luncheon on Wednesday. Mr. C. J. Hendon, Vice President, General Electric Company, and Col. J. Norman Pease, President, H. N. Pease Company, will speak at the luncheon on Thursday.

**INFORMAL HOSPITALITY HOUR.** Early arrivals will be entertained at an informal hospitality hour between 5:30 p.m. and 6:30 p.m. on Tuesday evening, April 12. This social period will be held on the mezzanine of the Soreno Hotel. There members and their families and guests will be able to renew old friendships and acquaintances. Tea, coffee and cocktails will be served to suit individual tastes. Members of the District 4 Executive Committee will be honor guests at this gathering.

**GENERAL SESSION.** The meeting will be called to order at 9:30 a.m. on Wednesday, April 13, by Mr. I. L. Garcia, Chairman. Mr.

Garcia will introduce Mr. Samuel G. Johnson, Mayor of the City of St. Petersburg, who will bring a message of welcome. Next, Mr. Charles P. Almon, Jr., Vice President of District 4, will take charge of the General Session, and will introduce President Monteith, who will speak on Institute affairs. Mr. William J. Clapp, President of the Florida Power Corporation, will then introduce Dr. J. Ollie Edmunds, President of Stetson University, who will deliver the main address. Dr. Edmunds will speak on the subject, "The Human Side of Business." Adjournment for lunch.

**LADIES PROGRAM.** The ladies' headquarters will be in the Terrace Room of the Soreno Hotel. Coffee will be served each morning. Hostesses will be on hand at all times to extend a welcome, help you get acquainted and answer any questions.

Wednesday, April 13, the tour of Cypress Gardens, "America's Tropical Wonderland," where rare and exotic plants gathered from the ends of the earth form a paradise of beauty. Luncheon on the Palm Terrace will be highlighted by colorful water ski show by the world famous Aquamaids. Later quiet electric boats will carry you through lagoons and flower-fringed canals among lush tropical scenery.

Thursday, April 14, a tour will be made of Weekiwachee Springs, where the Mermaids Ballet will be seen from the Underwater Theatre. You will look down more than 100 feet into one of the deepest, clearest springs in the world to see the amazing swimming and diving and the constantly changing marine life. Luncheon will be served in the Patio Restaurant. Also, the Congo Belle, Florida's only paddle-wheel boat, will transport you through a wonderland of tropic beauty along the Weekiwachee River where you will see a natural exhibit of rare and familiar animals.

Informal socials will be provided on Tuesday and Thursday evenings.

*Continued on page 4*

# AIEE Southern District Meeting—Program —St. Petersburg, Florida, April 13-15, 1955

## 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. The Transaction Papers will also be published in the bimonthly publications.

Note: Unnumbered District Papers (D.P.\*\*\*) 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, April 13

### 9:30 a.m.—General Session

1. Introduction. I. L. Garcia, General Chairman.
2. Address of Welcome. Mayor Samuel G. Johnson, St. Petersburg, Florida.
3. Address. President A. C. Monteith.
4. The Human Side of Business. Dr. J. Ollie Edmunds.

### 2:00 p.m.—Public Relations

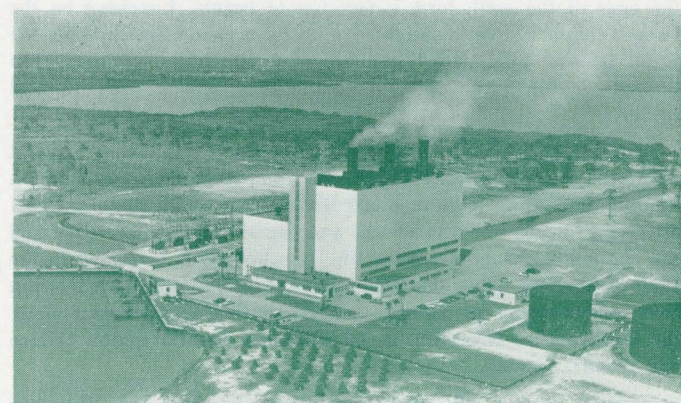
- DP.\*\* Human Engineering—A New Frontier. T. M. Ware, International Minerals & Chemical Corp.
- DP.\*\* The Social Aspects of Business. Frank Laver, Peninsular Telephone Co.
- DP.\*\* Shocks from Southern Industry. B. R. Askew, Professional Engineer.

### 2:00 p.m.—Power Handling and Plant Operation and Equipment

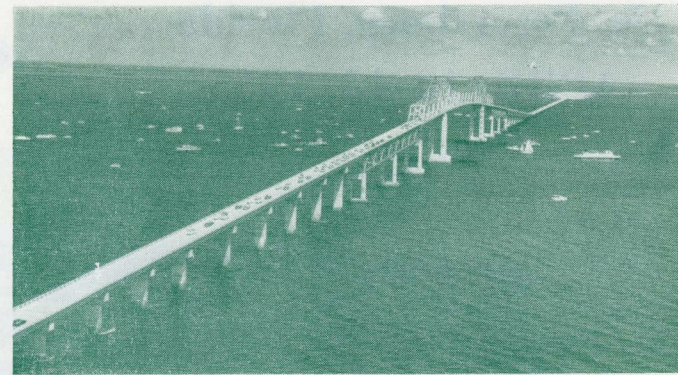
- DP.\*\* Continuous Demand Metering. R. J. Owens, Tennessee Valley Authority.
- 55-11. Behavior of High Voltage Buses and Insulators During Short Circuits. R. M. Milton and Fred Chambers, Tennessee Valley Authority.
- DP55-352. Importance of Actual Experience in the Operation and Maintenance of Power Plants. R. B. Lee, Florida Power Corp.
- 55-353. Increased Current Ratings for Step Regulators. W. C. Sealey, Ailis-Chalmers Mfg. Co.

### 2:00 p.m.—Semi-Conductors

- DP.\*\* An Experimental Automobile Receiver Employing Transistors. L. O. Freedman, T. O. Stanley and D. D. Holmes, R.C.A. Labs.



Higgins Steam Generating Plant of Florida Power Corp.



Sunshine Skyway Airflite Photo by Graber

- DP.\*\* Ferrites—New Materials for Electronics. P. N. Russell, General Electric Co.

- DP.\*\* Recent Developments in Silicon Diodes and Transistors. Jay Thornhill, Texas Instrument Co.

- DP.\*\* Direct Conversion of Radiation to Electrical Energy. E. G. Lender, P. Rappaport, J. J. Loferski, R.C.A. Labs.

### 2:00 p.m.—Magnetic Amplifiers

- DP.\*\* Introduction to Magnetic Amplifiers—Part I. Clarence Sturzenbecker, Western Electric Co.

- DP.\*\* Introduction to Magnetic Amplifiers—Part II. H. E. Whitted, Jr., Western Electric Co.

- DP.\*\* Introduction to Feedback Control Systems. A. R. Eckels, North Carolina State College.

- DP.\*\* Magnetic Amplifier Instrument Servomechanism. J. F. Koenig, Duke University.

### 2:00 p.m.—Special Session—Poles and Aluminum Connectors

- DP.\*\* Steel Poles. L. F. Heckmann and J. O. Hammond, Union Metal Mfg. Co.

- DP.\*\* Aluminum Poles. J. O. Hammond and L. F. Heckmann, Union Metal Mfg. Co.

- DP.\*\* Concrete Poles. J. W. Lewis, American Concrete Corp.

- DP.\*\* New Developments in Connectors for Aluminum. Richard Harap, Burndy Engineering Co.

## Thursday, April 14

### 9:00 a.m.—Paper and Pulp Industry

- DP.\*\* Integrating Amplifier Broaden Field for Application of Electric Drives. C. D. Beck, General Electric Co.

- DP.\*\* Foxboro Magnetic Flow Meter as Applied to the Pulp and Paper Industry. C. A. Moher, The Foxboro Co.

- DP.\*\* The Use of Magnetic Amplifiers in the Paper Industry. S. J. Campbell, Westinghouse Electric Corp.

- DP.\*\* A Comparison of Variable Speed Drives of Small and Medium Horsepower and Their Application in the Paper Industry. W. H. Buford, Southern Advance Bag and Paper Co. and G. E. Shaad, General Electric Co.

- DP.\*\* The Gas Turbine in Southeastern Pulp and Paper Mills. F. Wierk and W. L. Garlington, Reynolds, Smith & Hills.

### 9:00 a.m.—Telemetry and Recording

- DP.\*\* High Capacity PTM-AM Telemeter. G. F. Anderson, Radiation Inc.

- DP.\*\* Range and Coverage Characteristics of a High Capacity PTM-AM Telemetry System. J. E. Spooner, Radiation, Inc.

- DP.\*\* 18 Channel PAM-FM Telemeter for VHF Bands. R. P. Bishop and George Shaw, Radiation Inc.

- DP.\*\* A High Speed, High Capacity, Direct Writing Recorder System. C. E. Keith, Radiation Inc.

- DP.\*\* Application Engineering for the Electro Stylus Recorder. Jack Petersen, Radiation Inc.

### 9:00 a.m.—Power Transmission Lines

- DP.\*\* Insulation Characteristics of Wood and Porcelain in Series. J. M. Clayton and D. F. Shankle, Westinghouse Electric Corp.

- DP.\*\* Steel Tower Transmission Line Design and Construction. C. B. Benham, Florida Power Corp.

- DP.\*\* Practices and Results of Transmission Line Lightning Protection in Florida. I. L. Garcia, Florida Power Corp.

- DP55-354. Protective Relay Modernization Program Releases Latent Transmission Capacity. M. F. Hebb, Jr., Florida Power Corp. and J. T. Logan, Engineering Specialist.

### 9:00 a.m.—Communication Carrier and Radio

- DP.\*\* Communication Development in Florida. J. W. Travis, Southern Bell Telephone Co.

- DP.\*\* Type 45-Universal Carrier Equipment. R. R. Sanders, International Automatic Electric Co.

- DP.\*\* Outside Plant Considerations with High Frequency Carrier Systems. J. N. Petrie, Automatic Electric Sales Corp.

- DP.\*\* Solving Noise and Crosstalk Problems with Compandors. T. B. Collins, Automatic Electric Sales Corp.

### 9:00 a.m.—Phosphate Mining and High Voltage Cable

- DP.\*\* Electrical Maintenance-Phosphate Mining and Flotation. J. L. Cox, International Minerals and Chemical Corp.

- DP.\*\* Instrumentation in the Phosphate Chemical Plant. E. L. Barker, International Minerals and Chemical Corp.

- DP.\*\* Grounding System Practices in Florida Phosphate Industry. W. Barbarowicz, International Minerals and Chemical Corp.

- DP.\*\* Performance Characteristics of High Voltage Rubber-Insulated Cables. S. J. Rosch, Anaconda Wire & Cable Co.

### 2:00 p.m.—Telephone Switching and Basic Science

- DP.\*\* The Problems and Methods of Automatically Computing Toll Calls. J. D. Confeld, Stromberg Carlson Co.

- DP.\*\* The Tampa Area Intertoll Switching System. R. W. Jones, Stromberg Carlson Co.

- DP.55-355. The application of the Theorem of Superposition for the Generalization of the Theorems of Thevenin and Norton. W. J. McKune and D. L. Finn, Georgia Institute of Technology.

### 2:00 p.m.—Atomic Energy

- DP.\*\* Control of High Voltage Equipment Use in the Acceleration of Positive Nuclear Particles. H. E. Banta and R. F. King, Oak Ridge National Laboratory.



West Coast Champion, Atlantic Coast Line Railroad

- DP.\*\* The Savannah River Plant of the Atomic Energy Commission. Winston Davis, Atomic Energy Commission.

- DP.\*\* A Package Power Reactor for Remote Locations. A. L. Boch, Oak Ridge National Laboratory.

- DP.\*\* The Homogeneous Reactor as a Central Station Power Plant. R. B. Briggs, Oak Ridge National Laboratory.

### 2:00 p.m.—Aircraft Testing Power

- DP.\*\* The Arnold Engineering Development Center Power System. D. J. Goodman, ARO Inc.

- DP.\*\* Unusual Relaying and Control Problems at the Arnold Engineering Development Center. J. J. Kominsky, ARO Inc.

- DP.\*\* Electrical Equipment in the Arnold Engineering Development Center Test Facilities. R. C. Carter, Jr., USAF, A.E.D.C.

### 2:00 p.m.—Lightning Arrestors and Cathodic Protection

- DP.\*\* Some Lightning Arrestor Application Factors. J. E. Barkle and T. J. Bliss, Westinghouse Electric Corp.

- DP.\*\* The New Thyrite Magne-Valve Line-Type Arrestor. W. H. Eason, J. H. Snell and A. A. Olsen, General Electric Co.

- DP.\*\* Relay and Fuse Protection of Tapped Transmission Lines. C. W. Cogburn, Florida Power and Light Co.

- DP.\*\* Cathodic Protection in Power Plants. J. B. Prime, Jr., Florida Power and Light Co.

### 2:00 p.m.—Radio

- DP.\*\* VHF Communication System Requirements Today and Tomorrow. R. L. Casselberry, General Electric Co.

- DP.\*\* The Effect of Atmospheric Noise on a Frequency-Shift Radioteletype System. S. P. Hersperger, University of Florida.

- DP.\*\* Solar Flares and Atmospheric Noise. E. I. King, University of Florida.

### 2:00 p.m.—Television—Microwave

- DP.\*\* Color Television—Its Progress, Its Problems, Its Promise. L. R. Fink, General Electric Co.

- DP.\*\* Microwave as a Medium for Electric Utility Relaying. N. B. Tharp, Westinghouse Electric Corp.

- DP.\*\* On Television and Aural Broadcasting. C. M. Braum.

## Friday, April 15

### 9:00 a.m.—Atomic Energy and Instrumentation

- DP.\*\* Objectives, Utilization and Instrumentation of the Raleigh Research Reactor. H. A. Lamonds, North Carolina State College.

- DP.\*\* Recent Developments in Nuclear Instrumentation. F. M. Glass, Carbide and Carbon Chemicals Co.

- DP.\*\* Future Prospects for the Atomic Energy Industry. J. A. Swartout, Oak Ridge National Laboratory.

### 9:00 a.m.—Transformers and Capacitors

- 55-356. Intermittently Increased Kilovar Output of Large Capacitor Banks. P. M. Minder, Line Material Co.

- DP.\*\* A New Industry in the South, General Electric Transformer Plant in Rome, Ga. R. A. Nelson, General Electric Co.

- DP.\*\* Use of Series Capacitors with Distribution Transformers. N. M. Neagle, General Electric Co.

- DP.\*\* Reduced Insulation; Key to Sound Transformer Economy. O. T. Kirby, J. R. Meador, Florida Power and Light Co.

### 9:00 a.m.—Citrus Processing and Container Manufacturing

- DP.\*\* Florida Citrus Industry. Ansley Watson, Pasco Packing Co.

- DP.\*\* Citrus Processing. King Kenrick, Pasco Packing Co.  
 DP.\*\* Electric Power in Citrus Processing. Don Wiggins, Pasco Packing Co.  
 DP.\*\* Can Manufacturing in Florida. F. W. Gaylord, American Can Co.

**9:00 a.m.—Computers—Motors—Cable**

- DP.\*\* The Application of Computers for Power System Operation. C. Nichols, Leeds and Northrup Co.  
 DP.\*\* Single-Phase Line Operation of Three-Phase Motors. H. T. Smith, University of Louisville.  
 DP.\*\* Modern Cable Insulations for Communication and Power. P. H. Ware, Simplex Wire and Cable Co.

DP.\*\* Unnumbered District Papers 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.

CONTINUED FROM PAGE 1

The ladies will join the gentlemen on Thursday evening, April 14, for a banquet and dance, featuring top cuisine and entertainers.

Arrangements for golfing and deep-sea fishing parties will be made upon request.

**ADVANCE REGISTRATION.** Please register in advance by returning the accompanying advance registration card properly filled out. In so doing you will save time in completing registration details upon arrival at the hotel. The total cost for all activities (package plan): Members \$20.00, nonmembers \$25.00, ladies \$20.00. Members registration fee of \$2.00 and nonmember registration fee of \$3.00 included in the above prices. The cost of the "package plan" is one-third less than the cost of individual tickets to the various activities.

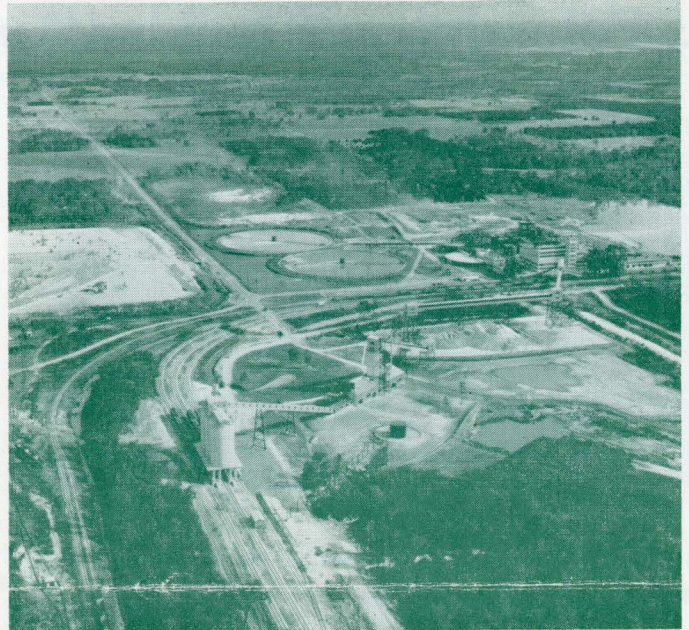
Registration facilities will be located in the lobby of the Soreno Hotel.

**HOTEL RESERVATIONS.** A large number of rooms are available at the Soreno Hotel, Convention Headquarters, and other nearby hotels. All requests for reservations should be sent to the Soreno Hotel, 1st Avenue and Beach Drive North, St. Petersburg, Florida. Reservation requests should be made prior to April 1 and should mention AIEE.

Reservation requests will be accommodated in the Soreno Hotel (meeting Headquarters) where possible with the overflow being as-



Section of Holiday Beaches



Noralyn Mine, International Minerals and Chemical Corp.

signed to nearby hotels at current prices.

Accommodations at the Soreno Hotel are as follows:

Single Room with Bath .....	\$6.00	European, \$11.00	American
Double Room .....	9.00	"	20.00
Twin Bed Suite with Parlor .....			30.00

**STUDENT ACTIVITY.** The Student Council for District 4 plans to hold a student meeting with 200 expected attendance from universities and colleges throughout the southern area. This meeting will be held at St. Petersburg simultaneously with the District meeting. Meeting plans include financial help toward cost of student program. There will be a subcommittee composed of three members; Chairman Professor C. R. Vail, Counselor, Duke University; Professor F. T. Tinsley, Clemson A & M College, and Professor E. R. Weston, Georgia Institute of Technology, who will be judges for the student paper awards which will be presented at the banquet.

**TRANSPORTATION.** Access to St. Petersburg can be made by rail, air or highways. The Atlantic Coast Line and the Seaboard Air Line have regularly scheduled connections into St. Petersburg. The Eastern Air Lines and National Air Lines both have good schedules into the Sunshine City. The best highway connections from the North would be U. S. Routes 19 and 41.

**Members of the 1955 Southern District Meeting Committee are:**  
 General Committee: I. L. Garcia, General Chairman; J. D. Hicks, Vice Chairman; Nat. Patterson, Secretary; Don Knauss, Treasurer; Advisory Committee: W. J. Clapp, M. R. McKinley, James G. Spencer, Jr., J. Arthur Turner, Sr., and C. J. Ellis; Ladies' Program: Mrs. Amy Thompson, Chairman; Members at Large: C. P. Almon, Jr., Vice President, District 4, and T. H. Mawson, Secretary, District 4; Finance: G. L. Kenny, Jr., Chairman; Technical Program: Ben Darlington, Chairman; Turner Loehr, Vice Chairman; Publicity: Milton O. Hollis, Chairman; Student Activities: Perry Gibbons, Chairman; Paul H. Nelson, Vice Chairman; Hotel Arrangements: W. V. Bracken, Chairman; Registration: T. F. Thompson, Jr., Chairman; Banquet and Social: R. E. Raymond, Chairman; Trips and Transportation: J. H. Rose, Chairman; Printing and Tickets: B. R. Gaffner, Chairman.

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