

# Power Plant Upkeep Is A Demanding Job

By Dick Byrd  
These men who practice preventive medicine and cure the ills of a million worth of generators for Carolina Power & Light Company.

pony's major plants. Their patients are located over a 36,000-square-mile, two-state area, from remote mountain valleys to vistas by the sea, robust youngsters less than a year old and oldtimers of 45 years and more.

The code of the engineers and technicians who watch over them is simple: keep them always able to deliver, on call, a million and a half kilowatts and more to serve 450,000 homes, factories and business places in the Carolinas.

Maintenance of these plants, heart of the CP&L power operation, is a program that grows each year. M. H. Long, CP&L maintenance engineer, compares the work to the practice of a good health program by the average family.

CP&L's family of generators has grown from 13 to 22 in the past 10 years. The 23rd (near Asheville) will be added in 1964; another (near Roxboro) in 1966.

Like people, their personalities and performance vary with age. CP&L's oldest is the Blewett Falls hydroelectric plant on the Pee Dee River near Rockingham. Its 33,500-horsepower generators have operated continuously, except for an occasional stoppage due to floods, since June, 1912. For its age, it is hale and hearty.

The company's oldest steam-electric plant is at Elk Mountain near Asheville. Its 16,000-horsepower generators went into service in 1916, just in time to supply power to Asheville after the big 1916 flood.

The newest is a gleaming 340,000-horsepower turbine-generator at the Harry Fitzhugh Lee plant near Goldsboro, making history last year as the world's first coal-fired unit designed for computer operation.

The new Lee unit is more complex and more costly than its predecessors. By the same token, it is more efficient and bigger.

Paul S. Colby, manager of CP&L's operating and engineering department, points out: "To us, efficiency means producing the maximum kilowatts with minimum use of fuel. We try to wring every kilowatt-hour possible from the more than 4 1/2 billion pounds of coal we will use in the current year to serve a power load that doubles every 8 1/2 years."

He credits improved plant technology and careful operation and maintenance with ever increasing efficiencies that have brought lower power costs to the CP&L customer. For instance, 1925, the year after the first two units were com-

pleted at the Cape Fear steam-electric plant near Monroeville, CP&L's average residential rate was 2.5 cents per kilowatt-hour. Today it is 1.85 cents.

CP&L schedules its plant maintenance carefully, always with the principle in mind that units which are not running must stand in reserve to supply the load when others are down for repair.

Such planning prevented trouble last October. The H. B. Robinson plant at Hartsville, S. C., second largest unit on the system, was down for check up. Trouble developed at Lee Unit 3 at Goldsboro, N. C., and it too was closed down. To carry the load, all six units of the Cape Fear plant at Monroeville were placed in operation. In three days this one plant produced 52,500,000 kilowatt-hours of energy—enough to supply 9,000 average homes for an entire year.

Two of the Cape Fear units are 39 years old; yet, maintenance had kept them capable of producing power on quick notice.

The low point of "valley" in demand for power occurs between seasons, March through May and September through November. Major maintenance jobs are carried out during these periods.

Turbine-generators, the machines driven by water or steam to generate electricity, normally operate five years without major repairs. Myriad instruments and performance records detect any flaw that might prompt earlier examination. Most operate around the clock, day in and day out, 365 days a year.

Boilers, furnaces and allied equipment are inspected annually and more often if instruments so indicate. These elements must perform the critical stage of power generation, when powder-fine coal burns to create heat at temperatures up to 2,000 degrees, converting water to steam to drive the turbines.

Long compares plants to people. Active plants, like active hillstarts, are usually the more efficient ones. The older ones have productive capacity that has weathered the years but are not as efficient as the younger ones. As a result, some of the older plants are held in reserve, to form a second team to assure sufficient plantpower whenever needed.

"Doctors" of the company's plant maintenance force are at work full-time seeing that old and new alike are kept in peak condition.



THE LONG RIDE—These two mechanics stand in the ash hopper of CP&L's L. V. Sutton steam-electric plant at Wilmington. Joseph Fips (right) straps himself into harness for a ride to the top of the 150-foot boiler to sandblast boiler tubing. L. B. Smith gives telephone directions to the winch operator. When the plant is in operation, this area is filled with water to carry off fly ash from the combustion chamber above the furnace throat (opening at top).



MAZE OF PIPES—A maze of pipes dwarfs Alex Cooke at CP&L's L. V. Sutton plant at Wilmington. Workmen flush these pipes with hydrochloric acid to clean them.

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**ROBERT B. BLANCHARD**  
KEESE AFB, Tex. - Second Lieutenant Robert B. Blanchard of Wallace, N. C., was awarded the silver wings of a United States Air Force pilot upon his recent graduation from pilot training here.

Lieutenants Blanchard flew the newest Air Force jet trainer aircraft and received academic and military training during the year-long course. He is being assigned to Perrin AFB, Tex., to fly F-102 aircraft.

The lieutenant, who received his B. S. degree from North Carolina State College, is the son of Mr. and Mrs. Oscar C. Blanchard Sr. of Wallace. He is a member of Sigma Nu.

**OBEDE E. CAVENAUGH**  
U. S. FORCES, OKINAWA - Army Pfc. Obede E. Cavenaugh, son of Mr. and Mrs. James S. Cavenaugh, Route 2, Wallace, N. C., qualified as expert in firing the M-1 rifle on Okinawa, late in June.

Cavenaugh, a switchboard operator in Battery, D of the 8th Artillery's 1st Missile Battalion at Okinawa, entered the Army in October 1961 and completed basic combat

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## Mrs. Ormand Drew Grice Vows Grice-Pope Exchange Nuptial Vows In Magnolia Methodist Church Sat.

In Magnolia Methodist Church rites at 7:30 p. m., Miss Anne Gertrude Pope became the bride of Mr. Ormand Drew Grice. The bride is the daughter of Mrs. Clarence Hatcher Pope of Magnolia and the late Mr. Pope. The bridegroom's parents are Mr. and Mrs. Ormand Larkins Grice of Warsaw.

The Reverend J. P. Pegg, pastor of the bride and the Reverend D. E. Parkerson, pastor of the groom, officiated at the double-ring ceremony. Mrs. W. G. Middleton, Jr., of Warsaw, organist and Miss Arin Drucilla Barnhardt of Concord, soloist, presented the wedding music which included, "O Perfect Love", "The Sweetest Story", "Whither Thou Goest", and "The Wedding Prayer".

Clarence Hatcher Pope, Jr. gave his sister in marriage. She wore a gown of silk beads de soire and sat with alienon lace trim. She had a scooped neckline applied in lace, and a full skirt with a chapel train. Her bouffant veil was of silk illusion, attached to a swiss crown of pearls; and she carried a traditional cascade of bridal pom-poms and double-faced satin showings centered with a white orchid.

Miss Mary Lou Davis of Sanford was maid of honor and Mrs. Jerry Sandlin Smith of Magnolia was matron of honor. They wore dresses of aqua satrapeau fashioned with a cow neck line, short sleeves and bell skirt draped in front. Their hat hats were of circular design and they carried a cascade of Rulerun lilies.

Bridemaids were Mrs. Jimmy Allen Scott of Asheboro, Mrs. Robert training at Fort Jackson, S. C.

The 24-year-old soldier is a 1966 graduate of Chinquapin (N. C.) High School.

**HAMPTON L. HOBBS**  
LACKLAND AFB, Tex. - Airman Hampton L. Hobbs, son of Mr. and Mrs. Earl Hobbs of Faison, N. C., is being reassigned to Amarillo AFB, Tex., for technical training as a United States Air Force aircraft maintenance specialist.

Airman Hobbs, who enlisted in the Air Force a short time ago, has completed his initial basic military training here.

The airman is a graduate of North Duplin High School in Calypso, N. C.

**JOHN W. STRANGHAN JR.**  
FORT BRAGG, N. C. (AHTNC) - Cadet John W. Stranghan Jr., 21, son of Dr. and Mrs. John W. Stranghan, 391 Hill St., Warsaw, N. C., is scheduled to complete six weeks of training at the Reserve Officer Training Corps (ROTC) summer camp at Fort Bragg, July 28.

Cadet Stranghan is active in the ROTC program at Wake Forest College.

A member of the Kappa Sigma fraternity and the Seaboard and Blade societies, he graduated from James Kenan High School in 1960.

Gaye Williams, Miss Mary Bunn, Miss Harriet Rivers, and Miss Mary Catherine Bass.

The wedding table was covered by a white lace cloth edged with wide bands of satin. A lovely arrangement of white flowers and candies served as the centerpiece with a silver punch bowl at one end of the table and a three-tiered wedding cake at the other.

Mrs. Perry Williams directed guests to the gift room where Mr. and Mrs. Joe Nowak received.

Presiding at the register was Mrs. Roscoe Potter. Guestbooks were read by Mr. and Mrs. Melvin Pope. Mrs. Walter Holland played wedding music during the reception.

**RECEPTION PARTY**  
After the Grice-Pope rehearsal Mrs. Norman Pickett, Mrs. Alvin Powell and Mrs. Abbie Smith entertained members of the wedding party and other guests at the home of Mrs. Pickett.

Mrs. Charles Thomas greeted the guests. Mrs. Roscoe Potter presided at the register. Directing to the dining room was Mrs. Fred Pickett. There the table covered with a hand embroidered linen cloth was centered with burning tapers crystal holders, an arrangement of white gladioli, daisies and fever few. At one end of the table was a crystal punch bowl, and at the other a three-tiered wedding cake, topped with a miniature bride and groom.

Mrs. Ormand Grice, mother of the groom-elect poured punch and Mrs. Clarence Pope, mother of the bride-to-be served cake. Assisting in serving were Mrs. Willard Brinson, Mrs. Ellis Vestal, Sherry Powell and Gaye Williams.

Goodbyes were said to Mrs. Paul Bass.

**SHOWER**  
Miss Anne Pope, bride-elect of July 13 was hostess at a miscellaneous shower on Friday night, July 5 at the home of Mrs. Jerry Smith.

The Smith home was thrown en-suite for the occasion and decorated with attractive arrangements of summer flowers.

Upon her arrival Miss Pope was presented with a yellow mum corsage, after which bridal games were enjoyed.

Individual square bridal cakes, nuts, mints and punch were served to those attending, by the hostess, assisted by Miss Sherry Powell.

Many lovely and useful gifts were received by the bride.

**LUNCHEON**  
Miss Mary Lou Davis of Sanford honored her Meredith roommate, Miss Anne Pope of Magnolia, bride-elect of July 13 at a luncheon at the Davis home in Sanford on June 28.

Having prepared a corsage for the bride, the hostess invited the guests into the dining room where a color scheme of pink and white

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