

Carolina Power To Open New Plant Sept. 30

Lumberton, N. C.—A vigorous chapter will be added to the story of the electrification of the Carolinas Friday, September 30th, when Governor W. Kerr Scott closes a switch and sends 60,000 electrical horses galloping over the Carolina Power Company's network of lines. Occasion will be

the formal inauguration here of production at the Company's Lumberton steam electric generating plant, three miles from this town, and on the banks of the Lumber River. Within a few months, installation of another 60,000 unit will bring capacity to 120,000 horsepower, and basic provisions have been made to double this as the need arises.

Formal opening of the new station will begin at 2:30 p. m. Friday, and will be broadcast. In addition to Governor Scott, Rep. F. Ertel Carlyle, and L. V. Sutton, president of CP&L, will partici-

UNIQUE STRUCTURE
The addition of a twelfth generating plant to the facilities of Carolina Power & Light—three steam, nine hydroelectric—introduces a new type of power maker to the southeast. It is of the semi-outdoors construction, with only essential parts covered, and much of the structure open all around.

The new plant, operating at full capacity 85 per cent of the time, will generate 75,000,000 kilowatt hours per year, and bring an abundance of electricity to one of the richest agricultural areas of the two states, and one hungry for new industry. The power generated here is equivalent to that used by over 300,000 average residences.

WEIGHTY
The new Lumberton plant represents a lot of steel, cement, and sheer weight. Behind the 200-foot smokestack are two 115-foot boilers, made of huge arcs tempered steel pipes rimmed by cement walls. The boiler room is based on 1002 pilings, each designed to support 20 tons. Beyond the boilers are the steam turbines, cone-shaped flanges or wings upon a shaft connecting with the generator. The turbine room is built on a five-foot-thick foundation of cement, laid 38 feet below the surface, and each turbine pedestal—a massive table—weighs around 12,500 tons. There's almost as much stuff underground as there is in sight.

The plant is located on a 1,000-acre tract lying along the river. The river channel itself underwent a change to supply the enormous quantity of water needed

for condensing spent steam back into water. A dam, its top only three feet below the surface of the normal level of the stream, guarantees a basin of condensing water, but all the water taken from the river is returned to it.

HOW IT WORKS
How coal, water, machinery and ingenuity are combined to pump electricity into the homes, stores and factories of the Carolinas will be graphically demonstrated at the opening of this new plant.

Coal, brought over spurlines of two railways (950 tons per day at full load on two units) is carried by endless belts to a crusher. From here it goes to pulverizers, which reduce it to the consistency of talcum powder, and it is then blown through six jets into the huge boilers, where it burns in suspension, much as gas, or oil would do.

The boilers are composed of miles of pipes made of special alloy steel, surrounding this fire nine stories high. Heat-resistant cement backs up the network of pipes, and behind it is another maze of pipes through which water circulates to all points of the boiler to keep the pipes next to the fire from burning up.

Water, derived not from the river, but from deep wells nearby, circulates in the pipes exposed to the heat, and is transformed into steam at a pressure of 1350 pounds per square inch at a temperature of 955 degrees Fahrenheit, at which temperature the pipes are red hot.

For the sake of economy, the heat from the huge fire is not released entirely through the smokestack, but blown back into the maelstrom by fans to add its temperature.

Little is left of the coal, but ashes are collected at the bottom of the furnace, ground to fine particles, and taken away in sluices to disposal grounds some distance from the plant.

The steam is rushed to the turbine, and thrown against the cone-like flanges, which turn the turbines at a speed of 3600 revolutions per minute, much as water turns a waterwheel, and this energy is transformed into elec-

tricity in the generator.

It is at this point that the Lumber River enters the picture. As the steam is released from its narrow confines, and hits the revolving metal wings of the turbines, it loses its force because of expansion. Presence of the spent steam in the far end of the chamber blocks the entry of working steam at the entry end. To get exhausted steam out of the way, a condensing system, using the cooling waters from the river, quickly reduces it to water, which is returned to the boilers for reheating into steam. The 100,000 gallons circulating each hour in the boiler pipes is thus used over and over again.

From the river comes 125,000,000 gallons per day for condensing, after being chlorinated at the intake. It is pumped to the condensers through four 36-inch pumps. That is enough water to supply a city of a million population.

The power thus generated is stepped up to 22,000 volts and transmitted to the Lumberton substation, and stepped up to 110,000 volts to go to other points for distribution over the Carolina Power and Light Company's network.

The plant was designed and its construction supervised by Ebasco Services of New York. G. E. Chamberlin succeeded C. H. Kelsey as construction superintendent. Blythe Brothers of Charlotte and many other sub-contractors did most of the work.

Resident Superintendent of the plant is J. S. Newbold. Approximately 60 persons will be required to operate the station.

Balance Abundance By Conservation PMA Head Says

It is fortunate that the Nation's farmers can produce enough corn, wheat, cotton, peanuts, tobacco, potatoes and similar crops on fewer acres, says R. J. Hasty, Chairman of the Hoke County PMA Committee. By using less land to produce currently needed crops, farmers can build up more of their land as a reserve for the future. The reduced emphasis on cash crops also opens the way for a better balanced production for present needs, the chairman points out. The need for more livestock and livestock products opens the way to a better deal for people generally and at the same time assures farmers of an income from land taken out of adjustment crops and put into pasture and hay. These crops, in turn, build up humus and plant food reserves for future produc-

tion. Shifts in production must be made to bring about a better balance. When bins, cribs and warehouses are full—excess production wastes soil fertility and depresses farm prices. Price support efforts without adjustments to changed needs place an unnecessary and expensive burden on the government.

In answer to critics of adjustment effort, Mr. Hasty states, "Those who look upon allotments

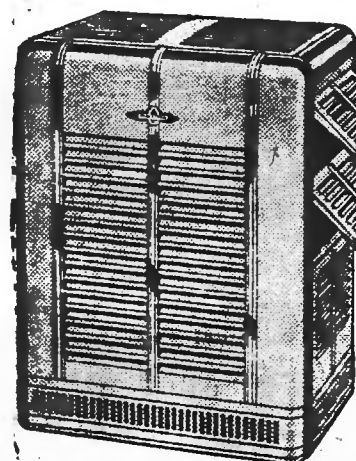
as curtailing freedom—somebody telling farmers what they can grow and what they can't—fail to recognize that allotments are for the protection of both the farmer and the consumer. The program is merely an orderly means of adjusting production instead of bringing it about through depression and a market crash."

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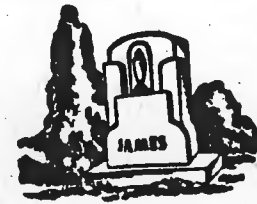
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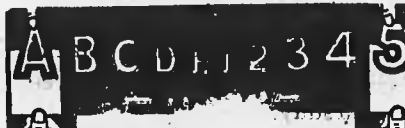
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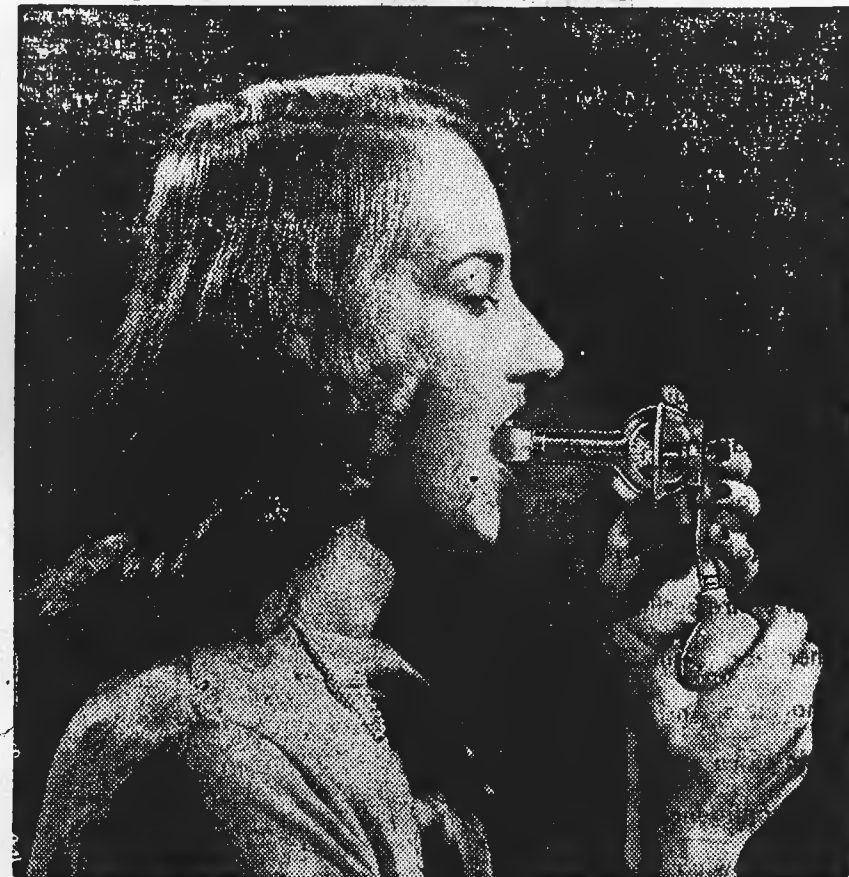


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