

SOUTHERN POWER'S STORY OF GROWTH

Dr. W. Gill Wylie Tells
Fascinating History of
Great Enterprise.

FROM ACORN TO OAK

The Steps in the Development of
Electric Power Recounted by
"The Man With the Idea."

The story of any great enterprise, particularly such as has to do with industrial development and growth and which carries in its wake vast constructive movements of almost limitless scope, is very interesting and doubly so where they have to do with home affairs and local growth.

The review of the history of the Southern Power Company by the "Man With the Idea" as Dr. W. Gill Wylie is known, which was given by him at the seventh annual banquet of this great corporation Saturday night, affords most fascinating reading. After going into a few preliminaries, Dr. Wylie launched into the story. It follows.

"About 35 years or more ago, while on a visit to my old home in Chester, S. C., I went to look over Doctor Cloud's plantation, (afterwards known as Boyleston's plantation), which I had learned was for sale. On this property was several locks of the old State canal and a considerable fall in the river which would make a development of the waterpower at this point practical and easy. At that time I could have bought the entire 1,600 acres for \$10,000, but it was not bought until some 30 years later at which time I paid \$45,000 for it.

THE BEGINNING.

"Some time during 1895 or 1896 Mr. William C. Whitner, who was a graduate engineer of the University of South Carolina, went North with Mr. John Roddey of Rock Hill, S. C., to interest me and my brother, Dr. E. H. Wylie in a steam plant which was used for supplying the city of Anderson, S. C., with water and lights. My brother and I took a large amount of bonds and stock in their company, and we decided to purchase a small piece of property on which to build an experimental hydro-electric plant. This was at Portman Shoals, 10 miles from Anderson. The plant was finished in 1896. It had a fall of 32 feet and developed about 1,800 horsepower. The 11,000-volt electric generators used here carried probably the highest voltages that were then in use.

PORTMAN SHOALS.

"We sold some of the power from Portman Shoals for driving a cotton mill in Anderson. The success of this experimental electric drive was such that it created a great deal of interest in the East, resulting in the sending of engineers to investigate and confirm the claims made for electrical driving in cotton mills.

"After a few years we increased the height of the dam at Portman Shoals to a head of 48 or 49 feet, enabling us to develop 3,000 or 4,000 horsepower. Mr. Whitner's success in this development and the one at Columbus, Ga., caused him to look for other sites to make a larger development. He found one at Indian Hook, on the bend in the Catawba River near Fort Mill. My brother and I invested \$50,000 in the land and water rights for this development and organized in 1900 the Catawba Power Company, of which I was made president. My brother and I then bought from Mr. Whit-

ner and the Roddeys all of their interests in the Anderson company. I engaged to assist me in rearranging this work Mr. Emil Kuchling, an expert mechanical engineer of New York. The Stanley Electric Company also assisted in the electrical designs. **THE CATAWBA STATION.**

"For the Catawba Power transmission we selected a three-phase system, which I considered to be better than the two-phase system which we were using at the Anderson plant. Mr. Charles P. Steinmetz, an old friend of mine, acted as consulting engineer for me in the selecting and arranging of this electric machinery and transmission. That we exercised good judgment is seen by the fact that all of this electrical work is just as good today as it was nine years ago when first installed.

The contract for the dam and power house for the Catawba plant was awarded in 1900, but on account of the many great floods on the Catawba River during 1901 the work proceeded very slowly. During this time I had an opportunity for making a further study of the subject, which resulted in some changes in the original plan, and in designing what is known as a "gorge dam", enabling us to utilize a normal head during high stages of the river, which had not been practicable with the forms of development hitherto used.

After much delay and discouragement we had nearly completed the dam in 1903, when we found it necessary to have \$250,000 additional money to complete the work. At this time we had an authorized bond issue of \$500,000 of which \$400,000 had been sold. We wanted to authorize an additional bond issue, but the subscribers to the previous issue would not consent to anything beyond the sale of the additional \$100,000 which had already been authorized. Thus, by February 1903 it became evident that some other financial arrangements must be made. At that time I believe I was the only person alive who had any faith in the final completion of that development.

"In the search for financial help I called on Morris Bros. & Christensen of Philadelphia, who promised to do something for me if they had a favorable report from their engineer, who was Mr. Farnham of Boston. While this engineer was investigating, and before he could make a report, I got a 60-day option on \$110,000 bonds which were held by the Charleston syndicate, and with the help of Mr. Oakley Thorne, then president of the Trust Company of North America, I got a similar option on the bonds held in New York. When Mr. Farnham, the engineer, reported favorably to the Philadelphia capitalists, they agreed to let me have up to a million dollars for the completion of the work, so I was enabled to take up the options above mentioned independently of any of the original bond holders.

MEETS W. S. LEE.

"On one of my frequent visits South I met Mr. Leland of Columbia, S. C., who was a Government engineer in charge of some Government river improvement. I tried to get him as resident engineer, but could not do so. However, he recommended Mr. W. S. Lee, Jr., who had worked for the Government under him, and who had been resident engineer at Portman Shoals when the first dam was built, and had also done similar work at Columbus, Ga. I then employed Mr. Lee and he went to Rock Hill. Mr. Lee was at that time employed on a development at Columbus, Ga., and they released him with evident regret, paying him a salary for a whole year just for the benefit of his occasional consultation about the Columbus work.

"I explained to Mr. Lee at that time that if he succeeded with the Catawba plant, his reputation as an engineer would be made, and I explained to him at that time the scheme I had for building dams all along the Catawba so that we could utilize a large part of the 700-foot fall which occurred through its length of 120 miles from Camden, S. C., to Hickory, N. C. I also explained my scheme for keeping the silt scoured out of canals and ponds.

BIG SCHEME APPROACHED.

"The completion of the Catawba plant in the following January and the distribution of the power to Charlotte and other points marked the beginning of our comprehensive hydro-electric development. My brother and I put \$350,000 of our own money into our scheme, and this seems to have convinced the bankers, that we were in earnest in the matter.

"About this time I met Mr. B. N. Duke, and had the good fortune to successfully perform on him an operation for appendicitis. When this power development was first started, Mr. Duke sent an engineer, Mr. Hayes, to examine the work, but Mr. Hayes advised against going into it. But after the Catawba Power plant had successfully run for nine months, Mr. J. B. Duke enquired about my waterpower and I showed him a copy of our first annual report. He said: 'If you will send for that man Lee and let him bring the plans and specifications for development and your maps for other dams, on that river, maybe I will go in with you.'

THE DUKES INTERESTED.

"The result of all this was that we organized the Southern Power Company and raised two million dollars, Mr. Duke raising most of it. My brother and I put in the Catawba Power Company as cash. Nobody else had any stock in the company. Then with Mr. Lee as engineer and manager, and Mr. W. A. Leland as superintendent of construction, we

commenced the development of Great Falls, S. C., finishing the first dam 18 months from the time we first went on the ground. This produced 40,000 horsepower, making in connection with the Catawba plant 50,000. In two years more we finished 40,000 horsepower more at Rocky Creek, two miles below Great Falls. Then in a little less than two years we added 24,000 horsepower at Ninety-Nine Islands on the Broad River.

"The Southern Power Company now has something like 1,300 miles of transmission lines, and besides the hydro-electric development, we have auxiliary steam turbines creating 10,000 horsepower. We now have one of the largest hydro-electric developments in the world controlled by one company. We can deliver at the same time for 24 hours use about 12,000 horsepower, and could deliver for 10 hours use over 150,000 horsepower. We have on hand sufficient property to at least double the above power, and most of this is on the Catawba, which with the exception of the Penobscott River is the best river east of the Rockies for power development."