

History of The Warrior Steam Plant

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The development of the Warrior Steam Plant is interesting to the friends and employes of the Alabama Power Company, because it has played such an important part in guaranteeing continuous service to the customers during low water periods and consequent light generation from the hydro plants. No one can visit this large plant, with its modern village and huge coal storage, without some interest as to its origin and growth. It is located twenty miles below Cordova on the Warrior River, in the heart of the Walker County hills. Above and below this plant, the water course is very crooked and is surmounted on both sides by high hills and abrupt bluffs. The elevated position of the village offers an excellent situation for viewing the rugged country for miles around.

Previous to the erection of the Warrior plant, the Gadsden steam plant had been sufficient to supplement the hydro output in low water periods, but with the growing demand for power in Alabama the steam load outgrew the capacity of the Gadsden station, and in 1916 the Warrior steam plant was designed to meet the additional requirements. The location was determined primarily by reasonable proximity to the Birmingham load and a good supply of coal and condensing water. Soon after the plant and village were constructed the village was named Gorgas in honor of General Gorgas.

The plant was originally designed for an ultimate capacity of 60,000 k.w. to be composed of three 20,000 k.w. units, each unit with its necessary auxiliaries and boiler-room equipment to be installed as required by the growth of the system. The first unit was a Westinghouse 20,000 k.w. machine, equipped with a Westinghouse Le Blanch jet condenser, steam being supplied by six 1200 horsepower B. & W. Sterling water tube boilers. This equipment was installed with intake and discharge canals sufficient to supply three such units, and the building was laid out and left with one temporary wall to facilitate the installation of the future equipment. With the site located as it was, the delivery of the massive equipment to location was in itself quite an undertaking. Material was shipped by rail to Benoit, a point on the river seventeen miles above the plant, and from there was transported by barge to the plant site.

Coincident with the installation of the first unit, the company erected about sixty houses for employes, this being necessary at the start, due to the fact that no towns with adequate housing facilities were located near the new plant. This work was completed in 1917, and the plant operated as a standby station, with light loads, during the following year. Coal was available from the Winona mines, which were opened up near the plant soon after its completion.

In 1918, due to the war and an acute demand for electrical energy in this district, the United States government commandeered the necessary equipment and furnished the funds for the installation of the second unit. The unit selected for this exigency was a General Electric 30,000 k.w. turbo-generator, with a Worthington surface condenser. At this time twelve more boilers of the same make and size as the first six were installed, which gave considerable spare boiler capacity.

During this construction period, rail facilities were obtained connecting the plant with Parish, a station on the Southern Railroad about eight miles distant. This service has been a great convenience to the plant since that date.

The second unit and equipment remained the property of the government and was operated under lease by the Alabama Power Company until September, 1923, when it was purchased outright for the sum of \$3,472,487.25.

Soon after the second unit was purchased from the government, work was started on the third unit, a General Electric 20,000 k.w. installation. This unit makes a total plant capacity of 70,000 k.w., whereas the original plans were only for 60,000 k.w. A study of the water canals and steam generating equip-

ment, however, showed that both were sufficient to permit the operation of the third unit without changing the canals or purchasing additional boilers.

With the completion of the third unit, the plant has reached its ultimate capacity, and the building is finished with permanent walls. Now that the construction work is completed, the plant has a very pleasing appearance and the camp houses are being beautified and made more comfortable. The two top seams of coal on the Winona land have been practically mined out, but additional coal properties have been purchased in the vicinity of the plant that will supply the necessary coal for years to come.

It is interesting to look back over the generation reports of this plant, which show the increasing demand to supplement the hydro generating plants' output. Following is an extract from the operating reports showing yearly generation:

Year	Gross Generation
1917	30,756,700
1918	71,073,000
1919	51,519,600
1920	88,088,100
1921	112,000,600
1922	188,414,600
1923	145,249,000

The yearly output of the Warrior steam plant will doubtless continue to increase due to longer operating periods, but no future machines will be installed at this location because of the fact that the present installation will require all of the condensing water available during dry weather periods.