

Public Utilities

A Selection of High Grade Utility Investments

Record and Prospects of Hydro-Electric Companies Entitle Their Shares to High Rating—Which Are the Best?—The Outlook for Individual Companies

By J. N. PAUL

WITH securities of public utility companies this year coming into better favor, those of the hydro-electric power companies generating electric energy by means of water power should be especially attractive. Despite our vast natural resources, this field has not yet been touched to any great extent and is still in the early stages of development. It has only been during the past decade that real strides in development of this branch of public service have been made.

The war necessarily stopped development work to a large extent and it was still further hampered by the fact that nearly all the undeveloped water power sites were on Government owned or controlled lands. The passage of the Water Power Act in 1920, which permitted long term leases on water powers, made available for private development many valuable sites. This has opened the door for investment by the public.

The original system of applying a stream of running water to a paddle wheel, which has since developed to the present battery of modern turbines generating thousands of horse-power, dates back many centuries. The ancients made use of the running stream to a small extent but the old-fashioned grist mill was the forerunner of the modern turbine hydro - electric plant. While streams had been used to turn water wheels which were attached directly on a shaft it was only late in the nineteenth century that electric current was generated by this means.

Development of the Turbine

The amount of power generated by the old-fashioned wheel was restricted and no great fall of water could be used. The next step was to devise machinery which could use the pent-up forces of stream many hundreds of feet higher in the air. This has resulted in the modern turbine with its numerous blades attached to a shaft. The water is frequently conveyed many miles to the turbine through large pipes.

Obviously, the generation of electric energy by steam, requiring use of costly coal or oil as fuel, cannot compete with that of plants using water power. With fuel advancing in price and becoming scarcer, the development of our hydro-electric resources seems bound to expand.

Nevertheless, the development will require both time and money. Considerable development work was undertaken last year and more has been planned and is now under way.

Figures of the United States Geological Survey show that less than one-fifth of our potential water-power resources are being utilized. Until very recently, the economical transmission of power for a distance of only one hundred miles was considered an achievement. Power is

industrial corporations. Those of the hydro-electric companies are even more so than the ordinary utility. It takes only a few men to operate a hydro-electric plant; hence, the labor item for production is negligible. Rising costs or depletion of supplies of fuel oil or coal mean nothing to the hydro-electric plant with an assured water supply. Earnings then are dependent only on costs of distribution, rates for the product and demand. In almost any given territory a steady increase in demand for electricity is being noted.

Practically 69% of estimated water power is located in the Western states and it is here, particularly in California that the greatest strides have been made since the end of the World War. The following table compiled from figures by the United States Geological Survey indicates at a glance where the water power is located. Of the estimated total potential maximum of 59,360,000 horse-power, less than one-fifth has already been developed. Table follows:

States	Potential Maximum Horse-Power	Percentage of Total
Western states.....	40,761,000	68.6
New England states	1,951,000	3.3
Atlantic states	9,348,000	15.7
Central states	7,360,000	12.4
Total	59,360,000	100%



Photo Brown Bros.

THE MAJESTIC POWER OF NIAGARA FALLS
100,000,000 tons of water flows over the falls every hour—an unbroken flow 14 feet deep, or approximately 58,000 barrels a second

now being transmitted by one of the Pacific Coast companies for nearly four hundred miles, being generated up north near the Oregon-California state line and delivered in San Francisco.

Recent inventions which are still in an experimental stage seem to indicate that in a very short while it will be possible to deliver hydro-electric power to almost any part of the country. That is to say, areas which have no available water powers will be able to obtain their requirements from other districts, no matter how far distant.

Earnings Stabilized

Earnings of public utility properties are necessarily more stabilized than those of

Water power resources of the Western states have as yet been practically untouched and it is here, naturally, that greatest development can be looked for during the next few years restricted only by the extent of the demand for power. In California, for instance, demand for power since the beginning of the War has been in excess of the supply. Last year practically all the companies in that state expended high sums for development of water power which should be reflected favorably in future earnings.

Future electrification by western railroads is a factor favorable to companies producing hydro-electric power in or adjacent to the Rocky Mountain territory. Practically the only instance of this kind now is that of the Chicago, Milwaukee & St. Paul Railroad which is electrified from Harlowtown, Mont., over the mountains to Avery, Idaho, a distance of four hundred miles. Several of the large carriers, notably Burlington, Northern Pacific

and Great Northern were understood to be contemplating electrification of parts of their systems but the war forced them to abandon their plans temporarily at least.

Which Securities to Buy

After having been selling at low prices for more than four years of high operating costs, securities of public utility companies are again coming into their own. They have already shown considerable appreciation in value on an average from the low prices of last year. While the immediate outlook for many industrial companies is still in doubt, it is an established fact that operating conditions for practically all utilities are improving steadily.

For the discriminating investor, bonds of several of the larger hydro-electric companies are being offered. For straight investment, care should be taken to buy into companies operating in more populous territories which have an assured demand for output. Some companies are financing new construction through the sale of preferred stock. The Pacific Coast companies have been successful in this respect.

To those who are content to hold securities for the long pull, consideration of those companies operating in territories which are as yet undeveloped to any great extent appears desirable. While outlay for water power development is at first a considerable item financially, the results will be seen in future years of low cost production reflected in better earnings as demand for power increases.

Particular attention has been paid to the companies operating in California in this article. California possesses more and better water powers than any other state in the Union. Nature has been prolific to the state in this respect. Thousands of streams rush down the sides of the Rocky Mountains having their sources from 7,000 to 14,000 feet in the air. This combined with the natural rapid development of the state, has brought these companies into prominence.

Pacific Gas & Electric

Pacific Gas & Electric Co. operating in thirty-six counties in northern and central California is perhaps the second largest public utility in this country based on the amount of electricity and gas sold to consumers. The war held up plans for

development of several water power sites controlled but in 1921 considerable work along this line was done. During 1920 some \$11,000,000 was expended for additions and improvements. In October, 1921, it was stated officially that \$17,000,000 was tied up in new construction which should become productive in July of this year. Practically all the new construction work represents extension of transmission lines and development of water power sites. Out of twenty-eight electric generating plants in operation last year, twenty-four were hydro-electric and the other four steam-electric.

Latest available earning statement is for ten months ended October 31, 1921, when gross earnings amounted to \$31,237,108 compared with \$28,603,852 for the corresponding period of 1920. Net earnings available for dividends amounted to \$4,138,585 against \$3,938,390. This would indicate earnings on the \$34,004,958 common stock of approximately \$9 a share for 1921 against actual earnings the previous year of \$6.30 a share. Earnings of \$9 a share on the common should insure the safety of the \$5 annual dividend. At the close of 1921 a 2% stock dividend was declared on the common. If present rate of earnings is maintained, and there is every indication that it will, further small stock payments or an increase in the rate might be looked for.

A recent issue of \$10,000,000 first and refunding series B 6% bonds due 1941 was sold publicly last November at 98½. Together with the company's other first mortgage issues, these bonds have a high investment rating. The 6% cumulative preferred stock also enjoys a good investment reputation while the common stock paying \$5 annually in dividends can be classed as a speculation.

Southern California Edison Co.

Southern California Edison Co. operating in Southern California including the San Joaquin valley is one of this country's largest producers and distributors of electricity. Water power plants at the close of 1920 had a generating capacity of 176,600 horse-power and steam plants 135,200 horse-power, a combined capacity of 311,800 horse-power or practically three-quarters of that of its northern neighbor Pacific Gas. Development work which has been under way on a large

scale since the early part of last year will enlarge its capacity considerably. Last year 94,000 horse-power additional capacity was added and can be developed by water power exclusively.

The securities of this company deserve a high rating. In 1921 approximately \$28,000,000 was expended for new construction and an official has just stated that \$20,000,000 will be expended in 1922. Of the \$28,000,000 spent last year, \$11,000,000 represented proceeds of sale of bonds. The balance came from the sale of stock, mostly common stock. The company has launched an extensive campaign and has been very successful in selling it to customers under the slogan of making them "customer-owners." Ability to sell \$17,000,000 of stock, practically all common, direct to the investor in one year is a distinct achievement. The common stock is now being offered at 98½.

Southern California Edison's earnings statement for the ten months ended October 31, 1921, shows net after fixed charges of \$5,307,869 against \$4,416,961 in the corresponding period of 1920. In 1920 earnings were equal to \$10 a share on the \$19,371,372 common outstanding at the end of the year.

The first mortgage bonds, debentures and preferred stock of the company have a good investment rating. The dividend on the common stock was increased from 7% to 8% annually early in 1921. The company controls some of the best water power sites in the state and based on present indications there is no reason why the common dividend should not be considered safe.

Western Power Corporation

The Western Power Corporation is a holding company. The chief operating subsidiary controlled is Great Western Power Co. of California. Several smaller subsidiary companies all operating in Central counties of California are also controlled. The company also serves San Francisco, Oakland and Sacramento with electricity. At the close of 1920, it had a connected load of 308,000 horse-power but this has since been increased considerably. Approximately 90% of its output is hydro-electric.

Western Power controls valuable power sites on the Feather River capable of great expansion. What has been declared

(Continued on page 501)



Power House and Dam at Great Falls, on the Missouri River; power being transmitted by the Montana Power Co. to the Chicago, Milwaukee & St. Paul Railway electrification