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THE ECONOMIC AND ESTHETIC ASPECTS OF THE WATER POWER DEVELOPMENT OF NEW YORK STATE.

When the white man came to America, he found a vast continent covered with forests full of game, and creeks and rivers abounding in fish, a country of unlimited resources and vast opportunities.

The forests have gone, but coal and iron have come, and to the pioneer age succeeeded the industrial age, the age of steam and engineering, and we became the richest and most prosperous nation. But there is another side of it: the age of steam, of coal and iron, also is the dirty age, the age of smoke and soot, and when from the surrounding hills you look down on some of our great industrial centers, and see the smoke and the fog produced by it roll over the valley in impenetrable dark masses, you feel that this is the nearest approach to the infernal regions which can be found on earth, and you almost begin to feel glad that some times the world's coal supply will be exhausted, and with it the age of coal and dirt will come to an end.

But there are other industrial cities, where no pall of smoke hides the sun, no stunted soot-covered trees show the last hopeless attempt of nature, but smokeless cities with clear skies, because the power which turns the wheels of industry comes from the distant waterfall over the electric transmission line, and the age of steam and dirt begins to give way to the age of electricity.

But how about our State, the State of New York, whose destinies are in your hands? ~~54~~ fifty four million tons of coal are burned yearly in New York State. Imagine what this means: filled in coal cars, it would make a train as long as our entire continent, from the north of Greenland down to Cape Horn at the southernmost point of South America.

It takes the continuous work of 500 locomotives and 15,000 coal cars, to bring it to us from the mines.

Most of this coal is used by the industries and by the railroads; less than one-third -- 17 million tons -- for domestic heating.

There are 50,000 industrial establishments in New York State, large and small, employing one and a half million people, so that, counting their families and dependents, probably over half the population of our state directly depends on the industries. ~~5~~ five million horsepower supply the power to these industries, not counting the steam locomotives. But of these 5 million horsepower, three-quarters are still produced by steam, from coal, and a little over a quarter comes from our state water powers by the electric current. Thus we are only just appraching the electric age, and are still largely in the age of coal -- and dirt.

But is this necessary? In California, nine-tenths of all the electric power comes from water power; in our state two-thirds of the electric power is still produced by steam from coal. In California, every person uses in average about twice as much electricity as in our state. Now, is not New York State as progressive as

California? Yes, you will say, but California has abundant waterpowers. But so has New York State, far more, and far larger ones, than most people imagine. When during the last month[1] circumstances caused me to investigate the water power resources of New York State, I was very much surprised ~~over~~ at the large amount of water power, which in the State of New York ~~are~~ is still undeveloped and running to waste.

One and one-third million horsepower have been developed and are used, saving about thirteen million tons of coal yearly. But over four million horsepower are still undeveloped, waiting for the engineer to put them to use in the service of man. Over a million horsepower in the internal streams, the Adirondacks, the upper Hudson, Mohawk, etc., and over three million in the boundary streams, the St. Lawrence, Niagara, Delaware. Developed, these water powers would allow us to shut down every steam engine and steam locomotive in New York State, to supply electric light and power to all our homes; to shut down every smoking factory chimney, with ample surplus of power for further industrial expansion. It would bring to us the electric age, that is, the age of clean and sanitary and smokeless towns.

But besides the esthetic and sanitary side, there is another side, the economic and financial one, perhaps more sordid, but more important to many. Let us also look at this.

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If we develop these four million horsepowers, we would save about 400 million dollars in railway equipment, which is now used in carrying the coal. By the lower cost of hydraulic power, our state would make a yearly saving in the cost of light and power of about 140 million dollars. Is this not an economic advantage worth considering?

Thus the great problem before our state of New York to day, which calls for immediate solution, is the economic development of our State's vast and still undeveloped water powers.